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(Sept.1 to Sept.30)

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MCQs from**



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- Plastic Pollution

- Cemented Artificial Reefs
- Pandemic Preparedness
- Anti-submarine Warfare
- Great Stupa of Sanchi
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SIMULTANEOUS ELECTIONS IN INDIA (ONOE)

Why in News: The Union Cabinet has accepted the recommendations of the High-Level Committee on One Nation, One Election.







Simultaneous Elections

- Simultaneous Elections (popularly known as One Nation, One Election) means holding elections to the House of the People, all the State Legislative Assemblies, and local bodies i.e., Municipalities and Panchayats, together.

Background

- Conscious efforts were made by the Central Government, the State Governments and Political Parties on persuasion of the Election Commission of India to prematurely dissolve State Legislative Assemblies in seven states of Bihar, Bombay, Madras, Mysore, Punjab, Uttar Pradesh, West Bengal, so that Simultaneous Elections could be held in 1957.
- Simultaneous Elections were, by and large, in vogue till the fourth general elections of 1967.
- With the disruption of the cycle of Simultaneous Elections, thereafter, the country now faces five to six elections in a year.
- If Municipalities and Panchayat elections are also included, the number of elections increase manifold.

Need for Simultaneous Elections

	Expenditure: Frequent elections burden the government exchequer with additional expenditure. If the expenditure incurred by political parties is also added, these figures will be even higher.
	Uncertainty and Instability: Asynchronous elections cause uncertainty and instability, thwarting supply chains, business investments, economic growth, quality of public expenditure, educational and other outcomes besides upsetting the social harmony.
	Disruption of government machinery: Due to asynchronous elections causes hardship to citizens.
	Efficient use of security forces: Frequent use of government officials and security forces adversely affect discharge of their duties.
	Policy Paralysis: Frequent imposition of the Model Code of Conduct (MCC) causes policy paralysis and slows down the pace of the developmental programmes.
	Voters Fatigue: Staggered elections induce 'voters fatigue' and present a significant challenge in ensuring their participation.

Advantages of Simultaneous Elections

- Voter Participation:** Simultaneous Elections ensure ease and convenience to voters, avoids voters' fatigue and facilitate greater voter turnout.
- Economic Growth:** Synchronising elections would result in higher economic growth and stability as it would enable businesses to take decisions without fear of adverse policy changes.
- Conducting elections to all three tiers of the Government together would **avoid disruption of supply chains and production cycles** due to migrant workers seeking leave of absence to cast their vote.
- Governance:** Simultaneous Elections enhance focus on governance and prevent policy paralysis.
- Frequent elections create an atmosphere of uncertainty and impact policy decisions. Holding Simultaneous Elections would bring **enhanced certainty in policy making**.
- Reduction in Financial Burden:** Simultaneous Elections would reduce financial burden on the government exchequer by avoiding duplication of expenditure on intermittent elections.
- Adoption of Simultaneous Elections would result in **optimised use of scarce resources** and result in increased capital investment and asset creation.
- Public Service Delivery:** Synchronising electoral calendars would ensure availability of more time for governance and unhindered delivery of public services to citizens.
- Simultaneous Elections would reduce the number of election related offences and disputes and **reduce burden on courts**.
- Simultaneous Elections would result in **avoidance of duplication of efforts** and saving of time and energy of government officials, political workers and security forces.
- Social Harmony:** Holding of elections once every five years would result in mitigation of social disharmony and conflict, which is often observed during elections.

Constitution of High Level Committee

In order to examine and recommend modalities of Simultaneous Elections in the House of the People, State Legislative Assemblies, Municipalities and Panchayats, the Government of India constituted a High Level Committee vide Gazette Notification dated 2nd September 2023.

Terms of Reference of the Committee

- Examine and make recommendation for holding Simultaneous Elections to the House of the People (Lok Sabha), State Legislative Assemblies, Municipalities and Panchayats, keeping in view the existing framework under the Constitution of India and other statutory provisions, and for that purpose, examine and recommend specific amendments to the Constitution, the Representation of the People Act, 1950, the Representation of the People Act, 1951 and the rules made thereunder and any other law or rules which would require amendments for the purpose of holding Simultaneous Elections.
- Examine and recommend, if the amendments to the Constitution would require ratification by the States.
- Analyse and recommend possible solution in a scenario of Simultaneous Elections emerging out of hung House, adoption of no-confidence motion, or defection or any such other event.
- Suggest a framework for synchronisation of elections and specifically, suggest the phases and time frame within which Simultaneous Elections may be held if they cannot be held in one go and also suggest any amendments to the Constitution and other laws in this regard and propose such rules that may be required in such circumstances.
- Recommend necessary safeguards for ensuring the continuity of the cycle of Simultaneous Elections and recommend necessary amendments to the Constitution, so that the cycle of Simultaneous Elections is not disturbed.
- Examine the logistics and manpower required, including EVMs, VVPATs, etc., for holding such Simultaneous Elections.
- Examine and recommend the modalities of use of a single electoral roll and electoral identity cards for identification of voters in elections to the House of the People (Lok Sabha), State Legislative Assemblies, Municipalities and Panchayats.

Recommendations of the High Level Committee

- The Committee recommends amendments to the Constitution to enable Simultaneous Elections in two steps:
 - As **the first step**, Simultaneous Elections will be held for the House of the People and the State Legislative Assemblies. For this, no ratification by the States will be required for the Constitutional Amendment.
 - In **the second step**, elections to the Municipalities and the Panchayats will be synchronised with the House of the People and the State Legislative Assemblies in such a way that Municipalities and Panchayats elections are held within hundred days of holding elections to the House of the People and the State Legislative Assemblies. This will require ratification by not less than one half of the States.
- For the purpose of preparation of single electoral roll and electoral photo identity cards (EPIC) for use in elections to all the three tiers of Government, amendments in the Constitution of India are recommended to enable Election

Commission of India to prepare a single electoral roll and EPIC in consultation with the State Election Commissions. These amendments will require ratification by not less than one-half of the States.

- In the event of a hung House, no-confidence motion, or any such event, fresh elections should be held to constitute the new House of the People or State Legislative Assembly for the “unexpired term” of the House of the People.
- The Committee recommends that for meeting logistical requirements, the Election Commission of India will plan and estimate in advance in consultation with the State Election Commissions, and take steps for the deployment of polling personnel, security forces, EVMs/VVPATs, etc., so that free and fair Simultaneous Elections are held in all the three tiers of the Government.

Challenges of One Nation, One Election (ONOE)

Constitutional Hurdles	Economic and Legal Concerns
The Indian Constitution currently mandates that both the Lok Sabha and state assemblies must serve five-year terms, unless dissolved earlier. If a government collapses mid-term, this could disrupt the synchronized election cycle and create logistical challenges.	Implementing ONOE could require significant initial investment in electoral infrastructure. Additionally, some legal experts warn that the idea might conflict with constitutional principles, such as those emphasized in the landmark S.R. Bommai case, which underscores the independent role of state governments.
Federalism Concerns	Risk of Single-Party Dominance
ONOE might conflict with the federal nature of India's political system, reducing the autonomy of state governments. Additionally, the Law Commission has expressed doubts about the feasibility of simultaneous elections under the current constitutional framework.	Studies suggest that when elections are held simultaneously, there is a higher likelihood of the same party winning both the national and state elections, potentially undermining the distinction between local and national issues.
Logistical Issues	Democratic Representation
Organizing ONOE would require significant resources, including a vast supply of electronic voting machines and trained personnel to oversee the process.	Frequent elections allow voters to voice their opinions regularly, holding governments accountable for their actions. ONOE might dilute this ability, reducing the regular feedback that elections provide.

Election Commission of India (ECI's) Position on One Nation, One Election

- The ECI has said over the years that it supports the idea of bringing election cycles of Lok Sabha and Assembly elections back in sync, but it would require amendments to the Constitution, and additional funds to hold simultaneous elections.
- At present, elections to the Andhra Pradesh, Arunachal Pradesh, Odisha, and Sikkim Assemblies are held simultaneously with Lok Sabha elections.
- In 2022, then Chief Election Commissioner (CEC) Sushil Chandra said that the ECI was fully geared up for One Nation, One Election.
- In its submission to the Parliamentary Standing Committee on Personnel, Public Grievances, Law and Justice in 2015, the ECI listed several “difficulties” in implementing the idea.
 - The chief issue highlighted by ECI is that simultaneous conduct of elections would require large-scale purchase of Electronic Voting Machines (EVM) and Voter Verifiable Paper Audit Trail (VVPAT) machines.
 - For conducting simultaneous elections, the Commission expects that a total of Rs 9,284.15 crore will be needed for procurement of EVMs and VVPATs.
 - The machines would also need to be replaced every

15 years which would again entail expenditure. Further, storing these machines would increase the warehousing cost.

Way Forward

- For ONOE to succeed, it is crucial to build a broad consensus among political parties and state governments. Constitutional amendments would also be required to ensure the legality of the synchronized election process. Furthermore, significant investments in infrastructure such as electronic voting machines and polling booths will be necessary to make the plan viable.
- A legal framework would also need to address potential disruptions, such as the collapse of governments mid-term, and voters would need to be educated about the benefits and challenges of simultaneous elections.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQs

Q. Consider the following statements regarding National Statistical Office

1. NSO is headed by Minister of Statistics and programme implementation
2. It formed after merging National Sample Survey Office (NSSO) and Central Statistical Office (CSO)
3. It conducts nationwide sample surveys

How many of the above statements are correct?

- (a) Only one (b) Only two
(c) All three (d) None

Answer: (b) (2 & 3 only)

COLLEGIUM SYSTEM

Why in News: The Supreme Court has recently directed the Himachal Pradesh High Court collegium to consider again the names of two judicial officers it had first recommended for elevation to the Bench 21 months ago.

Key Details

- In its decision, the apex court ruled that lack of effective consultation during judicial appointments falls within the scope of judicial review, emphasising that the chief justice of a high court cannot make such decisions individually.
- The judgment sets a significant precedent, with the court holding that the process of judicial appointments is not the prerogative of a single individual but must involve “collective consultation” by all members of the high court collegium -- chief justice and the two seniormost companion judges.

- The court quashed the Himachal Pradesh high court collegium’s process, deeming it procedurally and substantively vitiated due to the lack of joint deliberation.
- The ruling marked the first instance where the apex court exercised judicial review over a collegium decision, which is generally dealt with administratively.

Appointment of High Court (HC) Judges: Second and third Judges Case

- The collegium system of appointment (and transfer) of judges of the Supreme Court and High Courts was laid down by a nine-judge Bench of the Supreme Court in Supreme Court Advocates-on-Record Association vs Union of India (1993), commonly known as the Second Judges Case.
- The ruling made the recommendations of the SC collegium binding on the Centre, and gave the power to appoint and transfer judges of the higher judiciary to the judiciary.
- Under the collegium system, judges choose judges and while the government can delay their appointments, it cannot reject the collegium’s choice.
- In 1998, the SC clarified how the collegium system would function (Third Judges Case).
 - The court said that collegiums for HC appointments would include the Chief Justice of India (CJI) and the two seniormost judges of the Supreme Court.
 - This collegium would be required to consult the Chief Justice and senior judges of the HC concerned, the seniormost SC judge from that HC, as well as any SC judges who were knowledgeable about that HC.
- The court also spelled out the limited grounds on which a recommendation could be challenged.
 - First, if there was lack of effective consultation with any of these individuals or institutions.
 - Second, if the candidate in question was not eligible to be a judge — these qualifications are laid down in Articles 217 (High Court) and 124 (Supreme Court) of the Constitution.

Memorandum of Procedure (MOP) for Appointing High Court Judges

- Following the opinion given by the SC in the Third Judges Case, the central government and the SC entered into a Memorandum of Procedure (MOP) in 1998, which detailed the process, from the beginning, for the appointment of HC judges.
- As a part of this process, the Chief Justice of the HC must consult two other seniormost judges at the HC — together forming the High Court collegium — and send their recommendations, with reasons, to the Chief Minister, the Governor, and the CJI.
- The Governor, based on the advice of the Chief Minister, sends the proposal to the Minister of Law and Justice at the Centre, who will conduct a background check and

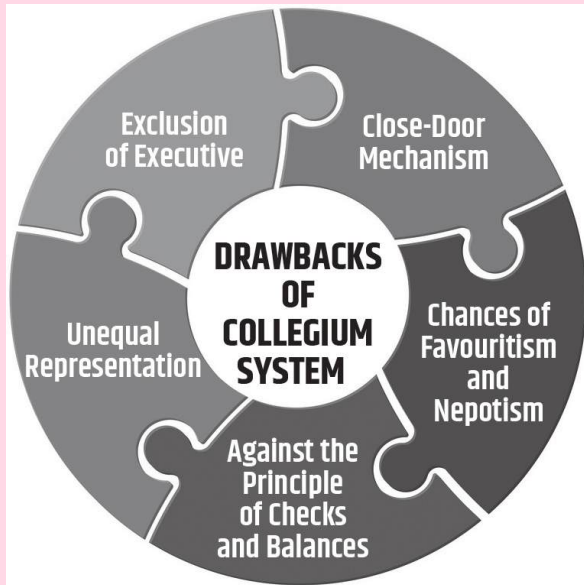
send the entire material to the CJI, who will consider it with the rest of the SC collegium.

What is the work of the Collegium?

- The Collegium system, one in which a group of the senior-most judges make appointments to the higher judiciary, has been in practice for nearly three decades.
- Its importance lies in the fact that its opinion has primacy in the matter of appointments to the high courts and the Supreme Court, as well as transfers.
- Its legal basis is found in a series of three judgments — usually referred to as the ‘Judges Cases’ — concerning the higher judiciary. Its manner of functioning has been laid down in the form of a ‘Memorandum of Procedure’.
- If a proposal for appointment of a judge is returned for reconsideration, the Collegium may either drop it or reiterate it.
- When the Collegium reiterates its decision after reconsideration, it is binding on the government.

Drawbacks of Collegium System

Its resolutions and recommendations are hosted on the Supreme Court’s website, giving relevant information about its decisions. However, the nature of the deliberations and whether there are any internal differences of opinion on the suitability of a particular candidate are unknown.



PRELIMS SPECIAL

JUDICIAL APPOINTMENTS IN INDIA

Constitutional Provisions

- **Article 124 (2):** Every Judge of the Supreme Court shall be appointed by the President by warrant under his hand and seal after consultation with such of the Judges of the Supreme Court and of the High Courts in the States as the President may deem necessary for the purpose and shall hold office until he attains the age of sixty-five years: Provided that in the case of appointment of a Judge other than the Chief Justice, the Chief Justice of India shall always be consulted.

- **Article 217 (1):** Every Judge of a High Court shall be appointed by the President by warrant under his hand and seal after consultation with the Chief Justice of India, the Governor of the State, and, in the case of appointment of a Judge other than the chief Justice, the chief Justice of the High court.

Evolution of Collegium System: Three Judges Case

- **First Judges Case (1982):** The seven-judge Constitutional Bench in S.P. Gupta vs. Union of India (1982) also popularly known as First Judges Case, the apex court held that ‘consultation’ does not mean ‘concurrence’ and ruled that the concept of primacy of the Chief Justice of India is not found in the Constitution of India. The Judgment tilted the balance in favour of the Executive in the appointment of judiciary.
- **Second Judges Case (1993):** The nine-judge Bench in the Supreme Court Advocates-on Record Association vs. Union of India (1993), also known as Second Judges Case, the apex court over-ruled the decision in S.P. Gupta Case (1982) with 7:2 majority. The court observed that Chief Justice of India should be given the primary role in the appointment process of judges. The Supreme Court held that “consultation” really means “concurrence” and a collegium system was introduced for the appointment of judges.
- **Third Judges Case (1998):** The Second Judges decision was reaffirmed unanimously in Third Judges Case (1998) by the nine-Judge Bench of the Supreme Court on a reference being made by the President under Article 143 of the Constitution. It also held that the recommendation should be made by the Chief Justice of India and his four senior-most colleagues. Thus, it is established that the sole opinion of the Chief Justice is binding on the Government in the matter of appointment of the Judges of the Supreme Court and High Courts.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQs

Q. Consider the following statements:

Statement I: National Judicial Appointments Commission (NJAC) appoints the judges of both the Supreme Court and High Courts.

Statement II: 99th Constitutional Amendment Act of 2014 was declared as unconstitutional and void by Supreme Court.

Which one of the following is correct in respect of the above statements?

- (a) Both Statement-I and Statement-II are correct and Statement-II is the correct explanation for Statement-I
- (b) Both Statement-I and Statement-II are correct and Statement-II is not the correct explanation for Statement-I
- (c) Statement-I is correct but Statement-II is incorrect
- (d) Statement-I is incorrect but Statement-II is correct

(d) Answer

RESTATEMENT OF VALUES OF JUDICIAL LIFE

Why in News: Prime Minister's visit to CJI Chandrachud's residence for the Ganpati puja has sparked a controversy, particularly in the context of the "Restatement of Values of Judicial Life" adopted by the Supreme Court in 1997.

Three Documents: Canons of Judicial Ethics

- Restatement of Values of Judicial Life
- Bangalore Principles of Judicial Conduct 2002
- Oath of a Judge as contained in the Third Schedule of the Constitution of India

Restatement of Values of Judicial Life

- The document called the 'Restatement of Values of Judicial Life' is an illustrative, and not exhaustive, guide of what is expected of Supreme Court and High Court judges.
- It is adopted by Full Court Meeting of the Supreme Court of India on 7th May, 1997.
 - Justice must not merely be done but it must also be seen to be done. The behaviour and conduct of members of the higher judiciary must reaffirm the people's faith in the impartiality of the judiciary. Accordingly, any act of a Judge of the Supreme Court or a High Court, whether in official or personal capacity, which erodes the credibility of this perception has to be avoided.
 - A Judge should not contest the election to any office of a Club, society or other association; further he shall not hold such elective office except in a society or association connected with the law.
 - Close association with individual members of the Bar, particularly those who practice in the same court, shall be eschewed.
 - A Judge should not permit any member of his immediate family, such as spouse, son, daughter, son-in-law or daughter-in-law or any other close relative, if a member of the Bar, to appear before him or even be associated in any manner with a cause to be dealt with by him.

- No member of his family, who is a member of the Bar, shall be permitted to use the residence in which the Judge actually resides or other facilities for professional work.
- A Judge should practice a degree of aloofness consistent with the dignity of his office.
- A Judge shall not hear and decide a matter in which a member of his family, a close relation or a friend is concerned.
- A Judge shall not enter into public debate or express his views in public on political matters or on matters that are pending or are likely to arise for judicial determination.
- A Judge is expected to let his judgments speak for themselves. He shall not give interview to the media.
- A Judge shall not accept gifts or hospitality except from his family, close relations and friends.
- A Judge shall not hear and decide a matter in which a company in which he holds shares is concerned unless he has disclosed his interest and no objection to his hearing and deciding the matter is raised.
- A Judge shall not speculate in shares, stocks or the like.
- A Judge should not engage directly or indirectly in trade or business, either by himself or in association with any other person. (Publication of a legal treatise or any activity in the nature of a hobby shall not be construed as trade or business).
- A Judge should not ask for, accept contributions or otherwise actively associate himself with the raising of any fund for any purpose.
- A Judge should not seek any financial benefit in the form of a perquisite or privilege attached to his office unless it is clearly available. Any doubt in this behalf must be got resolved and clarified through the Chief Justice.
- Every Judge must at all times be conscious that he is under the public gaze and there should be no act or omission by him which is unbecoming of the high office he occupies and the public esteem in which that office is held.

Bangalore Principles of Judicial Conduct

Value	Principle
Independence	Judicial independence is a pre-requisite to the rule of law and a fundamental guarantee of a fair trial. A judge shall therefore uphold and exemplify judicial independence in both its individual and institutional aspects.
Impartiality	Impartiality is essential to the proper discharge of the judicial office. It applies not only to the decision itself but also to the process by which the decision is made.
Integrity	Integrity is essential to the proper discharge of the judicial office.
Propriety	Propriety, and the appearance of propriety, are essential to the performance of all of the activities of a judge.

Equality	Ensuring equality of treatment to all before the courts is essential to the due performance of the judicial office.
Competence & Diligence	Competence and diligence are prerequisites to the due performance of judicial office.

Oath or Affirmation by Judge

- The Constitution of India obligates the Indian Judiciary to reach the goal of securing to all its citizens - Justice, Liberty, Equality and Fraternity.
- Swearing in the name of God or making a solemn affirmation a Judge ordains himself/herself:
 - that I will bear true faith and allegiance to the Constitution of India as by law established;
 - that I will uphold the sovereignty and integrity of India;
 - that I will truly and faithfully and to the best of my ability, knowledge and judgment perform the duties of office without fear or favour, affection or ill will; and
 - that I will uphold the Constitution and the laws.
- The oath of a Judge is a complete Code of Conduct and incorporates therein all the canons of judicial ethics.

Conclusion

Judicial corruption takes two forms: political interference in the judicial process by the legislative or executive branch, and bribery. Centrality of justice in human lives is summed up in a few words by the Greek philosopher, Aristotle: "It is in justice that the ordering of society is centred." Yet, a vast majority of countries have highly corrupt judiciaries.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

Q. Consider the following:

1. Restatement of Values of Judicial Life
2. Bangalore Principles of Judicial Conduct, 2002
3. Oath of a Judge as contained in the Third Schedule of the Constitution of India

How many of the above documents are part of the Canons of Judicial Ethics?

(a) Only one (b) Only Two
 (c) All three (d) None

Answer: (c)

**LEGALITY OF DECEPTION
DETECTION TESTS**

Why in News: The Central Bureau of Investigation (CBI) has recently started a second round of polygraph tests as part of their investigation into the rape-murder of a woman doctor at the institution.

About Deception Detection Tests (DDTs)

- Deception detection tests (DDTs) are scientific procedures employed to detect probable deception during interrogation. Predominantly, there are three categories within the Deception Detection Test, that are:
 - A **polygraph test** operates on the presumption that specific physiological responses are triggered when a person is lying.
 - the test is administered by attaching instruments like cardio-cuffs or sensitive electrodes to the suspect to measure variables such as blood pressure, galvanic skin response (a proxy for sweat), breathing and pulse rate.
 - As questions are posed, each physiological response is assigned a numerical value to determine whether the individual is telling the truth or being deceptive.
 - **Narco-analysis** involves the injection of a drug called sodium pentothal into the accused, inducing a hypnotic or sedated state.
 - The assumption is that a subject in such a state is less inhibited and is more likely to divulge information.
 - Because the drug is thought to weaken the subject's resolve to lie, it is often referred to as a "truth serum."
 - **Brain Mapping** measures a subject's neural activity specifically brainwaves using electrodes attached to the face and neck.
 - It operates on the principle that the brain generates distinctive brainwaves when exposed to familiar stimuli, such as an image or a sound.
- However, the efficacy of such tests remains contentious in the medical field.

Legality of such tests

- In **Rojo George v. Deputy Superintendent of Police (2006)**, the Kerala High Court noted that the techniques used for the commission of crimes have become very sophisticated and modern, making the use of these scientific tests essential for effective investigations.
 - When such tests are conducted under strict supervision of the expert, it cannot be said that there

THE ENEMY PROPERTY ACT

Why in News: A parcel of land in Uttar Pradesh, previously belonging to the family of former Pakistan President Pervez Musharraf, will be e-auctioned under the Enemy Property Act.

About the Enemy Property

- In the wake of the India-Pakistan wars of 1965 and 1971, there was migration of people from India to Pakistan.
- Under the Defence of India Rules framed under The Defence of India Act, 1962, the Government of India took over the properties and companies of those who took Pakistani nationality.
- The Centre vested these **enemy properties** with the Custodian of Enemy Property for India. The same was done for property left behind by those who went to China after the 1962 Sino-Indian War.

Key Details

- The Union government has begun to e-auction many of the 12,611 properties across the country, out of which 126 belong to Chinese citizens. Uttar Pradesh has the maximum number followed by West Bengal.
- The guidelines for the disposal of enemy properties stipulate that if the property is valued below ₹1 crore, the custodian must offer the occupant the choice of purchase. If they refuse, the property will be e-auctioned.
- Those valued at over ₹1 crore but less than ₹ 100 crore will be disposed of by the Custodian of Enemy Property for India (CEPI) through e-auction or through a rate determined by the Enemy Property Disposal Committee, unless the Central government chooses to retain it.
- All auctions take place through the Metal Scrap Trade Corporation Limited, a Central public sector undertaking.

About the Enemy Property Act

- The Enemy Property Act, enacted in 1968, provided for the continuous vesting of enemy property in the Custodian of Enemy Property for India.
- Through the Custodian of Enemy Property for India, the central government owns enemy properties across many states.
- In 2017, Parliament passed The Enemy Property (Amendment and Validation) Bill, 2016, which amended the 1968 Act and The Public Premises (Eviction of Unauthorised Occupants) Act, 1971.
 - It expanded the definition of the terms “enemy subject”, and “enemy firm” to include the legal heir and successor of an enemy, whether a citizen of India or a citizen of a country which is not an enemy; and the succeeding firm of an enemy firm, irrespective of the nationality of its members or partners.
 - The amended law provided that enemy property

shall continue to vest in the Custodian even if the enemy or enemy subject or enemy firm ceases to be an enemy due to death, extinction, winding up of business or change of nationality, or that the legal heir or successor is a citizen of India or a citizen of a country which is not an enemy.

- The Custodian, with prior approval of the central government, may dispose of enemy properties vested in him under the provisions of the Act, and the government may issue directions to the Custodian for this purpose.

Reasons to Bring the Amendments

- The amendments aimed to guard against claims of succession or transfer of properties left by people who migrated to Pakistan and China after the wars.
- The main aim was to negate the effect of a court judgment in this regard.

Court Judgment

- The judgment was passed in the case of the estate of the erstwhile Raja of Mahmudabad in UP, who owned several large properties in Hazratganj, Sitapur and Nainital.
- Following Partition, the Raja left for Pakistan in 1957 and took its citizenship but his wife and son Mohammed Amir Mohammad Khan stayed in India as Indian citizens.
- After the 1968 Act, the Raja’s estate was declared enemy property. When he died, his son staked claim to the properties.
- After a legal battle, Supreme Court on October 21, 2005, ruled in his favour.
- The verdict opened the floodgates for further pleas in courts in which genuine or purported relatives of persons who had migrated to Pakistan produced deeds of gift claiming they were the rightful owners of enemy properties.
- On January 7, 2016, the President of India promulgated The Enemy Property (Amendment and Validation) Ordinance, 2016, which was replaced by the Bill that became law in 2017.

EXPECTED QUESTIONS FOR UPSC CSE

Prelims MCQ

Q. The large number of enemy properties classified under Enemy Property Act, 1968 are located in?

- | | |
|-----------------------|-------------------|
| (a) Jammu and Kashmir | (b) West Bengal |
| (c) Assam | (d) Uttar Pradesh |

Answer: (d)

Descriptive Question

Q. Discuss the recent amendments to the Enemy Properties Act. What are the key changes introduced and reasons behind it. [15 marks] [250 words]

CONFERENCE ON INTERNATIONAL ARBITRATION

Why in News: The Supreme Court of India and Permanent Court of Arbitration (PCA) recently held Conference on International Arbitration in New Delhi.

Key Details

- The Conference was held in collaboration with the United Nations Commission on International Trade Law (UNCITRAL).
- The event commemorates the 75th anniversary of the establishment of the Supreme Court and the 125th anniversary of the PCA.

About Permanent Court of Arbitration (PCA)

- Established in 1899 to facilitate arbitration and other forms of dispute resolution between states, the PCA has developed into a modern, multi-faceted arbitral institution perfectly situated to meet the evolving dispute resolution needs of the international community.
- **Structure:** The PCA has a three-part organizational structure consisting of an Administrative Council that oversees its policies and budgets, a panel of independent potential arbitrators known as the Members of the Court, and its Secretariat, known as the International Bureau, headed by the Secretary-General.
- **International Offices:** Beyond its headquarters in the Peace Palace in The Hague, the PCA has opened offices in various cities in order to make its services more accessible in different regions of the world.
 - Buenos Aires (Argentina)
 - Ha Noi (Vietnam)
 - Mauritius
 - Singapore
 - Vienna (Austria)

Arbitration Framework in India

The Arbitration and Conciliation Act, 1996 ("Act"), as amended in 2019, is closely modeled on the 1985 UNCITRAL Model Law.

Key Provisions of the A&C Act

- **Arbitration Agreement:** The Act defines an arbitration agreement as a written agreement by two or more parties to submit to arbitration all or certain disputes that have arisen or may arise between them.

- **Appointment of Arbitrators:** The parties have the freedom to appoint their arbitrators. If they fail to do so, the court can appoint the arbitrator.
- **Conduct of Proceedings:** The Act outlines the procedures to be followed during arbitration proceedings, including the exchange of pleadings, hearings, and the making of an award.
- **Enforcement of Awards:** The Act provides for the enforcement of arbitral awards. An award can be enforced as if it were a decree of the court.

Other Relevant Laws

- **Civil Procedure Code, 1908:** While the A&C Act is primarily applicable, certain provisions of the CPC may still be relevant in arbitration proceedings, such as those related to service of notices and execution of awards.
- **Contract Act, 1872:** The Contract Act provides the legal framework for contracts, which are often the subject of arbitration disputes.
- **Foreign Exchange Management Act, 1999:** This Act regulates foreign exchange in India and may be relevant in international arbitration cases involving foreign currency transactions.

Conventions Related to Arbitration

- The **Convention on the Recognition and Enforcement of Foreign Arbitral Awards**, done at New York, 10 June 1958 (the **New York Convention**), is described as the most successful treaty in private international law. It is adhered to by more than 140 nations.
- The Convention was established as a result of dissatisfaction with the **Geneva Protocol on Arbitration Clauses of 1923** and the **Geneva Convention on the Execution of Foreign Arbitral Awards of 1927**.
- The initiative to replace the Geneva treaties came from the International Chamber of Commerce (ICC), which issued a preliminary draft convention in 1953.
- The ICC's initiative was taken over by the United Nations Economic and Social Council, which produced an amended draft convention in 1955.
- That draft was discussed during a conference at the United Nations Headquarters in May-June 1958, which led to the establishment of the New York Convention.
- Basic actions contemplated by the New York Convention
 - The first action is the recognition and enforcement of foreign arbitral awards, i.e., arbitral awards made in the territory of another State.
 - The second action contemplated by the New York Convention is the referral by a court to arbitration.
- In both actions, the arbitration agreement must satisfy the requirements of article II, paragraphs 1 and 2, which include, in particular, that the agreement be in writing.

Significance

- The influence of the New York Convention on the development of international commercial arbitration has been phenomenal.
- The New York Convention solidified two essential pillars of the legal framework by providing for the obligatory referral by

a national court to arbitration in the event of a valid arbitration agreement and for the enforcement of the arbitral award.

- The Convention provided impetus to the hugely successful UNCITRAL Arbitration Rules of 1976 and the UNCITRAL Model Law on International Commercial Arbitration of 1985 (as amended in 2006).
- The New York Convention is probably the main reason why arbitration is the preferred method for the resolution of international business disputes.

PRELIMS SPECIAL

The New York Convention:

- The Convention on the Recognition and Enforcement of Foreign Arbitral Awards (“New York Convention”) is one of the key instruments in international arbitration.
- The New York Convention applies to the recognition and enforcement of foreign arbitral awards and the referral by a court to arbitration.
- It also applies to awards that are not considered domestic awards in the state where recognition and enforcement are sought.

India recognizes foreign awards under the New York Convention (“NYC”) and the Geneva Convention on the Execution of Foreign Arbitral Awards (“Geneva Convention”).

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

Q. Consider the following statements:

1. The New York Convention is one of the key instruments in international arbitration.
2. India recognizes foreign awards under the New York Convention

Select the correct answer.

- (a) 1 only (b) 2 only
- (c) Both 1 and 2 (d) Neither 1 nor 2

Answer: (c)

STANDING COMMITTEE ON STATISTICS

Why in News: The Union Ministry of Statistics and Programme Implementation has recently dissolved the Standing Committee on Statistics (SCoS) headed by former chief statistician of India, Pronab Sen.

Background

- On July 13, 2023, the Ministry of Statistics & Programme Implementation (MoSPI) had constituted a 14-member Standing Committee on Statistics (SCoS), after renaming and expanding the scope of coverage of the Standing Committee on Economic Statistics (SCES) formed in December 2019.
 - The mandate of the SCoS was to help the Ministry on methodologies of collecting and tabulating data.
- Recently, the panel members stated that the work done by the SCoS was similar to the work done by the recently formed Steering Committee for National Sample Surveys, headed by Rajeeva Laxman Karandikar.

What were the Key Responsibilities of SCoS?

- The responsibility of SCoS was to advise the Union government on survey methodology, including sampling frame, sampling design, and survey instruments, and to finalise a tabulation plan of surveys.
- The Terms of Reference for the SCoS also included providing guidance for conducting pilot surveys/pre-testing, exploring the availability of administrative statistics relating to surveys/statistics, providing guidance for studying or identifying data gaps, providing additional data requirements, and imparting technical guidance to the Central and State level agencies for conducting surveys.

A New Steering Committee for National Sample Surveys

- The new Steering Committee, which replaces the SCoS, has 17 members and one non-member secretary. At least four members of the SCoS have already been accommodated in it.
- The tenure of the Steering Committee is two years.
- Its Terms of Reference are quite similar to that of SCoS, including reviewing subject results, methodology questionnaires, sampling frames, sampling design, concepts, definitions, survey instruments, etc. related to all National Sample Surveys.
- It will also advise the Ministry on survey methodology and finalise the tabulation plan of surveys.
- **Terms of Reference (ToR) For Steering Committee:**
 - To review the extant framework and to address the issues raised from time to time on the subject results/ methodology questionnaire, sampling frame, sampling design, concepts and definitions, survey instruments etc. related to all National Sample Surveys as brought before the Steering Committee.
 - To examine the issues or any other matters raised from time to time on the subject methodology, etc. related to all National Sample Surveys by MoSPI or external entities as brought before the Steering Committee.
 - To review and advise on survey methodology including sampling frame, sampling design, survey instruments, etc. and to finalize tabulation plan of surveys.

- Finalization and approval of survey results/ reports for release.
 - To provide guidance to conduct pilot surveys/pre-testing, if necessary, before finalizing schedules/questionnaire for data collection from time to time.
 - To provide guidance for study and exploring the availability of administrative statistics relating to surveys/statistics.
 - To provide guidance for study/identify data gaps/additional data requirements, if any, in respect of surveys/statistics and suggest appropriate strategy for improvement.
 - To provide technical guidance to the Central and State (wherever State participation is there) level agencies for the conduct of the surveys.
 - Deliberate on any other matter relating to or incidental to the surveys/survey results referred to Steering Committee from time to time.
- The Steering Committee will have the provision to constitute Working Group(s) for the above purposes, if required. The Working Group(s) so formed will directly report to the Steering Committee.

Importance of Census Data

- As of June 2024, out of 233 countries, India was one of 44 not to have conducted the Census this decade.
- Several public schemes such as the National Food Security Act, the National Social Assistance Programme and the delimitation of constituencies are dependent upon the Census being conducted.
- Besides, statistical surveys that go into setting policy such as those related to household and social consumption, the National Family Health Survey, the Periodic Labour Force Survey, and the Sample Registration System, among others, use the Census to set their sampling frames.
- With the 2011 Census data getting increasingly outdated and phenomena such as migration across and within States, the urbanisation of Indian societies, and the suburbanisation of cities becoming increasingly prominent in recent year.

PRELIMS SPECIAL

The Indian Statistical System

- The Ministry of Statistics and Programme Implementation came into existence as an independent Ministry on 15th October 1999 after the merger of the Department of Statistics and the Department of Programme Implementation.
- The Statistics Wing of Ministry of Statistics and Programme Implementation (MoS&PI) consists of the Central Statistical Organisation (CSO), National Sample Survey Organisation (NSSO), and Computer Centre. This is the apex body in the official statistical system of the country.
- CSO is an attached Office and NSSO is subordinate Office

under the control of Ministry of S&PI. The Programme Implementation Wing has three Divisions, namely,

- (i) Twenty Point Programme.
- (ii) Infrastructure and Project Monitoring and
- (iii) Member of Parliament Local Area Development Scheme.

• The Central Statistical Organisation (CSO):

- The CSO was set up in the cabinet secretariat on 2 May 1951 as a part of the cabinet Secretariat and having co-ordinating and advisory functions.
- At that time the name of CSO was Central Statistical Institute. In 1954 the CSI merged with CSO and the new name was Central Statistical Organization.
- The CSO coordinates statistical activities at the national and state level, and with international agencies.
- Compiles and releases the Index of Industrial Production (IIP) every month in the form of 'quick estimates'; conducts the Annual Survey of Industries (ASI);
- Organizes and conducts periodic all-India Economic Censuses and follow-up enterprise surveys.
- Dissemination of statistical information on various aspects through a number of publications distributed to Government, semi-Government, or private data users/agencies.
- Releases grants-in-aid to registered Non-Governmental Organizations and research institutions of repute for undertaking special studies or surveys.

• The National Sample Survey Organisation (NSSO):

- NSSO was conducting nationwide sample surveys on various socio-economic aspects since 1950.
- The National Sample Survey Office (NSSO) and the Central Statistical Office (CSO) was merged to form the National Statistical Office (NSO) on May 23, 2019.
- The NSO is headed by the secretary of the Ministry of Statistics and Programme Implementation (MOSPI).

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

Q. Consider the following statements:

1. CSO is an organisation under Ministry of Statistics.
2. It Compiles and releases the Index of Industrial Production (IIP) and WPI every month.

Select the correct answer using the code given below:

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Answer: (b)

THE JURISPRUDENCE OF BAIL

Why in News: The Supreme Court of India has recently reiterated that the legal principle “bail is the rule and jail is the exception” will apply even in cases registered under the Prevention of Money Laundering Act (PMLA) 2002.

Key Details

- The Supreme Court has recent struck down Section 45(1) of the PMLA 2002 insofar as it impose two further conditions for release on bail, for the offences punishable for a term of imprisonment of more than 3 years under Part A of the Schedule to the PMLA is involved, to be unconstitutional as it is violative of Article 14 and Article 21 of Constitution of India.
 - The apex court categorically held that although Section 45 of the PMLA only laid down that the grant of bail would be subjected to the twin conditions, it would not alter the fundamental principle that bail is the rule or impose absolute restraint on the grant of bail.
 - **Note:** The twin conditions for bail under the PMLA provides that the court must be satisfied that
 - ◆ Firstly, the public prosecutor should be given adequate opportunity to oppose the bail.
 - ◆ Secondly the court must be satisfied that there is reasonable ground to believe that the accused is “not guilty of such offence” and is “not likely to commit any offence while on bail”.
- The apex court has recently stated that the principle that, ‘bail is the rule and jail is the exception’ is only a paraphrasing of Article 21 of the Constitution of India, which states that no person shall be deprived of his life or personal liberty except according to the procedure established by law.
 - The apex court holds that while applying Section 45 of PMLA that Article 21 being a higher constitutional right, statutory provisions should align themselves to the said higher constitutional edict.
 - Further, the court said that “keeping persons behind the bars for unlimited periods of time in the hope of speedy completion of trial would deprive the fundamental right of persons under Article 21 of the Constitution of India and that prolonged incarceration before being pronounced ought not to be permitted to become the punishment without trial.”
- The apex court, while granting bail to accused by the Enforcement Directorate in a PMLA case in Jharkhand, also said that “in cases where the Public Prosecutor takes a considered decision to oppose the bail application, the counter-affidavit of the Investigating Agency should make out a cogent case as to how the three foundational facts set out hereinabove are prima facie established in the given case to help the Court at the bail application

stage to arrive at a conclusion within the framework laid down in Vijay Madanlal Choudhary. It is only thereafter the presumption under Section 24 would arise and the burden would shift on the accused”.

- **Note:** In Vijay Madanlal Choudhary v. Union of India, 2022, the apex Court held that the prosecution must establish at least three foundational facts.
 - ◆ First, that the criminal activity relating to a scheduled offence has been committed.
 - ◆ Second, that the property in question has been derived or obtained, directly or indirectly, by any person as a result of that criminal activity.
 - ◆ Third, the person concerned is, directly or indirectly, involved in any process or activity connected with the said property being proceeds of crime.

Background - Enactment and Nature of PMLA 2002

- In pursuance of resolution of the UN General Assembly – the Political Declaration and Global Programme of Action, the Government of India used the recommendations of the Financial Action Task Force (established in 1989) to formulate a legislation to prevent drug money laundering.
- As drug trafficking is a trans-border operation, the UN held a special session on June 10, 1998 on the theme ‘Countering World Drug Problem Together’ and made another declaration on the urgent need to combat money laundering. Accordingly, the Indian Parliament enacted the Prevention of Money Laundering Act in 2002. But it was brought into force in 2005.
- Accordingly, the PMLA 2002 contained a few offences listed in the Indian Penal Code (IPC) and the Narcotic Drugs and Psychotropic Substances Act, 1985.
- The UN resolutions, and the FATF recommendations are all focused on the prevention of money from the laundering of drugs. However, the PMLA of India acquired a different character through amendments from time to time.
- The law on money laundering revolves around the “crime proceeds” which are laundered. Not only the persons involved directly in the crime and the generation of the crime proceeds but also persons who have nothing to do with the crime but who have some involvement at a later stage in the laundering process are also guilty under this law.
- But the most serious aspect of the PMLA is that it includes a large number of offences in the schedule which have nothing to do with the original purpose of this law — namely, combating the laundering of drug money.
- Further, the PMLA was enacted by India’s Parliament under Article 253 which empowers it to make laws for implementing the international conventions.
- The PMLA now applies with all its rigour to public servants. Thus, a public servant charged with corruption and a hard-core drug trafficker are treated alike.
- A very disturbing thing about the PMLA is that an accused under this law is presumed to be guilty until proved innocent.

- **Report 273** on implementation of the United Nations Convention against Torture and other Cruel, Inhuman and Degrading Treatment or Punishment (UNCAT).
- **Report 274** on the Contempt of Courts Act of 1971.
- **Report 283** on the age of consent to sexual activity.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

Q. Consider the following statements:

1. The Law Commission of India is a statutory body.
2. The Recommendations of law Commission of India is mandatory upon Government of India.

Which of the statements given above is/are correct?

- (a) 1 only (b) 2 only
 (c) Both 1 and 2 (d) Neither of them.

Answer: (d)

THE APARAJITA WOMEN AND CHILD (WEST BENGAL CRIMINAL LAWS AMENDMENT) BILL 2024

Why in News: The West Bengal Assembly recently passed the Aparajita Women and Child (West Bengal Criminal Laws Amendment) Bill, 2024 to address the issue of sexual violence.

Key Provisions of the Bill

- This Bill introduces the death penalty or life imprisonment for rape by amending relevant sections of the Bharatiya Nyaya Sanhita (BNS), the newly enacted penal code.
- Specifically, the death penalty is proposed for five types of offenses:
 - Rape
 - Rape by a police officer or public servant
 - Rape resulting in death or permanent vegetative state
 - Gang Rape
 - Repeat Offences
- The Bharatiya Nagarik Suraksha Sanhita (BNSS) has been amended to establish special courts for expeditious trials of such cases.
- The Protection of Children from Sexual Offences (POCSO) Act, 2012, has also been revised to include the death penalty for penetrative sexual assault and aggravated sexual assault.
- One of the bill's most alarming provisions is the mandatory minimum sentence of life imprisonment for rape, which translates to imprisonment for the remainder of a person's natural life.

- The bill introduces a mandatory death penalty in certain cases, a measure that contradicts established legal principles, such as the Indian Supreme Court's ruling in *Mithu v. State of Punjab*, which deemed the mandatory death penalty unconstitutional.
- Extensive studies conducted by National Law University Delhi's Project 39A have revealed that there is very little evidence to show that the death penalty acts as an effective deterrent to crime with data indicating that a significant portion of death sentences are later commuted or overturned on appeal.

Drawbacks of the Bill

- While the Aparajita Bill focuses almost exclusively on increasing punishments, it offers little in the way of meaningful reforms to strengthen the criminal justice system.
 - The bill calls for the establishment of special courts and special public prosecutors to handle cases under the new law. However, as experience with fast-track courts has shown, without adequate infrastructure and training, these courts often fail to deliver justice.
- The bill glosses over the pressing need for gender sensitization among law enforcement and judicial officers.
 - Legal mechanisms to support survivors, such as witness protection programs and trauma-informed judicial practices, remain absent from the bill.
- Another glaring omission in the Aparajita Bill is the lack of attention to accountability within the law enforcement and judicial systems.
 - The bill fails to address the role of public prosecutors, many of whom are appointed based on political affiliations rather than competence.

Conclusion

The Aparajita Woman and Child Bill is a missed opportunity to enact meaningful reforms that could improve the lives of survivors of sexual violence. Instead of focusing on increasing punishments, the bill should have concentrated on addressing the systemic issues within the criminal justice system that lead to low conviction rates and revictimization of survivors.

EXPECTED QUESTIONS FOR UPSC CSE

Prelims MCQ

Q. The Aparajita Women and Child Bill, 2024 recently seen in news is passed by the state of?

- (a) Odisha (b) Assam
 (c) West Bengal (d) Karnataka

Answer: (c)

- However, the full weight of responsibilities currently lies on the shoulders of Vijayabharathi Sayani, who is NHRC's sole full-time member and was appointed as the acting chairperson on June 5. She also fulfils the requirement for a woman member in the panel.
- The delay in filling vacant posts will hurt India's global reputation.

Issues concerning NHRC

- **Lack of Transparency**
 - Geneva-based UN-linked Global Alliance of National Human Rights Institutions (GANHRI) deferred NHRC's accreditation for the second year in a row. The Geneva-based group cited several reasons, including the lack of transparency in appointing members to the Commission, and the poor gender and minority representation of the panel.
- Lack of Funding and Independence
- Delay in Appointments
 - Lethargic approach to filling up vacancies in the NHRC.

National Human Rights Commission (NHRC)

- The National Human Rights Commission (NHRC) of India was established on 12 October, 1993. The statute under which it is established is the Protection of Human Rights Act (PHRA), 1993 as amended by the Protection of Human Rights (Amendment) Act, 2006.
- It is in conformity with the Paris Principles, adopted at the first international workshop on national institutions for the promotion and protection of human rights held in Paris in October 1991, and endorsed by the General Assembly of the United Nations by its Regulations 48/134 of 20 December, 1993.
- The Commission consists of a Chairperson, five full-time Members and seven deemed Members.
- Vision and Mission: The Commission is responsible for spreading of human rights awareness amongst the masses and encouraging the efforts of all stake holders in the field of human rights literacy not only at the national level but at international level too.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

- Q. Who of the following is *not* a member of the committee that appoints the chairman and members of the National Human Rights Commission?
- Prime Minister
 - Chief Justice of India
 - Home Minister
 - Deputy Chairman of the Rajya Sabha

Answer: (b)

LOKPAL'S INQUIRY WING

Why in News: Lokpal forms inquiry wing to probe graft cases against public servants.

Key Details

- To discharge its statutory functions, Section 11 of the Lokpal and Lokayuktas Act 2013 obligates the Lokpal to constitute an inquiry wing for the purpose of conducting preliminary inquiry into any offence punishable under the Prevention of Corruption Act, 1988, alleged to have been committed by the specified public servants and functionaries.
- Lokpal chairperson has been authorised to commence the selection process for appointment of specified number of suitable persons as officers and staff required to provide logistical assistance in the inquiry wing.
- The inquiry wing is a part of the judicial wing of the Lokpal.
- There will be a Director of Inquiry under the Lokpal chairperson. The director will be assisted by three Superintendents of Police (SPs) - SP (general), SP (economic and banking) and SP (cyber). Each SP will be further assisted by inquiry officers and other staff.
- The Inquiry Wing or any other agency will have to complete its preliminary inquiry and submit a report to the Lokpal within 60 days.
- The Lokpal Act also has provision to constitute a prosecution wing headed by the Director of Prosecution for the purpose of prosecution of public servants, which is yet to be constituted.

PRELIMS SPECIAL

Lokpal of India

- The Lokpal is the first institution of its kind in independent India, established under the Lokpal and Lokayuktas Act 2013 to inquire and investigate into allegations of corruption against public functionaries who fall within the scope and ambit of the above Act.
- Structure
 - The Lokpal consists of a Chairperson and eight Members out of whom 50% are Judicial Members.
 - The Chairperson and the Members are appointed by the President of India by warrant under his hand and seal and hold office for a term of five years from the date on which they enter upon the office or until they attain the age of 70 years, whichever is earlier.
 - The salary, allowances and other conditions of services of the Chairperson are the same as that of Chief Justice of India. The salary, allowances and other conditions of services of the Members are the same as that of a Judge of the Supreme Court.
- Jurisdiction
 - The Lokpal has jurisdiction to inquire into allegations

of corruption against anyone who is or has been Prime Minister, or a Minister in the Union government, or a Member of Parliament, as well as officials of the Union Government under Groups A, B, C and D.

- Also covered are chairpersons, members, officers and directors of any board, corporation, society, trust or autonomous body either established by an Act of Parliament or wholly or partly funded by the Union or State government.
- It also covers any society or trust or body that receives foreign contribution above ₹10 lakh (approx. US\$ 14,300/- as of 2019).
- A complaint under the Lokpal Act should be in the prescribed form and must pertain to an offence under the Prevention of Corruption Act, 1988 against a public servant.
- The Lokpal is vested with the power of search and seizure and also powers under the Civil Procedure Code for the purpose of conducting preliminary inquiry & investigation and power of attachment of assets and taking other steps for eradication of corruption.
- Lokpal will have power of superintendence and direction over any central investigation agency including CBI for cases referred to them by the Lokpal.

- Lok Adalats have been given statutory status under the Legal Services Authorities Act, 1987.
- Under the said Act, the award (decision) made by the Lok Adalats is deemed to be a decree of a civil court and is final and binding on all parties and no appeal against such an award lies before any court of law.
- If the parties are not satisfied with the award of the Lok Adalat though there is no provision for an appeal against such an award, but they are free to initiate litigation by approaching the court of appropriate jurisdiction by filing a case by following the required procedure, in exercise of their right to litigate.
- There is no court fee payable when a matter is filed in a Lok Adalat.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

Q. Consider the following statements regarding the Lokpal and Lokayuktas Act, 2013:

1. It has provisions for punishment for false and frivolous complaints.
2. It allows civilians to file anonymous complaints against public servants.
3. The maximum deadline for filing a complaint is 5 years after the occurrence of the incident of corruption.

How many of the above statements are correct?

- (a) Only one (b) Only two
- (c) All three (d) None

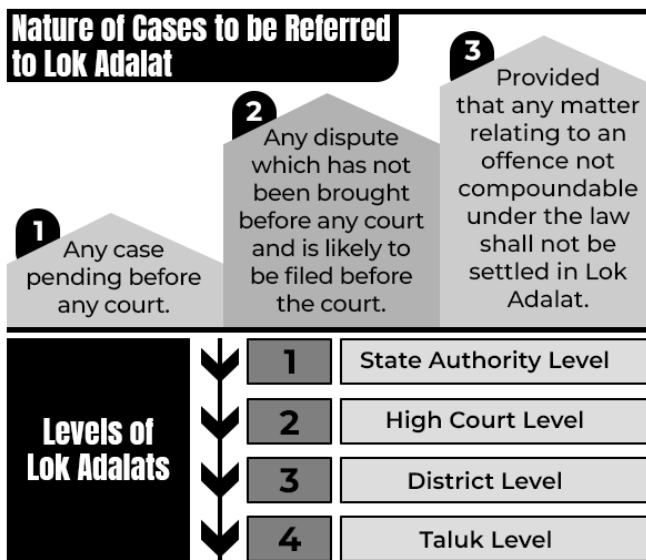
(b) Answer

NATIONAL LOK ADALAT

Why in News: Recently, over 1.14 crore cases settled at 3rd National Lok Adalat of 2024 organized by National Legal Services Authority (NALSA).

About Lok Adalat

- NALSA along with other Legal Services Institutions conducts Lok Adalats.
- Lok Adalat is one of the alternative dispute redressal mechanisms, it is a forum where disputes/cases pending in the court of law or at pre-litigation stage are settled/compromised amicably.



National Lok Adalat

National Level Lok Adalats are held for at regular intervals where on a single day Lok Adalats are held throughout the country, in all the courts right from the Supreme Court till the Taluk Levels wherein cases are disposed off in huge numbers.

Permanent Lok Adalat

- Permanent Lok Adalat is organized under Section 22-B of The Legal Services Authorities Act, 1987.
- Permanent Lok Adalats have been set up as permanent bodies with a Chairman and two members for providing compulsory pre-litigative mechanism for conciliation and settlement of cases relating to Public Utility Services like transport, postal, telegraph etc.
- The Award of the Permanent Lok Adalat is final and binding on all the parties. The jurisdiction of the Permanent Lok Adalats is upto Rs. Ten Lakhs.

Mobile Lok Adalats are also organized in various parts of the country which travel from one location to another to resolve disputes in order to facilitate the resolution of disputes through this mechanism.

EXPECTED QUESTION FOR UPSC CSE**Prelims MCQ**

Q. With reference to the Lok Adalat, consider the following statements:

1. Central Government may increase the said pecuniary jurisdiction from time to time.
2. After an application is made to the Permanent Lok Adalat, no party to that application shall invoke jurisdiction of any court in the same dispute.
3. Every award made by the Permanent Lok Adalat shall be final and binding on all the parties.

How many of the above statements are correct?

- (a) Only one (b) Only two
(c) All three (d) None

Answer: (c)

winners and the completion of all formalities, has to be completed before that date.

- The ECI works backwards from that date, planning the schedule based on the weather, availability of security forces, festivals, training of officers, procurement of EVMs, etc.
- Before finalising the schedule, the ECI visits the state to take inputs from the administrative and police machinery.
 - It also tries to club together voting in all states where polls are due around the same time.
- Usually, a special summary revision of the electoral roll starts a few months before elections are due.

Delhi's Case - Delhi is not a full state

- In Delhi, the Government of National Capital Territory of Delhi Act, 1991, applies.
- Section 6(2)(b) of the Act says the Lieutenant Governor may from time to time dissolve the Assembly, even if a Chief Minister of Delhi recommends the dissolution of the Assembly, the final say is the Centre's (through the LG).

LAWS RELATED TO EARLY ASSEMBLY ELECTIONS

Why in News: Delhi CM Arvind Kejriwal had recently declared his resignation and demanded for early elections.

Decision on Assembly Elections

- Under Article 324 of the Constitution, the powers of superintendence, direction, and control of elections are vested in the Election Commission of India (ECI).
 - The ECI works backwards from the date on which the five-year term of the existing House ends, ensuring that the election process is completed before then.
- Section 15(2) of The Representation of the People Act, 1951, says the election cannot be notified less than six months before the end of the term of the Assembly — unless the Assembly is dissolved before it completes its term.
- Article 174(2)(b) of the Constitution says the Governor may from time to time dissolve the Legislative Assembly.
 - The Council of Ministers can recommend dissolution of the House to the Governor before the end of its term, forcing a decision.
 - Once the Assembly has been dissolved, the ECI has to conduct fresh elections within six months.

Things Considered by ECI before deciding Assembly Election Schedule

- The new Assembly has to be in place before the end of the current Assembly's term, which means the election process, including giving certificates of election to the

EXPECTED QUESTION FOR UPSC CSE**Prelims MCQ**

Q. Consider the following statements with reference to the Election Commission of India:

1. It is a single member body.
2. The Election Commissioner is appointed by the Prime Minister.
3. Provisions for the Election Commission are made under Article 324 of the Constitution of India.

How many of the above statements are correct?

- (a) Only one (b) Only two
(c) All three (d) None

Answer: (a)

STATE FINANCE COMMISSION

Why in News: The Kerala Government recently constituted the 7th State Finance Commission, with a two-year tenure.

Key Details

- The Commission, chaired by former Planning Board member KN Harilal, will comprise the Principal Secretary of Local Self-Government Department and the Additional Chief Secretary of Finance Department as members.
- The Commission's primary objectives include reviewing the financial status of panchayats and municipalities, submitting recommendations, and determining the types

of taxes, surcharges, cess, and fees that can be levied on these local bodies. Additionally, it will strive to enhance their financial positions.

- This policy will also empower local governments to make effective contributions to disaster management, ensuring a more resilient and sustainable future for Kerala's communities.

PRELIMS SPECIAL

State Finance Commission

- Article 243I of the Indian Constitution prescribes that the Governor of a State shall, as soon as may be within one year from the commencement of the Constitution (Seventy-third Amendment) Act, 1992, and thereafter at the expiration of every fifth year, constitute a Finance Commission to review the financial position of the Panchayats and to make recommendations to the Governor as to:
 - The principles which should govern
 - ◆ The distribution between the State and the Panchayats of the net proceeds of the taxes, duties, tolls and fees leviable by the State, which may be divided between them under this Part and the allocation between the Panchayats at all levels of their respective shares of such proceeds;
 - ◆ The determination of the taxes, duties, tolls and fees which may be assigned as, or appropriated by, the Panchayats;
 - ◆ The grants-in-aid to the Panchayats from the Consolidated Fund of the State;
 - The measures needed to improve the financial position of the Panchayats;

- Any other matter referred to the Finance Commission by the Governor in the interests of sound finance of the Panchayats.
- Article 243Y of the Constitution further provides that the Finance Commission constituted under Article 243 I shall make similar recommendation vis-a-vis municipalities.
- The Governor is required to cause every recommendation made by the State Finance Commission together with an explanatory memorandum as to the action taken thereon to be laid before the Legislature of the State.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

- Q. Which of the following are among the major functions of the State Finance Commissions?
1. The commission in all the states review the financial position of the Panchayats.
 2. It reviews the economic condition of the various municipal bodies that are there in the state.
 3. It determines the taxes, tolls, duties, and fees that may be levied by the various municipal bodies only.

Select the correct answer using the codes given below:


- | | |
|------------------|------------|
| (a) 2 and 3 only | (b) 2 only |
| (c) 1 and 2 only | (d) 3 only |

Answer: (c)

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INDIA AND SINGAPORE RELATIONS

Why in News: India and Singapore elevated their bilateral ties to a “comprehensive strategic partnership” and signed four MoUs, including on cooperation in semiconductors.

Key Details

- **On South China Sea:** Both leaders expressed hope for the early conclusion of a substantive and effective Code of Conduct in the South China Sea in accordance with international law, especially UNCLOS, that does not prejudice the legitimate rights and interests of all nations including those not party to these negotiations
- **Act East Policy:** PM Modi said Singapore is an important facilitator of India’s Act East policy.
- **Trade relations:** Over the past 10 years, our trade has more than doubled.
 - With an investment of around US\$ 160 billion in the Indian economy, is a leading economic partner for India.
 - Singapore was the first country with which we launched the UPI person-to-person payment facility.
- **Tech cooperation** In the past decade, 17 satellites of Singapore have been launched from Indian soil.
 - The cooperation has gained momentum, from skilling to the defence sector.
 - The agreement between Singapore Airlines and Air India has strengthened connectivity.
 - In 2025, the India-Singapore relationship will celebrate its **60th** anniversary. To mark this occasion, PM Modi called on both countries to collaborate on an action plan.

Four Memorandum of Understanding (MoU)

- **The first MoU** was signed between India’s Ministry of Electronics and Information Technology and Singapore’s Ministry of Digital Development and Information for cooperation in the field of digital technologies.
 - It will facilitate closer cooperation between India and Singapore in the areas of digital technologies, such as DPI, cyber-security, 5G and emerging technologies such as Super-computing, Quantum Computing and Artificial Intelligence.
- India’s Ministry of Electronics and Information Technology and Singapore’s Ministry of Trade and

Industry signed second **MoU on the India-Singapore Semiconductor Ecosystem Partnership.**

- Under this agreement, India and Singapore will cooperate in the areas of semiconductor cluster developed, cultivation of talent in semiconductor design and manufacturing.
- Notably, Singaporean companies, which are part of global semiconductor value chains are keen to invest in India. Dialogue mechanisms set under this MoU will facilitate their investments in India.
- **The third MoU** was signed between India’s Ministry of Health and Family Welfare and Singapore’s Ministry of Health on cooperation in the field of health and medicine.
 - This agreement will facilitate joint efforts on research and innovation in areas of mutual interest.
 - The MoU also aims to promote closer cooperation in the areas of human resource development in the healthcare and pharmaceutical sectors.
- India’s Ministry of Skill Development and Entrepreneurship and Singapore’s Ministry of Education also signed an **MoU on educational cooperation and skills development.**
 - The agreement aims to promote closer cooperation in the areas of technical and vocational education and training.
 - India and Singapore have active collaboration in the area of skill development. This MoU will complement those ongoing initiatives.

India - Singapore Relations

1. Historical Connect

- Close ties between India and Singapore have a history rooted in strong commercial, cultural and people-to-people links across a millennium. India was one of the first countries to recognize Singapore in 1965.

2. High-Level Exchanges

- Foreign Minister Vivian Balakrishnan visited India in March 2023 (for G20 Foreign Ministers’ Meeting). EAM and Singapore Foreign Minister had several meetings on the sidelines of multilateral events, latest being ASEAN Meetings in Vientiane in July 2024.

3. Legal and Judicial Cooperation

- Chief Justice of India D.Y. Chandrachud was on an official

- **Dominance of India:** India is perceived to be a hegemonic power in the region. It is found that India's big brother role has turned out to be a major concern for other countries in the region. The geographical position of India has also contributed to sustain its hegemony.
- **Lack of Democracy in South Asia** impeded peace and development. Unstable political conditions are definitely a major barrier to progress and development of the region.
- **Lack of Communication and Bilateral dialogues** between the people/business groups of the region and the government organisations has also affected the progress of SAARC.

Relevance of SAARC in Contemporary World

- **Security:** SAARC can play a constructive role in order to ensure peace and development in the region. Organised crimes, terrorism, drug and human trafficking are some of the common security concerns across the SAARC nations.
- **Economic integration:** The process of effective economic integration can only be materialized by a strong initiative of SAARC. A common currency can be introduced among the SAARC member countries just like the Euro in the European Union.

Note: The SAARC Currency Swap Facility came into operation on November 15, 2012. Under the Framework for 2024-27, a separate INR Swap Window has been introduced with various concessions for swap support in Indian Rupee.

- **Connectivity:** In the realm of connectivity SAARC has a big role to play in order to improve transport and road to ensure more trade activities.
- **Dispute resolution:** Besides SAARC needs to setup a dispute resolution mechanism to overcome the disputes among its member states mainly India and Pakistan.
- **In social sector:** By improving food security, health security, personal security, community security, ecological security and political security.
- **Cooperation against Climate Change:** Countries like Maldives, Bangladesh and Srilanka are severely affected due to the changing climatic patterns.
- **Education:** In the sphere of education more universities like the South Asian University which was set up in 2010 at New Delhi should be established so that there can be more interactions among students and teachers.

The South Asia Free Trade Agreement (SAFTA)

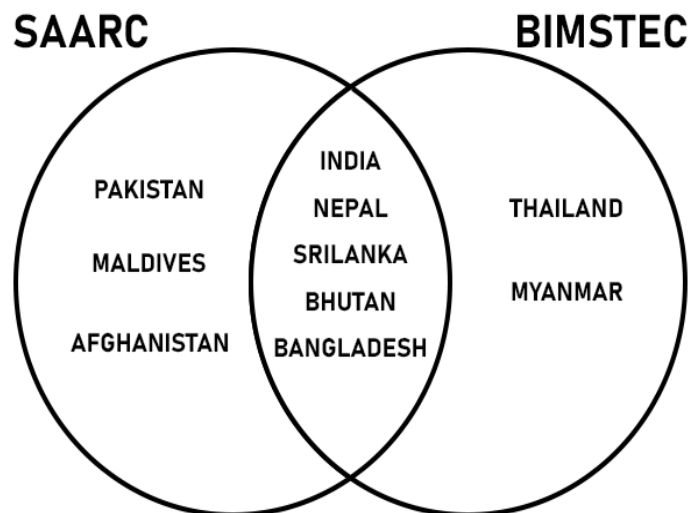
- It was signed during the 12th SAARC Summit held at Islamabad in January 2004 and came into force from 1st January 2006.
- All member countries of SAARC namely India, Pakistan, Sri Lanka, Bangladesh, Nepal, Bhutan, Maldives and Afghanistan have agreed to implement SAFTA.

SAARC Summit

- The SAARC has not been very effective since 2016, as its biennial summits have not taken place since the last one in Kathmandu in 2014.
- The 2016 SAARC Summit was to be held in Islamabad. But after the terrorist attack on an Indian Army camp in Uri in Jammu and Kashmir. India expressed its inability to participate in the summit.
- The summit was called off after Bangladesh, Bhutan and Afghanistan also declined to participate in the Islamabad meet.

Difference Between SAARC and BIMSTEC:

SAARC		BIMSTEC
A regional organisation looking into South Asia.	1	Interregional organisation connecting South Asia and South East Asia.
Established in 1985; a product of the Cold War era.	2	Established in 1997 in the post-Cold War era.
Member countries suffer for mistrust and suspicion.	3	Members maintain reasonably friendly relations.
Suffers from regional politics.	4	Core objective is the improvement of economic cooperation among countries.
Asymmetric power balance.	5	Balancing of power with the presence of Thailand and India on the bloc.
Intra-regional trade only 5 percent.	6	Intra-regional trade has increased around 6 percent in a decade.



Conclusion

While South Asian countries have signed trade treaties, the lack of political will and trust deficit has prevented any meaningful movement. India should take the lead and work with its neighbours to slash the tariff and non-tariff barriers. There's a need to resuscitate the negotiations on a SAARC investment treaty, pending since 2007. Deeper regional economic integration will create greater interdependence with India acquiring the central role, which, in turn, would serve India's strategic interests too.

GREAT POWER COMPETITION IN THE INDIAN OCEAN REGION

Why in News: Recently, India's guided-missile destroyer, INS Mumbai, and three Chinese warships all arrived at the Colombo port in Sri Lanka on the same day.

Key Details

- Sri Lanka has welcomed both INS Mumbai and the Chinese warships "in compliance with naval traditions." Meanwhile, INS Mumbai and the Chinese warships were scheduled to separately conduct "passage exercises" with the Sri Lankan navy upon their departure.
- The Indian Navy closely monitored the three Chinese warships -- destroyer Hefei, and amphibious ships Qilianshan and Wuzhishan -- from their entry into the IOR until they docked at Colombo.
- This growing Chinese naval presence poses significant challenges for India, with upcoming Sri Lankan Presidential elections potentially impacting regional dynamics.

Relevance of the Indian Ocean Region (IOR)

- **Geostrategic importance:** Extending from the eastern coast of Africa to the western coast of Australia, the IOR accounts for one-fifth of the water on Earth's surface. Its vast maritime and continental expanse encompasses

nearly 38 countries ranging from continental islands to archipelagos and has long been a crossroads for merchants, marines, and navies.

- **Geo-political Importance:** Further, amid intensifying geopolitical competition, cooperation with island territories deepens New Delhi's influence in its maritime neighborhood and beyond through extended areas of jurisdiction in the IOR, like the Reunion islands (France) and Cocos Islands (Australia). ~ India's respect for sovereignty and strategy autonomy positions the country well to emerge as the preferred regional partner.
- **Geo-economic Importance:** The region is rich in hydrocarbon resources like oil and natural gas, fertile fishing grounds along the coastlines, and rare earth materials like polymetallic nodules. Moreover, transit routes bridge the East and the West and supplement economies across the Indo-Pacific, especially through important choke points, such as the Straits of Malacca, Straits of Hormuz, Bab el Mandeb, and Ombai and Wetar Straits.
- **Cultural Ties:** Historically, India has served as the resident power in the IOR and its littorals. Occupying 40% of strategic waters, India's national interests are inherently tied to the region's dynamics. India is centrally located, shares civilization ties, and has strong diasporas in many of the countries across the IOR.



India's Engagement in the IOR

- **Diplomacy and Capability Building:** India has increased its diplomatic footprint through various high-level visits to promote island diplomacy. Initiatives such as Security and Growth for all in the Region (SAGAR). For example, the Indian Navy also provided medical assistance teams and food aid during the COVID-19 pandemic.
- **Information Dominance:** In 2018, New Delhi launched the Information Fusion Centre – Indian Ocean Region (IFC-IOR) to better address challenges like illegal fishing, drug smuggling, and human trafficking. The government also approved National Maritime Domain Awareness Project, which will provide “actionable intelligence” to deal with maritime threats.
- **Military Might:** India must clarify its military position in the IOR. While the Indian Navy has started mission-based deployments and enhanced its presence in the region, India remains committed to *atmanirbharta* (“self-reliance”). India should extend defense engagement to small island nations, focusing on military operations other than war.
- **Economic Prowess:** India has launched a Trilateral Development Corporation (TDC) fund that will bring in the private sector to boost investments and undertake infrastructure projects in the Indo-Pacific region. If India aspires to play a leading role in the region, deeper bilateral economic engagements are essential.

Factors Responsible for China-India Strategic Rivalry in the IOR

- China's recent development of its strategic partnership with Indian rival Pakistan through the China-Pakistan Economic Corridor (CPEC), a key project in China's BRI;
- China's strategic, trade, investment and diplomatic advances in Bangladesh, Burma (Myanmar), Nepal, and Sri Lanka.
- China's expanding naval and military presence in the IOR including the new military base at Djibouti (and potentially another in Pakistan) as well as increased naval presence in the Indian Ocean.
- India's decision not to join China's BRI over sovereignty concerns related to CPEC projects in Kashmir.
- Border disputes including China's claim to the Indian state of Arunachal Pradesh and China and India's border standoff at Doklam in Bhutan.
- China's opposition to India joining the Nuclear Suppliers Group and to it becoming a permanent member of the United Nations Security Council.
- India's Act East Policy including developing relations with Vietnam
- China's role in blocking the designation of certain anti-India terrorists at the United Nations;
- The two nations' starkly different political systems (India

is the world's largest democracy and China is presenting its authoritarian system as a model for the world).

India's Evolving Maritime Strategy

From 2004-2015

- In 2004, the Indian navy published its first maritime doctrine “Freedom of use of seas-Indian maritime military strategy,”. This doctrine emphasized the role of the Indian navy in allowing India to “use” Indian Ocean waters for its national interest.
- In that time period, India still understood itself as an emerging power with a limited naval force, confined to coastal waters.
- In 2009 India replaced “doctrine” with “strategy” and committing to “secure” waters in the Indian Ocean, rather than simply “using” them. In addition to its stronger language on the use of force, the doctrine defined the Indian navy's areas of interest.
- India's most recent maritime doctrine was updated in 2015, with an explicit emphasis on becoming regional “strongman” and to countering the growing Chinese presence in IOR. While its maritime doctrine has not been updated again, events since suggest further that India is cementing its approach as a maritime strongman in the IOR.
- The 2015 document was the first time India used the term “Indo-Pacific.” The transition from the Asia-Pacific to Indo-Pacific illustrates India's enhanced centrality to regional politics.
- India expanded its areas of interest from the 2009 doctrine. The adjacent areas to Indian territories, for instance, the Arabian Sea and the Bay of Bengal were termed as primary areas of interest, while the southern portion of the Indian Ocean between Australia and South Africa was called as secondary area of interest.

Post-2015 Developments

- The shift in world view from Euro-Atlantic to an Indo-Pacific focus and the repositioning of economic and military posture towards Asia has resulted in significant economic, political, and social changes in the IOR and has tangibly impacted the Indian maritime environment.
- In the revised 2015 doctrine, India enhanced both areas of interest. The important choke points on the Western and Eastern sides: Strait of Hormuz, Strait of Bab el Mandab, Strait of Malacca, Strait of Lombok, Strait of Sunda, and Strait of Ombai in South-Eastern Asia were included in primary areas of interest. The Mediterranean Sea, Atlantic Ocean, and far-flung areas of the Pacific, meanwhile, were termed secondary areas of interest.
- The doctrine focused on the Indian role as a **net security provider**, offerings security to other regional stakeholders. In this doctrine, India did not explicitly define its partners, but outlined the methods it would use to build security ties. For this purpose, India is accelerating its domestic defense industry and practicing new tactics and technologies as shown in the Malabar naval exercises, with participation from Quad members and Indonesia.
- In pursuit of its ambitions, India has carried out several

bilateral and multilateral agreements for deepening defense cooperation with the United States and littoral states. India and the United States carried out Basic Exchange and Cooperation Agreement (BECA) in 2020, Logistic Exchange Memorandum of Agreement (LEMOA) in 2016, and Communication Compatibility and Security Agreement (COMCASA) in 2018 to deepen defense cooperation in the naval domain, particularly amid China's rise in IOR.

- Apart from bilateral agreements and deals, India is also extending its tentacles through multilateral forums, including the Quadrilateral Security Dialogue (QUAD), Security and Growth for All in Region (SAGAR) and Indian Ocean Naval Symposium.

Conclusion

India's approach should not be developed as a race against any country in the Indian Ocean Region, which will instead point towards short-sightedness and frivolous approach of New Delhi. Instead, it should be driven by the holistic and sustainable development of these islands that value their interest first.

PACIFIC POLICING INITIATIVE

Why in News: Australia & Pacific Leaders Endorse Pacific Policing Initiative to Counter China's Influence.

Pacific Policing Initiative (PPI)

- It is a major regional initiative to strengthen collective peace and security throughout the Pacific.
- The PPI will boost the capability of Pacific nations to meet law and order and internal security requirements, and to support each other in times of need.

- **The PPI has three pillars:**
 - Up to four regional police training Centres of Excellence, located in the Pacific, to enhance policing capabilities through specialist training and operational support for Pacific police personnel.
 - The Pacific Police Support Group (PPSG) - a multi-country police capability, with a ready pool of trained Pacific police to deploy in response to Pacific country requirements, such as for major event management or additional capacity in times of crisis.
 - A PPI Policing Development and Coordination Hub to be hosted in Brisbane – including access to state of the art AFP facilities for training and to prepare for any PPSG deployments.
- The PPI is a practical contribution to the Pacific Islands Forum's peace and security vision outlined in the 2050 Strategy for the Blue Pacific Continent.

The Pacific and China

- The South Pacific, dotted with small and vulnerable island states, has become a battleground for influence between China and the traditional benefactors of Australia, New Zealand, and the USA.
- New Zealand's "Maritime Security Strategy 2024" has stated "Increased strategic competition in the Pacific will produce a more contested environment with a proliferation of military installations, competing infrastructure investments and more attempts to influence regional bodies."
- The Solomon Islands signed a security agreement with China in early 2022. This agreement included provisions for "China to send police, armed police, military personnel and other law enforcement to the Solomon Islands to assist in maintaining social order, protecting people's lives and property and providing humanitarian assistance."



- Debt-trap diplomacy is another concern for the region. Tonga, Samoa and Vanuatu are among the most heavily indebted nations to China. The former owes more than 50 per cent of its public debt to Beijing. Moreover, China’s fishing fleet is the worst offender in terms of illegal, unreported and unregulated (IUU) fishing in the Pacific.
- The Pacific Islands Forum Security Outlook from 2023 stated that “competing and nonaligned security partners could overwhelm and subsequently undermine peace and security efforts in the region”.

3. Phillippines 4. Indonesia

How many of the above countries are members of Pacific Islands Forum?

(a) Only one (b) Only two

(c) All three (d) None

Answer: (b) (1 and 2 only)

PRELIMS SPECIAL

Pacific Islands Forum

- Founded in 1971, the Pacific Islands Forum is the region’s top political and economic organisation, with 18 members across the Pacific Ocean.
- The Pacific Islands Forum brings the region together to address pressing issues and challenges, and foster collaboration and cooperation in the pursuit of shared goals.
- **Vision** is for a resilient Pacific region of peace, harmony, security, social inclusion and prosperity, that ensures all Pacific peoples can lead free, healthy and productive lives.
- **18 Members:**
 - Australia
 - Cook Islands
 - Federated States of Micronesia
 - Fiji
 - French Polynesia
 - Kiribati
 - Nauru
 - New Caledonia
 - New Zealand
 - Niue
 - Palau
 - Papua New Guinea
 - Republic of Marshall Islands
 - Samoa
 - Solomon Islands
 - Tonga
 - Tuvalu
 - Vanuatu

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

Q. Consider the following countries:

1. Australia 2. New Zealand

GULF COOPERATION COUNCIL (GCC) INDIA

Why in News: India and the Gulf Cooperation Council (GCC) recently adopted a Joint Action Plan for 2024-2028 to facilitate joint ventures in various sectors including energy, trade, security, agriculture, health, and food security.

Key Details

- The Gulf region holds geostrategic significance not only due to its geographic proximity to India but also because of the shared pursuit of peace and security.
- Additionally, it is one of India’s largest trading partners; its substantial gas and oil reserves are crucial for India’s energy security, and it hosts a large Indian expatriate community.
- India’s Foreign Minister stressed upon the expeditious finalization of the India-GCC Free Trade Agreement (FTA)
 - He also held separate bilateral talks with his counterparts from Qatar, Saudi Arabia, Oman, Kuwait, and Bahrain on the sidelines of the Strategic Dialogue.

Bilateral Partnerships that have Characterized India’s Foreign Policy in West Asia

- The Comprehensive Economic Partnership Agreement signed between India and UAE in 2022.
- The Strategic Partnership Council (SPC) established in 2019 between India and Saudi Arabia which convened its first meeting in 2023.
- India’s turn towards Iraq for crude oil imports following the Red Sea Crisis in 2023.
- A twenty-year deal signed in 2024 for supply of LNG from Qatar to India.
- Agreements signed with the UAE and Saudi Arabia in late 2023 to collaboratively work on transitioning towards clean energy sources such as wind and solar energy by 2030.
- Conducting joint military exercises such as Al Nagah with Oman and Zayed Talwar with the UAE.
- Periodic maritime exercises conducted by naval forces of Oman, Saudi Arabia, Kuwait, Qatar, and the UAE with India in the western IOR and the Arabian Sea.

- In May 2024, India and Iran signed a ten-year contract to develop and operate the Iranian port of Chabahar. For this project, India has pledged to invest \$120 million in infrastructure development and extend a \$250 million line of credit to Iran.

Importance of Gulf Cooperation Council

- **Agriculture & Food Security:** In light of the rising global concerns over food supply chains, strengthening agricultural ties with GCC countries for leveraging technological innovations such as climate-resilient crops and water-efficient farming methods will be vital for securing food security in India.
- **E-Commerce:** India should invest more in e-governance and e-commerce infrastructure to fully capitalize on trade agreements like the CEPA and the IMEEC. It will also expand market access for Indian businesses abroad while providing the necessary impetus for finalizing the FTA between India and the GCC.
- **Energy Transition & Green Technologies:** As the world inches closer to 2030, India and the GCC countries must strengthen their cooperation to achieve energy transition goals. Knowledge-sharing platforms on green technology and actively investing in them should be a major focus area for India.
- **Strategic Trade Routes & Maritime Security:** Prompt conclusion of the FTA between India and the GCC is the need of the hour for long-term institutionalization of India-GCC relations. India must build on the momentum it has gained in maritime influence and build robust sea lanes for trade as well as communication, especially in the Arabian Sea and IOR. Moreover, enhancing naval cooperation to safeguard critical waterways, expanding joint military exercises, and intelligence-sharing in the region could further bolster India’s role as a peacemaker in West Asia.
- **Expatriate Welfare:** With approximately 8.9 million Indian workers populating the Gulf, continued efforts to safeguard their welfare remain critical. India must prioritize strong labor laws, remittance frameworks, and social security benefits for the Indian expatriate community. This will ensure that India’s ties with the GCC remain people-centric while increasing avenues for cultural exchanges.
- **Balancing Geostrategic Interests:** In maintaining strong partnerships with diverse actors such as Iran, Israel, Saudi Arabia, and Palestine, India walks a geopolitical tightrope on which it must traverse cautiously. Though India has played a commendable role in regional mediation efforts so far, contingency planning to shield itself from political volatility in the Middle East would be a wise move.

Conclusion

The India-GCC Joint Action Plan 2024-2028 marks a significant milestone in India’s West Asia policy, reinforcing its commitment to deepening ties with the Gulf region. By

fostering cooperation in emerging areas, India is poised to play a pivotal role in championing progress and prosperity—not only in India, but also in West Asia altogether. The India-GCC dynamic will not only bolster India’s influential position in geopolitics but also contribute to its broader vision of sustainable development and regional peace.

PRELIMS SPECIAL

About Gulf Cooperation Council

- The Gulf Cooperation Council is a regional, intergovernmental, political, and economic union comprising Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates.
- The council’s main headquarters is located in Riyadh, the capital of Saudi Arabia.
- The Gulf Cooperation Council was founded in 1981 with a charter. The Charter of the GCC was signed on 25 May 1981, formally establishing the institution.
- All current member states are monarchies, including three constitutional monarchies (Qatar, Kuwait, and Bahrain), two absolute monarchies (Saudi Arabia and Oman), and one federal monarchy (the United Arab Emirates).
- There have been discussions regarding the future membership of Jordan, Morocco, and Yemen.
- The Peninsula Shield Force is the military arm of the GCC, formed in 1984.



THE STRATEGIC CLEAN ENERGY PARTNERSHIP

Why in News: The Strategic Clean Energy Partnership (SCEP) Ministerial was recently convened by U.S. Energy Secretary and Indian Minister of Petroleum and Natural Gas in Washington D.C.

Key Details

- The ministerial discussions highlighted **five core pillars:**

Power and Energy Efficiency, Responsible Oil and Gas, Renewable Energy, Emerging Fuels and Technologies, and Sustainable Growth.

- The formal launch of the **Renewable Energy Technology Action Platform (RETAP)** in August 2023 was hailed as a milestone, supporting: collaboration in hydrogen, long-duration energy storage, offshore wind, and geothermal energy.
- Both countries emphasized the importance of research, development, and pilot projects to accelerate clean energy transitions.
- **Hydrogen sector:** In hydrogen sector, the two nations welcomed the establishment of India's National Centre for Hydrogen Safety and lauded their collaboration on the 2nd International Conference on Green Hydrogen held in September 2024.
- **Energy storage** It also emerged as a critical component of future cooperation, with the formal launch of the Energy Storage Task Force. The task force will address policy frameworks, safety, manufacturing, and supply chain issues.
- **Modernization of India's power distribution sector:** It was also a key point, with support for smart metering deployment and power market reforms. The ministers lauded India's ambition to achieve net-zero emissions for Indian Railways by 2030.
- **Sustainable aviation fuel (SAF)** cooperation took center stage, with both sides endorsing new engagement on SAF, including R&D and market development.
- **Carbon capture, utilization, and storage (CCUS)** The two sides identified potential areas of cooperation on geologic carbon storage and regulatory frameworks.
- **The U.S.-India Partnership to Advance Clean Energy-Research (PACE-R) program,** particularly the recently concluded UI-ASSIST initiative, was highlighted for advancing smart grid and energy storage technologies.

Conclusion

As the SCEP partnership continues to evolve, a renewed partnership underscores a shared vision between the US and India, emphasising not just the commitment to transitioning towards sustainable energy but also enhancing bilateral ties through strategic cooperation in the face of global environmental issues.

ABU DHABI CROWN PRINCE AL NAHYAN ARRIVES IN DELHI

Why in News: Crown Prince of Abu Dhabi recently visited India to strengthen bilateral ties in energy, connectivity, and trade, enhancing strategic partnership, amid escalating tensions in West Asia.

Areas of Cooperation between UAE and India

- **Cross-border transactions:** Both the countries signed a Comprehensive Economic Partnership Agreement (CEPA) in February 2022 and a Local Currency Settlement (LCS) System in July 2023 to promote use of Indian Rupee and AED (United Arab Emirates Dirham) for cross-border transactions.
- **Bilateral trade:** The two countries are among each other's top trading partners with a bilateral trade of about USD 85 billion in 2022-23, according to official data. The UAE was also among the top four investors in India in terms of foreign direct investments in 2022-23.
- **Large Expatriate:** 3.5 million-strong and vibrant Indian community forms the largest expatriate group in the UAE.
- **Special invitee for G20:** The UAE was invited as a special invitee for G20 during India's Presidency of the grouping.
- **Trilateral institution:** In February 2023, the India-UAE-France (UFI) trilateral was formally launched.
- **India's active support to UAE** With India's active support, the UAE joined Shanghai Cooperation Organisation (SCO) as a dialogue partner in May 2023. The UAE also joined BRICS (a grouping of Brazil, Russia, India, China and South Africa) as a member on January 1 with India's support.
- **Defence Cooperation:** The India-UAE defence cooperation has also witnessed a renewed momentum in the past few years. In January 2024, the first India-UAE bilateral army exercise 'Desert Cyclone' was held in Rajasthan.

PRELIMS SPECIAL

About UAE

- The United Arab Emirates (UAE), or simply the Emirates, is a country in West Asia, in the Middle East, at the eastern end of the Arabian Peninsula.
- It is a federal, elective monarchy composed of seven emirates, with Abu Dhabi as its capital.
- It shares land borders with Oman to the east and northwest, and with Saudi Arabia to the southwest; as well as maritime borders in the Persian Gulf with Qatar and Iran, and with Oman in the Gulf of Oman.
- As of 2024, the UAE has an estimated population of over 10 million, of which 11% are Emiratis; Dubai, is the most populous city, and is an international hub.
- Islam is the official religion and Arabic is the official language, while English is the most spoken language and the language of business.
- The United Arab Emirates' oil and natural gas reserves are the world's sixth and seventh-largest, respectively.

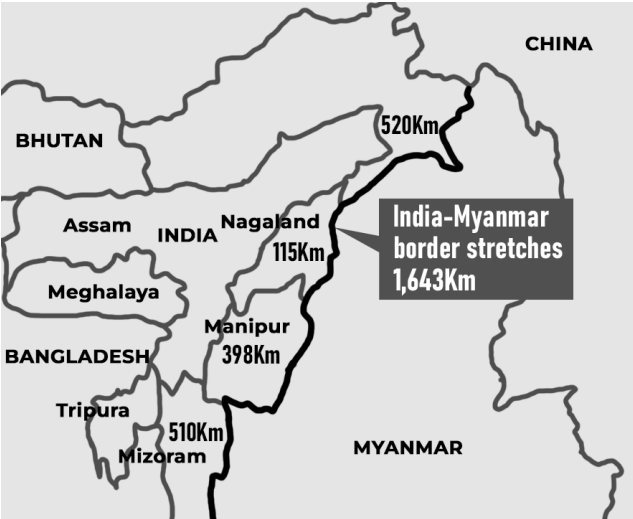


INDIA - MYANMAR BORDER

Why in News: The Cabinet Committee on Security has recently approved the construction of border fencing and roads along the India-Myanmar.

Key Details

- The entire 1,643 km porous India-Myanmar border, known for the smuggling of arms, ammunition and narcotics, will be fenced.
- This initiative follows the Indian government’s decision to revoke the Free Regime Movement (FMR) agreement with Myanmar which previously allowed people from both sides to cross the border up to 16 kms without a visa.



- The India-Myanmar border passes through Manipur, Mizoram, Nagaland and Arunachal Pradesh.

Security Concerns and Challenges along the India-Myanmar Border

- Being highly porous, poorly guarded and located along a remote, underdeveloped, insurgency-prone region and

proximate to one of the world’s largest five opium producing areas, the India–Myanmar border is vulnerable to the activities of insurgents and drugs and arms traffickers as well as criminals.

- For example, in 2023, Assam alone reported drug confiscations valuing INR 718 Cr (US\$86 million) and the apprehension of over 4,700 drug traffickers. Similarly, the year 2024 demonstrates a continuation of this concerning trend, as evidenced by drug seizure reports across several NER states.
- Another contributing factor is the influx of Myanmar refugees to India’s North Eastern Region (NER), especially in Mizoram and Manipur. Manipur has witnessed a significant rise in refugee numbers after the 2021 military coup.
- The complex topography along the Indo-Myanmar border, coupled with the shared ethnic ties among communities residing on either side, complicates the effective implementation of border fencing. Opposition from insurgent groups, and local communities in the NER can further exacerbate the existing tensions.

TURKEY SEEKS TO JOIN THE BRICS

Why in News: Turkey seeks to join the BRICS bloc of emerging economies

Key Details

- NATO member Turkey has applied for membership in the BRICS bloc of developing economies, a senior Kremlin official said on Wednesday (September 4, 2024), as Russia and China seek to counter the West’s global influence.
- Turkish President Recep Tayyip Erdogan has stated several times that his country aspires to become a member of the BRICS alliance, according to Omer Celik, a spokesman for Erdogan’s ruling party.

PRELIMS SPECIAL

About BRICS

- The BRICS alliance was founded in 2006 by Brazil, Russia, India and China, with South Africa joining in 2010.
- It recently has undergone an expansion, and now includes Iran, Egypt, Ethiopia and the United Arab Emirates.
- Saudi Arabia has said it’s considering joining, and Azerbaijan and Malaysia have formally applied.
- The BRICS countries are considered the foremost geopolitical rival to the G7 bloc of leading advanced economies, implementing competing initiatives such as the New Development Bank, the BRICS Contingent Reserve Arrangement, the BRICS pay, the BRICS Joint Statistical Publication and the BRICS basket reserve currency.



EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

Q. Find the correct answer to the given below statement:

Initiatives such as the New Development Bank, the Contingent Reserve Arrangement and Joint Statistical Publication are related to

- (a) QUAD
- (b) BRICS
- (c) NATO
- (d) IMF

Answer: (b)

- The Indian and Russian delegations expressed their intentions to intensify joint efforts to develop cooperation in emergency management, exchange best practices, including disaster monitoring and forecasting, training of rescue specialists and firefighters and extend cooperation between the eminent educational and research institutions in both the countries.

About Indo-Russian Joint Commission on Cooperation in Emergency Management.

- It is a bilateral platform that enhances collaboration between Russia and India in disaster management.
- It focuses on disaster risk reduction, training and capacity building, technical cooperation, humanitarian assistance, research and development, and policy formulation to improve preparedness, response, and recovery from disasters. This partnership strengthens both countries' abilities to manage emergencies effectively.
- The first meeting of the Indo-Russian Joint Commission on Cooperation in Emergency Management was held in New Delhi in 2016.
- It was decided that the next meeting of the commission will be held in India in 2026.

JOINT RUSSIAN- INDIAN COMMISSION ON THE COOPERATION IN THE FIELD OF EMERGENCY MANAGEMENT

Why in News: The Second Meeting of the Joint Russian-Indian Commission on the Cooperation in the Field of Emergency Management for (2025-2026) was recently held in Moscow, Russia

Key Details

- Both countries agreed to implement the plan during 2025-2026 and decided to continue the exchange of the best practices and lessons learnt in the field of disaster management.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

Q. Consider the following statements:

1. The Second meeting of the Indo-Russian Joint Commission on Cooperation in Emergency Management was held in St. Petersburg recently.

2. The Indo-Russian Joint Commission on Cooperation in Emergency Management is a bilateral platform that enhances collaboration between Russia and India in Climate Change management.

Which of the above statements are correct

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Answer: (d)

INDIA- BRUNEI RELATIONS

Why in News: India and Brunei recently elevated the bilateral ties to “Enhanced Partnership” as Prime Minister of India held talks with Sultan Haji Hassanal Bolkhiah discussing defence, trade and energy among other topics.

Key Highlights of the Meeting

- The two leaders met amid tensions in the South China Sea, where Chinese and Philippine Coast Guard vessels jostled over an island situated just 138 kilometres from the Philippines’ west coast and 1,200 kilometres from China’s southernmost province of Hainan.
- Both leaders reiterated their commitment to maintaining and promoting peace, stability, maritime safety and security, as well as respecting freedom of navigation and overflight and unimpeded lawful commerce, consistent with international law, the United Nations Convention on the Law of the Sea (UNCLOS) 1982.
- Prime Minister of India had emphasised the important of Brunei as partner in India’s Act East Policy and Indo-Pacific Vision, highlighting shared “cultural linkages for centuries” and that the deep cultural traditions are the basis of the bilateral friendship.
 - **Note:** India is looking at capitalising on Brunei’s potential to tap into its China+1 strategy. India also has vital stakes in the South China Sea, as almost 55 per cent of its trade passes through the disputed waters.
- On defence, the joint statement said that both leaders acknowledged the importance of enhancing defence and maritime cooperation including through regular exchanges of visits, training programmes, joint exercises and visits of naval and coast guard ships between both countries.
- The Prime Minister expressed deep appreciation to Brunei Darussalam for continuing to host the Indian Space Research Organisation (ISRO)’s Telemetry Tracking and Telecommand (TTC) Station.

PRELIMS SPECIAL

About Brunei

- Brunei, officially Brunei Darussalam, is a country in Southeast Asia, situated on the northern coast of the island of Borneo
- Capital - Bandar Seri Begawan.
- The government of Brunei is a constitutional absolute monarchy ruled by the Sultan.
- The small nation has a coastline with the South China Sea and is surrounded by its bigger neighbor, Malaysia.
- The nation gained its independence from the British in 1984 and has since seen its population rise to 428,000.



EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

Q. Which Island is geographically related to Brunei?

- (a) Jawa island
- (b) Sumatra island
- (c) Borneo island
- (d) Sulawesi island

Answer: (c)

INDUS WATER TREATY

Why in News: India is seeking “review and modification” of the Indus Water treaty (IWT).

Key Details

- A year-and-a-half after New Delhi issued a notice to Islamabad seeking the “modification” of the Indus Waters Treaty (IWT) in January 2023, India has once again sent a

formal notice to Pakistan, this time seeking the “review and modification” of the treaty.

- The word “review” effectively signals New Delhi’s intent to revoke and renegotiate the 64-year-old treaty.

- In effect, the Indus Waters Treaty gave India about 30% of the water carried out by the “Indus Rivers System” while Pakistan got 70% of the waters.

PRELIMS SPECIAL

About Indus Water Treaty

- The treaty between India and Pakistan was signed on September 19, 1960, for the use of water available in the Indus and its tributaries. It was signed in Karachi by then Prime Minister Jawaharlal Nehru and then Pakistan President Mohammed Ayub Khan after nine years of negotiations arranged by the World Bank.

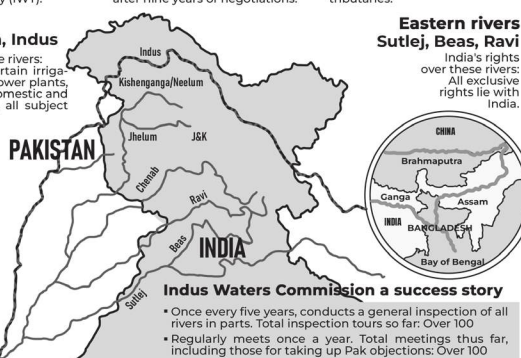
The Indus Waters Treaty (IWT)

- The distribution of waters of the Indus and its tributaries between India and Pakistan is governed by the Indus Water Treaty (IWT).
- Was signed on Sept 19, 1960, between India, Pakistan and a representative of World Bank after nine years of negotiations.
- Partition of India cut across the Indus river basin, which has the Indus river, plus five of its main tributaries.

Western rivers

Chenab, Jhelum, Indus

India's rights over these rivers: Limited to set up certain irrigation, run-of-the-river power plants, very limited storage, domestic and non-consumptive use, all subject to conditions



Eastern rivers

Sutlej, Beas, Ravi

India's rights over these rivers: All exclusive rights lie with India.

Indus Waters Commission a success story

- Once every five years, conducts a general inspection of all rivers in parts. Total inspection tours so far: Over 100
- Regularly meets once a year. Total meetings thus far, including those for taking up Pak objections: Over 100

- According to the IWT, India enjoys the “unrestricted use” of the three “Eastern Rivers (Beas, Ravi, Sutlej) except as otherwise expressly provided” whereas Pakistan got control of the three “Western Rivers (Indus, Chenab, Jhelum).
- According to Article III (1) of the IWT, “India is under obligation to let flow” waters of the Western Rivers to Pakistan.

Why does India want to renegotiate IWT?

- Among New Delhi’s concerns are the “change in population demographics, environmental issues and the need to accelerate development of clean energy to meet India’s emission targets, and the impact of persistent cross-border terrorism”.
- Moreover, the two notifications come amidst a prolonged controversy over the construction of two hydel power projects by India in Jammu & Kashmir — one on Kishanganga, a tributary of Jhelum, in Bandipora district, and the other (Ratle Hydroelectric Project) on Chenab in Kishtwar district.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

Q. Consider the following statements about Indus Water treaty:

1. The treaty between India and Pakistan was signed on September 19, 1960 arranged by the United Nations.
2. According to the IWT, India enjoys the “unrestricted use” of the three “Eastern Rivers i.e. Ravi, Beas and Sutlej.

Which of the above statements are correct:

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Answer: (b)

Free Initiative by Chahal Academy **CCHAHAL**

What to Read in The Hindu

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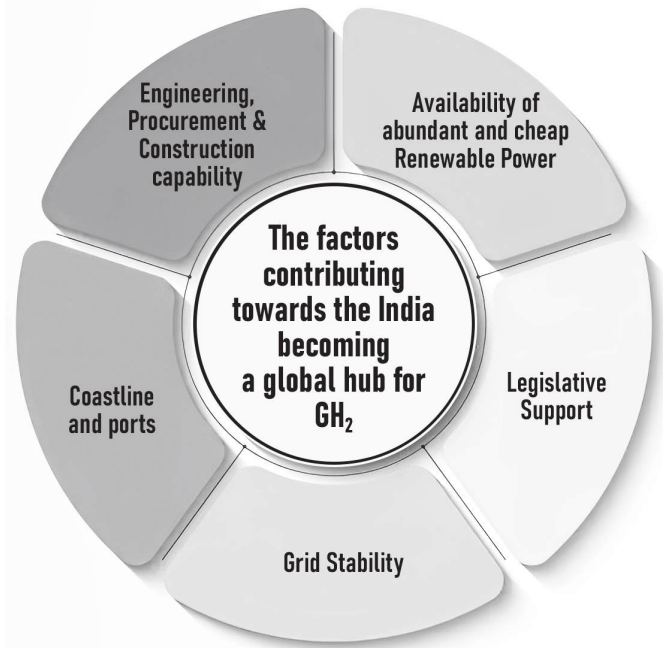
ECONOMY & AGRICULTURE

INTERNATIONAL CONFERENCE ON GREEN HYDROGEN

Why in News: The Prime Minister recently addresses second International Conference on Green Hydrogen(GH₂).

Key Details

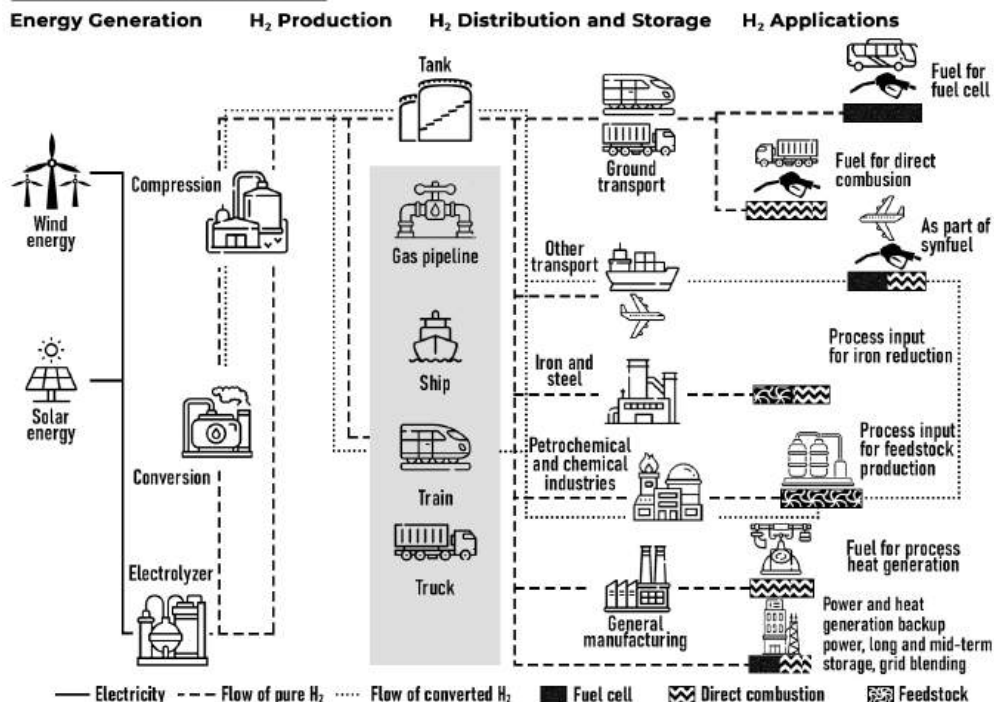
- The **International Conference on Green Hydrogen (ICGH-2024)** aiming to foster collaboration and innovation in the green hydrogen space, with a focus on establishing India as a leader in the global green hydrogen ecosystem.
- PM highlighted India's commitment to build a cleaner, greener planet to become a global leader in green hydrogen, positioning it as the cornerstone of the country's decarbonization efforts.
- **Note:** India has a huge potential to become the world leader in Green Hydrogen. India's target is not only to meet its power demand but to become an exporter of Green Hydrogen in the world.



An Overview of Hydrogen Ecosystem

Looking at hydrogen's low-carbon energy portfolio, it has a potential to decarbonize hard-to-abate sectors such as industry, transport and buildings.

Exhibit 5: Hydrogen ecosystem



Why is India betting big on Hydrogen?

India has set its sight on becoming energy independent by 2047 and achieving Net Zero by 2070. To achieve its goal and commitment, Government of India has recognised the critical role of Green Hydrogen.

- **Energy security:** The fluctuations in the oil & gas market due to various reasons have disrupted supply-demand chain and causes variation in the fuel cost. Developing countries like India need to find out an alternative to strengthen its National Energy Security.
- **Emission targets:** India is the third largest global CO₂ emitter (~7% of global CO₂ emission). Earlier, it was committed to reduce its emissions intensity by 33-35% under the Paris Agreement which has been revised to 45% by 2030.
- **Economic dependencies & balance of trade:** India is the world's third largest crude oil importer with an import dependency of over 80%. It also imports 54% of natural gas and 24% of coal requirements which largely affects India's financial account balance.
- **Energy Subsidies:** Along with the high cost of imported fuel, India gives away overall energy subsidies of approx. US\$30 bn / year on Oil & Gas, Coal, Transmission & Distribution, Renewable Energy and Electric Vehicles. Some proportion of these subsidies can be diverted for the development of hydrogen ecosystem.

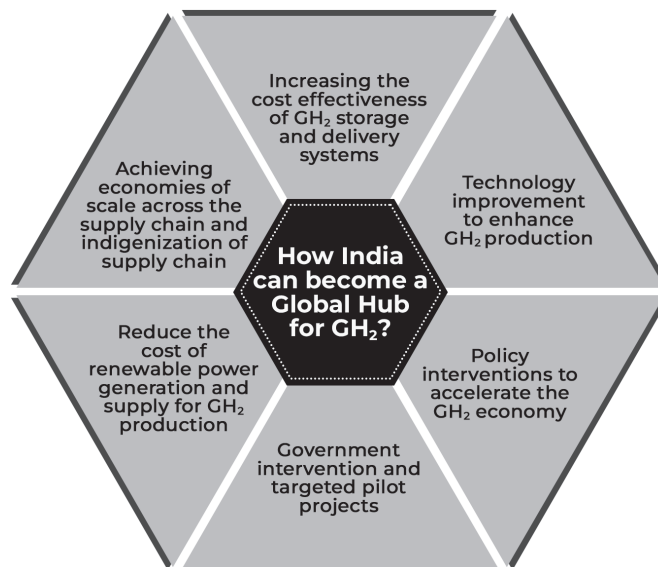
Key financing opportunities for the development of Green Hydrogen in India	▶ Public Private Partnerships (PPPs).
	▶ Government subsidies and grants.
	▶ Low-cost financing from multilateral agencies.
	▶ Monetising carbon credits and Participating in carbon markets.
	▶ Establishing Special Purpose Vehicles (SPVs) or issuing Green Bonds (GB).
	▶ Crossborder investments in Green Hydrogen technologies through Export Credit Agencies (ECAs).
	▶ Early-stage funding for startups through Venture Capital and Private Equity investments.

Challenges for Hydrogen Sector in India

- **More Expensive:** Green hydrogen is currently more expensive to produce than hydrogen made using fossil fuels, costing about \$2 more per kilogram.
- **Availability and Storage:** The other issue is that renewable energy is not available round-the-clock and battery storage is still not economical.
- **Over-demand of energy:** The country expects a requirement of 125 gigawatts of renewable energy by 2030 for production linked only to the incentive programme. India's current installed renewable base is 127 gigawatts.
- **Trade barriers:** Europe, Korea and Japan, being renewable resource-deficient, are likely to be the key markets for green hydrogen but trade barriers are a major worry. India has raised its concerns with Germany on barriers

imposed in a global green hydrogen tender called by that country last December.

- **Highly subsidised market :** India also faces competition from heavily subsidised markets like China and the United States.



Conclusion

Hydrogen can be produced using different technologies, but sustainable production technologies will create future possibilities of adoption and scale. Today, hydrogen is mainly produced from fossil fuels such as coal & natural gas. The cost of hydrogen, market-competitiveness and market time frame is affected by location of production technology and its volume of production.

PRELIMS SPECIAL

About National Green Hydrogen Mission

Objectives of the Mission

- Making India a leading producer and supplier of Green Hydrogen in the world
- Creation of export opportunities for Green Hydrogen and its derivatives
- Reduction in dependence on imported fossil fuels and feedstock
- Development of indigenous manufacturing capabilities
- Attracting investment and business opportunities for the industry
- Creating opportunities for employment and economic development
- Supporting R&D projects

Mission Outcomes

The mission outcomes projected by 2030 are:

- Development of green hydrogen production capacity of at least 5 MMT (Million Metric Tonne) per annum with an

associated renewable energy capacity addition of about 125 GW in the country

- Over Rs. Eight lakh crore in total investments
- Creation of over Six lakh jobs
- Cumulative reduction in fossil fuel imports over Rs. One lakh crore
- Abatement of nearly 50 MMT of annual greenhouse gas emissions

Types of Hydrogen based on Extraction Methods

Depending on the nature of the method of its extraction, hydrogen is categorised into three categories, namely, Grey, Blue and Green.

- **Grey Hydrogen:** It is produced via coal or lignite gasification (black or brown), or via a process called steam methane reformation (SMR) of natural gas or methane (grey). These tend to be mostly carbon-intensive processes.
- **Blue Hydrogen:** It is produced via natural gas or coal gasification combined with carbon capture storage (CCS) or carbon capture use (CCU) technologies to reduce carbon emissions.
- **Green Hydrogen:** It is produced using electrolysis of water with electricity generated by renewable energy. The carbon intensity ultimately depends on the carbon neutrality of the source of electricity (i.e., the more renewable energy there is in the electricity fuel mix, the “greener” the hydrogen produced).

EXPECTED QUESTIONS FOR UPSC CSE

Prelims MCQ

Q. Consider the following statements regarding Green Hydrogen:

1. The primary source of green hydrogen is natural gas.
2. Green hydrogen can be used as a fuel in transportation sector but not in heavy industries.

Which of the statements above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

(d) Answer:

Descriptive Question

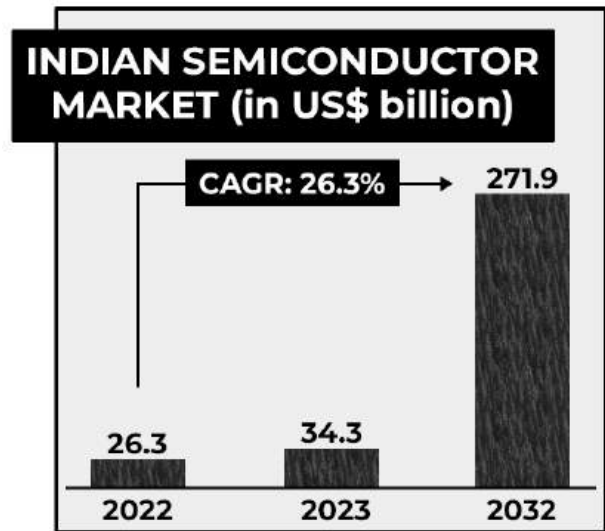
Q. Describe the role Hydrogen energy can play in fulfilling India’s energy needs. What are the challenges for Hydrogen Sector in India? [15 marks] [250 words]

DEVELOPMENT OF SEMICONDUCTOR UNIT

Why in News: The Union Cabinet recently approved the proposal of Kaynes Semicon Pvt Ltd to setup a semiconductor unit in Sanand, Gujarat.

Key Details

- This is the fifth semiconductor unit to be approved under the Programme for Development of Semiconductors and Display Manufacturing Ecosystem in India, which was notified in December 2021.
- The proposed unit will be established with a capacity of 60 lakh chips per day.
 - The chips produced will cater to a wide range of applications, including industrial, automotive, electric vehicles, consumer electronics, telecom, and mobile phones.
- In June, 2023, the Union Cabinet had approved approved the proposal of Micron for setting up a semiconductor unit in Sanand, Gujarat.
- In February, 2024, three more semiconductor units were approved.
 - Tata Electronics is setting up a semiconductor fab in Dholera, Gujarat and one semiconductor unit in Morigaon, Assam.
 - CG Power is setting up one semiconductor unit in Sanand, Gujarat.
- Construction of all 4 semiconductor units is progressing at a rapid pace and a robust semiconductor ecosystem is emerging near the units. These 4 units will bring an investment of almost Rs 1.5 Lakh crore. The cumulative capacity of these units is about 7 crore chips per day.



India Semiconductor Mission (ISM)

- India Semiconductor Mission (ISM) is a specialized and independent Business Division within the Digital India Corporation that aims to build a vibrant semiconductor and

display ecosystem to enable India's emergence as a global hub for electronics manufacturing and design.

- The mission aims to serve as a focal point for the comprehensive, coherent, efficient, and smooth deployment of the Program for Development of Semiconductor and Display Ecosystem in consultation with the Government ministries / departments / agencies, industry, and academia.

Under ISM, there are several schemes in place:

<p>Semiconductor Fab</p> <ul style="list-style-type: none"> ▶ Offers fiscal support of up to 50% of the project cost to approved applicants. ▶ Attract substantial investments for the establishment of semiconductor wafer fabrication facilities in India. 	<p>Display Fab</p> <ul style="list-style-type: none"> ▶ Offers fiscal support of up to 50% of the project cost to approved applicants. ▶ Focus on increasing display fabrication facilities in India.
<p>Compound Semiconductors</p> <ul style="list-style-type: none"> ▶ Fiscal support of 50% of the capex to facilities involved in compound semiconductor, silicon photonics, sensor and discrete semiconductor fabrication and semiconductor packaging. ▶ Focus on establishing semiconductor wafer fabrication facilities in India 	<p>Design Linked Incentives (DLI)</p> <ul style="list-style-type: none"> ▶ Offers product design-linked incentives of up to 50% of eligible expenditure and product deployment-linked incentives ranging from 6% to 4% on net sales over a five- year period.

Semicon India Programme

- The Union Cabinet had approved the comprehensive Semicon India programme with a financial outlay of INR 76,000 crore for the development of a sustainable semiconductor and display ecosystem in 2021.
- Semicon India Program aims to provide attractive incentive support to companies / consortia that are engaged in Silicon Semiconductor Fabs, Display Fabs, Compound Semiconductors / Silicon Photonics / Sensors (including MEMS) Fabs, Semiconductor Packaging (ATMP / OSAT) and Semiconductor Design.
- The program will give an impetus to semiconductor and display manufacturing by facilitating capital support and technological collaborations.

Programme for Development of Semiconductor and Display Manufacturing Ecosystem

- Semiconductors and displays are the basis of modern electronics driving the next phase of digital transformation under Industry 4.0.
- Semiconductor and display manufacturing is highly complex and technology-intensive sectors involving substantial capital investments, high risk, long gestation and payback periods, and rapid technological change that requires significant and sustained investments.
- In this purview, the Union Cabinet has approved the comprehensive program for the development of a sustainable semiconductor and display ecosystem in India on 15th Dec 2021,
 - It aims to provide attractive incentive support to companies engaged in silicon semiconductor fabs, display

fabs, compound semiconductors/ silicon photonics/ sensors (including MEMS) fabs, semiconductor packaging (ATMP/ OSAT), and semiconductor design.

- The government of India has allocated Rs. 2,30,000 crore (USD 30 billion) to this program to position India as a global hub for electronics manufacturing, with semiconductors serving as the foundational building block.

- This initiative shall pave the way for India's technological leadership in strategic importance and economic self-reliance by an impetus to semiconductor and display manufacturing and facilitating capital support and technical collaborations.

India offers a substantial cost advantage for semiconductor manufacturing due to the following factors:

Labor Costs	Compared to developed countries, labour costs in India are lower. This translates to decreased production expense for semiconductor manufacturers, particularly in labour-intensive processes such as assembly and testing.	
Supply Chain Efficiency	India's proximity to key semiconductor markets in Asia, Europe and the Middle East facilitates efficient supply chain management. Reduced transportation expenses and shortened lead times play a crucial role in generating cost savings for semiconductor manufacturers operating in India.	
Emerging Ecosystem	As India strengthens its semiconductor ecosystem with investment in research and development, infrastructure development and skill enhancement programmes, the overall cost-effectiveness of semiconductor manufacturing is expected to improve further.	

Conclusion

India depends on imports to fulfil its need of semiconductor devices. Major reason behind this highly dependent behaviour is the absence of semiconductor fabrication facility in India. As of now no major semiconductor firms have committed to significant investments in India so far, partly due to challenges with infrastructure, including a stable power supply. However, with sustained efforts and a proactive stance, India is on course to solidify its position as a leading semiconductor manufacturing hub, contributing majorly to technological advancement and economic growth.

EXPECTED QUESTIONS FOR UPSC CSE

Prelims MCQ

Q. In which of the following devices semiconductors are widely used?

1. Mobile phones
2. Telecommunications
3. Electric vehicles
4. Industrial automotive

How many of the above applications are correct?

- (a) Only one
- (b) Only two
- (c) Only three
- (d) All four

Answer: (d)

Descriptive Question

Q. Discuss the various schemes covered under India Semiconductor Mission and its objectives to positively affect the technological landscape of India. [10 marks] [150 words]

DIGITAL AGRICULTURE MISSION

Why in News: The Union Cabinet Committee has recently approved the 'Digital Agriculture Mission'.

Digital Agriculture Mission

- The Digital Agriculture Mission is designed as an umbrella scheme to support various digital agriculture initiatives.
- It includes:
 - Creating Digital Public Infrastructure (DPI)
 - Implementing the Digital General Crop Estimation Survey (DGCES)
 - Supporting IT initiatives by the Central Government, State Governments, and Academic and Research Institutions
- Two foundational pillars of Digital Agriculture Mission
 - **Agri Stack**
 - **Krishi Decision Support System**
- It also includes 'Soil Profile Mapping' and aims to enable farmer-centric digital services to provide timely and reliable information for the agriculture sector.

AgriStack: Kisan Ki Pehchaan

- AgriStack is designed as a farmer-centric Digital Public Infrastructure (DPI) to streamline services and scheme delivery to farmers.
- 3 key components of AgriStack
 - Farmers' Registry
 - Geo-referenced village maps
 - Crop Sown Registry
- Key targets under AgriStack
 - Creating digital identities for 11 crore farmers over three years (6 crore in FY 2024-25, 3 crore in FY 2025-26, and 2 crore in FY 2026-27).
 - Launching the Digital Crop Survey nationwide within two years, covering 400 districts in FY 2024-25 and all districts in FY 2025-26.

AGRISTACK: KISAN KI PEHCHAAN



Farmers' Registry

Under AgriStack, farmers will be given a digital identity (Farmer ID) similar to Aadhaar.

Geo-Referenced Village Maps

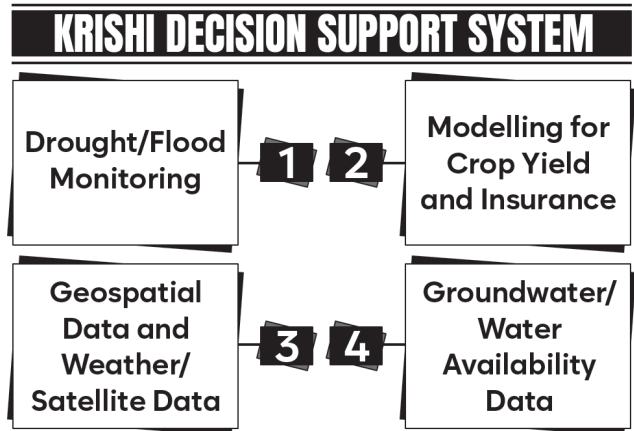
Farmer ID' will be linked to the State's land records, demographic details, family details, etc.

Crop Sown Registry

Crops sown by farmers will be recorded through mobile-based ground surveys i.e. Digital Crop Survey to be conducted in each season.

Krishi Decision Support System

- The Krishi Decision Support System (DSS) will integrate remote sensing data on crops, soil, weather, and water resources into a comprehensive geospatial system.



Soil Profile Mapping

- Under the mission, detailed soil profile maps on a 1:10,000 scale for approximately 142 million hectares of agricultural land have been envisaged, with 29 million hectares of soil profile inventory already being mapped.



- Soil Profile Maps on a 1:10,000 scale of about 142 million hectares of the country's agricultural land
- Digital General Crop Estimation Survey (DGCES) will provide yield estimates based on scientifically designed crop-cutting experiments
- Employment opportunities to about 2.5 lakh trained local youth and Krishi Sakhis
- The digital crop surveys, collection of ground-truthed data for remote sensing

Benefits of Digital Agriculture Mission

- **Convenience:** Digital authentication for accessing services and benefits, reducing paperwork and the need for physical visits.

- **Governance:** Enhanced efficiency and transparency in government schemes, crop insurance, and loan systems through accurate data on crop area and yield.
- **Mitigation:** Crop map generation and monitoring for better disaster response and insurance claims.
- **Digital Infrastructure:** Development of digital infrastructure to optimize value chains and provide tailored advisory services for crop planning, health, pest management, and irrigation.

Digital Public Infrastructure for Agriculture

- Union Finance Minister Nirmala Sitharaman announced in the Union Budget 2024-25 that the Government, in partnership with states, will implement Digital Public Infrastructure (DPI) for agriculture over the next three years.
- This initiative will cover farmers and their lands, with a digital crop survey for Kharif planned for 400 districts this year. The goal is to update registries with details of 6 crore farmers and their lands.
- The Union Budget 2023-24 had previously introduced the DPI for agriculture, which aims to provide comprehensive data on farmers, including demographic details, land holdings, and crops sown.
- The DPI will integrate with state and central digital infrastructures to offer a range of farmer-centric services, including information on livestock, fisheries, soil health, and available benefits.

Major Schemes for Improving Farmers' Lives and Livelihoods

- The Union Cabinet also approved six major schemes alongside the Digital Agriculture Mission.
- These initiatives include:
 - Crop Science aimed at ensuring food security and climate resilience by 2047.
 - Strengthening Agricultural Education, Management, and Social Sciences to support students and researchers.
 - Sustainable Livestock Health and Production to boost incomes from livestock and dairy.
 - Sustainable Development of Horticulture to increase income from horticulture.
 - Strengthening Krishi Vigyan Kendra.
 - Natural Resource Management.

Conclusion

These comprehensive approaches leverage digital technologies to enhance productivity, efficiency, and sustainability in India's agricultural sector, potentially transforming the lives of millions of farmers across the country. By extending the digital revolution to agriculture,

India aims to further solidify its position as a global leader in innovative, technology-driven solutions for critical sectors of the economy.

EXPECTED QUESTIONS FOR UPSC CSE

Prelims MCQ

Q. Consider the following initiatives by the Government of India for promotion of the agriculture sector?

1. AgriStack
2. Krishi Decision Support System
3. Soil Profile Mapping

How many of the above initiatives are components of the Digital Agriculture Mission?

- (a) Only one (b) Only two
(c) All three (d) None

(c) : ANSWER

Descriptive Question

Q. Discuss the objectives of Digital Agriculture Mission and analyze its impact on the agriculture sector of India. [10 marks] [150 words]

FOREIGN VENTURE CAPITAL INVESTORS

Why in News: The Securities and Exchange Board of India (SEBI) has recently introduced new regulations related to Foreign Venture Capital Investors (FVCIs).

Key Details

- The SEBI made an amendment to the **Securities and Exchange Board of India (Foreign Venture Capital Investors) (Amendment) Regulations, 2024**.
- An applicant seeking registration as an FVCI is required to engage a Designated Depository Participants (DDPs) to avail of its services for obtaining a registration certificate as FVCI and at all times the DDP and the custodian of the FVCI shall be the same entity.
 - To put simple, No person shall buy, sell or otherwise deal in securities as a foreign venture capital investor unless it has obtained a certificate granted by a designated depository participant on behalf of the Board (Sebi).
- Previously, SEBI handled FVCI applications directly, but now DDPs will conduct the due diligence and issue the required certification on SEBI's behalf.
- The amendments will come into effect from January 1, 2025.

Mandatory certification

- The SEBI (Foreign Venture Capital Investors) (Amendment) Regulations, 2024, specify that FVCI must first obtain a certificate issued by a DDP on behalf of SEBI to be allowed to buy, sell, or trade securities in India.
- To apply for this certificate, an FVCI must submit an application to the DDP in the format specified by the central government or SEBI.

Revised Eligibility Criteria

- The eligibility criteria for FVCI applicants have also been revised to include Resident Indians (RIs), Non-Resident Indians (NRIs), and Overseas Citizens of India (OCIs).
 - However, restrictions apply to individual contributions from NRIs, OCIs, or RIs that cannot exceed 25 percent of the FVCI’s total corpus, and their combined stake must remain below 50 percent.
- All FVCI investments be held in dematerialized (demat) form, ensuring greater transparency and efficiency in managing investments. These reforms are designed to streamline the regulatory framework and make it easier for FVCIs to invest in Indian companies.
- **Note:** At present, an investment company, investment trust, pension fund, investment partnership, mutual fund, endowment fund, charitable institution, university fund or any other entity incorporated outside India; an asset management company, investment management company, investment manager or any other investment vehicle incorporated outside India, could apply for registration as an FVCI.

PRELIMS SPECIAL

About Foreign Venture Capital Investors (FVCIs)

- FVCIs are investors incorporated outside India, primarily investing in unlisted securities of Venture Capital Undertakings and Venture Capital Funds.
- As of March 2023, 269 FVCIs were registered with SEBI, with total investments amounting to ₹48,286 crore in Indian investee companies.

About Securities and Exchange Board of India (SEBI)

- The SEBI was constituted as a non-statutory body on April 12, 1988 through a resolution of the Government of India.
- The SEBI of India was established as a statutory body in the year 1992 and the provisions of the Securities and Exchange Board of India Act, 1992 (15 of 1992) came into force on January 30, 1992.

Membership

- Sebi is run by its board of members.
- The board consists of a Chairman and several other whole time and part time members. The chairman is nominated by the union government.
- The others include two members from the finance ministry, one member from Reserve Bank of India and five other members are also nominated by the Centre.

- The headquarters of **SEBI** is situated in Mumbai and the regional offices are located in Ahmedabad, Kolkata, Chennai and Delhi.

Functions and powers of SEBI

- Sebi controls activities of stock exchanges, safeguards the rights of shareholders and also guarantees the security of their investment.
- It also aims to check fraudulence by harmonising its statutory regulations and self-regulating business.
- The regulator also enables a competitive professional market for intermediaries
- Apart from the above functions, SEBI provides a marketplace in which the issuers can increase finance properly.
- It also ensures safety and supply of precise and accurate information from the investors. SEBI analyses the trading of stocks and safes the security market from the malpractices. It controls the stockbrokers and sub- stockbrokers.
- It provides education regarding the market to the investors to enhance their knowledge.

NATIONAL BANK FOR FINANCING INFRASTRUCTURE AND DEVELOPMENT

Why in News: The Union Government has recently notified National Bank for Financing Infrastructure and Development (NaBFID) as a public financial institution under Companies Act.

Key Details

- Aims to strengthen infrastructure finance in India.
 - Established in 2021, NaBFID focuses on addressing gaps in long-term infrastructure finance and developing bonds and derivatives markets to boost the economy.
- To enhance the bank’s capacity to finance large-scale infrastructure projects, thereby bolstering the country’s infrastructure development.
- This will help the government fortify the nation’s infrastructure finance structures.

“Public Financial Institution” means—

- the Life Insurance Corporation of India, established under section 3 of the Life Insurance Corporation Act, 1956 (31 of 1956);
- the Infrastructure Development Finance Company Limited, referred to in clause (vi) of sub-section (1) of section 4A of the Companies Act, 1956 (1 of 1956) so repealed under section 465 of this Act;
- specified company referred to in the Unit Trust of India (Transfer of Undertaking and Repeal) Act, 2002 (58 of 2002);
- institutions notified by the Central Government under sub-section (2) of section 4A of the Companies Act, 1956 (1 of 1956) so repealed under section 465 of this Act;

- Such other institution as may be notified by the Central Government in consultation with the Reserve Bank of India:

Provided that no institution shall be so notified unless—

- It has been established or constituted by or under any Central or State Act other than this Act or the previous company law; or
- Not less than fifty-one per cent of the paid-up share capital is held or controlled by the Central Government or by any State Government or Governments or partly by the Central Government and partly by one or more State Governments

About National Bank for Financing Infrastructure and Development (NaBFID)

- The National Bank for Financing Infrastructure and Development (NaBFID) is a specialized Development Finance Institution in India aimed at supporting the country's infrastructure sector, which can significantly gain from an enabling credit flow by means of attractive instruments and channelized investment.
- NaBFID was set up in 2021, by an Act of the Parliament (The National Bank for Financing Infrastructure and Development Act, 2021), with the essential objectives of addressing the gaps in long-term non-recourse finance for infrastructure development, strengthening the development of bonds and derivatives markets in India, and sustainably boosting the country's economy.
- Reserve Bank of India (RBI) vide its letter dated March 8, 2022 has advised that NaBFID shall be regulated and supervised by RBI as an All India Financial Institution (AIFI) under sections 45L and 45N of the RBI Act, 1934, respectively.
- **Mission:** Be the principal enabler for infrastructure financing with an emphasis on innovation, environment and sustainability.
- **Vision:** Be a globally recognized strong provider of impact investment, catalysing infrastructure funding for transformative growth of India.

PRELIMS SPECIAL

Differences Between Shares, Bonds, and Derivatives

- **Ownership vs. Debt:** Shares represent ownership in a company, while bonds represent a debt obligation of the issuer. Derivatives derive their value from an underlying asset but do not represent ownership or debt.
- **Risk and Return:** Shares typically offer higher potential returns but also come with higher risk due to the volatility of stock prices. Bonds are considered lower risk but offer lower returns. Derivatives can offer high returns but also carry higher risk due to their leverage and complexity.
- **Income Generation:** Shares can provide income in the form of dividends, while bonds provide regular interest payments. Derivatives do not provide regular income but can be used for speculative purposes to generate profits.

- **Liquidity:** Shares are generally more liquid than bonds, as they can be easily bought and sold on stock exchanges. Bonds can also be traded, but their liquidity depends on the issuer and the bond's maturity. Derivatives are highly liquid but can be complex to trade.
- **Purpose:** Shares are typically bought for long-term capital appreciation, while bonds are often used for income generation and capital preservation. Derivatives are often used for hedging, speculation, or arbitrage.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

Q. National Bank for Financing Infrastructure and Development (NaBFID) is located in ...

- (a) New Delhi (b) Mumbai
(c) Hyderabad (d) Chennai

Answer : (b)

VIOLATION OF COMPETITION LAWS

Why in News: Recently, e-commerce giant Amazon and Walmart's Flipkart were found violating Indian competition laws by giving preference to select sellers on their shopping website.

Key Findings of the Report by Competition Commission of India (CCI)

An Indian antitrust investigation (CCI) in its recently report on Amazon and Flipkart, found that both the e-commerce giant Amazon and Walmart's Flipkart have created an ecosystem where preferred sellers appeared higher in search results, elbowing out other sellers.

- **Preferred Sellers**
 - Amazon had six preferred sellers, while Flipkart had 33, who got preferential treatment on their platforms in breach of antitrust laws. The sellers received marketing, warehousing and other services at a miniscule cost.
 - Amazon and Flipkart used their foreign investments to provide such subsidised rates.
 - There is an ecosystem at both Amazon and Flipkart "wherein no seller other than its preferred seller can survive.
- **Preferential Listing**
 - The majority of products appearing at the top of Amazon and Flipkart listings were from alleged preferred sellers. This created a barrier for other sellers.

- **Exclusive Product Launches**
 - Both Amazon and Flipkart had partnerships with smartphone and technology companies to launch their devices exclusively, a move that hurt smaller retailers.
 - Exclusive launches severely affects the ordinary sellers on the platform but also the brick-and-mortar retailers who were provided mobile phones at a much later date.
- **Deep Discounting**
 - Both Amazon and Flipkart enabled their affiliated and preferred sellers to provide deep discounts, which involved selling much below cost for the purpose of driving out competition.

PRELIMS SPECIAL

The Competition Act

- The Competition Act, 2002, as amended by the Competition (Amendment) Act, 2007, follows the philosophy of modern competition laws.
- The Act prohibits anti-competitive agreements, abuse of dominant position by enterprises and regulates combinations (acquisition, acquiring of control and M&A), which causes or likely to cause an appreciable adverse effect on competition within India.

Competition Commission of India

- It was established by the Central Government Act with effect from 14th October 2003.
- Consists of a Chairperson and not less than two and not more than six other Members to be appointed by the Central Government.
- It is the duty of the Commission to eliminate practices having adverse effect on competition, promote and sustain competition, protect the interests of consumers and ensure freedom of trade in the markets of India.
- The Commission is also required to give opinion on competition issues on a reference received from a statutory authority established under any law and to undertake competition advocacy, create public awareness and impart training on competition issues.

Latest Development

- The Competition Commission of India (General) Regulations, 2024 were notified recently, under which Competition Commission can now appoint agencies to monitor the implementation of its orders, with the notification of amended regulations.
- The agencies can be accounting firms, management consultancy or any other professional organisation or chartered accountants, company secretaries or cost accountants.
- Among others, the agency would have the responsibility to inform CCI of any non-implementation or non-compliance with its orders.

INVESTOR EDUCATION AND PROTECTION FUND AUTHORITY

Why in News: Investor Education and Protection Fund Authority (IEPFA) draws plans to expedite investor claim settlements.

Key Details

- The Investor Education and Protection Fund Authority (IEPFA) will hold outreach programmes in five key cities (Mumbai, Ahmedabad, Bengaluru, Chennai and Kolkata), to expedite claim settlements.
- **Reason:** Securities, dividends and debentures that remain unclaimed for more than seven years are transferred by companies to the IEPFA under the corporate affairs ministry.
 - The authority then oversees claim settlements, with the companies playing a key part in verification and other processes.

About Investor Education and Protection Fund Authority (IEPFA)

- For administration of Investor Education and Protection Fund Government of India has on 7th September, 2016 established Investor Education and Protection Fund Authority under the provisions of section 125 of the Companies Act, 2013.
- The Authority is entrusted with the responsibility of administration of the Investor Education Protection Fund (IEPF), make refunds of shares, unclaimed dividends, matured deposits/debentures etc. to investors and to promote awareness among investors.

Investor Education and Protection Fund

- Investor Education and Protection Fund (IEPF) has been established under Section 205C of the Companies Act, 1956 by way of Companies (Amendment) Act, 1999 for promotion of investors' awareness and protection of the interests of investors.
- It was also provided in the Amendment Act that no claims shall lie against the Fund or the Company in respect of individual amounts which were unclaimed and unpaid for a period of seven years from the dates that they first became due for payments and no payment shall be made in respect of any such claims.
- The following amounts that remained unpaid and unclaimed for a period of seven years from the date they became due for payment are credited to the Fund:
 - Amounts in the unpaid dividend accounts of the companies
 - The application moneys received by companies for allotment of any securities and due for refund
 - Matured deposits with companies
 - Matured debentures with companies
 - The interest accrued on the amounts referred to in clauses (i) to (iv)
 - Grants and donations given to the fund by the Central Government, State Governments, companies or any other institutions for the purposes of the Fund;

- And, the interest or other income received out of the investments made from the fund.
- **The Fund is utilised for:**
 - The refund in respect of unclaimed dividends, matured deposits, matured debentures, the application money due for refund and interest thereon.
 - Promotion of investors' education, awareness and protection.
 - Distribution of any disgorged amount among eligible and identifiable applicants for shares or debentures, shareholders, debenture-holders or depositors who have suffered losses due to wrong actions by any person, in accordance with the orders made by the Court which had ordered disgorgement.
 - Reimbursement of legal expenses incurred in pursuing class action suits under sections 37 and 245 by members, debenture-holders or depositors as may be sanctioned by the Tribunal.
 - Any other purpose incidental thereto, in accordance with such rules as may be prescribed: Provided that the person whose amounts referred to in clauses (a) to (d) of sub-section (2) of section 205C transferred to Investor Education and Protection Fund, after the expiry of the period of seven years as per provisions of the Companies Act, 1956, shall be entitled to get refund out of the Fund in respect of such claims in accordance with rules made under this section.

PRELIMS SPECIAL

Securities, Dividends and Debentures

- The term "security" refers to a wide range of investments, including stocks, bonds, notes, debentures, limited partnership interests, oil and gas interests, and investment contracts.
- **Dividends** are payments a company makes to share profits with its stockholders.
 - Dividend refers to a reward, cash or otherwise, that a company gives to its shareholders.
 - Dividends can be issued in various forms, such as cash payment, stocks or any other form.
- A **derivative** is a financial contract whose price is based on the value of an underlying asset, such as a stock, bond, or commodity. Call options and put options are common types of derivatives.
- A **debenture** is a long-term debt instrument that is a type of loan that investors give to a company or government in exchange for the promise of repayment.
 - Debentures are a way for companies to raise capital without diluting their equity or tying up assets.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

Q. The terms 'Call options' and 'Put options' recently seen in news are related to?

- (a) Derivatives
- (b) Credit
- (c) Telecommunications
- (d) None of the above

Answer : (a)

Descriptive Question

Q. Analyze the role of Investor Education and Protection Fund in promoting investor awareness and education. [10 marks] [150 words]

HYDRO ELECTRIC PROJECTS

Why in News: The Union Cabinet recently approved the development of 31,350 MW hydropower projects to be implemented over the next eight years.

Key Details

- The Union Cabinet has approved the proposal of the Ministry of Power for modification of the scheme of budgetary support for the cost of Enabling Infrastructure for Hydro Electric Projects (HEP).
- The scheme would be implemented from FY 2024-25 to FY 2031-32.

Promoting Hydro Power in India

- The Government of India has been taking several policy initiatives to address the issues impeding Hydro Power development, viz., remote locations, hilly areas, lack of infrastructure etc.
- To promote the hydro power sector and to make it more viable, government approved measures, such as:
 - Declaring large hydro power projects as Renewable Energy sources
 - Hydro Power Purchase Obligations (HPOs)
 - Tariff rationalization measures through escalating tariff
 - Budgetary support for flood moderation in storage HEP
 - Budgetary support for the cost of enabling infrastructure, i.e., construction of roads and bridges.
- For the faster development of Hydro Electric Projects and improvement of infrastructure in the remote project locations, the following modifications have been made in the earlier scheme:
 - To widen the ambit of the Budgetary Support for cost of Enabling Infrastructure by including four more items apart from construction of roads and bridges i.e., the cost incurred for the construction of:
 - ◆ transmission line from power house to the nearest pooling point including upgradation of pooling substation of State / Central Transmission Utility
 - ◆ ropeways
 - ◆ railway siding
 - ◆ communication infrastructure.
 - The **scheme will be applicable to all Hydro Power Projects of more than 25 MW capacity** including the private sector projects which have been allotted on a transparent basis.

- The projects whose Letter of Award of first major package is issued upto 30.06.2028 would be considered under this scheme.
- The limit of Budgetary Support for the cost of Enabling Infrastructure has been rationalized to Rs.1.0 crore/ MW for projects up to 200 MW and Rs.200 crore plus Rs.0.75 crore per MW exceeding 200 MW, for projects above 200 MW.
- The Budgetary Support for cost of Enabling Infrastructure will be provided after appraisal of the cost of Enabling Infrastructure by the DIB/PIB and approval of the Competent Authority as per extant guidelines.

Benefits of Revised Scheme

- This revised scheme would help in faster development of hydro electric projects, improve infrastructure in the remote and hilly project locations and would provide large number of direct employment to the local people along with indirect employment / entrepreneurial opportunities through transportation, tourism, small-scale business.
- It would encourage fresh investments into hydro power sector and incentivize timely completion of new projects.

PRELIMS SPECIAL

FACTS

- Hydroelectric power projects with aggregate capacity of 15 GW are under construction in the country.
- The hydro capacity is likely to increase from 42 GW to 67 GW by 2031-32, marking an increase of more than half of present capacity.
- India has 3.3 GW of pumped storage. Main ones are Nagarjunasagar, Kadana, Kadamparai, Panchet and Bhira.
- The share of hydropower has steadily declined in recent years amid a slowdown in the addition of new capacity, with other sources including coal, solar and wind gaining share.
- The power generation from coal and lignite in 2023-24 rose 13.9%, outpacing the 9.7% increase in renewable sources' output, data from the grid regulator showed.
- Globally, the hydropower output fell for only the fourth time since 2000 due to lower rainfall and warmer temperatures brought about by the El Nino weather pattern, according to energy think tank Ember.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

Q. Consider the following pumped storage projects:

	Project	State
1.	Kadamparai Hydroelectric Plant	Andhra Pradesh

2.	Panchet Dam	Jharkhand
3.	Bhira Hydroelectric Project	Karnataka

How many of the above pairs are correctly matched?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

Answer : (a) (2 only)

VADHVAN PORT

Why in News: The Prime Minister of India recently laid down foundation stone of Vadhvan Port project in Maharashtra's Palghar.

Vadhvan Port

- Vadhvan Port, located near Dahanu town in Palghar district, will be one of India's largest deep-water ports and will provide direct connectivity to international shipping routes, reducing transit times and costs.
- Equipped with state-of-the-art technology and infrastructure, the port will feature deep berths, efficient cargo handling facilities, and modern port management systems.
- The port is expected to generate significant employment opportunities, stimulate local businesses, and contribute to the overall economic development of the region.
- The Vadhvan Port project incorporates sustainable development practices with a focus on minimizing environmental impact and adhering to stringent ecological standards.
- Once operational, the port will enhance India's maritime connectivity and further strengthen its position as a global trade hub.

Salient features of Vadhvan Port

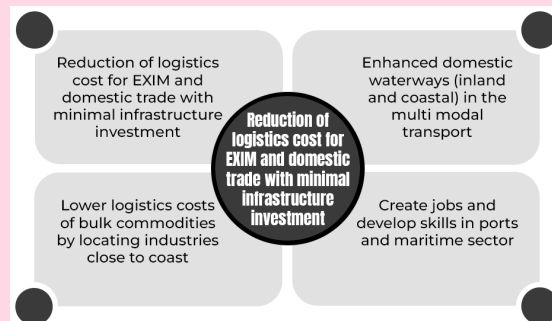
- Development of a Port at Vadhvan has been conceived under Sagarmala Programme an initiative of the the Govt. Of India to augment Port Led Development and Development of Coast Lines to contribute in India's growth.
- The objective is to augment and develop Green Field Port to handle growing traffic demand of Major Ports at West Coast.
- The new Port at Vadhvan will be developed as a deep draught Port to cater to large container, bulk and crude vessels.
- Jawaharlal Nehru Port Authority signed a MoU with Maharashtra Maritime Board for development of Vadhvan Port.
- The Proposed Port is located at Vadhvan point near Dahanu in the District of Palghar, Maharashtra.

Sagarmala Programme

- 1** The Sagarmala Programme, a flagship initiative of the Ministry of Ports, Shipping and Waterways, represents a visionary approach by the Government of India to transform the country's maritime sector.
- 2** With India's extensive coastline, navigable waterways, and strategic maritime trade routes, Sagarmala aims to unlock the untapped potential of these resources for port-led development and coastal community upliftment.
- 3** Through comprehensive studies and strategic planning, Sagarmala identifies key opportunities to optimize logistics, improve port efficiency, and promote coastal community development.
- 4** By doing so, Sagarmala not only strengthens the maritime economy but also contributes to the overall economic growth and competitiveness of India on the global stage.
- 5** Sagarmala seeks to enhance the performance of the logistics sector by reducing logistics costs for both domestic and international trade.
- 6** By leveraging coastal and waterway transportation, the program aims to minimize the need for extensive infrastructure investments, thus making logistics more efficient and improving the competitiveness of Indian exports.

- 7** Sagarmala Programme intends to enhance and modernize infrastructure for more efficient and effective transportation of goods, utilizing improved logistics and practices.
- 8** It is built on the foundation of integrated planning, connectivity enhancement, and sustainable development, with a focus on creating synergy among its five pillars.

• Four aspects of Sagarmala's vision



• 5 Pillars and 24 Categories of Sagarmala



PRELIMS SPECIAL

Difference between Deepwater Ports & Regular Ports

- The main difference between deepwater and regular ports is their water depths and ability to accommodate vessels of different sizes.
- Deepwater Ports have a minimum depth of 45 feet or 13.7 m, while regular ports can be shallower.
- Deepwater Ports can accommodate post-panamax ships, ultra-large container vessels, the biggest bulk carriers, oil tankers and LNG ships.
- They are usually located in naturally deep harbours or regions where extensive dredging has been done, while regular ports can be found in coastal and inland regions.

Examples of Deepwater Ports: Port of Sines, Portugal; Yangshhan Port, China; Port of Rotterdam, the Netherlands; Tanger Med, Morocco; Port Hedland, Australia.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

Q. Consider the following statements regarding Vadhvan port?

1. It is located along with Bay of Bengal waterways
2. It is located near city of Bhubaneswar
3. It will be one of largest shallow water port of India

How many of the above statements are correct?

- (a) Only one (b) Only two
 (c) All three (d) None

Answer : (d)

VOLUNTARILY VEHICLE MODERNIZATION PROGRAM

Why in News: The Ministry of Road Transport and Highways has recently launched the Voluntary Vehicle Modernization Program or Vehicle Scrapping Policy.

Key Details

- **Aim:** To create an ecosystem for phasing out unfit polluting vehicles across the country through a network of Registered Vehicle Scrapping Facilities (RVSFs) and Automated Testing Stations (ATs).
- Auto manufacturers have agreed to offer discounts on commercial and passenger vehicles against a scrapping certificate of an old vehicle for a limited period of time.
- This scrapping discount will replace the discount customers were getting for exchanging their vehicles from car dealers.

About V-VMP

- **Target:** To remove old and unfit vehicles from Indian roads by preventing their re-registration after they reach a certain age—20 years for cars and 15 years for commercial vehicles.

Incentives Provided Under V-VMP

- **Scrap Value Offer:** The scrapping centers provide a scrap value approximately equal to 4-6% of the ex-showroom price of a new vehicle, encouraging owners to scrap old vehicles in exchange for a new purchase.
- **Manufacturer Discounts:** Auto manufacturers offer a 5% discount to consumers who show scrapping certificates when purchasing a new vehicle.
- **Tax Concessions:**
 - Up to 25% tax concession on motor vehicle taxes for non-transport vehicles.
 - Up to 15% tax concession for transport vehicles.
- **Waiver of Registration Fees:** New vehicle purchases following a scrapping will have registration fees waived, reducing overall costs.

Disincentives Provided Under V-VMP

- **Increased Fees for Older Vehicles:**
 - Commercial vehicles older than 15 years face higher charges for fitness tests and fitness certificates.
 - Private vehicles older than 15 years incur higher registration renewal fees.
- **Green Cess:** An environmental tax ranging from 10-15% is levied on older vehicles, aimed at discouraging the continued use of environmentally harmful vehicles.

New Developments in V-VMP:

- **State Government Participation:** Various state governments are actively involved, offering up to 30% discounts on road tax for vehicles that are bought as replacements for scrapped ones.

Fitness Tests and Vehicle Scrapping:

- Private vehicles require a fitness test after 15 years; if passed, registration can be renewed for another five years.
- Commercial vehicles such as buses and trucks have different testing frequencies based on their age, with mandatory scrapping after 15 years of service.
- Government vehicles over 15 years old are also mandated to be scrapped.
- Vintage vehicles are exempt from this policy due to their infrequent use and maintenance status.

Benefits of the V-VMP:

- **Environmental Impact:** Estimated to reduce pollution significantly by scrapping approximately one crore vehicles, leading to a 15-20% reduction in vehicular emissions.
- **Boost to Auto Industry:** Expected to increase demand for newer, safer, and technologically advanced vehicles.
- **Recycling and Economic Growth:** The policy is likely to energize the recycling industry, creating jobs and enhancing waste and recycling management research and development.
- **Safety and Efficiency Improvements:** Promotes road and passenger safety and enhances fuel efficiency, particularly noting a 25% reduction in NOx emissions from upgraded BS VI compliant petrol engines.

EXPECTED QUESTIONS FOR UPSC CSE

Prelims MCQ

- Q. Consider the following statements regarding Voluntary Vehicle Modernization Program:
1. The program was launched by Ministry of Road Transport and Highways
 2. It offers scrapping certificates to owners of cars who scrap their vehicles under program
 3. The program will ensure 50% reduction in vehicular emissions

How many of the above statements are correct?

- (a) Only one (b) Only two
(c) Only three (d) None

Answer: (b) 1 and 2 only

Descriptive Question

- Q. Discuss the objectives and significance of the Voluntary Vehicle Modernization Program (V-VMP) in India. How does it aim to address environmental concerns? [10 marks] [150 words]

INITIATIVES ON FISHERIES SECTOR

Why in News: The Prime Minister of India inaugurates projects in Palghar, Maharashtra and has laid the foundation stone of 218 fisheries projects.

Key Details

- Foundation stone for infrastructure projects including development, upgradation and modernization of fishing harbors, landing centers and construction of fish markets.

These Projects include:

- **National rollout of Vessel Communication and Support system (VCS):** Indigenous technology developed by ISRO for establishing two-way communication with fishermen, providing for their emergency rescue and safety.
 - Phase wise installation of mechanized/motorized fishing vessels in 13 coastal states/UTs has been envisaged.
- **Development of Integrated Aquaparks and adoption of advanced technologies** such as the Recirculatory Aquaculture System (RAS) and Biofloc.
 - Aquaparks were introduced under the PM Matsya Sampada Yojana to facilitate various fisheries activities in one place.
 - RAS involves the use of mechanical and biological filters where the water in the fish culture tanks is recycled and reused after removing suspended particles and metabolites.
 - ◆ Used in high density fish culture.
 - Biofloc is an environmentally friendly aquaculture technique based on in-situ microorganism production.

Objectives of these Projects:

- Enhance fish production, improve post-harvest management of fish and seafood, etc.
- Generate more than 5 lakh employment opportunities
- Foster Women Empowerment.

PRELIMS SPECIAL

India's Fisheries Sector

- India is the third largest fish producing country, contributing 8 percent to the global fish production and ranks second in aquaculture production.
- Schemes/Initiatives
 - **Pradhan Mantri Matsya Sampada Yojana (PMMSY) [2020-2025]**, flagship scheme to bring about the Blue Revolution.
 - ◆ Pradhan Mantri Matsya Kisan Samridhi Sah-Yojana (PM-MKSSY, 2023-24): Central Sector Sub-scheme under PMMSY to focus on gradual formalization of the unorganized fisheries sector.
 - ◆ 100% FDI allowed through automatic route in Pisciculture, aquaculture and PM-MKSSY.

- **Fisheries and Aquaculture Infrastructure Development Fund (FIDF):** Provides concessional finance to the Eligible Entities (EEs), including States/UTs and State entities for development of identified fisheries infrastructure facilities through Nodal Loaning Entities (NLEs) namely (i) National Bank for Agriculture and Rural Development (NABARD), (ii) National Cooperatives Development Corporation (NCDC) and (iii) All scheduled Banks.
- Kisan Credit Cards (KCC) facility to fishers and fish farmers for meeting working capital requirements.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

Q. Consider the following statements:

1. India is the Fourth -largest fish producing country in the world as it accounts for 6.3 percent of the global fish production.
2. The Union Ministry of Agriculture has launched Mission Fingerling, a programme to enable holistic development and management of the fisheries sector in India.

Choose the correct answer:

- (a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

Answer: (b)

WHITE REVOLUTION 2.0

Why in News: The Union Home Minister and Minister of Cooperation recently launched the standard operating procedure for 'White Revolution 2.0.

White Revolution 2.0

- The standard operating procedure for 'White Revolution 2.0' states that milk dairies will aid empowerment of women and the fight against malnutrition.
- The White Revolution 2.0 will help the inclusion of women engaged in procurement of milk in formal employment as the money will be deposited in their bank accounts.
- The scheme aims to increase procurement led by cooperatives from the present 660 lakh litres per day to 1,000 lakh litres.
- White Revolution 2.0 will "increase milk procurement of dairy cooperatives by 50% over the next five years by providing market access to dairy farmers in uncovered areas and increasing the share of dairy cooperatives in the organised sector.
- It will work for women's self-reliance and women empowerment especially in rural areas.
- The initiative will leverage benefit of existing programs, including the Dairy Processing and Infrastructure Development Fund (DIDF), National Programme for

Dairy Development (NPDD), as well as proposed schemes NPDD 2.0 of Department of Animal Husbandry & Dairying to achieve its objective.

PRELIMS SPECIAL

Milk production in India

- India is the **world's top milk producer**, with production having reached 230.58 million tonnes during 2022-23.
- In 1951-52, the country produced just 17 million tonnes of milk.
- The average yield is, however, **only 8.55 kg per animal per day** for exotic/ crossbred animals, and 3.44 kg/ animal/ day for indigenous/ nondescript animals. The yield in Punjab is 13.49 kg/ animal/ day (exotic/ crossbreed), but only 6.30 kg/ animal/ day in West Bengal.
- As per the Basic Animal Husbandry Statistics (BAHS) 2023, the top five milk producing states are UP (15.72%), Rajasthan (14.44%), Madhya Pradesh (8.73%), Gujarat (7.49%), and Andhra Pradesh (6.70%), which together contribute 53.08% of the country's total milk production.
- The national per capita availability of milk is **459 grams/ day**, which is higher than the global average of 323 g/ day; this number, however, varies from 329 g in Maharashtra to 1,283 g in Punjab.
- About two-thirds of the marketable milk is in the unorganized sector. In the organized sector, cooperatives account for the major share.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

Q. Consider the following statements regarding milk production in India:

1. India is the world's second largest milk producer after China.
2. Rajasthan is the top milk producing state in India.

Which of the statements above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

(d) : Answer

CENTRALIZED PENSION PAYMENT SYSTEM

Why in News: The proposal for a Centralized Pension Payment System (CPPS) for the Employees' Pension Scheme, 1995 has been approved by the Union Minister of Labour and Employment and the Chairperson of the EPF's Central Board of Trustees.

Key Details

- **Centralized Pension Payment System (CPPS)** marks a major shift by establishing national-level centralized system, enabling pension disbursement through any bank, any branch across India.

Who will it benefit?

- The Centralized Pension Payment System is expected to benefit more than 78 lakh EPS pensioners of EPFO.
- **Note:** The current decentralized pension disbursement system, in which each EPFO Zonal/Regional Office maintains individual arrangements with just three to four banks, is replaced by the CPPS.
- This facility will be launched as part of EPFO's ongoing IT modernization project Centralized IT Enabled System (CITES 2.01) from 1st January 2025.
- In the next phase, CPPS will enable a smooth transition to Aadhaar-based payment system (ABPS).

Benefits of Centralized Pension Payment System (CPPS)

- By harnessing advanced IT and banking technologies, it will offer a more efficient, seamless, and user-friendly experience for pensioners.
- The CPPS would ensure disbursement of pension throughout India without any need for transfer of Pension Payment Orders (PPO) from one office to another even when the Pensioner moves from one location to another or changes his bank or branch.
 - This would be a great relief to pensioners who move to their hometown after retirement.
- The CPPS is a paradigm shift from the existing pension disbursement system that is decentralized, with each Zonal/Regional Office of EPFO maintaining separate agreements with only 3-4 banks.
- There will also be no need for pensioners to visit the branch for any verification at the time of commencement of pension and the pension shall be immediately credited upon release.
- In addition, EPFO expects a significant cost reduction in pension disbursement after moving to the new system.

Issues Faced by EPFO Pensioners

- **Delay in Transfers and Payments:** At present, if a pensioner decides to migrate, they have to seek the transfer of Pension Payment Orders (PPO) from one office to another.
 - This has invariably resulted in complaints from pensioners about the delay in transfers, and subsequent payments.
- **Limited Choice of Banks:** Pensioners can draw their monthly pension only through a group of three or four banks empanelled with the EPFO at every zone or region.

Conclusion

The approval of the Centralized Pension Payment System

(CPPS) marks a significant milestone in modernization of the EPFO. By enabling pensioners to receive their pensions from any bank, any branch, anywhere in the country, this initiative addresses the long-standing challenges faced by pensioners and ensures a seamless and efficient disbursement mechanism.

PRELIMS SPECIAL

Who is eligible for EPS Pension?

In order to be eligible for availing benefits under the Employees' Pension Scheme (EPS), an individual has to fulfil the following criteria:

- He should be a member of EPFO
- He should have completed 10 years of service
- He has reached the age of 58
- He can also withdraw his EPS at a reduced rate from the age of 50 years.
- He can also defer his pension for two years (up to 60 years of age) after which he will get a pension at an additional rate of 4% for each year.
- Members who have contributed to the Employees' Pension Scheme (EPS) will get consistent income through these perks.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

Q. Consider the following statements regarding Employee Pension Scheme Criteria to avail benefits

1. An individual should be member of EPFO
2. An individual should have completed 7 years of service
3. An individual reached the age of 58

Choose the correct option from following:

- (a) 1 and 3 only (b) 2 and 3 only
 (c) 1 only (d) All of the above

Answer: (a)

DELHI DECLARATION ON CIVIL AVIATION

Why in News: The Prime Minister recently announced adoption of Delhi Declaration on Civil Aviation.

Key Details

- The Ministers from the Asia and Pacific States responsible for Civil Aviation, met in New

- Delhi, India on the occasion of the **2nd Asia Pacific Ministerial Conference on Civil Aviation** and the 80th anniversary of the Convention on International Civil Aviation (Chicago Convention), with the **adoption of the the Draft Asia Pacific Ministerial Declaration on Civil Aviation (Delhi Declaration)**.

- The declaration was endorsed by 29 countries, sets ambitious targets for the future of air travel in one of the world's fastest-growing aviation markets.
- Delhi Declaration is a comprehensive framework designed to enhance regional cooperation, address emerging issues, and promote sustainable growth in the civil aviation industry.
- A key focus of the Delhi Declaration is accelerating efforts to reduce aviation's environmental impact.
 - ◆ This commitment was symbolically underscored by India's initiative to plant 80,000 trees commemorating ICAO's 80th anniversary.
- The declaration also emphasizes the critical role of accelerating progress towards gender equality in the sector. India leads with 15% of its pilots being women, triple the global average.

Note: The Declaration reaffirms support and continues efforts towards realizing the commitments of the prior Beijing Declaration.

About International Civil Aviation Organization (ICAO)

- A specialized agency of the United Nations, the ICAO leads the international alignment of technical standards and strategies, facilitating the safe, secure, and sustainable development of its 193 member states' aviation sectors and air services.
- This year(2024), ICAO is celebrating the 80th anniversary of its establishment by the 1944 Convention on International Civil Aviation.



The aim is to increase the number of airport to 350-400 by 2047.

PRELIMS SPECIAL

Government Schemes for Indian Aviation Sector

- **National Civil Aviation Policy 2016 (NCAP):** To promote ease of doing business, deregulation, simplified procedures, and e-governance.
- **UDAN ('Ude Desh ka Aam Nagrik'):** To enhance connectivity to India's unserved and under-served airports and envisages to make air travel affordable.
- **Digi Yatra Policy:** For providing passengers seamless and hassle-free experience at airports without the need for verification of ticket and ID at multiple touch points.
- **Foreign Direct Investment (FDI):** Up to 100% FDI under the automatic route in non-scheduled air transport services, MRO for maintenance and repair organizations, etc.
- **Monetising Assets:** Airport Authority of India (AAI) has formed joint ventures and awarded a few under public-private partnership (PPP) for a period of 50 years.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

Q. Consider the following statements regarding Digi Yatra:

1. It is a Ministry of Civil Aviation led initiative to make passenger's journey seamless, hassle-free and Health-Risk-Free.
2. It uses the single token of face biometrics to digitally validate the Identity, Travel, Health or any other data that is needed for the purpose of enabling air travel.
3. Airport Authority of India is the biggest shareholder in the Digi Yatra initiative.

How many of the above statements are correct?

- (a) Only one (b) Only two
(c) All three (d) None

Answer: (c)

STRENGTHENING OF COOPERATIVE SECTOR IN INDIA

Why in News: The union minister of cooperation launched the Margdarshika for the formation and strengthening of 2 lakh new (Multipurpose Primary Agriculture Credit Societies) MPACS and Dairy and Fishery Cooperatives.

Key Details

Margdarshika

- Action Plan on formation and strengthening of new Multipurpose PACS, Dairy and Fisheries Cooperative Societies in each Panchayat.

- In view of the important role played by primary level cooperatives in the overall and balanced development of the country, the Government of India has approved the plan for formation of new Multipurpose PACS, Dairy and Fisheries Cooperative Societies in uncovered Gram Panchayats in the country.
- In order to ensure its effective implementation in time-bound manner, a 'Margdarshika' has been prepared by the Ministry of Cooperation in collaboration with NABARD, NDDDB and NFDB.

Significance

- With the formation and strengthening of new multipurpose cooperative societies, crores of small and marginal farmers associated with them will get forward and backward linkages. Further, it will also have a multiplier effect on the entire rural economy of the country.

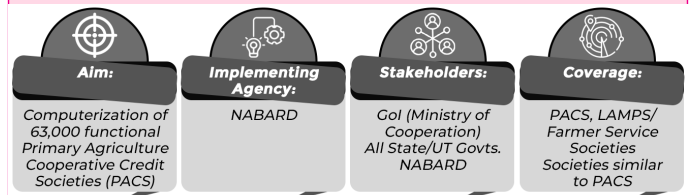
National Co-operation Policy

- Union Budget 2024 proposed National Co-operation Policy for the co-operative sector.
- In response, a 48-member national-level committee was constituted under the chairmanship of Suresh Prabhakar Prabhu, consisting of experts of the cooperative sector, representatives from National/State/District/Primary level cooperative societies, Secretaries (Cooperation) and RCSs from States/UTs, officers from Central Ministries /Departments to formulate the New National Cooperation Policy.

PRELIMS SPECIAL

Primary Agricultural Credit Societies (PACS)

- They are grassroots-level institutions, and their membership encompasses individual farmers, artisans, and members of other weaker sections of the society as shareholders.
- They form the lowest tier of the federated short-term cooperative credit structure with District Cooperative Banks (DCCBs) and/or State Cooperative Banks (StCBs) in their upper tiers.
- Majority of PACS have so far been not computerized and there is no uniformity in the software being used by them and they are not even interconnected with the DCCBs and StCBs.



GALATHEA PORT

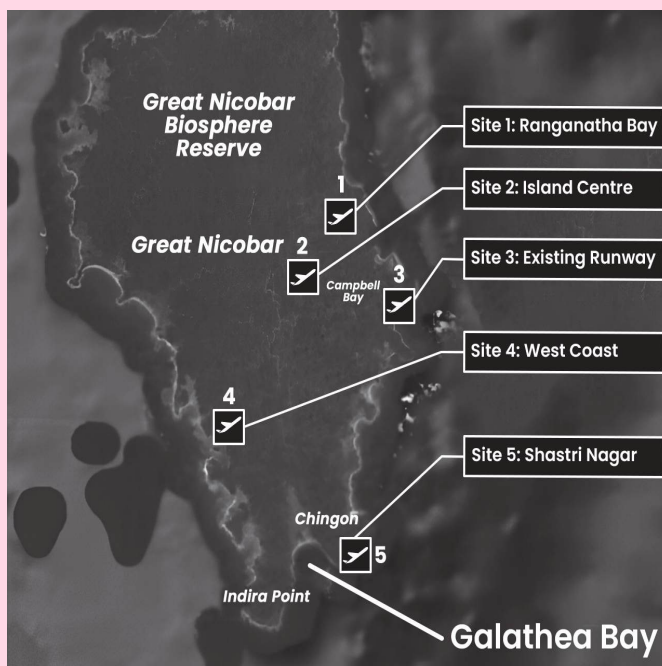
Why in News: Recently, the Government of India has notified the Galathea Bay as a 'Major Port'.

Key Details

- The international trans-shipment hub at Galathea Bay in the Andaman & Nicobar Islands has been notified as a 'Major Port'.
- It is being developed as an International Container Transshipment Port (ICTP).
- With this, the proposed Rs 44,000 crore mega project is officially under the administrative control of the union ports, shipping, and waterways ministry.
- It is also eligible for central funding and will be developed under the public-private partnership model.
- Once operational, the Galathea Bay project will help capture a large share of transshipped cargo which is handled at ports outside India.
- The proposed facility is envisaged to be developed in four phases with Phase 1 is proposed to be commissioned in the year 2028 with handling capacity of ~ 4 Million TEUs, increasing to 16 Million TEUs in the ultimate stage of development by 2058.

Note: Under the Maritime Amrit Kaal Vision 2047, four port clusters with a capacity of more than 300 MTPA and two with capacity more than 500 MTPA will be developed.

- Strategic location in terms of proximity (40 nautical miles) with the International shipping trade route and availability of natural water depth of over 20m.



- Galathea forms part of what has been designated as the Great Nicobar Biosphere Reserve, with notable animal species found in the park include the giant robber crab, megapode and Nicobar pigeon.

PRELIMS SPECIAL

About Galathea Bay

- It is located in the Great Nicobar Island of Andaman and Nicobar Islands of India.

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The Indian EXPRESS

PLASTIC POLLUTION

Why in News: India has secured the top spot as biggest plastic polluter in the world.

Key Details

- New research reveals India's plastic waste generation at 9.3 million tonnes per year.
- The country's official waste generation rate, approximately 0.12 kilogrammes per capita per day.
- Official statistics do not include rural areas, the open burning of uncollected waste, or waste recycled by the informal sector, the paper said.
- Taking the second and third spots were Nigeria, with 3.5 Mt of emissions and Indonesia, with 3.4 Mt.

Plastic Waste in India

Present Scenario

- As per Central Pollution Control Board (CPCB) reports, plastic contributes to 8% of the total solid waste, with Delhi producing the maximum quantity followed by Kolkata and Ahmedabad.
- Only 60% of the total plastic waste is being recycled.
- Households generate maximum plastic waste, of which water and soft drink bottles form a large number.
- In India, around 43% of manufactured plastics are used for packaging purposes and most are of single use.
- Multi Layered Plastics are categorized under either recyclable, energy recoverable or with some other alternate use, but their recycling is an expensive process.

Plastic Waste Collection

- **Plastic Waste Management Rules 2016** mandated the producers and brand owners to devise a plan in consultation with the local bodies to introduce a collect-back system. This system is known as the Extended Producers Responsibility (EPR).
- CPCB has estimated the collection efficiency as 80.28% in 2014, out of which only 28.4% was treated. Remaining quantities were disposed of in landfills or open dumps.
- ULBs could take cue from some best practices followed in cities like Bangalore where Dry Waste Collection Centres have not only been established but also have a self-sustainable business model.
- Need to establish a monetized collection model for plastic waste that has economic returns for all those involved.

- Virgin plastics (e.g. those used in food packets, etc) should be collected separately because of the higher value it draws.



Solution to Plastic wastes

- **Alternatives:** Develop bio-based and biodegradable plastic which utilize starch, cellulose, poly lactic acid as raw materials for short-term use products.
 - Need to promote the use of biodegradable plastic, and especially in high-end large scale applications (give examples) that can absorb the full cost of this kind of plastic. This will help in moving out bioplastics from labs to markets.
 - India already has a market for bioplastics with several manufacturing plants at Bengaluru and Chennai.
- **Recycling:** Some plastics have fibers which shorten with every time it is recycled. Thus, a plastic can be recycled 7-9 times before it is no longer recyclable.
- Recycling is good - every ton of plastic waste recycled results in a saving of approximately 3.8 barrels of petroleum.
- Technologies are available in India that can convert 1 Kg of plastic to 750 ml of automotive grade gasoline.
- Shredded plastic waste can be used in laying roads. Jambulingam Street in Chennai was one of India's first plastic roads built in 2002.
- In 2015-16, the National Rural Road Development Agency laid around 7,500 km of roads using plastic waste.

- Co-processing of plastic in cement kilns offers a sound, environmentally viable mechanism to process non-recyclable, combustible plastic waste.

EXPECTED QUESTIONS FOR UPSC CSE

Prelims MCQ

Q. Which of the following statements are correct?

1. According to a recent report by journal nature, India has secured the top spot as biggest plastic polluter in the world
2. Virgin plastic is a resin produced using natural gas or crude oil and does not contain any recycled materials.

- (a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither of them

(c) Answer

Descriptive Question

Q. Despite many attempts India has not been able to curb the menace of Plastic Pollution. What are the other alternative solutions to curb the plastic pollution? [10 marks] [150 words]

CO₂ EMISSIONS FROM INDIA'S TRANSPORT SECTOR

Why in News: A World Resources Institute study found that **road transport** accounts for 90% of the transport sector's emissions.

Key Findings of the Study

- Carbon dioxide emissions from India's transport sector could be reduced up to 71 percent by 2050 if high-ambition strategies are adopted on three key parameters – electrification, improving fuel economy standards, and switching to cleaner modes of transport and mobility, said a new study by World Resources Institute (WRI) India.
- The study noted that following a high emission reduction target in the transport sector would also be pivotal in achieving India's net-zero target by 2070. The study's findings are based on the energy policy simulator, which allows users to develop dynamic models for different decarbonisation targets and their outcomes.
- The transport sector accounted for 14 percent of total energy-related CO₂ emissions in 2020, 90 percent of which was driven by road transport,
 - Which remains the most carbon-intensive. Out of this 90 percent, two-wheelers contributed about 16 percent, cars about 25 percent, buses 9 percent, freight light-duty vehicles (LDVs) 8 percent, and freight heavy-duty vehicles (HDVs) 45 percent (the highest).

What are India's long-term low-carbon development strategies?

- India aims to increase its renewable energy quotient by installing 50 percent of its renewable sources harnessing equipment by 2023. The increase in renewable energy harnessing will reduce greenhouse gas emissions to a great extent.
- India also aims to increase energy efficiency in its multiple sectors, such as transportation, power and electricity, and industrial manufacturing. The energy efficiency steps will help reduce the overconsumption and waste of power and fuel in different sectors.
- Another step that India is trying to take and has already taken is the switch to electric vehicles so that vehicular pollution and emissions are cut down to zero. There are indigenous and foreign EV plants in India today.
- India aims to conserve and increase its forest cover and biodiversity to increase natural forest cover and minimize the effects of climate change. The conservation of forests and afforestation helps achieve net zero emissions and other developmental goals.
- India is now trying to build its climate resilience with smart natural resource management strategies to reduce the effects of climate change. This not only helps in better resource allocation in a growing population but also helps in disaster management and emergencies.

Conclusion

The mandate of expanding electric vehicle sales is most effective in terms of CO₂ emissions reduction, with an annual abatement potential of 121 MtCO₂e (Metric tonnes of carbon dioxide equivalent). Therefore, the decarbonisation of electricity generation could complement the electrification targets in the transport sector.

BATTERY WASTE RULES

Why in News: The Ministry of Environment, Forest, and Climate Change (MoEFCC) has introduced stringent environmental compensation (EC) guidelines to penalise violations of the Battery Waste Management (BWM) Rules, 2022.

Key Details

- The Ministry of Environment, Forest, and Climate Change (MoEFCC) has introduced stringent environmental compensation (EC) guidelines to penalise violations of the Battery Waste Management (BWM) Rules, 2022.
- These guidelines were issued by the Central Pollution Control Board (CPCB) on September 10.
- The environmental compensation collected under Battery Waste Management Rules, 2022 would be utilised in collection and refurbishing or recycling of uncollected and non-recycled or non-refurbished waste batteries.

- Penalties will be enforced not only for non-compliance with battery waste regulations but also for failing to meet metal-wise extended producer responsibility (EPR) targets.
 - Entities found violating the BWM Rules must deposit their EC and financial penalties within a specified time frame. If payment is delayed, penalties will increase accordingly.
 - Delayed deposits made within one month of the deadline will incur 12 percent annual interest on the original amount.
 - Deposits made after one month but within three months will be subject to 24 percent annual interest.
- With different battery chemistries involving varying recycling costs, the government has set differentiated EPR credit costs, ranging from Rs 18 per kg for lead batteries to Rs 2,400 per kg for lithium batteries.
- This structured approach ensures that producers are held accountable for managing battery waste according to the environmental impact and recycling complexity of each type of battery, according to the guidelines.

Current Scenario of Battery Waste in India

- The Ministry of Environment, Forest and Climate Change, published the Battery Waste Management Rules, 2022, to ensure environmentally sound management of waste batteries under the Environment (Protection) Act 1986.
 - The rules replaced the Batteries (Management and Handling) Rules, 2001.
 - They were amended in 2023 and much recently in 2024.
- **Key Provisions of the Battery Waste Management Rules, 2022**
 - **Extended Producer Responsibility (EPR):** Where the producers (including importers) of batteries are responsible for collection and recycling/refurbishment of waste batteries and use of recovered materials from wastes into new batteries.
 - **Centralized online portal:** for exchange of EPR certificates between producers and recyclers/refurbishes.
 - **Mandatory recovery:** the minimum percentage of recovery of materials from waste batteries.
 - **Polluter Pays Principle:** Environmental compensation will be imposed for non-fulfilment of EPR target.
 - ◆ Funds collected shall be utilised in collection and refurbishing or recycling of uncollected and non-recycled waste batteries.

PRELIMS SPECIAL

About Extended Producer Responsibility and new rules

- EPR targets are environmental regulations that require producers to manage the entire lifecycle of their products, including their disposal and recycling.
- The EC will be levied progressively for non-compliances unrelated to EPR shortfalls.
- For a first default, the EC is set at Rs 20,000, equivalent to the application fee for registration under the BWM Rules. For the second default, the penalty doubles to Rs 40,000, and for the third, it escalates further to Rs 80,000.
- Entities found violating the BWM Rules must deposit their EC and financial penalties within a specified time frame. If payment is delayed, penalties will increase accordingly.
- If payments are delayed beyond three months, the government will impose stricter sanctions, including closure of the unit. They may also include seizure of trade documents, and further legal action under the Environmental Protection Act (EPA).
- According to data from the MoEFCC, 252 recyclers are registered with the CPCB.

TACKLING STUBBLE BURNING POLLUTION

Why in News: Punjab government aiming to check stubble burning.

Key Details

- The Punjab government has issued sanction letters for procuring 11,052 crop residue management (CRM) machines to help farmers manage paddy straw.
 - Super seeder machine leads the pack among CRM machines.
- These machines are pivotal in promoting sustainable agriculture by supporting farmers in clearing fields efficiently while preserving soil health and fertility.

Related News: Delhi government has started preparations to spray bio-decomposer free of cost over 5,000 acres of farmland in the national capital.

- Bio-decomposer is a microbial liquid spray which, when sprayed onto paddy stubble, breaks it down in a way that can be easily absorbed into the soil, whereby farmers then have no need to burn the stubble.
- It has been developed by the Indian Agricultural Research Institute (IARI).
- It is an alternative to stubble burning.

Drivers of Crop Residue Burning	Impacts of Crop Residue Burning
Time Constraint - Limited period between paddy harvest and wheat sowing	On Atmosphere Environment <ul style="list-style-type: none"> • Air pollution • Smog and Haze • Aerosols and Particulates
Resource Constraint - Financial Constraint and Labour Scarcity	On Soil Environment <ul style="list-style-type: none"> • Declining Microbial Biomass • Loss of Soil Organic Carbon • Loss of Soil Biodiversity • Declining Soil Fertility
Small and Marginal Farmers - Inability to purchase implements to manage crop residues	On Human Health <ul style="list-style-type: none"> • Chronic Heart and Lung Diseases

Ways to make Crop Residue Management (CRM) Operational Guidelines more Effective

- Subsidising tractors for Custom Hiring Centres could boost machinery rentals
 - The use of crop residue management machines on any farm, such as Super Seeders and Happy Seeders, requires compatible high horsepower (HP) tractors of more than 45-50 HP for operation.
- Empowering biomass aggregators to set up independent aggregation units
 - Biomass aggregators collect crop residue from fields and supply it to biomass-based industries for energy production.
 - Setting up and running the aggregation business requires procurement of CRM machines, undertaking baling activities on farms, and efficient storage and transportation of residue.
 - Starting such businesses requires high capital investment and assured residue buyers.
- Enhancing beneficiary accountability through the credit-linked capital subsidy mechanism
 - While the financial assistance under the CRM scheme was previously paid through direct benefit transfers to the beneficiaries, this has been replaced by a credit-linked capital subsidy mechanism in 2024.
 - It will apply to farmers and entrepreneurs seeking financial assistance to start Custom Hiring Centres or paddy straw supply chain-related projects.

Case Study: Haryana

- At 2,303, Haryana recorded fewer farm fires from September 15 to November 30 in 2023 than in the same period the last three years. It was 37% down from 3,661 farm fires in 2022, 67% down from 6,987 in 2021 and 45% down from 4,202 in 2020.
- Reasons for fewer farm fires
 - According to experts the lower count of farm fires, estimated using satellite imagery collected by NASA,

showed that the steps being taken to deter were working and farmers were switching to newer technologies.

- The total area under paddy cultivation in the state was down to 30.4 lakh acres in 2023, compared to 34 lakh acres in 2022 - a change that likely contributed to reducing farm fires.
- The Haryana government, ahead of winter, accumulated 16,000 machines that were given to farmers for in-situ paddy straw management.
- It had also appointed 7,000 nodal officers and set up dedicated call centre teams to check stubble burning.
- Much of the straw that was left behind after paddy harvests was utilised as cattle fodder or sold to industries.
- Gram panchayats that achieved zero-burning targets will be awarded Rs 1 lakh or Rs 50,000.

Super Seeder

- Super Seeder is a three in one solution offered to increase farmers efficiency & income by combining three operations- tilling, sowing and seed bed covering and is primarily recommended for wheat sowing in combine harvested paddy fields.
- It also helps in containing pollution as it offers environment friendly solution by avoiding burning of paddy straw.

EXPECTED QUESTION FOR UPSC CSE

Prelims Question

Q. Consider the following impacts of stubble burning:

1. Reduced soil fertility
2. Air Pollution
3. Loss of soil biodiversity

Select the correct answer from the code above:

- (a) 1 only (b) 1 and 3 only
(c) 2 and 3 only (d) 1, 2 and 3

Answer (d)

INTERNATIONAL BIG CATS ALLIANCE

Why in News: India formally joins international alliance for big cats' conservation.

Key Details

- India become a member country of the International Big Cat Alliance (IBCA) by signing and ratification of the Framework Agreement on the establishment of the International Big Cat Alliance (IBCA).
- So far four countries have become members of IBCA including India, Nicaragua, Eswatini and Somalia. Twenty-four countries (including India) have consented to be members of IBCA and nine international organizations have also consented to be partner organizations of IBCA.
- The Union cabinet in its meeting held on February 29 approved the establishment of International Big Cat Alliance with Headquarters in India with a one-time budgetary support of ₹150 crore for a period of five years from 2023-24 to 2027-28.



PRELIMS SPECIAL

About International Big Cat Alliance

- On the occasion of commemorating 50 years of India's Project Tiger on April 9, 2023 the Prime Minister launched an International Big Cat Alliance aiming at securing the future of cats -- **tiger, lion, leopard, snow leopard, puma, jaguar and the cheetah.**
- Through the alliance, the member nations will exchange experiences, provide faster assistance to their neighbours, and place a strong emphasis on capacity building.
- The Intergovernmental body will have 97 countries with many Asian and African countries becoming a part of the alliance.
- Among the seven big cats, five — tiger, lion, leopard, snow leopard and cheetah — are found in India, excluding puma and jaguar.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

Q. Which of the following statements about International Big Cats Alliance are correct:

1. The alliance aims at securing the future of big cats namely lion, tiger, cheetah, leopard, snow leopard, puma and jaguar.
2. There are no members of Asia except India.

(a) 1 only

(b) 2 only

(c) Both 1 and 2

(d) Neither 1 nor 2

Answer (a)

ANNUAL AIR QUALITY AND CLIMATE BULLETIN

Why in News: United Nations' World Meteorological Organization (WMO) released its fourth annual Air Quality and Climate Bulletin.

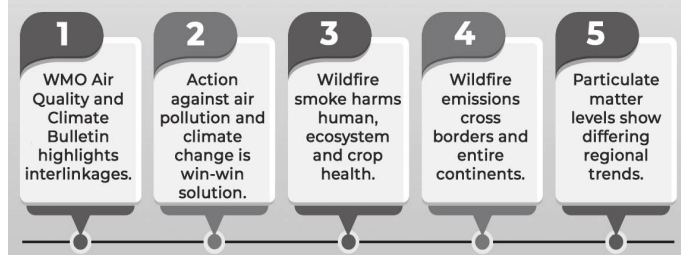
About the Report

- The WMO bulletin was released for Clean Air for Blue Skies Day on 7 September.
- This year's theme is Invest in Clean Air Now.
- The bulletin, the fourth in an annual series, explores the intricate relationship between air quality and climate.

Key Details of the Report

- The WMO Air Quality and Climate Bulletin includes a special focus on wildfires.
- It also looks at global and regional concentrations of particulate matter pollution and its harmful effects on crops in 2023.
- The chemical species that lead to a degradation in air quality are normally co-emitted with greenhouse gases. Thus, changes in one inevitably cause changes in the other.
- Air quality in turn affects ecosystem health as air pollutants settle from the atmosphere to Earth's surface.
- Deposition of nitrogen, sulphur and ozone reduces the services provided by natural ecosystems such as clean water, biodiversity, and carbon storage.
- This fourth edition of the WMO Air Quality and Climate Bulletin surveys the state of the science and highlights some notable events that took place in 2023.

Key Messages of the Report

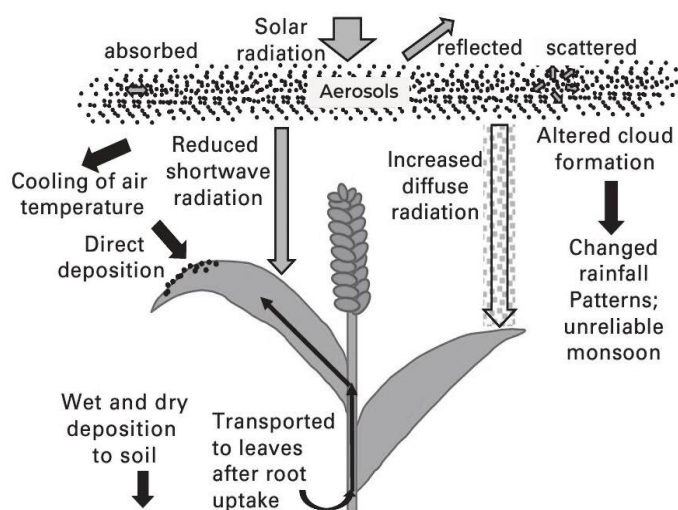


Particulate Matter Concentrations

- Particulate matter at the surface that is smaller than 2.5 micrometres in diameter is referred to as PM2.5.
- In ambient air, PM2.5 is a severe health hazard (World Health Organization, 2021).
- Anthropogenic and natural sources contribute to PM2.5 pollution in varying proportions at the global scale. Emissions of PM2.5 originate from human activity such as transport, industry and agriculture, as well as from natural sources such as wildfires and wind-blown desert dust.
- The formation of secondary aerosol particles from gases such as sulfur dioxide, nitrogen oxides, ammonium and volatile organic compounds is an important additional source of PM2.5.
- These diversities in emission sources, and uncertainties in formation and other processes, make predicting (forecasting) PM2.5 challenging.

Impacts of Atmospheric Particulate Matter (PM) on Crops

- Global PM hotspots include agricultural areas in Central Africa, Pakistan, India, China and South-East Asia.
- Agriculture is itself a major contributor to PM through release of particles and their precursors by stubble burning, fertilizer and pesticide applications, tillage, harvesting, and manure storage and use.
- Edible parts of crops may become contaminated with PM containing heavy metals such as lead and mercury.
- Where PM concentrations are high, dry deposition of PM onto crops directly affects them by reducing the amount of sunlight reaching leaf surfaces and physically blocking leaf stomata which regulate exchange of water vapour and carbon dioxide with the atmosphere.
- Experimental evidence from India and China indicates that dry deposition of PM in highly polluted areas reduces crop yields by up to 15%.
- PM also affects crop growth indirectly by changing the amount and characteristics of solar radiation reaching the Earth's surface.



EXPECTED QUESTION FOR UPSC CSE

Prelims Question

- Q. Air Quality and Climate Bulletin is release by ...
- United Nation Environment Programme
 - International Union for Conservation of Nature
 - World Meteorological Organization
 - Intergovernmental Panel on Climate Change

Answer (c)

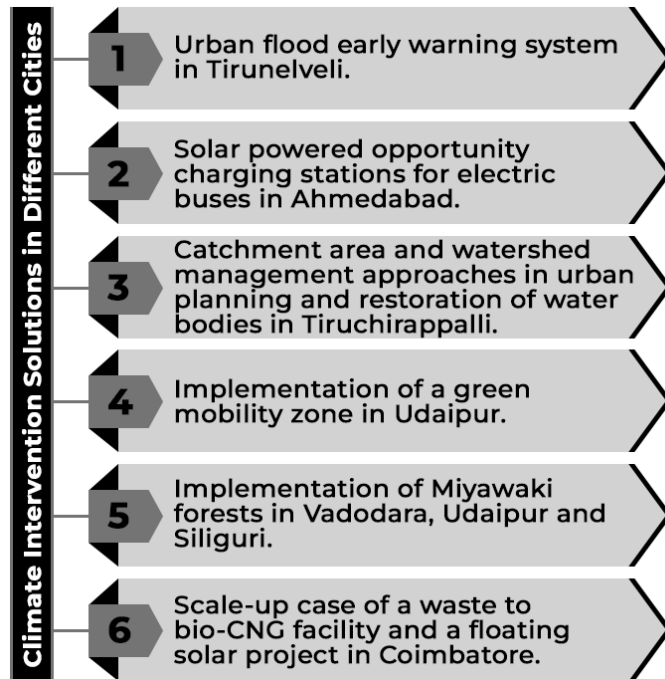
NET-ZERO CLIMATE RESILIENT CITY ACTION PLANS 2070

Why in News: For the first time in South and Southeast Asia, seven Net-zero Climate Resilient City Action Plans 2070 was released.

Key Details

- Net-zero Climate Resilient City Action Plans 2070 for the cities of Ahmedabad, Rajkot, Vadodara, Coimbatore, Tiruchirapalli, Tirunelveli Udaipur and Siliguri, were released together at the National Workshop on Multi-Level Action for Climate Resilient Cities, held on 18 and 19 September 2024
- These are in alignment with India's ambitious target to achieve net-zero emissions by 2070 as committed by Prime Minister, at the CoP26 in Glasgow, 2021.

Significance: This initiative underscores the commitment of Indian cities to combat climate change and enhance community resilience, marking a significant milestone in advancing urban climate resilience in India.



Key Highlights from the Eight Net-zero Climate Resilient City Action Plans

- All 8 cities require climate finance of more than USD 85,000 billion until 2070, for varied climate action projects in the transport, buildings, biodiversity, water supply, SWM, wastewater, stormwater, renewable energy and energy efficiency sectors among others.
- City emissions reductions of up to 91% lower than business-as-usual scenario expected by 2070 with existing technology.
- Approximately 8 lakh green jobs are expected to be created through implementation of the climate actions highlighted in the plans.

Climate Resilient Cities

- A Resilient City is one that has developed capacities to absorb future shocks and stresses.
- Climate resilience is not about making development in a new way. It is about adding climate variability and change considerations to the planning and development framework to ensure long term sustainability and preparedness towards climate change.
- A resilience building process entails strengthening of:
 - City systems (Infrastructure, services, sectors) - drainage, water supply, transport, health facilities etc.
 - City planning (development norms, land-use planning)

How are Climate Resilient Cities Different or Better?

- A resilient city is one that has developed capacities to help absorb future shocks and stresses, so as to maintain the same functions, structures, systems, and identity.

- Climate resilient cities have the capability to reduce and manage the negative impacts of climate change because these cities have planned and factored these changes in their development goals and planning by:
 - Utilizing climate information (of past and future) to identify climate stressors typical to their cities / regions.
 - Preparing and implementing strategies to reduce vulnerability of population and city systems.
 - Adapting to change, preparing, and responding to disasters, mitigating GHG emissions.

International Programmes Supporting Resilience

- Asian Cities Climate Change Resilience Network
- Cities Development Initiative of Asia
- UNHABITAT’s Cities and Climate Change Initiative
- Rockefeller Foundation’s Recent 100 Resilient Cities Program
- USAID’s Climate Change Resilient Development(CCRD) program have been working towards addressing knowledge gaps with improved mechanisms to support cities to be climate resilient.
- Global Resilience Partnership
- ADB’s Urban Climate Change Resilience Partnership (UCCRP)

TROPICAL CYCLONE - YAGI

Why in News: India launched Operation Sadbhav to send urgent supplies to Vietnam, Laos and Myanmar – the countries devastated by Typhoon Yagi that has claimed more than 200 lives.

Key Details

- Yagi was the strongest typhoon to hit the Southeast Asian region in decades. It made landfall in Philippines with winds of up to 149 kph (92 mph).
- Under Operation Sadbhav, India has extended assistance to the Government of Vietnam to provide relief to the affected communities in northern Vietnam impacted by the natural disaster.
- India has been among the first responders in providing Humanitarian Assistance and Disaster Relief (HADR) to impacted countries. Operation Sadbhav is part of India’s broader effort to contribute to HADR within the ASEAN region, in line with its longstanding ‘Act East Policy’.

Yagi: Strongest Storm in Asia

- Typhoon Yagi started as a tropical storm in the western Philippine Sea on September 1. It made landfall in the Philippines the next day and started to weaken. However, due to unusually warm waters in the South China Sea, the storm intensified again. By September 4, it strengthened into a strong typhoon with Category 3 winds.
- The next day, it became a Category 5 typhoon with peak maximum sustained winds of 260 kmph.

- Typhoon Yagi is one of four Category 5 storms recorded in the South China Sea, after Pamela in 1954, Rammasun in 2014, and Rai in 2021.
- On September 6, it made a landfall in China's Hainan province with winds of 223 kmph. The following day, Typhoon Yagi hit near Haiphong, Quang Ninh province, in northern Vietnam, as one of the strongest storms the country has seen in more than a decade.
- The storm was subsequently downgraded to a tropical depression but still brought heavy rains last week in countries such as Myanmar, where it triggered severe floods around the remote capital, Naypyidaw.

Formation of Tropical Cyclones

- Tropical cyclones form over warm ocean waters near the equator.
- When the warm, moist air from the ocean surface rises upward, a lower air pressure area is formed below.
- Air from surrounding areas with higher air pressure rushes into this low pressure area, eventually rising, after it also becomes warm and moist.
- As warm, moist air rises, it cools down, and the water in the air forms clouds and thunderstorms.
- This whole system of clouds and winds gains strength and momentum using the ocean's heat, and the water that evaporates from its surface.
- The weakest tropical cyclones are called tropical depressions. If a depression intensifies such that its maximum sustained winds reach 63 kmph, the tropical cyclone becomes a tropical storm, according to the National Oceanic and Atmospheric Administration (NOAA). Storm systems with wind speeds of 119 kmph and above are classified as hurricanes, typhoons, or tropical cyclones.
- **Tropical Cyclones Categories**
 - The category of a tropical cyclone is determined by its sustained wind speed, as measured by the Saffir-Simpson Hurricane Wind Scale.
 - Cyclones are classified into five categories - Category 1 to Category 5.
 - While Category 1 tropical cyclones bring winds of 119 to 153 kmph, Category 5 tropical cyclones, which are the strongest, have winds of 252 kmph or higher.
 - Storms that reach Category 3 and higher are considered major tropical cyclones due to their potential to inflict significant damage.

EXPECTED QUESTION FOR UPSC CSE

Prelims Question

Q. Consider the following:

1. Warm Sea Surface water
2. High Humidity and moisture in air

3. High Wind Shear

4. Coriolis Effect

Which of the above are conditions needed for the development of a tropical cyclone?

- (a) 1 and 3 only (b) 1, 2 and 3 only
 (c) 1, 3 and 4 only (d) 1, 2 and 4 only

Answer (d)

METHANOL PRODUCTION IN INDIA

Why in News: India's first CO₂-to-methanol pilot plant to come up in Pune.

Key Details

- In a significant step towards advancing carbon capture and utilisation (CCU) technologies, Abhay Karandikar, Secretary to the Department of Science and Technology (DST), laid the foundation stone for India's first CO₂-to-methanol pilot plant at Thermax Limited in Pune.
- The project is being implemented as a public-private partnership (PPP) between IIT-Delhi and Thermax Limited.
- With a capacity of 1.4 tons per day (TPD), the plant marks a pioneering effort in carbon reduction and conversion technology.
- Comprehensive techno-economic analysis will assess the feasibility and commercial viability of converting CO₂ into methanol.

The pilot plant will serve as a pioneering platform for the demonstration and advancement of indigenous Carbon Capture and Utilisation (CCU) cutting-edge technologies, marking a significant step towards India's Panchamrit declaration.

Collaboration between IIT Delhi and Thermax Limited will act as a living lab for CCU research, focusing on developing new catalysts and processes for converting captured CO₂ into chemicals.

Significance

This includes both pre-combustion and post-combustion carbon capture techniques, which aim to reduce CO₂ emissions significantly.

The findings from this pilot plant will provide critical insights to develop operations at a commercial scale and demonstrate decarbonisation potential in coal-based thermal power sectors, which account for 30% of India's carbon emissions.

Carbon Capture, Utilisation, and Storage (CCUS)

CCUS involves the capture of CO₂, generally from large point sources like power generation or industrial facilities that use either fossil fuels or biomass as fuel. If not being used on-site, the captured CO₂ is compressed and transported by pipeline, ship, rail or truck to be used in a range of applications, or injected into deep geological formations such as depleted oil and gas reservoirs or saline aquifers.

Role of CCUS in Clean Energy Transitions

- CCUS can be retrofitted to existing power and industrial plants, allowing for their continued operation.
- It can tackle emissions in hard-to-abate sectors, particularly heavy industries like cement, steel or chemicals.
- CCUS is an enabler of least-cost low-carbon hydrogen production, which can support the decarbonisation of other parts of the energy system, such as industry, trucks and ships.
- Finally, CCUS can remove CO₂ from the air to balance emissions that are unavoidable or technically difficult to abate.

Way Forward

- CCUS deployment has been behind expectations in the past but momentum has grown substantially in recent years, with over 700 projects in various stages of development across the CCUS value chain.
- Nevertheless, even at such level, CCUS deployment would remain well below what is required in the Net Zero Scenario.

MISSION MAUSAM

Why in News: The Union Cabinet approved Mission Mausam to make India 'Weather Ready' and 'Climate Smart'.

Key Points

- **Aim:** To improve weather understanding and forecasting through expanded observation networks, better modelling and advanced tools like AI and machine learning.
- Mission boosts an extra edge in tackling extreme weather events and impacts of climate change.
- Next-generation radars and satellite systems with advanced sensors and high-performance supercomputers to be included.
- Mission Mausam, to be chiefly implemented by the Ministry of Earth Sciences, is envisaged to be a multi-faceted and transformative initiative to tremendously boost India's weather and climate-related science, research, and services.
 - In the first phase, which runs until March 2026, will focus on expanding the observation network. This includes adding around 70 Doppler radars, high-performance computers and setting up 10 wind profilers and 10 radiometers.
 - The second phase will focus on adding satellites and aircraft to further enhance observational capabilities.

Over the five-year period, the ministry and its institutions will work to improve their understanding of weather and climate processes and prediction capabilities and develop weather management technologies.

- It will help to better equip stakeholders, including citizens and last-mile users, in tackling extreme weather events and the impacts of climate change. The ambitious program will help broaden capacity and resilience across communities, sectors, and ecosystems in the long run.
- **Objectives** As part of the Mission Mausam, India will exponentially expound research and development, and capacity in atmospheric sciences, especially weather surveillance, modelling, forecasting, and management.
 - To improve short to medium-range weather forecast accuracy by five to 10 percent and enhance air quality prediction in all major metro cities by up to 10 percent.
 - It will enable weather prediction up to the panchayat level with a lead time of 10 to 15 days and improve the nowcast frequency from three hours to one hour.
- "Cloud chamber" will be established at the Indian Institute of Meteorology in Pune within the next one and a half years under the mission to study the processes occurring within clouds in the context of rising temperatures.
 - The insights gained from the cloud chamber will also help improve the parameterization of weather models, supporting the indigenization of these model.
- **Organisations involved:** Three institutes of the Ministry of Earth Sciences: the India Meteorological Department, the Indian Institute of Tropical Meteorology, and the National Centre for Medium-Range Weather Forecasting will primarily implement Mission Mausam.

4TH GLOBAL RENEWABLE ENERGY INVESTOR'S MEET AND EXPO (RE-INVEST)

Why in News: India-Germany Platform for Investments in Renewable Energies Worldwide launched at 4th Global Renewable Energy Investor's Meet and Expo (RE-INVEST).

Key Details

- The India-Germany Platform for Investments in Renewable Energies Worldwide, was launched at the 4th RE-INVEST, on 16 September 2024, to develop concrete and sustainable solutions for the accelerated expansion of renewable energy.
- The platform will bring together international stakeholders from across the globe, including the private sector (both financial sector and industry), international organizations, development banks and bilateral partners, to create business opportunities, for meeting the increasing demand for capital, technology transfer and innovative technical solutions.

Other developments

- Union Minister for New and Renewable Energy Shri Pralhad Joshi said the 4th edition of RE-INVEST will be remembered as a historic event where record investments worth 32.45 lakh crore in the form of Shapath Patra has been pledged by 2030.
- Manufacturers have committed additional manufacturing capacities of 340 GW in solar modules, 240 GW in solar cells, 22 GW in wind turbines and 10 GW in electrolyzers.

Renewable Energy Investor's Meet and Expo (RE-INVEST)

- It is a global renewable energy investors meet and expo organized by the Ministry of New and Renewable Energy (MNRE), Government of India.
- It is a platform for bringing together global investors, developers, manufacturers, and innovators in the renewable energy sector.
- The first RE-INVEST India was held in 2015, and the second was held in 2018 and the third RE-INVEST India was held in 2020.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

Q. Recently, the 4th edition of the REINVEST Summit was in the news. The event was related to

- Startup Promotion
- Investment in Artificial Intelligence
- Investment in Renewable energy
- Investment in Cyber Security

Answer : (c)

STATE OF THE RHINO REPORT

Why in News: The International Rhino Foundation (IRF) published the 'State of the Rhino' report.

Key Details

- The International Rhino Foundation (IRF) published its annual State of the Rhino report to illuminate the threats to and raise awareness for the five rhino species this World Rhino Day, September 22nd.

Key takeaways from the 2024 State of the Rhino:

- Rhino poaching in Africa increased by 4% from 2022 to 2023. At least 586 African rhinos were poached in 2023, one every 15 hours.
- While thriving in several regions, the total black rhino population declined slightly over the last year due to heavy poaching in Namibia and South Africa.
- White rhino populations in South Africa are on the rise despite poaching.
- Greater one-horned rhinos have been making use of improved habitats and wildlife corridors.

- Two calves were born at the Sumatran Rhino Sanctuary in Way Kambas National Park in September and November 2023.
- Since July 2023, Indonesian authorities have been investigating and prosecuting Javan rhino poaching groups, who confessed to killing 26 rhinos in Ujung Kulon National Park from 2019 to 2023.
- With all five species combined, there are just under 28,000 rhinos left in the world.

PRELIMS SPECIAL

About One-Horn Rhino

- The greater one-horned rhinoceros or Indian rhino for short, is a rhinoceros species native to the Indian subcontinent.
- It is the second largest extant species of rhinoceros, with adult males weighing 2.07–2.2 tonnes and adult females 1.6 tonnes.
- The skin is thick and is grey-brown in colour with pinkish skin folds. They have a single horn on their snout that grows to a maximum of 57.2 cm (22.5 in).
- It is listed as Vulnerable on the IUCN Red List, as populations are fragmented and restricted to less than 20,000 km² (7,700 sq mi).
- As of August 2018, the global population was estimated to comprise 3,588 individuals.
- The Indian state of Assam is home to the largest population of greater-one horned rhinos, with more than 90% in Kaziranga National Park.
- The Kaziranga Model of Conservation, which emphasizes investment in forest frontlines and scientific management of wildlife habitats, has gained global recognition. This model integrates biodiversity conservation, anti-poaching strategies, and reforestation programs, ensuring the long-term survival of rhinos.
- The rhino population has surged by approximately 170% since the 1980s, growing from 1,500 to over 4,014 today.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

Q. Consider the following statements regarding one-horned rhino:

- It is listed as Endangered on the IUCN Red List.
 - Its geographical range is limited to India only.
- 1 only
 - 2 only
 - Both 1 and 2
 - Neither 1 nor 2.

Answer (d)

QUANTUM GRAVITY

Why in News: Recently IIT Guwahati Researcher Unlocks Quantum Secrets of Gravity in Groundbreaking Study.

Key Details

- The research led by IIT Guwahati, and the University of Stellenbosch, South Africa, focuses on gravity-induced entanglement (GIE).
 - This phenomenon has the potential to bridge theory of **general relativity** and **quantum mechanics**.
- Their work aims to understand how gravity behaves at incredibly small scales, such as those of atoms and subatomic particles, where existing theories start to unravel.
- Physics currently operates under two separate frameworks.
 - Albert Einstein's **general relativity** explains how gravity works for massive objects like planets and stars, describing gravity as the curvature of space and time around these objects.
 - **Quantum mechanics** governs the behavior of particles on the atomic and subatomic levels.
- While both theories excel in their respective domains, they fail to align when it comes to explaining how gravity functions at the quantum level.
 - This disconnect has left a significant gap in our understanding, one that researchers hope to address through the pursuit of quantum gravity.
- The research takes an innovative approach by studying how gravity might lead to entanglement, a phenomenon in quantum mechanics where two particles become linked, such that the state of one affects the other, regardless of the distance between them.
- The concept of gravity-induced entanglement proposes that under certain conditions, gravitational forces may create this quantum connection, revealing a quantum aspect of gravity.

Implications of the Research

- If gravity-induced entanglement can be detected using gravitational wave detectors, it could provide the first evidence that gravity operates at a quantum level.
- Such a discovery could unlock other cosmic mysteries, such as the nature of dark matter and dark energy — two enigmatic components that make up most of the universe but are still poorly understood.

- The research work represents a significant step forward in the quest to understand the quantum nature of gravity.
- The research not only advances the search for quantum gravity but also lays the foundation for future discoveries, potentially uniting our understanding of the universe's largest and smallest elements.

About Classical Theory V/S Quantum Theory

- A paradigm of quantum mechanics is the Standard Model, which explains many of the smallest particles and how they behave.
 - The Standard Model explains how three of the four fundamental forces of nature work — the electromagnetic force, the weak force and the strong force. Each of these forces is mediated by a boson — a photon for the electromagnetic force, a W or Z boson for the weak force, or a gluon for the strong force). These bosons act as “delivery” particles, carrying the force between other particles.
- On large scales, the main force governing objects is gravity, described by general relativity. But when trying to reconcile these two models together, scientists have fallen short; quantum mechanics and general relativity are not compatible with each other.
- In quantum mechanics, the properties of particles are never certain. Instead, they are described by “wave functions,” which give only probabilistic values. Again, in general relativity, this uncertainty does not exist.

Theory of General Relativity

- General relativity is a physical theory about space and time and it has a mathematical description.
- In general relativity, mass and energy are treated in a purely classical manner, where ‘classical’ means that physical quantities such as the strengths and directions of various fields and the positions and velocities of particles have definite values.
- According to general relativity, the spacetime is a 4-dimensional object that has to obey an equation, called the Einstein equation, which explains how the matter curves the spacetime.
- General relativity explains gravity, and in this theory, it is not really a “force” anymore. The gravitational field comes out of the description of general relativity as a result of the curved spacetime.
- In general relativity (GR), concentrations of mass and energy curve the structure of spacetime, affecting the motion of anything passing near — including light.
- General relativity showed that gravitation has a speed, which is the same as the speed of light.

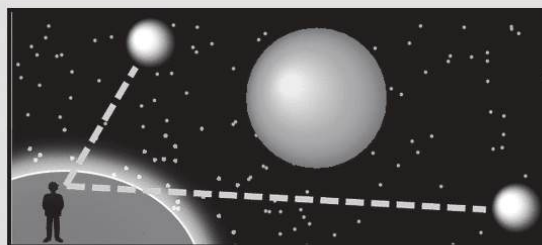
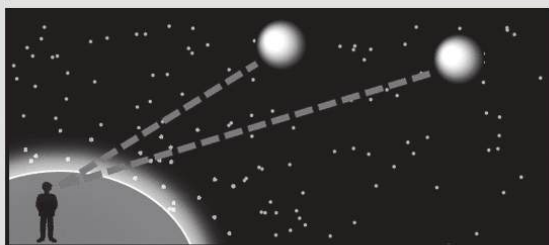
- General relativity predicted many phenomena years before they were observed, including black holes, gravitational

waves, gravitational lensing, the expansion of the universe, and the different rates clocks run in a gravitational field.

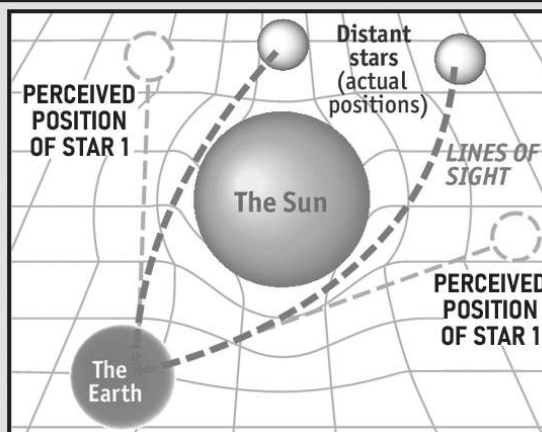
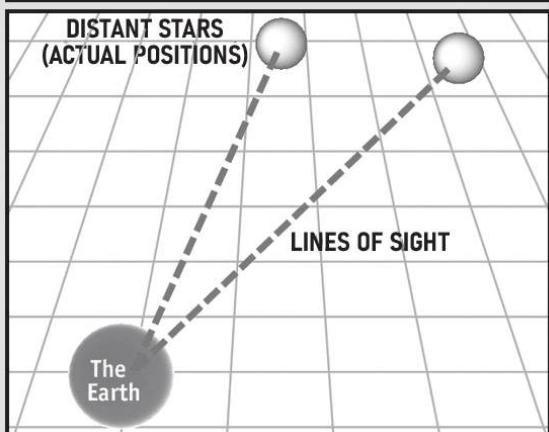
Lights all askew in the heavens

The intervening sun changes the way the sky appears by bending space-time

HOW IT LOOKS



HOW IT IS



Theory of Quantum Mechanics

- Quantum mechanics is the field of physics that explains how extremely small objects simultaneously have the characteristics of both particles (tiny pieces of matter) and waves (a disturbance or variation that transfers energy). Physicists call this the wave-particle duality.
- The particle portion of the wave-particle duality involves how objects can be described as “quanta.”
 - A quanta is the smallest discrete unit (such as a particle) of a natural phenomenon in a system where the units are in a bound state.
 - For example, a quanta of electromagnetic radiation, or light, is a photon. A bound state is one where the particles are trapped. One example of a bound state is the electrons, neutrons, and protons that are in an atom.
 - To be quantized means the particles in a bound state can only have discrete values for properties such as energy or momentum. For example, an electron in an atom can only have very specific energy levels.
- At the same time, tiny quantized particles such as electrons can also be described as waves. In quantum mechanics, scientists talk about a particle’s wave function.

Note: Heisenberg’s Uncertainty Principle

- The Nobel Prize in Physics 1932 was awarded to Werner Karl Heisenberg for the creation of quantum mechanics.
- Heisenberg’s uncertainty principle is usually taken to express a limitation of operational possibilities imposed by quantum mechanics.

What Does Uncertainty Principle Tell Us?

$$\Delta X \Delta P \geq \frac{h}{4\pi} \leftarrow \text{Fixed}$$

Position Uncertainty Momentum Uncertainty



$\Delta X \downarrow \Delta P \uparrow$
If we can pinpoint the position of an electron, we cannot know its momentum



$\Delta X \uparrow \Delta P \downarrow$
If we know the momentum of an electron, we cannot locate its position

- Formulated by the German physicist and Nobel laureate Werner Heisenberg in 1927, the uncertainty principle states that we cannot know both the position and speed of a particle, such as a photon or electron, with perfect accuracy; the more we nail down the particle's position, the less we know about its speed and vice versa.

About Quantum Gravity

- Quantum gravity is an attempt to reconcile two theories of physics — quantum mechanics and gravity, which tells us how physics works on large scales.
- Therefore it is a field of theoretical physics that seeks to describe gravity according to the principles of quantum mechanics.
 - It deals with environments in which neither gravitational nor quantum effects can be ignored, such as in the vicinity

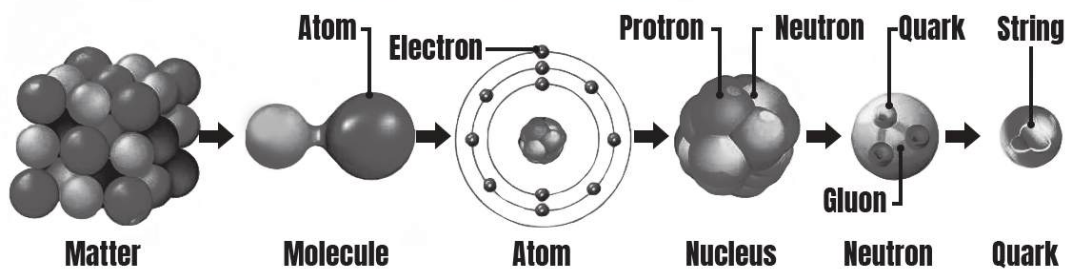
of black holes or similar compact astrophysical objects, such as neutron stars.

- Quantum gravity can help us understand the physics within black holes and the moments right after the birth of the universe.
- It can also aid us in understanding quantum entanglement, condensed matter physics and quantum information.

Leading Models of Quantum Gravity

- **String Theory**
 - In string theory, the fundamental constituents of reality are not point particles (like electrons or quarks), but rather one-dimensional "strings" that vibrate at different frequencies. These strings give rise to different particles depending on their vibrational modes.

STRING THEORY



◆ **Holographic duality**, a theory spawned from string theory, suggests that there is a projection of our universe — a "hologram" — with no gravity.

• **Loop Quantum Gravity**

- This theory redefines the fabric of space-time as a discrete, granular structure, much like a woven fabric. Quantum states of gravity are associated with the connections between these discrete elements.
- ◆ For example, classical general relativity predicts that a black hole lives forever and that its center is a "singularity" where space and time end. Whereas, **Loop Quantum Gravity** predicts that spacetime continues across the center of the hole into a new region that has the geometry of the interior of a white hole, and is located in the future of the black hole

• **Non-commutative Geometry**

- This theory explores the possibility that the fundamental structure of space-time is non-commutative, meaning that the order of operations matters when describing the position of points.

• **Asymptotic Safety**

- Asymptotic safety suggests that gravity, when treated as a quantum field, can be well-defined and predictive at high energies. It proposes the existence of a "safe" ultraviolet fixed point that makes the theory renormalizable.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

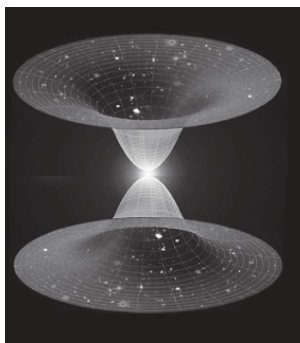
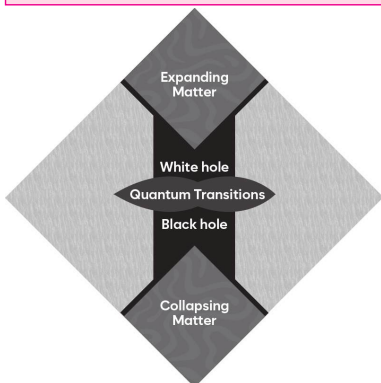
Q. Consider the following phenomena:

1. Light is affected by gravity.
2. The Universe is constantly expanding.
3. Matter warps its surrounding space-time.

Which of the above is/are the prediction/predictions of Albert Einstein's General Theory of Relativity, often discussed in media?

- (a) 1 and 2 only
- (b) 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

(d) Answer:



BLOCKCHAIN TECHNOLOGY STACK

Why in News: Ministry of Electronics and Information Technology (MeitY) recently launched Vishvasya-Blockchain Technology Stack.

Key Details

- The Vishvasya-Blockchain Technology Stack to offer Blockchain as a Service with a geographically distributed infrastructure designed to support various permissioned Blockchain based applications.

National Blockchain Framework to Enhance Digital Trust and Service Delivery

- MeitY, with the vision to create trusted digital platforms, initiated National Blockchain Framework (NBF) for promoting research and application development, facilitating state of the art, transparent, secure and trusted digital service delivery to citizens.
- National Blockchain Framework technology stack is architected with Distributed Infrastructure, Core Framework functionality, Smart Contracts & API Gateway, Security, Privacy & Interoperability and Applications development offering Blockchain as a Service (BaaS).
- NBF currently supports two ,Vishvasya and NBF Lite permissioned Blockchain platforms and is extensible. The Technology Stack is hosted on geographically distributed infrastructure at NIC Data centers i.e. Bhubaneswar, Pune, Hyderabad.

Blockchain Sandbox for Startups and Academia

- NBF Lite, a Blockchain sandbox platform, is developed especially for startups/academia for rapid prototyping of applications, carrying out research and capacity building.
- These technologies have been developed by collaborating efforts of C-DAC, NIC, IDRBT Hyderabad, IIT Hyderabad, IIIT Hyderabad and SETS Chennai under the MeitY support.

National Blockchain Framework to Boost Security and Transparency for Citizens

- National Blockchain Framework would play an important role in enabling security, trust and transparency for various citizen centric applications.
- Stakeholders should aim to position India as a global leader in blockchain technology and proliferate the developed solutions for Global adoption, leveraging it to drive economic growth, social development, and digital empowerment.

Blockchain's Role in Transforming Governance

- Blockchain technology holds immense potential for transforming governance in India by making public services more transparent, efficient, and accountable.
- There is a need for scaling the applications on NBF

across various states & departments and also suggested to explore onboarding new applications/ platforms/ innovative components on the NBF stack.

NBF's Goals for Addressing Challenges

- The objective of initiating NBF is to develop an extensible framework with Blockchain technology stack on distributed infrastructure towards addressing the challenges such as need for skilled manpower towards building Blockchain based applications, vendor lock-in and research challenges related to security, interoperability, performance and other aspects.
- NBF is a consortium mode effort towards addressing research challenges and harnessing the benefits of the technology to develop applications in association with Government organizations. A number of patents and research publications are generated as part of this initiative.

Vishvasya: National Blockchain Technology Stack

- Vishvasya, the National Blockchain Technology Stack, facilitates in enabling trust by developing new types of distributed software architectures, capable of finding consensus on their shared states and providing a single source of truth.
- Vishvasya, through its Blockchain as a Service (BaaS) model, provides security assurance of various Blockchain components across the stack.
- It reduces the need for skilled human resources and enables technological support to organizations in developing and deploying Blockchain applications.

Vishvasya Blockchain as a Service (BaaS)

- Vishvasya BaaS addresses the challenges of Blockchain adoption across various stakeholders including Infrastructure Providers, Smart Contract Developers and Application Developers.

PRAAMAANIK

- Praamaanik is a solution that harnesses Blockchain technology to verify mobile app origins and is powered by the National Blockchain Framework.
- The Mobile Apps are uploaded by designated representative of the organization and the unique details of the mobile app are recorded in the Blockchain ledger. The citizens can identify the authentic mobile apps through the M-Kavach 2 mobile security app.

Features & Benefits

- Immutable ledger of mobile app fingerprints
- Single source of truth for mobile app authenticity
- Blockchain solution to combat counterfeit/fake mobile apps
- Improved user satisfaction and trust
- One time & easy to record mobile app fingerprint
- Easy and reliable connect to customer support team

NATIONAL BLOCKCHAIN PORTAL

- The National Blockchain Portal is developed on the theme based on Content Management System to manage the contents related to the National Blockchain Framework initiative.
- It contains information related to the current Blockchain News, latest Articles, Events, Conferences, Education & Training, Success Stories thereby providing the viewers with the latest updates on Blockchain trends.

Portal Coverage

- Latest News
- Success Stories
- Technical Resources
- National & International Events
 - Workshops
 - Conferences
- List of Blockchain Startups
- Education and Training
- Publications / Patents

Features

- **Integrated Chatbot:** AI based quick search on the queries related to the portal contents
- **Crowdsourced Content:** Facilitating the Users to “Contribute Content”
- **Managed Content:** Using various roles such as “User”, “Reviewer” and “Admin” role
- **Subscription:** Get regular updates about the latest portal content

EXPECTED QUESTION FOR UPSC CSE

Prelims Question

Q. Consider the following aspects regarding blockchain initiatives:

	Blockchain Initiative	Aspect
1.	Vishvasya	National Blockchain Technology Stack
2.	PRAAMAANIK	Verify mobile app security
3.	National Blockchain Portal	Manage the contents related to the National Blockchain Framework initiative

How many of the above pairs are correctly matched?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

Answer: (c)

VENUS ORBITER MISSION SHUKRAYAAN-1

Why in News: Union Cabinet recently approved mission to Venus for scientific exploration and for understanding of Venusian atmosphere.

Key Details

- The mission was earlier planned for 2023 but as per the recent Cabinet, approvals will ISRO plans to launch it in March 2028.
- The ‘Venus Orbiter Mission’ is envisaged to orbit a scientific spacecraft in the orbit of planet Venus for better understanding of the Venusian surface and subsurface, atmospheric processes and influence of Sun on Venusian atmosphere.
- ISRO will be responsible for the development of spacecraft and its launch.
 - The data generated from the mission would be disseminated to the scientific community.
- **Cost:** The cost for the Venus Orbiter Mission includes development and realization of the spacecraft including its specific payloads and technology elements, global ground station support cost for navigation and network as well as the cost of launch vehicle.
- **Aim:**
 - To study the planet’s atmosphere, surface, and geological features using sophisticated scientific instruments.
 - The mission will place a spacecraft in orbit around Venus to collect critical data on the planet’s climate, atmospheric composition, and its potential for volcanic or seismic activity.

Significance of the Mission

- ▶ The mission would enable India for future planetary missions with larger payloads, optimal orbit insertion approaches.
- ▶ There would be a significant involvement of Indian Industry during the development of the spacecraft and launch vehicle.
- ▶ The involvement of various academic institutions and training to students in pre-launch phase that includes design, development, testing, test data reduction and calibration.
- ▶ The mission through its unique instruments offers the Indian Science community new and valuable science data and thereby providing emerging and novel opportunities.
- ▶ The mission will also see India perform aero-braking for the first time.

What will be the scientific payloads on the mission?

- Proposals for at least 17 Indian experiments and seven international ones were selected for the mission by 2019, according to a reply in the parliament.
- The Indian payloads include an L and S band Synthetic Aperture Radar that can help in imaging the surface of the planet.
- There will also be a thermal camera, an experiment to study the flow of interplanetary dust particles, and an experiment to study the high-energy particles entering the Venusian atmosphere leading to its ionisation.
- Another payload will study the composition, structure, variability, and thermal state of Venus’s atmosphere

Why is India Interested in Exploring Venus?

- Studying Venus offers a unique opportunity to understand Earth's future.
- Venus, once believed to have oceans, has now become a sweltering greenhouse world with surface temperatures reaching 470°C.
- By comparing Venus's climate with Earth's, scientists hope to uncover clues about climate change, atmospheric dynamics, and planetary evolution.
- Studying Venus can provide insights into Earth's potential future and the factors that make a planet habitable.

PRELIMS SPECIAL

Venus

- Venus, the closest planet to Earth and believed to have formed in conditions similar to Earth, offers a unique opportunity to understand how planetary environments can evolve very differently.
- The study of the underlying causes of transformation of Venus, which is believed to be once habitable and quite similar to Earth would be an invaluable aid in understanding the evolution of the sister planets, both Venus and Earth.

What is aero-braking?

- Keeping in mind the fuel considerations, the satellite would be placed in a highly elliptical orbit of 500 km x 60,000 km around Venus. This, however, is too high for the science payloads to conduct experiments.
- The satellite will be brought down to either 300 x 300 km or 200 x 600 km orbit depending on the requirements of the finalised payload with the help of aero-braking.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

Q. Consider the following statements regarding the planet Venus:

1. It has the highest surface temperature than any other planet in the solar system.
2. It is the planet with the highest atmospheric pressure in the solar system.

Which of the statements above is/are correct?

- (a) 1 only (b) 2 only
 (c) Both 1 and 2 (d) Neither 1 nor 2

Answer: (c)

BHARATIYA ANTARIKSH STATION

Why in News: Cabinet approved Gaganyaan Follow-on Missions and building of Bharatiya Antariksh Station:

Key Details

- The union cabinet has approved the building of first unit of the Bharatiya Anatriksh Station by extending the scope of Gaganyaan program.
- Approval by the cabinet is given for development of first module of Bharatiya Antariksh Station (BAS-1) and undertake missions to demonstrate and validate various technologies for building and operating BAS.
- Now the human spaceflight program of technology development and demonstration is through eight missions to be completed by December 2028 by launching first unit of BAS-1.
- **Significance:**
 - The nation will acquire essential technological capabilities for human space missions to Low Earth Orbit.
 - A national space-based facility such as the Bharatiya Antariksh Station will boost microgravity based scientific research & technology development activities.
 - This will lead to technological spin-offs and encourage innovations in key areas of research and development.
 - Enhanced industrial participation and economic activity in human space programme will result in increased employment generation, especially in niche high technology areas in space and allied sectors.
 - This programme will provide a unique opportunity, especially for the youth of the country to take up careers in the field of science and technology as well as pursue opportunities in microgravity based scientific research & technology development activities.
 - The resulting innovations and technological spin-offs will be benefitting the society at large.

Gaganyaan Programme

- The Gaganyaan Programme approved in December 2018 envisages undertaking the human spaceflight to Low Earth Orbit (LEO) and to lay the foundation of technologies needed for an Indian human space exploration programme in the long run.
- The vision for space in the Amrit kaal envisages including other things, creation of an operational Bharatiya Antariksh Station by 2035 and Indian Crewed Lunar Mission by 2040.
- All leading space faring nations are making considerable efforts & investments to develop & operationalize capabilities that are required for long duration human space missions and further exploration to Moon and beyond.
- Gaganyaan Programme will be a national effort led by ISRO in collaboration with Industry, Academia and other

National agencies as stake holders. The programme will be implemented through the established project management mechanism within ISRO.

- The target is to develop and demonstrate critical technologies for long duration human space missions. To achieve this goal, ISRO will undertake four missions under ongoing Gaganyaan Programme by 2026 and development of first module of BAS & four missions for demonstration & validation of various technologies for BAS by December, 2028.

Bharatiya Antariksh Station

- ISRO is meticulously examining the overall architecture, including the quantity and types of modules and docking ports required for BAS.
- this space station will feature fundamental components such as a crew command module, a habitat module, a propulsion module, and docking ports.
- ISRO aim to initiate the launch of the first module in 2028. Subsequently, within seven years, by 2035, ISRO plans to construct additional modules to achieve full operational status for the space station.
 - The reason for this timeline is that ISRO’s current rocket, the LVM-3, has a payload capacity of only 10 tonnes, hence the initial module to be launched in 2028 will weigh approximately eight tonnes.
 - Future modules are anticipated to be larger, ranging from 20-25 tonnes. However, due to their size, they cannot be accommodated by the existing rocket. Consequently, ISRO is in the process of developing a new, more powerful rocket.
- The 2028 launch will involve a robotic module serving as a satellite, enabling docking, experimentation, and return. Human missions to the space station are envisioned to commence only after 2035.
- Indian space station, upon completion, would operate independently from the International Space Station (ISS) and would be of a smaller scale.
- The establishment of the Bharatiya Antariksh Station holds the promise of significantly enhancing India’s presence in space research and exploration. It will serve as a unique platform for conducting scientific experiments in microgravity, driving advancements in space technology.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

- Q. Consider the following statements regarding Bharatiya Antariksh Station:
1. ISRO is expected to initiate the launch of the first module of Bharatiya Antariksh Station in 2028.
 2. It would operate as an attached module to the International Space Station (ISS).

Which of the statements above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Answer: (a)

CHANDRAYAAN LUNAR MISSION

Why in News: Recently, the Union Cabinet gave approval for CHANDRAYAAN-4 Mission in the series of Chandrayaan - 1, 2 & 3.

Key Details

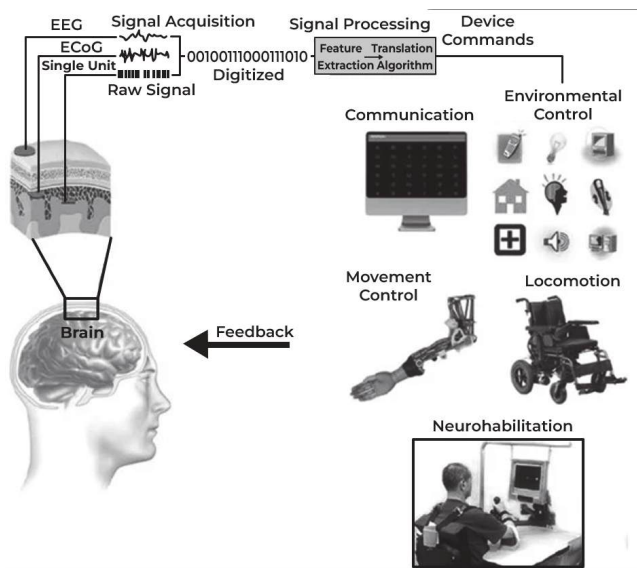
- The union cabinet has approved the mission to moon, named Chandrayaan-4 to develop and demonstrate the technologies to come back to Earth after successfully landing on the Moon and also collect moon samples and analyse them on Earth.
- This Chandrayaan-4 mission will achieve the foundational technologies capabilities eventually for an Indian landing on the moon (planned by year 2040) and return safely back to Earth.
- Major technologies that are required for docking/ undocking, landing, safe return to earth and also accomplish lunar sample collection and analysis would be demonstrated.
- The successful demonstration of safe and soft landing of Chandrayaan-3 Lander on the Lunar Surface has established vital technologies and demonstrated capabilities that only few other nations possess.
- A natural successor to the successful landing mission is the demonstration of the ability to collect Lunar Samples and return them safely back to Earth.
- ISRO will be responsible for the development of spacecraft and launch. The Project will be effectively managed and monitored through the established practices prevailing at ISRO.
- The mission is expected to be completed within 36 months of approval with the participation of industry and academia.
- All the critical technologies are envisaged to be indigenously developed.
- The realization of the mission is through various industries and it is envisaged that there would be high employment potential and technology spin-off to other sectors of the economy.
- **Cost**
 - The total fund requirement for the technology demonstration mission Chandrayaan-4 is Rs. 2104.06 Crore.
 - The cost includes spacecraft development and realization, two launch vehicle missions of LVM3,

external deep space network support and conducting special tests for design validation, finally leading to the mission of landing on moon surface and safe return to Earth along with the collected lunar sample.

Significance

- The mission would enable India to be self-sufficient in critical foundational technologies for manned missions, lunar sample return and scientific analysis of Lunar samples.
- Towards realization there would be a significant involvement of Indian Industry.
- Plan for associating the Indian academia through Chandrayaan-4 science meets, workshops, is already in place.
- This mission will also ensure the establishment of facilities for curation and analysis of the returned samples, which will be national assets.

- The experimental device, known as Blindsight, will enable even those who have lost both eyes and their optic nerve to see.
- Founded in 2016 by Musk and a group of engineers, Neuralink is building a brain chip interface that can be implanted within the skull, which it says could eventually help disabled patients to move and communicate again, and also restore vision.
- Neuralink’s device has a chip that processes and transmits neural signals that could be transmitted to devices like a computer or a phone.



EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

Q. Consider the following statements regarding Geosynchronous Satellite Launch Vehicle Mark III (LVM3):

1. LVM3 is the heavy lift launch vehicle of ISRO for achieving a 4000 kg spacecraft launching capability to Geosynchronous Transfer Orbit.
2. It is a four-stage cryogenic rocket.
3. It was used to launch the Chandrayaan-2 and Chandrayaan-3 Missions of the ISRO.

How many of the above statements are correct?

- (a) Only one (b) Only two
 (c) All three (d) None

Answer: (b) (1 and 3 only)

Brain Computer Interface

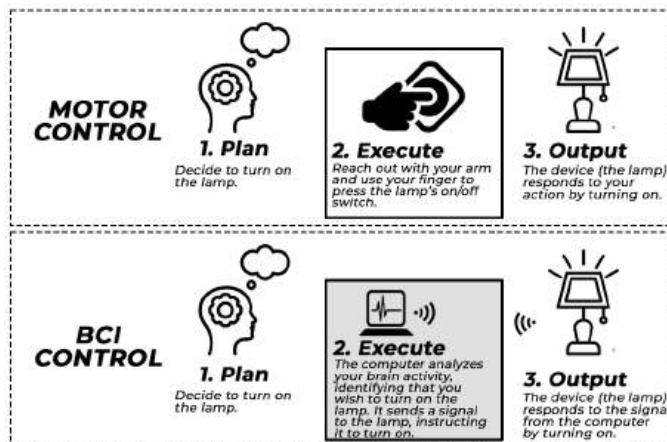
- A brain computer interface (BCI) is a system that determines functional intent - the desire to change, move, control, or interact with something in your environment - directly from your brain activity. In other words, BCIs allows a person to control an application or a device using only his/her mind.
- Using a BCI skips over the need to have voluntary control of your muscles to interact with devices around you. The computer replaces the execution of a physical movement, instead translating your desired action and controlling the device directly.

NEURALINK BLINDSIGHT

Why in News: Recently Neuralink received FDA’s breakthrough device tag for ‘Blindsight’ implant.

Key Details

- Elon Musk’s brain-chip startup Neuralink’s experimental implant aimed at restoring vision received the U.S. Food and Drug Administration’s “breakthrough device” designation.
- The FDA’s breakthrough tag is given to certain medical devices that provide treatment or diagnosis of life-threatening conditions. It is aimed at speeding up development and review of devices currently under development.

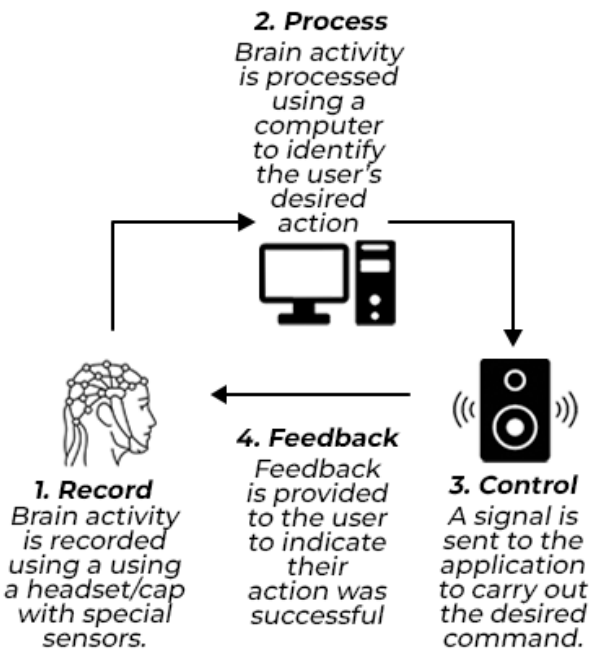


Parts of Brain Computer Interface: A brain computer interface has three main parts:

- A device to measure brain activity. This is usually in the form of a headset, cap or headband that has specialized sensors embedded in it to detect and record signals coming from the brain.
- A computer to process and analyze the recorded brain activity. The BCI software will try to interpret the user's desired action from the incoming brain activity, using specialized processing methods and algorithms.
- An application/device to control. Once the computer has 'determined' what the user wants to do, it will send a signal to the application/device to carry out that command.

Steps of a Brain Computer Interface

- First brain activity is recorded, then processed to determine the user's intent, then a command signal is sent to the application that is to be controlled, and finally, feedback lets the user know if their action was successful.



Types of Brain Computer Interface (BCI)

- **Invasive BCI:** Invasive BCIs are implanted directly into the grey matter of the brain during neurosurgery.
- **Partially-Invasive BCI:** Partially invasive BCI devices are implanted inside the skull but rest outside the brain rather than within the grey matter. They produce better resolution signals than non-invasive BCIs where the bone tissue of the cranium deflects and deforms signals and have a lower risk of forming scar-tissue in the brain than fully-invasive BCIs.
- **Non-Invasive BCI:** The easiest and least invasive method is a set of electrodes, this device known as an electroencephalograph (EEG), attached to the scalp. The electrodes can read brain signals.

Applications of Brain Computer Interface (BCI)

- **Bioengineering Applications:** Brain-computer interfaces have a great potential for allowing patients with severe neurological disabilities to return to interaction with society through communication and prosthetic devices that control the environment as well as the ability to move within that environment.
- **Human subject monitoring:** Sleep-disorders, neurological diseases, attention, monitoring, and/or overall mental state.
- **Neuroscience Research:** Real-time methods for correlating observable behavior with recorded neural signals.
- **Man-Machine Interaction:** Interface devices between human and computers, Machines.
- **Military Applications:** US military has begun to explore possible applications of BCIs beginning in 2008 to enhance troop performance as well as a possible development by adversaries.
- **Gaming:** Computer game have gone hands-off because of development in BCI.
- **Counter Terrorism:** A possible application is in Counter terrorism where a customs official can scan photos of many hundreds of faces.

Related News: IISc scientists develop brain-inspired analog computing platform capable of storing, processing data.

- Researchers at the Indian Institute of Science (IISc) have developed a brain-inspired analog computing platform capable of storing and processing data in an astonishing 16,500 conductance states within a molecular film.
- This breakthrough represents a step forward over traditional digital computers in which data storage and processing are limited to just two states.
- Such a platform could potentially bring complex AI tasks, like training Large Language Models (LLMs), to personal devices like laptops and smartphones, thus taking us closer to democratising the development of AI tools.
- With silicon electronics nearing saturation, designing brain-inspired accelerators that can work alongside silicon chips to deliver faster, more efficient AI is also becoming crucial.
- The platform developed by the IISc team drastically cuts down both the time and energy involved, making matrix multiplication calculations a lot faster and easier.
- The researchers believe that this breakthrough could be one of India's biggest leaps in AI hardware, putting the country on the map of global technology innovation.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

- Q. Which of the following statements best describe a Brain-Computer Interface (BCI)?
- (a) A technology that uses sensors to track brain waves for medical diagnostics.

- (b) A tool that enhances memory retention by sending electrical impulses to specific areas of the brain.
- (c) A neural device that automatically translates human thoughts into spoken words without any external hardware.
- (d) A system that allows direct communication between the brain and an external device, bypassing traditional neural pathways.

Answer: (d)

INTERNATIONAL ARTIFICIAL INTELLIGENCE (AI) TREATY

Why in News: The first legally binding international Artificial Intelligence (AI) treaty was recently signed by the European Union members, the U.S. and Britain.

Key Details

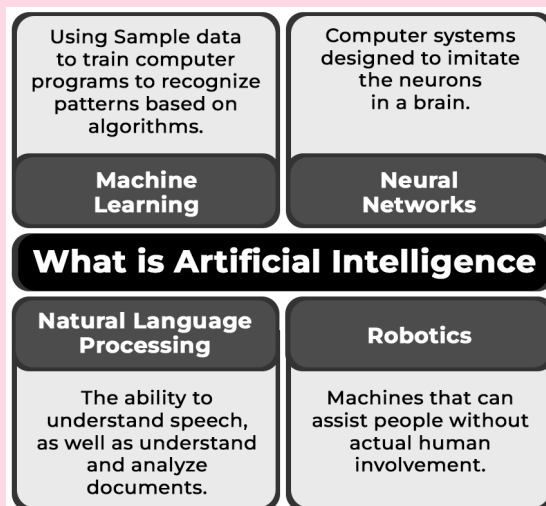
- The treaty that was drafted over the past 24 months by more than 50 countries adopts a risk-based approach to the design, development, use, and decommissioning of AI systems. It covers the use of AI systems in the public sector including companies acting on its behalf and in the private sector, and will be applicable across geographies.
- Signatories will be accountable for “any harmful and discriminatory outcomes of AI systems”, and will ensure that “outputs of such systems respect equality and privacy rights, and that victims of AI-related rights violations have legal recourse”.
- The treaty comes at a time when sovereign governments and smaller multilateral groups have come up with new regulations and agreements to oversee AI tools, including the G7 pact on AI (October 2023), Europe’s AI Act, and Bletchley Declaration signed by 28 countries (November 2023).
- The AI Convention mainly focuses on the protection of human rights of people affected by AI systems and is separate from the EU AI Act, which entered recently.
 - The EU’s AI Act entails comprehensive regulations on the development, deployment, and use of AI systems within the EU internal market.
 - The new rules establish obligations for providers and users depending on the level of risk from artificial intelligence

Concerns

- It does not contain provisions for punitive sanctions such as penalties or fines.
- Compliance is primarily ensured through “monitoring”, which is not much of a deterrent from an enforcement point of view.

- There are a few exemptions in the scope of applicability of the Framework Convention, such as national security and research and development.

About A.I.



- Artificial intelligence (AI) is technology that enables computers and machines to simulate human learning, comprehension, problem solving, decision making, creativity and autonomy.
- Applications and devices equipped with AI can see and identify objects. They can understand and respond to human language.



EXPECTED QUESTIONS FOR UPSC CSE

Prelims MCQ

Q. Consider the following countries:

1. Malta
2. Luxembourg
3. USA
4. Britain

How many of the above are the members of the recently signed International Artificial Intelligence (AI) Treaty?

- (a) Only one
- (b) Only two
- (c) Only three
- (d) All four

Answer: (d)

- The effect is caused by the non-concentricity of Earth and its magnetic dipole and has been observed to be increasing in intensity recently.
- The SAA is the near-Earth region where Earth's magnetic field is weakest relative to an idealized Earth-centered dipole field.

COMMERCIAL SPACEWALK

Why in News: Jared Isaacman, three others take a bold leap into space history with first-ever commercial spacewalk on SpaceX Polaris dawn mission

Key Details

- In a historic event, a four-person crew of civilians from **SpaceX's Polaris Dawn mission** conducted the first commercial spacewalk.
- The crew comprises Shift4 Payments CEO Jared Isaacman, former US Air Force pilot Scott Poteet, and SpaceX engineers Anna Menon and Sarah Gillis.
- They opened the hatch of their capsule and ventured into space, marking the first time non-government astronauts have performed this activity.
- The event is particularly notable as the mission traveled farther into space than any human since NASA's Apollo program over 50 years ago.

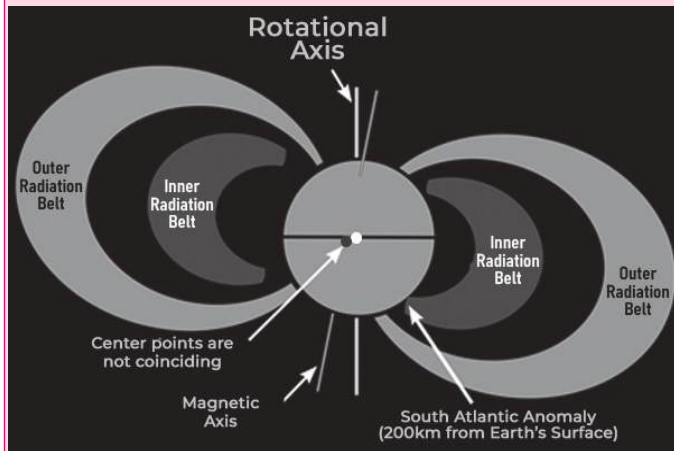
ANUSANDHAN NATIONAL RESEARCH FOUNDATION

Why in News: The Prime Minister of India recently headed First meeting of Governing Body of Anusandhan National Research Foundation (ANRF).

Key Details

- The meeting focussed on discussion about India's Science and Technology landscape and redesigning of research and development programmes.
- During the meeting, the Governing Body decided to launch a programme in hub and spoke mode by pairing universities where research is at nascent stage with top tier established institutions in mentorship mode.
- Governing Body also discussed several areas of strategic interventions of ANRF which include global positioning of India in key sectors, aligning R&D with national priorities, promoting inclusive growth, capacity building, driving scientific advances and innovation ecosystem, as well as bridging the gap between academic research and industrial applications through industry-aligned translational research.
- The ANRF will launch programmes on solution-focused research in mission mode in select priority areas like Electric Vehicle (EV) mobility, Advanced Materials, Solar Cells, Smart Infrastructure, Health & Medical Technology, Sustainable Agriculture and Photonics. The Governing Body observed that these efforts would impactfully supplement our march towards Aatmanirbhar Bharat.
- Governing Body emphasized on promoting fundamental research for advancement of knowledge. It was decided to set up Centers of Excellence to support interdisciplinary research in humanities and social sciences.
- Governing Body agreed that there was a need to empower our researchers with flexible and transparent funding mechanism towards achieving ease of doing research.
- The Governing Body also directed that the ANRF strategies should align with the goals of Viksit Bharat 2047 and implementation should follow global best practices adopted by research and development agencies across the world.

PRELIMS SPECIAL



South Atlantic Anomaly

- The South Atlantic Anomaly (SAA) is a region in the Earth's magnetic field that can affect spacewalks and spacecraft in Low Earth Orbit (LEO).
- It is an area where Earth's inner Van Allen radiation belt comes closest to Earth's surface, dipping down to an altitude of 200 kilometres (120 mi). This leads to an increased flux of energetic particles in this region and exposes orbiting satellites (including the ISS) to higher-than-usual levels of ionizing radiation.

- The ANRF aims to seed, grow and promote research and development (R&D) and foster a culture of research and innovation throughout India's universities, colleges, research institutions, and R&D laboratories.
- ANRF acts as an apex body to provide high-level strategic direction of scientific research in the country as per recommendations of the National Education Policy. ANRF forges collaborations among the industry, academia, and government departments and research institutions.
- With the establishment of ANRF, the Science and Engineering Research Board (SERB) established by an act of Parliament in 2008 has been subsumed into ANRF.

EXPECTED QUESTION FOR UPSC CSE

Prelims Question

Q. Consider the following statements regarding Anusandhan National Research Foundation (ANRF):

1. It is a statutory body established with Anusandhan National Research Foundation (ANRF) 2023 Act.
2. It works under the Science and Engineering Research Board (SERB) established by an act of Parliament in 2008.

Which of the statements above is/are correct?

- (a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

Answer: (a)

WASTEWATER AND SOLID WASTE MANAGEMENT

Why in News: The World Health Organization (WHO) released its first ever global guidance on antibiotic pollution stemming from manufacturing processes.

Key Details

- The new guidance on wastewater and solid waste management for antibiotic manufacturing sheds light on this important but neglected challenge ahead of the United Nations General Assembly (UNGA) High-Level Meeting on antimicrobial resistance (AMR)
- The emergence and spread of AMR caused by antibiotic pollution could undermine the effectiveness of antibiotics globally, including the medicines produced at the

manufacturing sites responsible for the pollution.

- Pollution contributes to antibiotic resistance, potentially undermining the effectiveness of medicines manufactured at the very same site. Yet, high levels of antibiotics in water bodies downstream of manufacturing sites have been widely documented.
- Currently, antibiotic pollution from manufacturing is largely unregulated and quality assurance criteria typically do not address environmental emissions.
- The guidance was developed in close collaboration with a diverse group of international experts representing academia, regulators, inspectors, international organizations such as UNEP, and other sectors.
- The guidance provides human health-based targets to reduce the risk of emergence and spread of AMR, as well as targets to address risks for aquatic life caused by all antibiotics intended for human, animal or plant use. It covers all steps from the manufacturing of active pharmaceutical ingredients (APIs) and formulation into finished products, including primary packaging.

Anti-Microbial Resistance

- AMR occurs when bacteria, viruses, fungi, and parasites no longer respond to medicines, making people sicker and increasing the risk of spread of infections that are difficult to treat, illness and deaths.
- AMR is driven largely by the misuse and overuse of antimicrobials, yet, at the same time, many people around the world do not have access to essential antimicrobial medicines.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

Q. Which of the following statements best describes Antimicrobial Resistance (AMR)?

- (a) It occurs when the immune system becomes resistant to infections due to excessive use of antibiotics.
- (b) It is the phenomenon where antibiotics lose their effectiveness due to changes in human metabolism.
- (c) It occurs when pathogens like bacteria become resistant to the effects of medications, making infections harder to treat.
- (d) It refers to the body's natural adaptation to antibiotics, making them unnecessary over time.

Answer: (c)

INDIA'S FIRST INDIGENOUS COMBAT UNMANNED AIRCRAFT

Why in News: India's first indigenous combat unmanned aircraft FWD 200B was successfully launched.

Key Details

- Bengaluru-based unmanned aerial vehicle (UAV) and component private manufacturing company, Flying Wedge Defence and Aerospace (FWDA) announced its successful maiden flight of India's first indigenous unmanned bomber aircraft, the FWD 200B, marking a milestone in the country's defence sector.
- The bomber FWD 200B is classified as a Medium Altitude Long Endurance (MALE) (15000 ft) unmanned combat aerial vehicle (UCAV).
- The FWD 200B is equipped with optical payloads for surveillance and missile-like weapons for air strikes and bombing.
- Despite its size, the aircraft has a maximum take-off weight of 102 kg and can carry a payload capacity of 30 kg, making it capable of conducting significant missions with precision.
- Its operational versatility is further highlighted by its runway requirement of just 300 meters, allowing it to operate from shorter airstrips.
- With an endurance of 7 hours and a range of 800 km, the FWD 200B ensures extended mission capabilities, providing substantial coverage without the need for frequent refueling or landing.

Challenges faced by India's Defence Industry

- The foremost challenge is increasing production, at least to a level that meets India's procurement requirements.
 - The slow progress in India's defence production and an ever-increasing procurement budget have ensured that India remains dependent on external sources for critical defence hardware requirements.
- Defence PSUs, have been slow in rising to expectations.
 - This is the biggest challenge in meeting the government's export target.
- Indian defence industry, despite having a large production and R&D base, lacks the technological depths to design/manufacture major systems and critical parts, components, and raw materials, which are eventually imported.

- Many reforms are yet to be implemented in full letter and spirit.
 - This has created a condition where the time between reform announcements and their translation to actual contract, production, and delivery is unduly prolonged.
 - Given India's bureaucratic system, overcoming the delays in implementation will remain a key challenge in the foreseeable future.

Recently, DAC approves 10 capital acquisition proposals worth Rs 1.45 lakh crore to enhance defence preparedness

- Of the total cost of Acceptance of Necessity (AoN), 99% is from indigenous sources under Buy (Indian) and Buy (Indian-Indigenously Designed Developed and Manufactured) categories.
- For modernisation of the tank fleet of the Indian Army, the proposal for procurement of Future Ready Combat Vehicles (FRCVs) has been cleared.
 - The FRCV will be a futuristic Main Battle Tank with superior mobility, all terrain ability, multilayered protections, precision & lethal fires over and real-time situational awareness.
- The AoN was also accorded for procurement of Air Defence Fire Control Radars, which will detect & track aerial target and provide firing solution.
- The proposal has also been approved for Forward Repair Team (Tracked) which has suitable cross country mobility for carrying out in-situ repair during mechanised operations.
- Three AoNs have been accorded to enhance the capabilities of the Indian Coast Guard (ICG).
 - The procurement of Dornier-228 aircraft, Next Generation Fast Patrol Vessels having high operational features in rough weather conditions and Next Generation Offshore Patrol Vessels with advanced technology and enhanced long-range operations,

Recently, Directorate General of Foreign Trade (DGFT) updates the SCOMET List with recent policy changes and updates in the multilateral export control regimes

- DGFT, Ministry of Commerce & Industry, has notified the updated SCOMET list for the year 2024.
- India's export control list (SCOMET) has been updated, incorporating the recent changes /updates in the control lists of the multilateral export control regimes, and certain policy amendments in our national system, on the basis of inputs from relevant government organizations and stakeholders.

- With the recent update, DGFT has also authorized the Department of Defence Production (DDP), MoD, to be the licensing authority for export of all items falling under Category 6 of SCOMET for military end use, streamlining certain exclusions existing earlier.

Strategic Trade and Non-proliferation Export Controls

- India has a robust legal and regulatory framework on strategic trade and related non-proliferation matters. It includes:
 - Inter-ministerial SCOMET licensing process
 - Effective enforcement and risk assessment mechanisms
 - Regular outreach to industry and other stakeholders
- India is a member of the major multilateral export control regimes, viz. the Missile Technology Control Regime, Wassenaar Arrangement, and Australia Group, and harmonises its guidelines and control lists with that of these regimes and the Nuclear Suppliers Group.
- India regulates the exports of dual use items, nuclear related items, and military items, including software and technology under the SCOMET (Special Chemicals Organisms Materials Equipment and Technologies) list, which is notified by DGFT under the Foreign Trade Policy.
- The emergence of Strategic Trade Controls as an important area has been acknowledged in the Foreign Trade Policy 2023, where the SCOMET processes and procedures have been consolidated at one place for better understanding of the Industry, for effective compliance.
- DGFT has taken several initiatives to facilitate authorized and responsible export of the high end goods and technologies. These include:
 - Strengthening DGFT's e-platform for licensing
 - Laying down a liberalized General Authorization policy for items such as drones, dual-use chemicals, telecommunication equipment, information security systems, and for Repairs in India
 - Repeat Order for Stock & Sale Policy
 - Intra Company Transfers (GAICT)

SCOMET: Special Chemicals, Organisms, Materials, Equipment and Technologies

- The SCOMET List has been notified by DGFT under Appendix 3 to Schedule 2 of ITC (HS) Classification of Export and Import Items.
- The policy and procedures under SCOMET are outlined in Chapter 10 of FTP and HBP 2023, and the list is regulated under Chapter IVA of Foreign Trade (Development & Regulation) Act, 1992, as amended in 2010.
- Items on the SCOMET List are organized in the following categories.
 - **Category 0:** Nuclear materials, nuclear-related other materials, equipment and technology
 - **Category 1:** Toxic chemical agents and other chemicals
 - **Category 2:** Micro-organisms, toxins
 - ◆ 2A Bacteria
 - ◆ 2B Fungi

- ◆ 2C Parasites
- ◆ 2D Viruses
- ◆ 2E [Reserved]
- ◆ 2F Toxins
- ◆ 2G Plant pathogens
- ◆ 2H Genetic Elements and Genetically-modified Organisms
- **Category 3:** Materials, Materials Processing Equipment and related technologies
- **Category 4:** Nuclear-related other equipment and technology, not controlled under Category 0
- **Category 5:** Aerospace systems, equipment, including production and test equipment, related technology and specially designed components and accessories therefore.
- **Category 6:** Munitions List
- **Category 7:** Reserved
- **Category 8:** Special Materials and Related Equipment, Material Processing, Electronics, Computers, Telecommunications, Information Security, Sensors and Lasers, Navigation and Avionics, Marine, Aerospace and Propulsion

EXPECTED QUESTIONS FOR UPSC CSE

Prelims MCQ

Q. SCOMET (Special Chemicals, Organisms, Materials, Equipment and Technologies) list is notified by:

- Ministry of Defence
- Ministry of Home Affairs
- Ministry of Commerce
- Ministry of Finance

(c) Answer

Descriptive Question

Q. What are the policy initiatives taken by the government for defence indigenization in India? Discuss the challenges faced by India's defence industry. [15 Marks] [250 Words]

CASE STUDY-INDIA'S MILITARY DIPLOMACY

Why in News: In the last few months, India's military diplomacy is at a hectic pace with back-to-back military exercises from countries far and wide for all three Services.

Key Details

- **RIMPAC:** Indian Naval Ship Shivalik completed

participation in exercise Rim of the Pacific (RIMPAC) hosted by the U.S. Navy at Guam held from June 27 to August 1.

- **Tarang Shakti Phase-1:** The Phase-I of exercise Tarang Shakti was held at Sulur from August 6-14 which saw participation of Germany, France, Spain and the U.K.
- **Mitra Shakti:** The 10th edition of the bilateral exercise Mitra Shakti with Sri Lanka held from August 12-25 at Army Training School, Maduru Oya, Sri Lanka
- **Exercise Varuna:** INS Tabar on departure participated in the 22nd edition of India-France bilateral Exercise Varuna from September 2 to 4 in the Mediterranean Sea.
- **Yudh Abhyas:** India-U.S. bilateral Army exercise Yudh Abhyas commenced at the Mahajan field firing ranges in Rajasthan on September 9, 2024.
- **Tarang Shakti Phase - 2:** Phase-II of the Indian Air Force's (IAF) largest multilateral exercise Tarang Shakti is underway at Jodhpur with eight countries, including India participating with aircraft and 17 countries as observers.
- **Malabar Naval Exercise** comprising India, Australia, Japan and the U.S. is scheduled to be held off the Visakhapatnam coast in the first half of October.

India's Defence Diplomacy with Southeast Asian States

- Defence diplomacy, also known as military diplomacy, is the non-violent use of military forces, adapting public diplomacy, through activities like officer exchanges, combined training programmes, cultural exchanges, and ship visits, etc., to further a country's diplomatic ties and promoting its International agenda.
- Indian defence diplomacy has fostered deeper partnerships with key Southeast Asian states; countries like Singapore, Vietnam, and the Philippines have strengthened their ties with India, diversifying their strategic options and hedging against Chinese influence.
- **With Singapore:** In November 2017, India and Singapore sealed a naval cooperation agreement to bolster maritime security, mutual logistics support, and joint exercises. 2025 will be marked the 60th anniversary of diplomatic relations between India and Singapore.
- **With Vietnam:** Vietnam has emerged as a cornerstone of Indian defence diplomacy in Southeast Asia and constitutes a pillar of India's 'Act East' policy and an anchor in India's Indo-Pacific strategy. Moreover, India presented a missile corvette, *INS Kirpan*, to the Vietnamese Navy in June 2023. There are also ongoing considerations regarding the potential sale of BrahMos missiles to Vietnam.
- **With Philippines:** The Indian government agreed to sell three batteries of BrahMos supersonic cruise missiles to the Philippine Marine Corps. At the fourth Philippines-India Joint Defence Cooperation Committee meeting in March 2023, India also agreed to post a defence attaché in Manila to oversee defence and security affairs.

Chinese Perception of Indian Military Diplomacy

- **Shift after PM Modi:** The Chinese defence discourse frequently highlights shifts in India's foreign strategy since Modi came to power, emphasising improvements in India's military relations with Japan, the US, Vietnam, the Philippines, and Australia.
- **Tit for tat:** India's expanding interests in the South China Sea and its use of related disputes to counter Chinese actions along the border have gained attention.
- **Post Galwan:** Following the Galwan incident, China believes that Indian activity in the South China Sea region has surged, restricting China's resource investment along its Indian border.
- **India-centric Indian Ocean:** Furthermore, according to China, India perceives the Indian Ocean as its strategic domain, potentially leading to an India-centric regional order through the control of key maritime channels.
- **Alternate development model:** India is also competing with China as a development model in the Global South and is seeking to emerge as a leading force in maintaining the balance of power in the Indo-Pacific through robust military diplomacy.
- **New weapon supplier:** With the completion of the BrahMos missile sale to the Philippines, China is apprehensive that India will soon become one of the primary sources of weapon supplies for countries in Southeast Asia.

EXPECTED QUESTIONS FOR UPSC CSE

Prelims MCQ

Q. Which of the following India's joint Military Exercises are correctly matched:

1. Mitra Shakti - Bangladesh
2. Exercise Varuna – Russia
3. Exercise Indra – France

- (a) Only 1 pair (b) Only 2 pair
(c) All three pair (d) None of them

(d) Answer

BIANNUAL NAVAL COMMANDERS' CONFERENCE

Why in News: Minister of Defence (MoD) recently addressed the 2nd edition of the biannual Naval Commanders' Conference in New Delhi.

Key Details

- The conference is the single most important apex-level forum of the Indian Navy to discuss, ideate, and find solutions towards ensuring that the navy remains a combat ready, credible, cohesive & future ready force.

- The conference focused on contemporary security paradigms, and critical analysis to further enhance the combat capability of the Navy and synergise operations with the other Services.
- It was also meant to delve into the dynamics of the geostrategic situation of the region in the backdrop of international developments.
- It focussed to formulate a future roadmap to consolidate as a first responder and preferred security partner in the Indian Ocean Region.
- The key focus areas for the navy to ensure combat readiness of all naval platforms, equipment, weapons, and sensors underpinned by the singular focus on ordnance delivery on target.

Indian Ocean Region (IOR) : India as a Net Security Provider

Geo-Strategic Importance of IOR to India

- **Long Coastline:** India has a coastline of over 7500 km, a total of over 1200 Islands and about two million square km of EEZ. India's central position in the IOR gives her an immense advantage and at the same time presents far greater challenges.
- **Crude oil imports:** Nearly 80 per cent of India's crude oil requirement is imported, which are mostly routed through the sea. Taking into account the total oil imports by sea, offshore oil production and petroleum exports, the country's cumulative 'sea dependence' for oil is estimated to be about 93 per cent.
- **Trade route:** Today, almost 95 per cent of India's trade by volume and 68 per cent of trade by value are routed via the Indian Ocean.
- **Fishing industry:** India depends heavily on Indian Ocean resources with her fishing and aquaculture industries being a major source of export as well as providing employment to more than 14 million people.
- **Security threats:** The presence of non-traditional threats like piracy, smuggling, illegal fishing and human trafficking also present major challenges and hence, a secure Indian Ocean is key to securing India's national interests.

Challenges in Becoming a Net Security Provider in IOR

- **Resource Availability vs Requirement** The myriad of tasks envisaged in achieving the status of net security provider calls for manifold increase in existing military hardware. With the shrinking allocation of defence budget as percent of GDP, it would take more than a few decades before India could offer viable force friction to PLAN in IOR.
- **Existing Civil-Military Relationship** There have been numerous instances of missing out on strategic gains due to differing views of various ministries as well as between civil and military leadership. The growing differences in perception of India's relationship with Seychelles, Maldives and Sri Lanka (to a certain extent), are examples of such mishandling.
- **Nascent Jointmanship.** Token gesture of creating Integrated Defence Staff (IDS) might bring sense of false integration to

a few, but true jointmanship would not be realised till all the anomalies in the appointment of the Chief of Defense Staff (CDS) at the apex level are dealt with.

- **Non-alignment Policy.** Considering the humongous capability gap vis-à-vis India's arch rival in IOR, China, it is a matter of time before India decides to either partner militarily with the US or accept to be a subservient state of China.
- **Past Experience of Overseas Deployment.** The Indian armed forces involvement in Sri Lanka, as part of the Indian Peace keeping Force (IPKF), did not achieve the expected results and it put India off from further overseas adventures.
- **Cumbersome Acquisition and Procurement Processes.** The technological gap in the indigenous defence industries, coupled with inadequate participation by private industries, has dragged the defence modernisation process. This in turn has impeded capability development commensurate with the requirement for Indian Navy (IN) to project itself as net security provider.

Way Forward

The hitherto fore analysis clearly brings out that India has miles to go before it achieves the status of net security provider in the IOR. Having said that, the silver lining is that the first step in terms of showing the strategic intent has been taken and due deliberation is being carried out progressively towards realisation of this intent.

EXPECTED QUESTION FOR UPSC CSE

Descriptive Question

- Q. Discuss the initiatives undertaken by India to become a net security provider. What are the challenges in India's path to be a net security provider? [15 marks] [250 words]

ANTI-SUBMARINE WARFARE

Why in News: Indian Navy recently launched Anti-Submarine Warfare Shallow Water Craft (ASW-SWC) Malpe and Mulki, as part of its effort to bolster coastal defense capabilities.

Key Details

- Anti-submarine warfare (ASW) shallow water crafts, named Malpe and Mulki, are fourth and fifth ships of the Eight Anti-Submarine Warfare Shallow Water Craft project, which was initiated in 2019.
- These vessels will replace the ageing Abhay ASW-class corvettes that entered service with the Indian Navy in 1989.
- The first three ships being built by CSL, including Mahe, Malvan, and Mangrol, were launched in November 2023.
- The ASW-SWC will perform subsurface surveillance on coastal waters, coordinate ASW operations with aircraft, and destroy subsurface targets in inland waters.
 - The ASW vessel will be equipped with a water jet propulsion system driven by three diesel engines.

- The warships can also perform search and rescue operations during both day and night, in coastal areas, defend against intruding aircraft, and lay mines on the sea bed.

What is a Corvette?

- A Corvette is the smallest class of naval ships and it falls below the warship class of a frigate.
- These are highly agile ships and are categorised as missile boats, anti-submarine ships, coastal patrol crafts and fast attack naval vessels.
- During World War II, the term Corvette was used to describe vessels which had anti-submarine roles assigned to them.
- Modern Corvettes can go up to 2,000 tons in displacement which helps in keeping them agile.

What kind of Corvettes does the Indian Navy possess?

- The Indian Navy at present has the Kamorta Class Corvettes, which are also known as Project 28.
- These ships have an anti-submarine role and are manufactured at Garden Reach Shipbuilders and Engineers in Kolkata.
- The four Kamorta Class Corvettes that the Indian Navy possesses are named INS Kamorta, INS Kadmatt, INS Kiltan and INS Kavaratti. The first of these was commissioned in 2014 and the last one in 2020.

Capabilities and Specifications of the Vessels

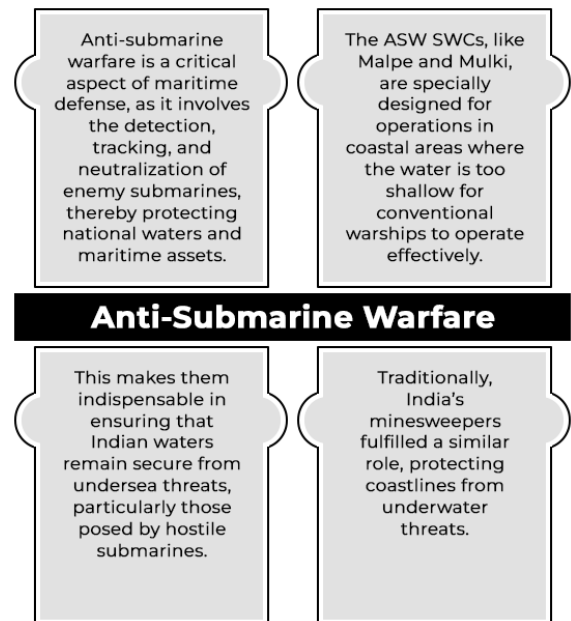
- The newly launched ships, Malpe and Mulki, are designed to enhance India’s coastal defense and anti-submarine warfare capabilities.
 - The vessel are 78.0 m long, 11.36 m wide with a draught of about 2.7 m.
 - The displacement is about 900 tons, with a maximum speed of 25 knots and endurance of 1800 nautical miles.
 - The ships are designed to fit indigenously developed, state-of-the-art SONARS, for underwater surveillance.
 - They are equipped with advanced, locally developed underwater sensors designed to detect enemy submarines and other underwater threats.
- The vessels are capable of conducting anti-submarine warfare in shallow waters, low-intensity maritime operations, and mine-laying activities.

Significance

- The project is part of India’s broader ‘Aatmanirbhar Bharat’ (self-reliant India) initiative, aimed at reducing dependence on foreign defense imports.
 - Over 80% of the content used in building these ships is indigenous, reflecting India’s growing expertise in domestic defense manufacturing.
 - The indigenous content not only contributes to self-reliance but also boosts national manufacturing capabilities and job creation in the defense sector.
- The Ministry of Defence emphasized that expansion in domestic defense production will have a ripple effect on various sectors of the economy.

Legacy and Symbolism Behind Ship Names

- The vessels are named after two important ports along India’s coastline Malpe and Mulki continuing the Navy’s tradition of naming such crafts after strategically significant ports.
- This naming tradition is intended to honor the legacy of their namesake minesweepers, further linking the vessels to India’s rich maritime history.
- These ships are part of the Mahe-class, which aims to carry on the legacy of the erstwhile minesweepers used by the Indian Navy for coastal defense in previous decades.



JOINT DOCTRINE FOR AMPHIBIOUS OPERATIONS

Why in News: Chief of Defence Staff released Joint Doctrine for Amphibious Operations.

Key Details

- The Doctrine is a keystone publication which will provide guidance to the Commanders for conduct of Amphibious Operations in today’s complex military environment.
- Following the release of Joint Doctrine for Cyberspace Operations, the Joint Doctrine for Amphibious Operations is the second Joint Doctrine released this year and it provides due focus on Jointness and Integration of Armed Forces in general and Amphibious Operations in particular.

Amphibious Operations

- An amphibious operation is a military operation launched from the sea by an amphibious force (AF) to conduct landing force (LF) operations within the littorals.
- The littorals include those land areas (and their adjacent sea and associated air space) that are predominantly susceptible to engagement and influence from the sea and may reach far inland.

- An amphibious force is an amphibious task force and landing force together with other forces that are trained, organized, and equipped for amphibious operations.
- Major characteristics of amphibious operations are flexibility, speed of deployment, security both physical and of information, vulnerability both at sea and on landing, etc.
- **Note:** the amphibious capability empowers the Armed Forces to conduct a multitude of operations in the Indian Ocean Region, both during war and peace.
 - These operations are a crucial component of multi-domain operations and serve as the best example of the cohesion and integration amongst the Armed Forces.

Applications of Amphibious Operations

- Amphibious operations use maneuver principles to employ ready-to-fight combat forces from the sea to the shore to achieve a position of advantage over the enemy.
- The ability to conduct amphibious operations from the sea, without the requirement for diplomatic clearance or host-nation support, provides the joint force commander (JFC) with flexible and sustainable options.
- AFs can alleviate unnecessary political and logistical burdens on host nations by operating from the sea base and reducing the footprint ashore. This adaptability and versatility enables additional options for the JFC that do not limit the activities of the other components.

Types of Amphibious Operations

- **Amphibious Raid:** Amphibious raids are conducted as independent operations or in support of other operations.
- **Amphibious Demonstration:** Amphibious demonstrations are a show of force intended to influence or deter an enemy's decision.
- **Amphibious Assault:** Amphibious assaults are launched from the sea by the amphibious force on a hostile or potentially hostile shore.
- **Amphibious Withdrawl:** Amphibious withdrawals are operations conducted to extract forces in ships or craft from a hostile or potentially hostile shore.

Joint Doctrine for Cyberspace Operation.

- It outlines a comprehensive strategy integrating cyberspace capabilities across all military domains—land, sea, air, and space.
- Its elements include both defensive and offensive operations, a unified command structure, enhanced cyber intelligence, collaboration with civilian sectors, and continuous training and capability development.
- It offers essential conceptual guidance to military commanders, staff, and practitioners for effectively planning and executing cyberspace operations while enhancing awareness among warfighters at every level.

INDIAN LIGHT TANK 'ZORAWAR'

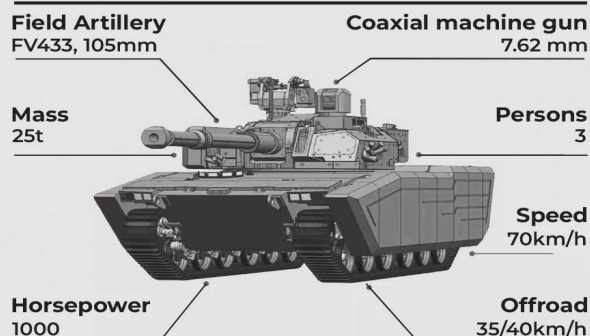
Why in News: Recently, Defence Research and Development Organisation (DRDO) successfully conducted first phase of Developmental Field Firing Trials of Indian Light Tank 'Zorawar'.

Key Details

- The Indian light Tank, Zorawar, a highly versatile platform capable of deployment in high-altitude areas has been successfully developed by the Combat Vehicles Research & Development Establishment (CVRDE), a unit of the Defence Research and Development Organisation (DRDO), in collaboration with Larsen & Toubro Ltd.
- During the field trials conducted in the desert terrain, the Light Tank demonstrated exceptional performance, efficiently meeting all the intended objectives. In the initial phase, the tank's firing performance was rigorously evaluated and it achieved the required accuracy on designated targets.
- The tank can be transported by air, is capable of amphibious operations, and can fire at high angles of elevation and perform the role of limited artillery.
- The tank is expected to be ready for induction into service in 2027.

INDIGENOUS ZORAWAR LIGHT TANK: WHY IS IT CALLED 'BRAVE & STRONG'

Developed by L&T in collaboration with DRDO



Famous tanks used by Indian army

T-90M Bhisma	<ul style="list-style-type: none"> ◆ Main Battle Tank (MBT) ◆ The T-90M Bhisma is an indigenously built Indian Army variant of the Russian T-90 Main Battle Tank.
DRDO Arjun (Lion)	<ul style="list-style-type: none"> ◆ Main Battle Tank (MBT) ◆ The main aim of the Arjun Mk II is to vastly improve the overall capabilities of the original Arjun MBT.
T-72 (Ajeya)	<ul style="list-style-type: none"> ◆ It is also known as Ajeya Main Battle Tank (MBT) ◆ T-72 Main Battle Tank succeeded the T-54/T-55 series systems and continues in service today.
BMP-2 (Boyevaya Mashina Pekhoty)	<ul style="list-style-type: none"> ◆ Infantry Combat vehicle ◆ ICV BMP II is amphibious infantry fighting vehicle introduced in the 1980s in the Soviet Union.
T-54 MBT	<ul style="list-style-type: none"> ◆ It is Medium Tank / Main Battle Tank (MBT) ◆ The T-54 Main Battle Tank succeeded the fabled Soviet T-34 Medium Tank of World War 2 fame.

Note: It has been named after the legendary general, **Zorawar Singh**, who led the Dogra forces a record six times, between 1834 and 1841, to victories in Ladakh and Tibet. In May 1841, he led a 5,000-strong Dogra force into Tibet and within weeks overran the Chinese forces and captured their Mantalai flag.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

Q. Zorawar recently seen in news, refers to:

- (a) Army inducted Unmanned Aerial Vehicle
- (b) Indigenously developed Stealth Submarine
- (c) Attack helicopter developed by HAL
- (d) DRDO developed Light Tank.

(d) :Answer

P8I POSEIDON AIRCRAFT

Why in News: A P8i aircraft of the Indian Navy took part in a joint naval exercise with the French Navy in France for the first time.



Key Details

- In a historic debut in Europe, An Indian Navy P8i Poseidon aircraft landed in France at Air Base 125 Istres-Le Tube to participate in the joint naval exercise Varuna with France.
- The 2024 edition of the Indo-French bilateral naval exercise 'Exercise Varuna' took place in the Mediterranean Sea from September 2 to September 4.
- This deployment comes 63 years after the Indian Navy's Alizé aircraft, operating from the erstwhile INS Vikrant, last flew at Hyères Airbase.
- In addition to INS Tabar and Aircraft P8I, Indian Navy was represented by the ship borne Helicopter; LRMR, whereas French side was represented by FS Provence, Submarine Suffren, Aircraft F20; Atlantique2, fighters MB339 and Helicopters NH90; Dauphin.

PRELIMS SPECIAL

About P8i

- P-8I Poseidon is Indian Navy's Versatile Long Range Maritime Patrol (LRMP) Aircraft.
- It is one of American aircraft company Boeing's most advanced multi-purpose aircraft being flown by the Indian Navy.
- Anti-submarine warfare is one of the primary roles of the P-8I Poseidon. Its advanced sensors and weapons systems enable it to detect, track, and engage submarines with high precision.
- It is primarily being used for intelligence gathering, surveillance, target acquisition, and reconnaissance (ISTAR) roles.
- The P-8I's advanced sensors, weapons systems, and long-range capabilities enable it to detect and respond to a wide range of threats, from submarines and surface vessels to environmental challenges.
- The aircraft is equipped with avionics and sensors such as: AN/APY-10 Radar and Magnetic Anomaly Detector (MAD).

The P-8I Poseidon is designed to carry a variety of weapons and payloads, making it a versatile platform for maritime operations. Its **armament includes:**

- **Torpedoes:** The aircraft is equipped with Mark 54 lightweight torpedoes, which are effective against submarines. These torpedoes can be launched from internal bomb bays or underwing pylons.
- **Harpoon Anti-Ship Missiles:** The P-8I can carry AGM-84L Harpoon Block II anti-ship missiles, which provide a powerful strike capability against surface vessels. These missiles have a range of over 120 kilometres and are equipped with advanced guidance systems.
- **Depth Charges:** The aircraft can deploy depth charges to target submarines operating at various depths.
- **Sonobuoys:** In addition to weapons, the P-8I carries a large payload of sonobuoys, which are essential for its ASW mission. These sonobuoys are deployed in patterns to create an acoustic barrier and detect submarines.

About Exercise Varuna

- The Varuna Naval Exercise is a bilateral maritime drill between the Indian and French navies involving guided missile frigates, tankers, maritime patrol aircraft, and integral helicopters from both sides.
- This diverse range of vessels and aircraft demonstrates the scale and complexity of the exercise, which was initiated in 1993 and later named 'Varuna' in 2001.
- Since then, it has become a hallmark of the robust India-France strategic bilateral relationship, providing an opportunity to learn from each other's best practices and procedures.

EXPECTED QUESTIONS FOR UPSC CSE

Prelims MCQ:

Q. Consider the following statements:

1. P8i is an aircraft primarily being used for intelligence gathering, surveillance, target acquisition, and reconnaissance (ISTAR) roles.
2. It is one of American aircraft company Boeing's most advanced multi-purpose aircraft being flown by the Indian Air force.

Select the correct answer using the code given below:

- (a) 1 only (b) 2 only
 (c) Both 1 and 2 (d) Neither of them

Answer: (a)

NAGALAND INNER LINE PERMIT

Why in News: Nagaland Government has approved the implementation of the Inner Line Permit (ILP) regime under Bengal Eastern Frontier Regulation 1873 (BEFR Act) in three additional districts- Chümoukedima, Dimapur and Niuland.

Key Details

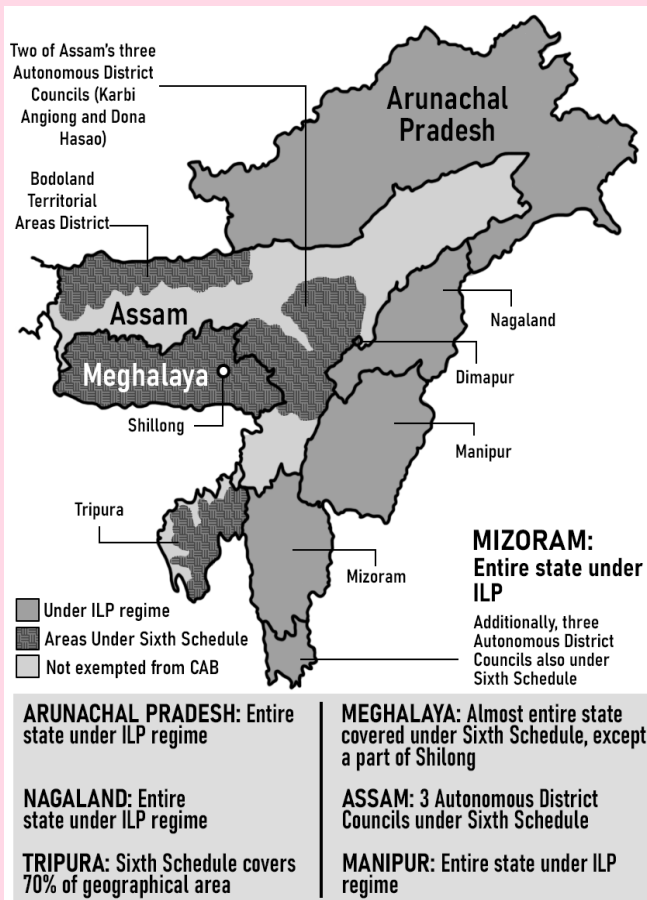
- The ILP regulation under section III of BEFR 1873 has been in operation in Nagaland since inception to safeguard the identity and existence of the indigenous people of the state.
 - The permit is an official travel document issued by the state government which allows entry of foreigners and Indian citizens of other states into Nagaland for a limited period.
- Dimapur residents will be classified into three categories, with Category I and II residents exempt from ILP requirements.
 - **Category-I** includes individuals who settled in Dimapur before December 1, 1963. These individuals will not require an ILP and will be eligible for a Smart Card, as well as the option to obtain a Permanent Residence Certificate and Domicile Certificate.
 - **Category-II** pertains to individuals who settled between December 1, 1963, and November 21, 1979. These individuals will also not need an ILP and will be issued a PRC, with the option of obtaining a Domicile Certificate.
 - **Category-III** includes those who settled in Dimapur on or after November 22, 1979. This group will be required to obtain an ILP for their stay in the district.
- No ILP will be required for the first two above categories.
- Certain groups, including students, teachers, technical personnel, and business partners, will be eligible for

an ILP valid for two to five years, depending on their purpose of stay in the state.

- Government is working on strengthening the digital system for ILP issuance to ease the application process.

Inner Line Permit (ILP)

- For inward travel into Arunachal Pradesh, Meghalaya, Manipur, Mizoram, under the Foreigners (Protected Areas) Order 1958, requires an official document issued by the Government which is known as the Inner Line Permit.
- The ILP system came into existence in 1873 with the promulgation of Bengal Eastern Frontier Regulation (BEFR).
- Presently, it is in existence in the states of Arunachal Pradesh, Manipur, Mizoram and parts of Nagaland.
- The ILP system was promulgated to preserve the culture and traditions of the tribes living in the area beyond the Inner Line and to safeguard their title to tribal land and protect their resources.
- The Inner Line Permit could be availed by both domestic as well as foreign tourists, only difference be the procedure to avail the same.
 - For a domestic tourist, the permit is known as the Inner Line Permit.
 - For foreign tourist (except a tourist of Bhutan) the permit is known as the Protected Area Permit which is similar to that of the Inner Line Permit.



Bengal Eastern Frontier Regulation (1873)

- The first administrative policy of the British in the North East was the introduction of Bengal Eastern Frontier Regulation in 1873 also known as the Inner Line Regulation.
- Under Section 2 of the Regulation an “inner line” was prescribed by the state authority for limiting movement.
- Section 4, gave the authority power to provide a permit for passing or residing in any of these “inner line” areas.
- The idea behind this regulation was to protect the culture and identity of indigenous tribes in the region, giving them some autonomy to look into their personal tribal affairs.

EXPECTED QUESTIONS FOR UPSC CSE

Prelims MCQ

Q. Consider the following states in India:

- | | |
|----------------------|------------|
| 1. Arunachal Pradesh | 2. Mizoram |
| 3. Tripura | 4. Sikkim |

How many of the above states implemented Inner Line Permits?

- (a) Only one (b) Only two
 (c) Only three (d) All four

Answer: (b) (1 and 2 only)

THE RESPONSIBLE AI IN THE MILITARY DOMAIN (REAIM) SUMMIT

Why in News: A global summit in South Korea recently announced a “blueprint for action” to govern responsible use of artificial intelligence in the military.

Key Details

- The REAIM (Responsible AI in the Military Domain) Summit 2024 is the most comprehensive and inclusive platform for AI in the military domain.
- Held from September 9 to 10, the event is co-organized by the Ministry of Foreign Affairs (MOFA) and the Ministry of National Defense (MND) of the Republic of Korea.
- During the Responsible AI in the Military Domain (REAIM) summit in Seoul, out of the 90 countries, 60 endorsed legally nonbinding declarative documents, including the UK, the US, Japan, Australia, and China.

Why There is a Need for Such Document?

- The “Blueprint for Action” states that adequate human involvement needs to be maintained in the development, deployment, and use of artificial intelligence in the military domain. The responsibility and accountability of humans can never be transferred to machines.

- The slogan of REAIM Summit 2024 was “Responsible AI for Safer Tomorrow”.
- In the military domain, there could be AI-enabled weapons, cyber operations, electronic warfare, decision support systems (AI-DSSS) for combat operations, etc. T
- This could introduce many new challenges as well, like, the risk of international humanitarian crises and legal, security, ethical, technological, and cyber challenges.
- Moreover, until recently, the debate on the use of artificial intelligence in war was limited to autonomous weapons and killer robots. The fear that wars would be taken up by computers and algorithms has sparked new debate.

REAIM Blueprint for Action

- **The impact of AI on international peace and security**
 - Affirm that AI applications in the military domain should be developed, deployed and used in a way that maintains and does not undermine international peace, security and stability.
 - Recognize that AI applications in the military domain may bring benefits such as increased situational awareness and understanding, precision, accuracy and efficiency.
 - Recognize that AI applications can present both foreseeable and unforeseeable risks across various facets of the military domain.
 - Recognize that possible high impact applications in the military domain that deserve particular policy attention could include AI-enabled weapons, AI-enabled decision-support systems for combat operations, AI in cyber operations, AI in electronic warfare and AI in information operations.
 - Stress the need to prevent AI technologies from being used to contribute to the proliferation of weapons of mass destruction (WMDs) by state and non-state actors.
 - Underscore the importance of establishing robust control and security measures to prevent irresponsible actors from acquiring and misusing potentially harmful AI capabilities in the military domain.
- **Implementing responsible AI in the military domain**
 - Affirm that AI applications must be developed, deployed and used in accordance with international law.
 - Stress the importance of establishing national strategies, principles, standards and norms, policies and frameworks and legislation as appropriate to ensure responsible AI applications in the military domain.
 - Acknowledge the following, to ensure responsible AI in the military domain:
 - ◆ AI applications should be ethical and human-centric.
 - ◆ AI capabilities in the military domain must be applied in accordance with applicable national and international law.

- Stress that efforts on responsible AI in the military domain can be taken in parallel and do not hamper the efforts on research, development, experimentation and innovation with AI technology.
- **Envisaging future governance of AI in the military domain**
 - Recognize that the discussion on the governance of AI in the military domain should include fostering a common understanding of AI technology and its capabilities and limitations.
 - Emphasize that such a discussion should take place in an open and inclusive manner to fully reflect wide- ranging views.
 - Commit to strengthening international cooperation on capacity-building aimed at reducing the knowledge gap on responsible development, deployment and use of AI in the military domain.
 - Recognize the need for a flexible, balanced, and realistic approach to the governance of AI in the military domain to keep pace with the rapid development and advancement of technologies.

EXPECTED QUESTIONS FOR UPSC CSE

Prelims MCQ

Q. Responsible AI in the Military Domain (REAIM) Summit 2024 was held in ...

- (a) Amsterdam
- (b) Tokyo
- (c) New York
- (d) Seoul

Answer: (d)

JOINT MILITARY EXERCISE AL NAJAH

Why in News: Indian Army Contingent departed for 5th edition of INDIA- OMAN Joint Military Exercise AL NAJAH V.

Key Details

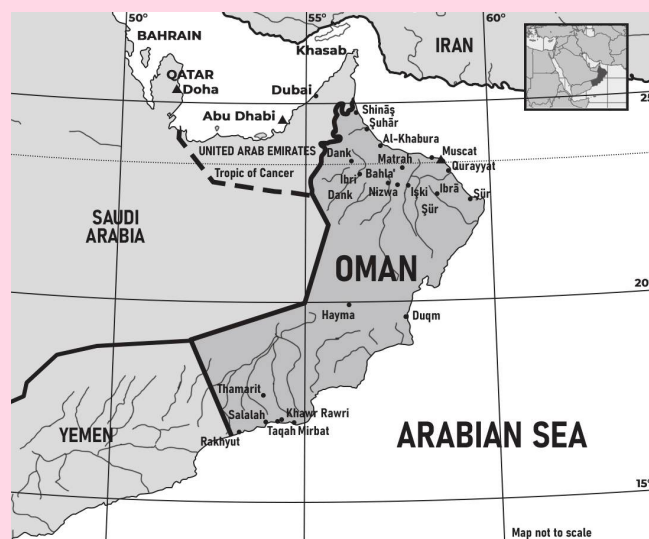
- The 5th edition of India-Oman Joint Military Exercise AL NAJAH is scheduled to be conducted from 13th to 26th September 2024 at Rabkoot Training Area in Salalah, Oman.
 - Exercise AL NAJAH has been held biennially since 2015, alternating between India and Oman. Last edition of the same exercise was conducted at Mahajan in Rajasthan.
- Aim of the Joint Exercise is to enhance joint military capability of both sides to undertake counter terrorism operations under Chapter VII of the United Nations Charter. The exercise will focus on operations in the Desert environment.
- Tactical drills to be rehearsed during the exercise include Joint Planning, Cordon and Search Operation, Fighting

in Built Up Area, establishment of Mobile Vehicle Check Post, Counter Drone and Room Intervention, among others. Combined field training exercises that simulate real-world counter-terrorism missions have also been planned.

- Additionally, the joint exercise will strengthen defence cooperation and further enhance the bilateral relations between the two friendly nations.

PRELIMS SPECIAL

About Oman



- Oman is a country in the Arabian Peninsula. It is located on the southeastern coast of the Arabian Peninsula, and overlooks the mouth of the Persian Gulf.
- It shares land borders with Saudi Arabia, the United Arab Emirates, and Yemen. The capital and largest city is Muscat.
- The coast faces the Arabian Sea on the southeast, and the Gulf of Oman on the northeast.
- Formerly a maritime empire, Oman is the oldest continuously independent state in the Arab world.
- It is a member of the United Nations, the Arab League, the Gulf Cooperation Council, the Non-Aligned Movement, and the Organisation of Islamic Cooperation.

EXPECTED QUESTIONS FOR UPSC CSE

Prelims MCQ

Q. Recently Indian Army Contingent departed for 5th edition of Joint Military Exercise AL NAJAH V with?

- (a) UAE
- (b) Saudi Arabia
- (c) Oman
- (d) Turkiye

Answer: (c)

VL-SRSAM WEAPON SYSTEM

Why in News:

Defence Research & Development Organisation (DRDO) & Indian Navy successfully flight test Vertical Launch Short Range Surface-to-Air Missile off Odisha coast.



Specifications:

The flight test was carried out from a land-based vertical launcher, targeting a high-speed aerial target flying at a low altitude. The missile system successfully tracked and engaged the target.

Aim:

To validate multiple updated elements of the weapon system, including the Proximity Fuse and Seeker. The performance of the system was meticulously tracked and confirmed by various instruments such as the Radar Electro-Optical Tracking System and telemetry deployed at ITR Chandipur.



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MENTAL HEALTHCARE INFRASTRUCTURE

Why in News: Despite rising demand and changing attitudes, Indians have limited access to mental healthcare.

Mental Health

- WHO defines mental health as a state of well-being in which a person realises their abilities, copes with the normal stresses of life, works productively and makes a contribution to the community. It extends to a positive state of mental and emotional well-being.
- When there is a significant disturbance in an individual's cognition, emotional regulation, or behaviour, usually associated with distress or impairment, it is referred to as a mental health disorder.

Government's Effort to Tackle Mental Illness

- **National Mental Health Programme (NMHP)**
 - It aimed at providing affordable and accessible mental healthcare facilities.
 - As part of the programme, primary and community health workers were given specialised training for the treatment of mental disorders.
- **District Mental Health Programme (DMHP)**
 - The NMHP was re-strategised as the District Mental Health Programme (DMHP) to decentralise care.
 - Districts were designated as the main administering units for the implementation of the programme.
 - The DMHP aimed to provide mental health services, which included managing cases, counselling, manpower training and spreading awareness, at different levels of the district healthcare delivery system.
 - It was later integrated with the National Rural Health Mission.
- **Mental Health Policy**
 - In response to the growing burden of mental illness, the government launched India's first national mental health policy in 2014.
 - It calls for a more accessible and holistic treatment of mental illnesses and advocates for the decriminalisation of attempted suicide.
- **Rashtriya Kishor Swasthya Karyakram (RKSK)**
 - Rashtriya Kishor Swasthya Karyakram (RKSK), was

launched in 2014 under the National Health Mission to focus specifically on adolescent health.

- **Mental Healthcare Act, 2017**
 - It discourages the long-term institutionalisation of patients and reaffirms the right of people to live independently and within communities.
 - It places a range of duties on mental health professionals, the state and other duty-bearers to protect the autonomy and dignity of persons with mental illness.
- **Ayushman Bharat – Health and Wellness Centre Scheme**
 - Mental health services are provided as part of services under the Comprehensive Primary Health Care under Ayushman Bharat – Health and Wellness Centre scheme.
 - The government has also released operational guidelines on mental, neurological and substance use disorders at health and wellness centres (HWC) under the ambit of Ayushman Bharat.
- **National Tele-Mental Health Programme (NTMHP)**
 - National Tele-Mental Health Programme (NTMHP) was launched in 2022 under the NMHP to use digital technology to address growing mental health challenges and improve access to quality mental health counselling and care services in the country.

Mental Healthcare in India

- The demand for mental healthcare is increasing in India thanks to shifts in attitudes over the years. But there is no commensurate rise in the number of mental health professionals.
- As per the latest National Mental Health Survey (NMHS), which was conducted between 2015 and 2016, India has only 0.75 psychiatrists per 1 lakh population.
 - The World Health Organization's guidelines state that there should be at least three practising psychiatrists per one lakh population.
- About 1,000 psychiatrists enter the Indian workforce every year. Keeping aside factors such as attrition and unemployment, it would take India about 27 years to meet the WHO-recommended goal.

Mental Health in Youth: Rising Epidemic

- Adolescent population, aged 10-19 years, accounts for a substantial portion of the national total, some 253 million.

This demographic segment is a significant part of what economists and demographers have come to call the 'demographic dividend'.

- Adolescents in India are particularly vulnerable to mental health problems like anxiety disorders and depression.
 - Official reports have stated that among Indians aged 13-17 years, the prevalence of severe mental illness was 7.3% (as of 2015-2016).
- **Adolescent girls** in India face unique challenges, including gender-based violence and discrimination, that can severely affect their mental well-being.
- **Adolescent boys** are commonly expected to conform to masculine norms of stoicism and are victims of bullying and shaming.
- In India, mental health disorders are underreported due to poor awareness, lack of help-seeking behaviour (stemming from stigma), a desire and/or expectations to be self-reliant, and insufficient prioritisation in the policy framework.
 - Schemes designed to improve access to mental healthcare need to accommodate these factors.
- Rashtriya Kishor Swasthya Karyakram (RKSK) deals exclusively with adolescent health. It was rolled out on January 7, 2014. But despite having been in operation for nearly a decade, the mental health strategies under this policy have been implemented painfully slowly.
 - There is a little awareness of RKSK among school-going adolescents, parents, and teachers.
- Under the purview of the National Health Mission, State governments were responsible for implementing the RKSK policy – including setting up 'Adolescent Friendly Health Clinics' as part of its facility-based strategies.

Main Risk Factors for the Onset and Persistence of Mental-Health Disorders in India

- Poverty
- Childhood Adversity
- Violence
 - These factors are also associated with poor access to good quality education, lack of employment, and reduced productivity.
- Other Issues
 - Equity in healthcare remains a significant issue in India, and this also extends to mental health.
 - Access to mental healthcare services is often skewed along the same lines – wealth, caste, location, gender, etc.

Potential Solutions for Improving Mental Health in Youth and Adolescents

- Policymakers should endeavour to shift from the current "medical model" of mental health to the convergent model of mental health.

- Convergent model recognises the complex interplay of behavioural, environmental, biological, and genetic factors throughout an individual's life, especially during the crucial stages of childhood and adolescence.
- Initiatives like establishing peer support groups in schools and colleges and community-based interventions leveraging technology can also encourage help-seeking behaviour.
- Example: Whole School, Whole Community, Whole Child model in the U.S.
- A multi-sector approach that includes underlying factors like education and nutrition should be at the core of policies to realise the full potential of adolescents.
- Recognising that a healthy mind thrives within a healthy body. The government should continue to make the improvement of school environments and health-promoting conditions a priority in parallel with efforts to combat pressing health concerns like malnutrition and anaemia.

Community-based Interventions for India's Mental Health Burden

- Most conversations on mental health either look at breaking the stigma (which will increase the demand for services) or improving quality service delivery through psychiatrists (who are in limited numbers).
- The paradigm shift from relying on mental health professionals to psychosocial interventions, through community-led models, would cultivate a rights-based approach to mental healthcare which is accessible, affordable, inclusive, and fosters help-seeking behavior at the community level.
- Following the '**Look-Listen-Link**' (3L) Model, the care community could undertake need-based interventions that allow non-formal, trained community workers to look into the particular mental health challenges of the community.
- An efficient and robust community-integrated model will have the ability to build a response system of cadres of community volunteers and leaders to create safe spaces.
 - They would build upon locally established peer support networks such as Self-Help Groups ('SHGs'), activity-based groups, and civil society organizations to provide care.
- It is important that any community-based mental health program provides access to institutional social care benefits by building strategic partnerships with the local governments, panchayats, educational institutions and other stakeholders to enable referrals and access to existing social benefit schemes.
- **Example:** Atmiyata Project run by the Centre for Mental Health Law and Policy in Mehsana, Gujarat.
 - The program is led by community volunteers who

identify persons in distress, and who can benefit from informal care.

Way Forward

- **Accessibility:** Mental healthcare services must be made easily accessible, especially for those in urgent need.
 - More psychiatric units are required at the sub-district level for effective dissemination.
 - Additional human resources are needed on the ground for preventive and curative strategies.
- **Rational Deployment of Human Resources**
 - Distributing responsibilities between genders to ensure effective screening, control and management of mental health diseases.
 - ASHAs may be trained to screen individuals for common mental health conditions, a new cadre of community mental health workers (CMHW) may also be created at the PHC level for screening and facilitating treatment as recommended by policymakers.
- **Community Participation:** More stakeholders can be roped in to spread awareness about mental health and the government programme.
 - The programme also needs a robust monitoring system to facilitate mid-course corrections.
- **Additional Funds and Finances:** Additional funds to provide optimal health services aligning with NMHP goals to ensure the availability and accessibility of minimum mental healthcare for all.

Conclusion

A diverse collaboration with the community can humanize the existing public health institutions by reducing hesitancy and building awareness about mental health. It also allows for early screening, assistance mechanisms and preventive measures to be built and decentralize the delivery of mental health services to make way for personalized solutions that are contextual thereby bridging the healthcare gap and making a significant contribution towards the amelioration of mental health.

EXPECTED QUESTIONS FOR UPSC CSE

Prelims MCQ

Q. Consider the following initiatives of the Government of India:

1. Rashtriya Kishor Swasthya Karyakram
2. Ayushman Bharat
3. District Mental Health Programme

How many of the above initiatives have components of Mental Healthcare?

- (a) Only one (b) Only two
(c) All three (d) None

Answer: (c)

Descriptive Question

- Q. Discuss the various risk factors for rising mental health issues among Indian Youth. Also enlist government initiatives to tackle challenge of mental health. [10 marks] [150 words]

CASE STUDY - WHY LAWS ON SEXUAL VIOLENCE CONTINUE TO BE SKEWED AGAINST WOMEN?

Why in News: The recent murder and rape of a resident doctor at RG Kar Medical College and Hospital in Kolkata have highlighted the pervasive issue of sexual violence in India.

Note: Following the rape and murder in Kolkata, the Supreme Court has set up a national task force of doctors to create gendered safety norms for medical professionals (and presumably for patients).

The Issue of Sexual Violence Against Women

- **The Bhartiya Nyaya Sanhita:** The BNS has also ignored the serious recommendations made repeatedly by autonomous women's movements to redress and prevent sexual violence.
 - Recently, West Bengal Government has passed, **Aparajita Women and Child (West Bengal Criminal Laws Amendment) Bill, 2024**, prescribes a compulsory death penalty for the offence of committing rape and inflicting injury that results in the death of the victim or causes her to be in a vegetative state. **(For More Detail Please Refer Polity Section)**
- **At Workplaces:** Contrary to the spirit of the Vishaka judgment, the processes led by women to redress sexual harassment were handed over to employers who have a vested interest in not preventing or redressing sexual harassment at the workplace.
- **Criminalisation of Protest :** Change in rape cultures is not possible if difference, critique and dissent are censored, disciplined or criminalised — as witnessed in the criminalisation of protest in the Hathras case, a terrifying assertion of law as patriarchal caste order.
- **De-Funding of Women's Groups:** The mass scale de-funding of women's groups who worked with rape survivors and gender-based violence has been fatal. It has led to a tremendous loss of experience and expertise.
- **Institutional Capture:** De-funding accompanies institutional capture, where policies on admissions, recruitments, rules of seniority, or inclusive governance are set aside to facilitate nepotistic and arbitrary processes in admissions and recruitment. When institutions gather impunity, it is inevitably dangerous for women.
- **Post Incident Measures:** At times, "atrocities videos" are expressions of outrage or used to expose impunity institutions. The leaks, social media practices and sexist language deployed by state actors are used to gaslight women.

- **Criminal Justice System:** Failure of the criminal justice system to protect women and punish offenders contributes to sexual assault. The most possible reasons are shortage of judges; the slow transition from an ineffective paper filing system to a computerized system and bribes and corruption in judicial system to slow the process and escape jail time.

Hema Committee report

- Recently, the Hema committee report on the Malayalam film industry was released. It has revealed alarming instances of sexual abuse, gender discrimination, and inhuman treatment of women in the Malayalam film industry.

Key Issues Highlighted in the Report

- **Sexual Abuse:** It include unwanted **physical advances** even before commencing work, **rape threats**, code names for women who would agree to **compromise** among other shameful acts.
- **Casting Couch:** The report highlights the prevalence of the casting couch, where women are often forced to **exchange sexual favours for job opportunities**.
 - Directors and producers often coerce female actors into making compromises, with those who comply being termed “cooperating artists.”
 - Women were forced to work with abusers, resulting in significant **emotional trauma**.
 - The casting couch is a euphemism for the practice of **soliciting sexual favours** from a job applicant in exchange for **employment** in the entertainment industry, primarily **acting roles**.
- **Safety on Film Set:** Many female film workers frequently bring their **parents or close relatives** to the set due to fears of **sexual demands** and harassment.
- **Criminal Influence:** The report indicates that the Malayalam film industry is plagued by **criminal influence**.
 - Many industry men, sometimes under the influence of liquor or drugs, insistently knock the hotel doors of female artists, causing significant distress.
- **Fear of Consequences:** Although such crimes are covered by the **Indian Penal Code** and the **Sexual Harassment of Women at Workplace (Prevention, Prohibition, and Redressal) Act 2013**, women in the film industry are apprehensive about the consequences of lodging an official complaint.
 - The stigma surrounding **sexual harassment**, particularly for public figures, frequently deters actors from reporting such incidents.
- **Cyberthreats:** **Online harassment** poses a significant challenge for women in cinema, with both female and male artists facing **cyberbullying, public threats, and defamation**.
 - Social media platforms become avenues for vulgar comments, images, and videos, where female artists are especially targeted with explicit and threatening messages.
- **Inadequate Facilities:** Female artists often refrain from drinking water on set due to **inadequate toilet facilities**, especially in outdoor locations.

- The situation worsens during **menstruation** when female artists struggle significantly with changing or disposing of their sanitary products.
- **Inhumane Working Conditions:** The junior artists lack a **minimum remuneration**. Junior artists are in some cases “**treated worse than slaves**” with work extending up to 19 hours. **Intermediaries misappropriate a good part of their payments**, which are not given on time.



EXPECTED QUESTION FOR UPSC CSE

Descriptive Question

Q. Analyse how laws and executive actions on Sexual violence against women work against women instead of working for them. [150 words] [10 marks]

CASE STUDY: MICRONUTRIENT INADEQUACIES IN INDIA

Why in News: A recent article in The Lancet has estimated that the Indian population’s consumption of 15 dietary micronutrients is inadequate.

- Key Details**
- The article, *Global estimation of dietary micronutrient inadequacies: a modelling analysis*, by Simone Passarelli estimated the micronutrient across the world and in india.
 - The analysis provided the first global estimates of inadequate micronutrient intakes, and public health practitioners could use the results to target populations requiring intervention.

- Key Findings of the Report**
- It estimated that over 5 billion people worldwide, which is 68% of the global population, do not consume enough iodine; 67% do not consume enough vitamin E; and 66%, calcium.

- More than 4 billion people (65% of the population) do not consume enough iron; 55%, riboflavin; 54%, folate; and 53%, vitamin C.
- Within the same country and age groups, estimated inadequate intakes were higher for women than men for iodine, vitamin B12, iron, and selenium; and higher for men than women for magnesium, vitamin B6, zinc, vitamin C, vitamin A, thiamin, and niacin

Effects of Micronutrient deficiency and its necessity

- **Higher effect on Vulnerable sections:** Major impediment to socioeconomic development and contributes to a vicious circle of underdevelopment, to the detriment of already underprivileged groups.
- **Effects of Vitamin A deficiency (VAD):** It primarily affects children. It causes night blindness and, eventually, permanent blindness (xerophthalmia). It also contributes to retarded physical growth and impaired resistance to infections, resulting in high rates of sickness and death among young children.
- **Effects of Anemia and iron deficiency:** It affect more than 2 billion people in virtually all countries. Anemia in infants and children is associated with retarded physical growth, reduced resistance to infections and slow development of learning abilities. In adults it causes fatigue and reduced work capacity and may cause reproductive impairment.
- **Effects of Iodine deficiency:** More than 200 million people have goitre and 20 million suffer mental impairments (resulting in significant reduction in IQ) caused by iodine deficiency.

Challenges to Address the Nutrient-Micro Deficiency in India

- **Poverty:** Poverty stands as a primary catalyst for child Micronutrient Deficiency in India, exerting profound effects on multiple fronts. Impoverished families frequently face financial constraints that hinder their ability to afford nutritious foods, leading them to rely on more economical but less nutritious alternatives. Moreover, poverty restricts access to crucial resources like healthcare, clean water, and proper sanitation, further exacerbating the prevalence of Micronutrient Deficiency among children in India.
- **Inadequate diet:** A significant number of children in India encounter challenges in accessing a diverse and nutrient-rich diet. Their dietary patterns often skew towards high carbohydrate consumption while lacking sufficient protein, essential vitamins, and minerals. This imbalance in nutrient intake contributes to the prevalence of Micronutrient Deficiency among children in the country.
- **Poor feeding practices:** Micronutrient Deficiency among children can be attributed to poor feeding practices, which encompass various factors such as premature weaning, insufficient exclusive breastfeeding, and inadequate complementary feeding. These suboptimal practices have

been identified as contributing factors to the occurrence of Micronutrient Deficiency among children.

- **Inadequate sanitation and poor hygiene:** Inadequate sanitation and poor hygiene practices can contribute to the dissemination of infectious diseases, thereby exacerbating the prevalence of Micronutrient Deficiency. The transmission of these infections further compromises the nutritional status of individuals, particularly children, and perpetuates the cycle of Micronutrient Deficiency.
- **Limited access to healthcare:** Limited access to healthcare, especially in rural areas, presents a significant challenge in identifying and treating Micronutrient Deficiency and other health issues among children. The lack of healthcare facilities and qualified personnel can hinder timely diagnosis, intervention, and appropriate management of Micronutrient Deficiency, perpetuating the problem and compromising the well-being of affected children.
- **Gender inequality:** Girls are more likely to be malnourished than boys in India due to gender-based discrimination in food allocation and access to healthcare.

Solution to micronutrient deficiency

- **Dietary diversification:** consuming a variety of food items to ensure the proper intake of various macro and micronutrients.
- **Food fortification or nutrient supplementation:** is the practice of deliberately increasing the content of one or more micronutrients (i.e., vitamins and minerals) in a food or condiment to improve the nutritional quality of the food supply and provide a public health benefit with minimal risk to health.
- **Crop biofortification:** the nutrient density of food crops is increased through conventional plant breeding, and/or improved agronomic practices.
- **Traditional food:** Traditional food will provide the required micronutrient values as it is rich in iron, vitamins and protein. It is time we avoid processed food, and return to our roots.

- It is defined as a lack of essential vitamins and minerals that are required in small amounts by the body for proper growth and development.
- In contrast to macronutrients — which include energy, protein, and fat — micronutrients are vitamins and minerals that are consumed in small quantities but are nonetheless essential for physical and mental development.
- Essential micronutrients include, but are not limited to: iron, zinc, calcium, iodine, vitamin A, B vitamins, and vitamin C.

Government initiatives to tackle micronutrient deficiency

- **Anemia Mukht Bharat Abhiyan:** The mission was launched in 2018 with the aim of accelerating anemia decline by one to three percentage points annually.
- **Fortified rice through PDS:** Pilot projects on the distribution of fortified rice have been taken up in select States, including Maharashtra (Gadchiroli district) as part of a targeted Public Distribution programme for the masses.

- **Scaling up the distribution through various food security schemes:** The programme has been a success in terms of preventing cases of anaemia from 58.9% to 29.5%, within a span of two years, prompting the central government to declare the scaling up of the distribution of fortified rice, the major staple diet of 65% of the population, through the existing platform of social safety nets such as the PDS, ICDS and PM-POSHAN.
- **Cost-effective strategy:** Experiences from the different States on the fortified rice project, so far tally with the results of global programmes that use fortified food as a cost-effective strategy.

EXPECTED QUESTIONS FOR UPSC CSE

Prelims MCQ

Q. Micronutrient deficiency in individual causes due to lack of?

1. Proteins
2. Vitamins
3. Minerals

Choose the correct option from following

- (a) Only one (b) Only two
 (c) All three (d) None

Answer: (b)

Descriptive Question

Q. Explain micronutrient deficiency? Mention its impacts on human health and suggestions to remove such deficiencies. [10 marks] [150 words]

WOMEN REPRESENTATION IN LAW ENFORCEMENT AGENCY

Why in News: The Rajasthan government recently approved 33% reservation for women in the police force.

Key Details

- Rajasthan government approved 33% reservation for women in the police force by deciding to amend the State Police Subordinate Service Rules, 1989.
- Potential Benefits:
 - Police would be able to work with more sensitivity in the matters related to women
 - Provide more employment opportunities to women.

Women's Representation in Indian Police

- All-India percentage of women in the police force has improved steadily over the past 10 years, rising from 5.87% in 2013 to 11.75% in 2022, it is still way short of the 33% target set by the Union home ministry for the improved representation of women in their police forces.
- Women police personnel across all states and Union territories as on 01.01.2022 totalled just over 2.4 lakh, of which 1.8 lakh were posted at constable level and 20,196 at head constable level.
- Women officers in the various state/UT police were few and included 8 in the rank of DGP, 37 in the rank of Additional DGP, 31 IGPs, 368 at SSP level, 269 at Additional SP level, 908

at SP level, 3,680 Inspectors, 13,146 Sub-Inspectors and 6,052 Assistant Sub Inspectors.

- States with highest number of women police personnel (Decreasing Order)
 - Uttar Pradesh > Maharashtra > Tamil Nadu > Assam > Gujarat > Delhi
- Women police stations comprising an all women staff rose to 745 on 01.01.2022 from 518 on 01.01.2014.
- States with largest number of women police stations (Decreasing Order)
 - Tamil Nadu > Uttar Pradesh > Madhya Pradesh > West Bengal
- Six UTs and nine States have a target of 33% reservation for women. Elsewhere, targets range from Bihar's 35% to 10% in Arunachal Pradesh, Meghalaya and Tripura. Five states/UTs, including Kerala and Mizoram, have no reservations.

Findings of India Justice Report 2022

- No State which had the 33% criteria, managed to meet it.
- Among large and medium states, Andhra Pradesh which reserves 33% of overall police posts for women, performed the best with 21.8% being its share of women in police.
- Jharkhand was the worst performer with its share of women in police being just 6.2%.
- In small States, Himachal Pradesh was at the top with 14% of police personnel being women, while Tripura came in last with just 5.3%.
- Among Union Territories, Ladakh had 28.3% women in police, while Jammu and Kashmir had just 3.3%.

Challenges Faced by Women in Police

- **Stereotyping And Gender Discrimination**
 - Despite their capabilities and dedication, women police personnel often face biases and prejudices from their male colleagues.
 - This discrimination can manifest in various ways, such as unequal opportunities for career advancement, exclusion from decision-making processes, and being assigned less challenging tasks compared to their male counterparts.
- **Challenges Related To Workplace Misconduct And Sexual Harassment**
 - Workplace misconduct, such as intimidation, bullying, or discrimination, exacerbates the challenges faced by women police officer.
 - They may be subjected to unfair treatment or retaliation for speaking out against such behavior, leading to feelings of isolation and vulnerability etc.
 - Sexual harassment can take various forms, including lewd comments, unwanted advances, or even coercion for sexual favors.
- **Lack Of Resources And Support**
 - Women police often struggle with a lack of support and resources, which hampers their ability to effectively carry out their duties.

- **Balancing Family Responsibilities And Work**
 - Balancing family responsibilities and work is a significant challenge for women police personnel.
 - Like many working women, they often struggle to meet the demands of their job while fulfilling their roles as caregivers and homemakers.
- **Lack of Representation In Leadership**
 - Despite their skills and capabilities, women often find themselves underrepresented in positions of authority and decision-making.
- **Lack of Development Opportunities And Training**
 - Despite their commitment, and dedication women police personnel may find themselves overlooked when it comes to accessing essential training programs and career advancement opportunities.
 - The absence of adequate training can hinder women police officers' ability to perform their duties safely and effectively.

Suggestions to Address the Challenges Faced by Women Police

- **Gender Sensitization Training**
 - Implement comprehensive training programs for all police personnel to raise awareness about gender biases, stereotypes, and discrimination. This can foster a more inclusive and respectful work environment.
- **Infrastructure Improvement**
 - Invest in upgrading police stations to provide separate and adequate facilities for women officers, including restrooms, changing rooms, and accommodations. This ensures their safety, comfort, and dignity while on duty.
- **Safety Measures**
 - Enhance safety protocols and provide specialized training to address the unique safety concerns faced by women officers. This includes self-defense training, access to protective equipment, and support for handling dangerous situations.
- **Work-Life Balance Policies**
 - Introduce policies that support work-life balance for women officers, such as flexible work hours, parental leave options, and childcare support. This helps them manage their professional responsibilities alongside their family obligations.
- **Promotion of Women in Leadership**
 - Implement initiatives to encourage and support women's advancement into leadership positions within the police force. This includes mentorship programs, leadership training, and ensuring equal opportunities for career advancement.

EXPECTED QUESTIONS FOR UPSC CSE

Prelims MCQ

Q. Recently, which state government approved 33% reservation for women in the police force?

- (a) West Bengal (b) Kerala

- (c) Maharashtra (d) None of the above

(d) Answer

Descriptive Question

Q. Discuss the current status of Women representation in the Indian police force. What are the challenges women face in police service and suggest measures for the same. [10 marks] [150 words]

PRADHAN MANTRI SCHOOLS FOR RISING INDIA (PM-SHRI) SCHEME

Why in News: Recently, Delhi government has agreed to sign a Memorandum of Understanding (MoU) with the Union Government to implement the Pradhan Mantri Schools for Rising India (PM-SHRI).

Key Details

- The Union Education Ministry had stopped funds under the Samagra Shiksha Abhiyan (SSA), the flagship school education programme, to Delhi, Punjab and West Bengal because of their reluctance to participate in the Pradhan Mantri Schools for Rising India (PM-SHRI) scheme.

About PM SHRI School

- PM SHRI School is a centrally sponsored scheme by the Government of India.
- It to be implemented over a period of 5 years w.e.f. 2022-23 to 2026-27.
- It will nurture students in a way that they become engaged, productive, and contributing citizens for building an equitable, inclusive, and plural society as envisaged by the National Education Policy 2020.
- More than 20 lakh students are expected to be the direct beneficiaries of the scheme.
 - The scheme will promote an understanding of various dimensions of the Quality of school education and inform Policy, Practice and Implementation.
 - The learning from these schools will be scaled up to other schools in the country.
- PM SHRI Schools will help showcase the implementation of the National Education Policy 2020.

Six Pillars of PM SHRI Schools

Pillar 1:	Curriculum, Pedagogy and Assessment
Pillar 2:	Access and Infrastructure
Pillar 3:	Human Resources and School Leadership
Pillar 4:	Inclusive Practices and Gender Equity
Pillar 5:	Management, Monitoring and Governance
Pillar 6:	Beneficiary Satisfaction

Key Features

- PM SHRI will provide high-quality education in an equitable, inclusive and joyful school environment that takes care of the diverse background, multilingual needs, and different academic abilities of children and makes them active participants in their own learning process as per the vision of NEP 2020.
- PM SHRI Schools will provide leadership to other schools in their respective regions by providing mentorship.
- The PM SHRI Schools will be developed as Green schools, incorporating environment friendly aspects like solar panels and LED lights, nutrition gardens with natural farming, waste management, plastic free, water conservation and harvesting, study of traditions/practices related to protection of environment, climate change related hackathon and awareness generation to adopt sustainable lifestyle.
- Pedagogy adopted in these schools will be more experiential, holistic, integrated, play/toy-based (particularly, in the foundational years) inquiry-driven, discovery-oriented, learner-centred, discussion-based, flexible and enjoyable.
- Focus will be on learning outcomes of every child in every grade. Assessment at all levels will be based on conceptual understanding and application of knowledge to real life situations and will be competency-based.
- Assessment of the resources available and their effectiveness in terms of availability, adequacy, appropriateness, and utilisation for each of the domains and their key performance indicators will be done and gaps will be filled in a systematic and planned manner.
- Linkage with Sector Skill Councils and local industry for enhancing employability and providing better employment opportunities will be explored.
- A School Quality Assessment Framework (SQAF) is developed, specifying the key performance indicators to measure outcomes. Quality evaluation of these schools at regular interval will be undertaken to ensure the desired standards.

PRELIMS SPECIAL

What is a centrally sponsored scheme?

- Since the PM-SHRI scheme is sponsored by the Central government, the 60 per cent cost of the implementation cost will be borne by the Centre, while the remaining 40 per cent will be borne by the state or UT. However, in some states such as Himachal Pradesh, Uttarakhand, Jammu and Kashmir and the northeast, the contribution of the Central government can go up to 90 per cent.

What are some other central schemes for students?

- In September 2021, the government approved a new meal scheme, the **Pradhan Mantri Poshan Shakti Nirman scheme (PM Poshan Scheme)** for government and government-aided schools. The original midday meal scheme is a part of this programme.

- The centre has also launched some **scholarship schemes**, which include **PRAGATI (Scholarship for Girl Students)** and **PM Yashasvi Scheme** for students from the Other Backward Classes, economically backward classes, and non-notified, nomadic and semi-nomadic tribes among others.
- **Eklavya Model Residential Schools (EMRS)** are set up in States/UTs with grants under Article 275(1) of the Constitution of India. EMRSs provide free education to ST children from class VI to XII in residential set up. The scheme is being implemented by the Ministry of Tribal Affairs, Government of India.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

Q. Consider the following statements regarding PM-SHRI:

1. It is a centrally sponsored scheme by Ministry of Education.
2. It is being implemented over a period of 5 years w.e.f. 2022-23 to 2026-27.

Which of the statements above is/are correct?

- (a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

Answer: (c)

THE PHARMACOPOEIA COMMISSION FOR INDIAN MEDICINE & HOMOEOPATHY

Why in News: Recently, the Pharmacopoeia Commission for Indian Medicine & Homoeopathy (PCIM&H) achieved the Bureau of Indian Standards (BIS) Integrated Management System (IMS) Certifications.

Key Details

- This achievement marks a significant advancement for the Ayush sector, paving the way for enhanced global recognition and setting a new standard for excellence in Indian Medicine & Homeopathy.
- PCIM&H has been awarded with IS/ISO 9001:2015 for Quality Management System (QMS), IS/ISO 14001:2015 for Environmental Management System (EMS) and IS/ISO 45001:2018 for Occupational Health & Safety Management System (OHSMS).
 - The IMS certification system will help to assure the adherence to international acceptance of the pharmacopoeia standards developed by PCIM&H for ASU&H drugs.
 - The Quality Management System certification affirms PCIM&H's ability to consistently meet and exceed customer expectations.

About Non-communicable Diseases

- A non-communicable disease (NCD) is a disease that is not transmissible directly from one person to another.
- NCDs account for seven out of the ten leading causes of death worldwide
- The report underscored the importance of digital health technologies in addressing these diseases, particularly as people living with NCDs require continuous management and long-term care.
- The four major NCDs are cardiovascular diseases (CVDs), cancers, chronic respiratory diseases (CRDs) and diabetes which share four behavioral risk factors –unhealthy diet, lack of physical activity, and use of tobacco and alcohol.

Present Status In India:

- Nearly 5.8 million people (WHO report, 2015) die from NCDs (heart and lung diseases, stroke, cancer and diabetes) every year or in other words 1 in 4 Indians has a risk of dying from an NCD before they reach the age of 70.
- In a report “India: Health of the Nation’s States” by Ministry of Health and Family Welfare (MOHFW), Government of India (GOI), it is found that there is increase in the contribution of NCDs from 30% of the total disease burden- ‘disability-adjusted life years’ (DALYs) in 1990 to 55% in 2016 and also an increase in proportion of deaths due to NCDs (among all deaths) from 37% in 1990 to 61% in 2016.
- This shows a rapid epidemiological transition with a shift in disease burden to NCDs.

Steps taken by Indian Government to curb NCDs

- In response to the “WHO Global Action Plan for the Prevention and Control of NCDs 2013-2020”, India is the first country to adopt the National Action Plan with specific national targets and indicators aimed at reducing the number of global premature deaths from NCDs by 25% by 2025.
- National Programme for prevention and control of Cardiovascular Diseases, Diabetes, Cancer & Stroke (NPCDCS).
- National Programme for Control of Blindness & Visual Impairment (NPCB & VI).
- National Programme for Health Care for Elderly (NPHCE).
- National Programme for prevention and control of Deafness (NPPCD)
- National Mental Health Programme (NMHP).
- National Haemoglobinopathies Control Programme.
- National Programme for Palliative Care (NPPC).
- National Tobacco Control Programme (NTCP).

EXPECTED QUESTION FOR UPSC CSE

Descriptive Question

Q. What are non-communicable diseases? How has it Impacted India. Mention the initiatives of Government of India to curb the Non - communicable diseases. [15 marks] [250 words]

PRADHAN MANTRI JANJATIYA UNNAT GRAM ABHIYAN

Why in News: The Union Cabinet recently approved Pradhan Mantri Janjatiya Unnat Gram Abhiyan for improving the socio-economic condition of tribal communities.

Key Details

- The Pradhan Mantri Janjatiya Unnat Gram Abhiyan envisions saturation of critical gaps in social infrastructure, health, education, livelihood, through different schemes of Govt of India by convergence and outreach and ensure holistic and sustainable development of tribal areas and communities based on learnings and success of Pradhan Mantri Janjati Adivasi Nyaya Maha Abhiyan (PM-JANMAN), which was launched on 15th November, 2023.
- The scheme will cover around 63,000 villages benefitting more than 5 crore tribal people as announced in the Budget Speech 2024-25.
 - It will cover 549 districts and 2,740 blocks spread across all tribal majority villages across 30 States/UTs.
- The Mission comprises 25 interventions which will be implemented by 17-line ministries.
 - Each Ministry/Department would be responsible for implementation of scheme related to it in a time bound manner through funds allocated to them under Development Action Plan for Scheduled Tribes (DAPST) in next 5 years.

Goals under Pradhan Mantri Janjatiya Unnat Gram Abhiyan

	<p>Goal-1: Developing Enabling Infrastructure</p> <p>Pucca house for eligible Households with other entitlements Eligible ST household shall have access to pucca housing under the PMAY (Gramin) with availability of tapped water (Jal Jeevan Mission) and electricity supply (RDSS). Eligible ST household shall also have access to Ayushman Bharat Card (PMJAY).</p>
	<p>Goal-2: Promotion of Economic Empowerment</p> <p>Skill Development Entrepreneurship promotion and enhanced livelihood(self-employment) Providing access to training (Skill India Mission/ JSS) and ensuring that ST boys/girls get access to long-term skill courses after 10th/12th standard every year.</p>
	<p>Goal-3: Universalization of Access to Good Education</p> <p>Education To increase GER to the national levels in school and higher education and to make quality education affordable and accessible to ST students (Samagra Shiksha Abhiyan) by setting up tribal hostels in schools at district/block level.</p>
	<p>Goal-4: Healthy lives and Dignified Ageing</p> <p>Health To ensure enhanced access to quality health facilities to ST households, reach towards the national standards in IMR, MMR and coverage of immunisation through Mobile Medical Units in areas where sub centre is more than 10 km in plain areas and 5 kms in Hilly areas (National Health Mission).</p>

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

Q. Consider the following statements about Pradhan Mantri Janjatiya Unnat Gram Abhiyan:

1. The scheme will cover around 63,000 villages benefitting the Scheduled Castes and tribes' population.
2. The Mission will solely be implemented by the Ministry of Tribal affairs.

Which of the above statements are correct?

- (a) 1 only (b) 2 only
 (c) Both 1 and 2 (d) Neither 1 nor 2

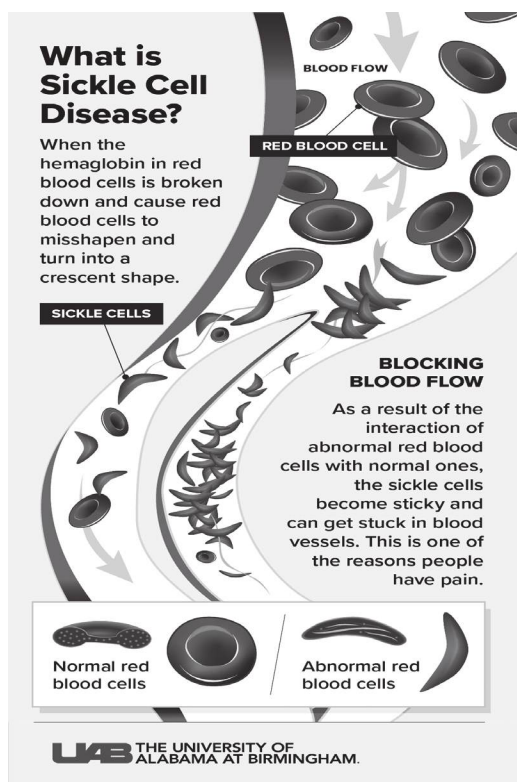
Answer: (d)

CASE STUDY- INDIA'S SICKLE CELL CHALLENGE

Context: The various challenges faced by the government of India to eliminate sickle cell Anaemia.

About Sickle Cell Disease

- It is also called sickle cell anemia, is a group of inherited disorders that affect hemoglobin, the major protein that carries oxygen in red blood cells.
- Caused by a genetic abnormality: if both parents carry the sickle cell trait, the child has significant chances of being born with the disease.



What Happens in Sickle cell disease?

- Normally, red blood cells are disc-shaped and flexible so they can move easily through the blood vessels. In sickle cell disease, red blood cells are misshaped, typically crescent- or "sickle"-shaped due to a gene mutation that affects the hemoglobin molecule.
- When red blood cells sickle, they do not bend or move easily and can block blood flow to the rest of the body.
- The lifespan of these patients is significantly shortened (to about 40 years) and their quality of life is curtailed due to the range of health complications caused by sickle cells, including sickle cell anaemia, recurrent infections, pain, swelling, and damage to vital organs.

Challenges Faced by India to Eliminate Sickle Cell Disease

- **Concentration of Disease in Tribal Areas:** With over a million people affected with sickle cell disease, India bears the world's second largest burden of this condition. A majority of the patients are concentrated in the tribal belt running across Odisha, Jharkhand, Chhattisgarh, Madhya Pradesh, and Maharashtra.
- **Social Stigma Associated with Disease:** In addition to health issues, patients suffer from the social stigma that is attached to this disease. They can sometimes be deemed "genetically inferior" and ostracised.
- **Huge Patient drop-out rate on Treatment:** The estimates suggest that only 18% of the people affected by sickle cell disease in India are receiving consistent treatment. This is because patients drop out at all stages of treatment. The largest drops occur at the diagnosis and treatment adherence stages.
- **Mistrust of Public Health System Among Tribals:** Getting a correct diagnosis is a challenge as many people hesitate to seek support due to the stigma associated with the condition. They often consult traditional healers, who frequently misdiagnose the condition.
- **Lack of a Permanent Cure:** No permanent cure is available for sickle cell disease. Ongoing research in gene therapy is promising, but will be unaffordable for most of the affected population even when it becomes available.
- **Unavailability of Necessary Medicines:** Irregular supply of essential medicines like hydroxyurea and insufficient adherence support for patients is a roadblock in tackling sickle cell disease.
- **Inadequate Health Infrastructure:** Lack of trained health staff at the primary health and wellness centers leads to the problem of misdiagnosis and delay in timely treatment.

Measures Taken By the Government:

- **National Sickle Cell Anaemia Elimination Mission:** Under this mission patients living with Sickle Cell disease are provided with the following services/ facilities for improving their quality of life through Ayushman Bharat-Health and Wellness Centres (AB-HWC), such as:

- Regular follow-up of diseased individuals at frequent intervals
- Counseling regarding lifestyle management
- Nutritional supplementation support through distribution of folic acid tablets
- Conducting yoga and wellness sessions
- Management of crisis symptoms and referral to higher facilities.
- **Outreach Programmes to Manage Disease:** The Indian Council of Medical Research and the National Rural Health Mission in different States are undertaking outreach programmes for better management and control of the disease.
- **Registration of Patients:** The Ministry of Tribal Affairs launched a Sickle cell support corner portal wherein people can register themselves if they have the disease or the trait, in order to collate all information related to SCA among tribal groups.
- **Development of New and Inexpensive Drugs:** India's first indigenous, room temperature stable drug oral suspension of Hydroxyurea is developed for treating the disease. It is available at only 1% of the global price.
- **Establishment of the State Haemoglobinopathy Mission in Madhya Pradesh** to address the challenges in screening and management of the disease.
- **Unmukt project** for strengthening screening and timely management of Sickle cell disease in Jharkhand and Chhattisgarh with the help of mobile vans.

Way Forward:

- **Public Awareness:** Reduce the stigma related to the disease and build trust in public health institutions. And raising awareness through targeted media campaigns. For this, India could draw from its experience in tackling polio and HIV.
- **Use of Modern Technology:** Strengthening of screening and testing facilities, strengthening of laboratory services for diagnosis of the disease.
- **Convergence of Efforts:** Building interdisciplinary centres of excellence at the district/division levels for better administration of disease.
- **Decentralisation of Medical Facilities:** Increasing availability of drugs and treatment adherence support in the nearest health while tracking and maintaining regular records of all patients receiving treatment.
- **Targeting Approach:** Focussing on the overall nutritional and health status of population prone to sickle cell disease.

- **Adequate Research and Development:** Supporting research and development to better understand the disease and its pathways in India.

Conclusion

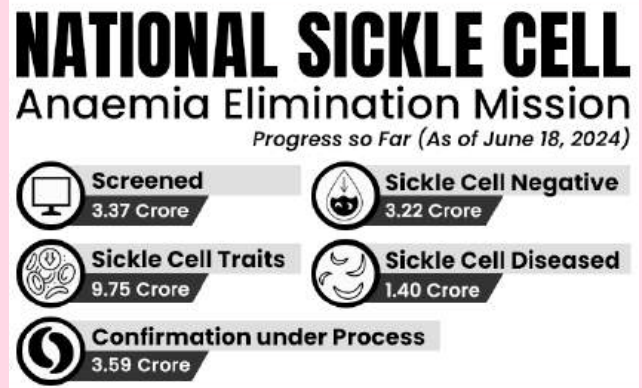
Through increased awareness, strategic screening initiatives, and integrated healthcare approaches, significant progress has been achieved in identifying cases, providing care, and advancing toward the elimination of SCD as a public health concern by 2047. As these efforts continue to expand across different states and age groups, they reinforce India's resolve to enhance healthcare outcomes and promote wellbeing among its diverse population, particularly in tribal and high-prevalence areas.

PRELIMS SPECIAL

National Sickle Cell Anaemia Elimination Mission: Launched in 2023 by PM of India, to eliminate sickle cell disease as a public health problem by 2047, from Shahdol, Madhya Pradesh.

The strategy of the mission emphasizes three pillars:

- **Health promotion-** Awareness generation & pre-marital genetic counselling
- **Prevention -** Universal screening and early detection
- **Holistic Management & continuum of care-** Management of persons with sickle cell disease at primary, secondary, and tertiary health care levels; treatment facilities at tertiary health care facilities, Patient support system and Community adoption.



- World Sickle Cell Awareness Day, observed annually on June 19th, serves as a crucial platform for raising awareness about sickle cell disease (SCD), a genetic blood disorder affecting millions worldwide.
 - In 2024, the theme for World Sickle Cell Awareness Day is "Hope Through Progress: Advancing Sickle Cell Care Globally."

GREAT STUPA OF SANCHI

Why in News: External Affairs Minister S Jaishankar stopped by the replica of the **East Gate of Sanchi's Great Stupa** standing in front of Humboldt Forum museum in Berlin.

About Great Stupa of Sanchi



- A stupa is a Buddhist commemorative monument usually containing sacred relics of the Buddha or other venerable saints.
- The archetypal stupa is a hemispherical structure, whose origins can be traced to pre-Buddhist burial mounds found in India.
- The Great Stupa of Sanchi exemplifies this form. Commissioned in the third century BCE by Emperor Ashoka, it is the largest and oldest structure in a complex of Buddhist monuments comprising numerous other stupas, temples, and monasteries.
- The most recent construction in Sanchi can be dated to as late as the twelfth century CE.
- The Great Stupa is one of the oldest standing stone structures in India, believed to have been built over the Buddha's relics.
- Its construction was overseen by Ashoka's wife Devi, who hailed from the nearby trading town of Vidisha.
- The development of the Sanchi complex was supported by patronage from Vidisha's mercantile community.

Gateways of the Great Stupa

- Ornamental gateways or toranas that stand in front of the Stupa make it instantly recognisable.
- The four toranas, oriented to the four cardinal directions,

were constructed in the first century BCE, likely within a few decades of each other during the reign of the Satavahana dynasty.

- These gateways are made of two square pillars which support a superstructure comprising three curved architraves (or beams) with spirally-rolled ends.
- The pillars and the architraves are adorned with beautiful bas relief and sculptures depicting scenes from the Buddha's life, stories from the Jataka Tales, and other Buddhist iconography.
- The gates do not represent the Buddha in his human form, as was the norm in the period of their construction.
- The toranas and the balustrade surrounding the Great Stupa were once painted.

The East Gate and its Replica in Europe

- In Europe, the East Gate is the most famous of the Sanchi Toranas.
- The Sanchi complex was in abject ruins when it was discovered by British officer Henry Taylor in 1818.
- Alexander Cunningham, who later founded the ASI, led the first formal survey and excavations at Sanchi in 1851.
- The site was restored to its present condition by ASI director-general John Marshall in the 1910s with funding from the begums of Bhopal.
- Sanchi was frequently ravaged by treasure hunters and amateur archaeologists, some of whom wanted to take its gates to Europe. They were unable to do so, and had to make do with plaster casts instead.
- The East Gate was cast in plaster by Lieutenant Henry Hardy Cole for the Victoria and Albert Museum in the late 1860s.
 - Multiple copies of this cast were later made, and displayed across Europe. The latest Berlin replica also traces its origin to this original cast.

Features of the Gate

- The upper architrave of the gate represents the seven Manushi Buddhas (previous Buddhas, with the historical Buddha being the latest incarnation).
- The middle architrave depicts the scene of the Great Departure, when prince Siddhartha leaves Kapilavastu to live as an ascetic in search of enlightenment.
- The lower architrave depicts Emperor Ashoka visiting the Bodhi tree under which the Buddha attained enlightenment.

- Other decorative elements include the shalabhanjika (a fertility emblem represented by a yakshi grasping the branch of a tree), elephants, winged lions, and peacocks.

EXPECTED QUESTIONS FOR UPSC CSE

Prelims MCQ

Q. With reference to the ‘Stupa’, consider the following statements:

1. The concept of ‘Stupa’ as a burial mound has been prevalent since ‘Vedic’ period.
2. After the death of Buddha, eight stupas were constructed associated with his relics and ashes.
3. Among the stupas, Sanchi stupa is the oldest one.

Which of the above statements are correct?

- (a) Only one (b) Only two
 (c) All three (d) None

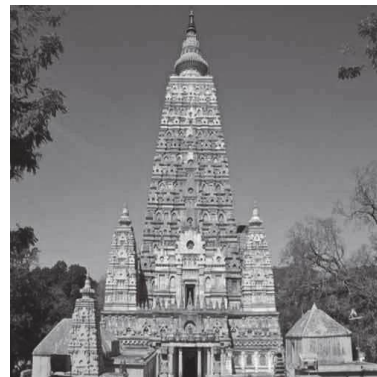
Answer : (a) (1 only)

Descriptive Question

Q. Discuss the origin & structure of Great Stupa at Sanchi and its influence & reach in contemporary Europe. [10 marks] [150 Words]

- As the name suggests, the Hindu temple is dedicated to Lord Vishnu. Legend says a demon or *asura* named Gayasur asked the gods to give him powers, which would allow anyone who saw him to attain *moksha* — freedom from the cycle of rebirth.
- Architecturally, the temple is around 100 feet tall and has 44 pillars, is located on the banks of the Falgu River.
 - It is believed to feature a 40-cm-long footprint of Lord Vishnu in a basalt rock. As the story goes, Lord Vishnu killed demon Gayasur at this place by stamping his foot on his chest.
 - After Lord Vishnu pushed the demon under the earth (*paatal lok*) with his foot, his footprint was retained in a rock.
 - Devotees visit the temple during *pitra paksh*, a period in the Hindu calendar when people take part in rituals to remember their ancestors.
 - Though the origin of the temple is unknown, it is believed that Ahilya Bai Holkar, the queen of Indore, had the present octagonal shrine built in 1787.
 - Within the courtyard of the complex, lie other temples dedicated to Lord Narasimha and Lord Shiva in the avatar of Phalgwisvara.

About Mahabodhi Temple



VISHNUPAD AND MAHABODHI TEMPLES

Why in News: Corridor projects will be built for the Vishnupad Temple at Gaya and the Mahabodhi Temple at Bodh Gaya in Bihar.

Key Details

- As part of Union budget 2024, the Vishnupad Temple corridor at Gaya and Mahabodhi Temple at Bodh Gaya in Bihar will be developed as corridors and the ancient city of Nalanda will be transformed into “world-class pilgrim and tourist destinations.
- The development model will be based on the Kashi Vishwanath temple corridor in Varanasi, Uttar Pradesh

About Vishnupad Temple



- The Mahabodhi Temple is one of the oldest brick temples in India. The original structure, later replaced, was built by the Mauryan emperor Ashoka, one of Buddhism’s most important proselytes, to commemorate the Buddha’s Enlightenment.
 - The temple is 55 metres (180 feet) in height. Its pyramidal shikhara (tower) comprises several layers of niches, arch motifs, and fine engravings. Four towers, each identical to its central counterpart but smaller in size and topped with an umbrella-like dome, adorn the corners of the two-story structure. A shrine inside the temple holds a yellow sandstone statue of the Buddha encased in glass.
- The Mahabodhi Temple Complex at Bodh Gaya was recognised as a UNESCO World Heritage Site in 2002. The temple stands to the east of the Mahabodhi Tree, where Gautam Buddha is believed to have attained nirvana.
 - A descendant of the Bodhi tree under which

the Buddha is said to have sat until he attained enlightenment stands adjacent to the temple. Ashoka's stone slab purporting to mark the exact

position where the Buddha sat is traditionally called the Buddha's vajrasana (literally "diamond throne" or "thunder seat").

PRELIMS SPECIAL

UNESCO World Heritage Site in India

Cultural 35

1. Agra Fort (1983)	14. Group of Monuments at Mahabalipuram (1984)	25. Mountain Railways of India (1999, 2005, 2008)
2. Ajanta Caves (1983)	15. Group of Monuments at Pattadakal (1987)	26. Rani-ki-Vav (the Queen's Stepwell) at Patan, Gujarat (2014)
3. Archaeological Site of Nalanda Mahavihara at Nalanda, Bihar (2016)	16. Hill Forts of Rajasthan (2013)	27. Red Fort Complex (2007)
4. Buddhist Monuments at Sanchi (1989)	17. Historic City of Ahmadabad (2017)	28. Rock Shelters of Bhimbetka (2003)
5. Champaner-Pavagadh Archaeological Park (2004)	18. Humayun's Tomb, Delhi (1993)	29. Sacred Ensembles of the Hoysalas (2023)
6. Chhatrapati Shivaji Terminus (formerly Victoria Terminus) (2004)	19. Jaipur City, Rajasthan (2019)	30. Santiniketan (2023)
7. Churches and Convents of Goa (1986)	20. Kakatiya Rudreshwara (Ramappa) Temple, Telangana (2021)	31. Sun Temple, Konârak (1984)
8. Dholavira: a Harappan City (2021)	21. Khajuraho Group of Monuments (1986)	32. Taj Mahal (1983)
9. Elephanta Caves (1987)	22. Mahabodhi Temple Complex at Bodh Gaya (2002)	33. The Architectural Work of Le Corbusier, an Outstanding Contribution to the Modern Movement (2016)
10. Ellora Caves (1983)	23. Moidams – the Mound-Burial System of the Ahom Dynasty (2024)	34. The Jantar Mantar, Jaipur (2010)
11. Fatehpur Sikri (1986)	24. Qutb Minar and its Monuments, Delhi (1993)	35. Victorian Gothic and Art Deco Ensembles of Mumbai (2018)

Natural 7

1. Great Himalayan National Park Conservation Area (2014)	5. Nanda Devi and Valley of Flowers National Parks (1988, 2005)
2. Kaziranga National Park (1985)	6. Sundarbans National Park (1987)
3. Keoladeo National Park (1985)	7. Western Ghats (2012)
4. Manas Wildlife Sanctuary (1985)	

Mixed 1

1. Khangchendzonga National Park (2016)

SRI VIJAYA PURAM

Why in News: The Union Government renamed Andaman and Nicobar's capital, Port Blair, as Sri Vijaya Puram.

Key Details

- According to while the earlier name had a colonial legacy, Sri Vijaya Puram symbolises the victory achieved in our freedom struggle.

History and Naming of Port Blair

- It was named after Archibald Blair, a naval surveyor and lieutenant in the Bombay Marine. Blair was the first officer to carry out a thorough survey of the Andaman Islands.
- After joining the Bombay Marine in 1771, Blair set out on a survey mission along the coasts of India, Iran, and Arabia next year.
- During his first surveying voyage to the Andamans from Calcutta, he was immediately aware of the significance of his discovery of port area and wrote a detailed report of that.

HINDI DIWAS

Why in News: India celebrates National Hindi Diwas on 14 September to promote and preserve the Hindi language.

Key Details

- Hindi Diwas, also known as National Hindi Day, is celebrated annually to commemorate the adoption of Hindi as one of the official languages of India. It is a cornerstone of India's cultural and linguistic identity.
- This day marks the anniversary of the Constituent Assembly of India's decision to adopt Hindi, written in the Devanagari script, as official language of the central government and the Union as per Article 343.
- About 425 million people speak Hindi as their first language and about 120 million people speak Hindi as their second language.

History of Hindi Diwas

- In 1918, a group of Hindi scholars and activists formed the Hindi Sahitya Sammelan (Hindi Literary Conference) to promote the use of Hindi as a national language.
- The Hindi Sahitya Sammelan played a major role in the adoption of Hindi as the official language of India. After independence, the Constituent Assembly of India accepted Hindi, written in Devanagari script, as an official language on *September 14, 1949*.
- This decision was taken to promote and develop Hindi as the *lingua franca* of India and to unite the diverse linguistic and cultural regions of the nation. The first Hindi Diwas was celebrated in 1953.

Significance of Hindi Diwas

- Hindi Diwas aims to raise awareness about the language and also commemorate the event when it was adopted as one of the official languages of India.
- The adoption of Hindi as an official language was aimed at simplifying administration in a nation with multiple languages. Efforts were made by several writers, poets, and activists for the inclusion of Hindi.
- Hindi Diwas is celebrated with great enthusiasm across India, especially in schools, colleges, and government offices. The celebrations include literary and cultural events showcasing Hindi literature and art.
- The President of India presents the Rajbhasha Gaurav Puraskar and Rajbhasha Kirti Puraskar awards to ministries, departments, public sector units, banks, and citizens on Hindi Diwas for their exceptional work in promoting the language.
- By commemorating Hindi Diwas, India reaffirms its commitment to preserving its linguistic heritage and cultural diversity.

The 10 most widely spoken languages in the world-

Rank	Language	No. of Speakers (Millions)
1	English	1.5 B
2	Mandarin Chinese	1.1 B
3	Hindi	609.5 M
4	Spanish	559.1 M
5	French	309.8 M
6	Standard Arabic	274.0 M
7	Bengali	272.8 M
8	Portuguese	263.6 M
9	Russian	255.0 M
10	Urdu	231.7 M

419TH PRAKASH PURAB OF SRI GURU GRANTH SAHIB

Why in News: Prime Minister extended wishes on the occasion of Prakash Purab of the Sri Guru Granth Sahib.

About Guru Granth Sahib

- Guru Granth Sahib Ji is considered to be the supreme spiritual authority and head of Sikhism rather than any living person.
- It is also the only book of its kind that not only contains the works of its religious founders but also the writings of people of their faith.
- The living Guru of the Sikhs, the book is kept with great reverence by the Sikhs and is treated with the utmost respect.
- The Guru Granth Sahib is a compilation of many hymns, poems, Shabad and other writings from several different scholars including the Sikh Gurus and other saints.
- It contains words spoken by the Gurus. It is known as Gurbani, which means 'from the mouth of the Guru'.
- It is considered the word of God. It is written in Gurmukhi script.

History

- Guru Arjan Dev ji, the fifth Sikh Guru compiled the original version of Guru Granth Sahib.
- Guru Arjan Dev ji felt that the Sikhs needed authentic compilation of the hymns of their gurus.
 - Thus, Guru ArjanDev ji started the collection of

original verses of all the Gurus. He sent reliable Sikhs like Bhai Piara ji, Bhai Gurdas ji and Baba Buddha ji across the country in search of original manuscripts.

- He travelled to Goindwal, Khadur and Kartarpur to visit the families of the previous Gurus.
- He collected original manuscripts of the Gurus from Mohan ji (son of Guru Amar Das ji), Datu ji (son of Guru Angad ji) as well as Sri Chand ji (son of Guru Nanak ji).

Guru Granth Sahib: The Eternal Guru

- In 1708, Adi Granth became Sri Guru Granth Sahib Ji, the Eternal Guru of Sikhs as was declared by Guru Gobind Singh Ji.
- After Guru Gobind Singh ji’s martyrdom in 1708, Baba Deep Singh ji and Bhai Mani Singh ji prepared many copies of the Sri Guru Granth Sahib ji for distribution.
- The original version of the Sri Guru Granth Sahib can be found at Nanded, a city in Maharashtra state.
- The first Shabad of the Guru Granth Sahib ji is the “Mool Mantra”. This is a statement of recognition for Sikhism.
- Guru Gobind Singh Ji raised Sri Guru Granth Sahib ji to the status of a permanent Guru and conferred it the title of “Guru of the Sikhs” in 1708.
- Declaring the Sri Guru Granth Sahib ji to be the next Guru after him, Guru Gobind Singh ji commanded the Sikhs to regard the Guru Granth Sahib ji as their next and everlasting Guru.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

Q. Consider the following statements:

1. Guru Gobind Singh was the 1st guru of Sikh religion.
2. Guru Tegh Bahadur was the youngest son of Guru Hargobind Sahib.
3. Guru Gobind Singh has composed two savaiyyas in Punjabi, but these are not a part of the Adi Granth.

Which of the statements given above is/are correct?

(a) 1 and 2 only (b) 2 and 3 only

(c) 1 and 2 only (d) 1, 2 and 3

Answer : (b)

CHHATRAPATI SHIVAJI MAHARAJ AND THE SINDHUDURG FORT

Why in News: The 35-foot statue of Chhatrapati Shivaji Maharaj in Malvan that collapsed recently which was built less than a year ago.

Key Details

- On December 4 2023, a 35-foot statue of Chhatrapati Shivaji Maharaj was unveiled by Prime Minister Narendra Modi at Rajkot Fort in Malvan in Sindhudurg district.
- In less than a year, on August 26, 2024, the statue collapsed, triggering widespread protests and criticism, with many expressing disbelief that a statue erected in the 21st century, equipped with modern technology, could not survive even a year.
- Ironically, the Sindhudurg Fort, which Shivaji Maharaj built 357 years ago, still stands strong.
- This stark contrast has reignited interest in exploring the history of the fort, a proud symbol of the Maratha Navy, and the technology behind its construction.

Maratha Navy and Role of Fort

- In 1510, the Portuguese captured Goa from the Bijapur forces, establishing their dominance along the southern Konkan coastline.
- Realising the importance of maritime trade for strengthening his kingdom’s economy, Shivaji Maharaj envisioned the creation of a naval force.
- In January 1664, Shivaji Maharaj plundered the trading hub of Surat, using the wealth acquired to further strengthen his navy and construct sea forts.
- Shivaji Maharaj sought to establish his control over the seas, especially against the powerful Siddis, who held the formidable fort of Murud-Janjira.
- However, despite several attempts, he could not capture Janjira, so he resolved to build a naval fleet and construct a sea fort to counter Siddis’ influence.
- Malvan, historically known as Mahalavan, was an ancient port of significance. Malvan an ideal location for controlling maritime access and constructing a fort could helped Shivaji defend against potential threats.
- Records from February 8, 1664 note that 25 ships and three large boats sailed from Malvan to Basrur, showcasing the growing influence of the Maratha Navy. By this period, the Marathas had already established control over nine ports in Konkan.



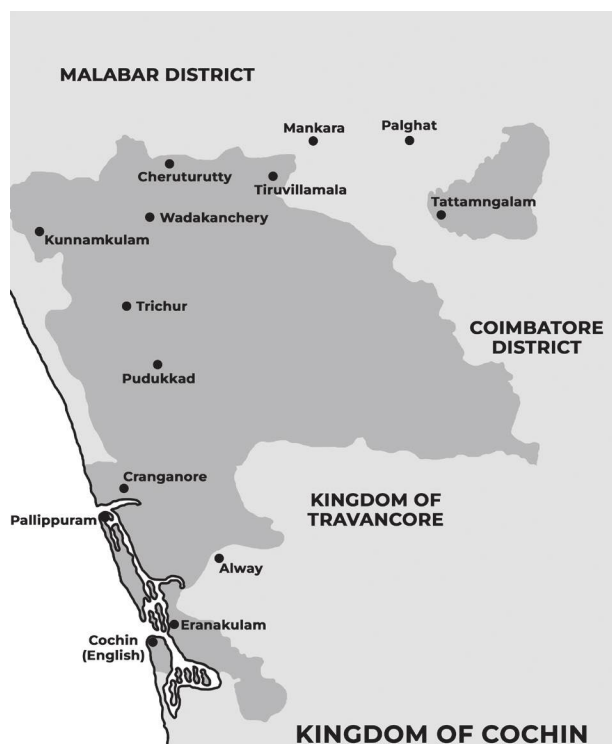
- **Location :** Sindhudurg Fort is a historical sea fort located in Arabian Sea near the Konkan region of Maharashtra in Western India. The fort lies off the shore of Malvan taluka of the Sindhudurg District in the Konkan region of Maharashtra, 450 kilometres (280 mi) south of Mumbai. It is a protected monument under the Archaeological Survey of India.
- **History:** Sindhudurg island-fort was built under Shivaji I, the founder of the Maratha Empire. The fort's foundation stone was laid on 25 November 1664. Construction was supervised by Hiroji Indulkar who took assistance from Portuguese engineers of Goa. Historical records indicate that the construction was completed on March 29, 1667.
- **Reason:** The fort's main objective was to counter the rising influence of English, Dutch, French and Portuguese merchants in the Konkan coast, and to curb the rise of Siddhis of Janjira. The fort was built on a small island known as the Khurte island.
- **Strategic Significance:** To ensure Sindhudurg remained unconquerable, smaller forts like Padmagad, Sarjekot, and Rajkot were built in close proximity. The fortification of Sindhudurg was serpentine, covering four kilometres and enclosing an area of twenty hectares. The walls stood ten metres high and featured 45 stairways, with facilities for guards and cannon placements.

SAKTHAN THAMPURAN

Why in News: Minister of State for Tourism pledged to reconstruct a fallen statue of Sakthan Thampuran.

About Sakthan Thampuran

- Raja Rama Varma Kunjipillai or Rama Varma IX, better known today as Sakthan Thampuran, ruled over the **Cochin kingdom** from 1790 to 1805.



- He was born in 1751 to Ambika Thampuran and Chendose Aniyam Namboodiri of the Cochin royal family, but was raised by an aunt who called him **Sakthan, meaning 'powerful'**. The word thampuran is believed to be an appropriation of the Sanskrit samrat, meaning emperor.
- The Cochin kingdom, which was part of the Late Chera Empire, covered the regions between Ponnani in Malappuram and Thottappally in Alappuzha in today's Kerala.
- Sakthan is said to have orchestrated Mysore's attempt to invade the Travancore kingdom, which had established relations with the English East India Company. This would result in the Powney treaty which freed the Cochin kingdom from its allegiance to Mysore, and helped formalise its relations with the British.
- Sakthan Thampuran put an end to the institution of the Yogiathirippads — the erstwhile spiritual heads of the Vadakkunnathan and Perumanam temples, who had conspired against the previous Cochin king in his wars against the Calicut Zamorin — and entrusted temple management to the government.
- He built a fearsome reputation for himself, and is said to have largely freed his kingdom of crime.
- Sakthan Thampuran started the Thrissur Pooram in 1797 as an alternative to the Arattupuzha Pooram, then the largest temple festival in the state.

PRELIMS SPECIAL

Thrissur Pooram

- The festival is held in the months of April - May in the Thekkinadu ground adjoining the Vaddakunnathan Temple in the town of Thrissur.
- It was started by Shakthan Thampuran, Maharaja of Kochi and includes the participation of 10 different temples from Paramekkavu, Thiruvambadi Kanimangalam, Karamucku, Laloor, Choorakottukara, Panamukkampally, Ayyanthole, Chembukkavu and Neythilakavu.
- The festival is held in honor of Lord Shiva, the presiding deity of the Vadakkunnathan Temple located in Thrissur city.
- These temples participate with their richly-caparisoned elephants and traditional orchestra music. This retinue is referred to as the pooram.
- The festival begins with the arrival of poorams from the ten temples.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

- Q. With reference to the period of the Cochin kingdom in medieval India, "Yogiathirippads" were well known as
- (a) ports handling foreign trade
 - (b) spiritual heads of the temples

- (c) places of exquisite stone art and architecture
- (d) important Buddhist pilgrimage centers

(b) : ANSWER

BATTLE OF SARAGARHI

Why in News: Recently, the 127th anniversary of the Battle of Saragarhi was observed on 12th September 2024.

About Battle of Saragarhi

- In 1897, despite overwhelming odds, 21 Sikh soldiers faced 10,000 Afghans at Saragarhi post. Their bravery was inspired by the slogan “Sawa lakh se ek ladawan,” raised by Guru Gobind Singh Ji at the Battle of Chamkaur Sahib.

Background:

- Saragarhi was a post originally built by Ranjit Singh of Punjab during his western expedition. It was a critical post for the British, helping to monitor any aggressive moves by the Afghans.
- In 1897, the Mulla of Hadda called for ‘jihad’ (a holy war to defend the religion of the Prophet), inspiring 10,000 tribesmen to fight against 21 Sikh soldiers stationed at Saragarhi.
- On this day in 1897, 21 soldiers were pitted against over 9,000 Afridi and Orakzai tribal militants and managed to hold down the fort for seven hours.
- Though heavily outnumbered, the soldiers of 36th Sikhs (now 4 Sikh) regiment, led by Havildar Ishar Singh, fought till their last breath, killing 200 militants and injuring 600.
- The battle began at 9 am and ended a little after 3:30 pm with the entire garrison killed in action. The post of Saragarhi fell into Afghan hands.
- The brave resistance from the Sikh battalion allowed British forces to receive reinforcements at the two forts, which helped in recapturing the Saragarhi post within two days after it had been presumed lost.

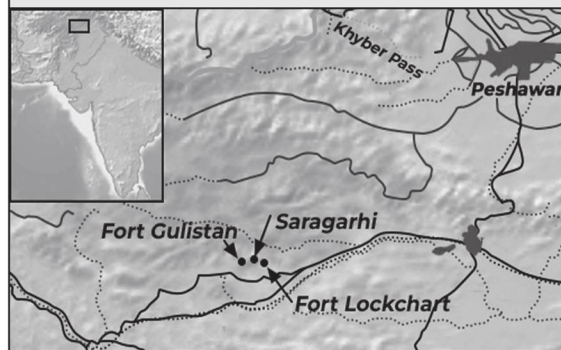
Acknowledgement

- Making a departure from the tradition of not giving gallantry medals posthumously, Queen Victoria awarded the 21 dead soldiers of the 36th Sikh the Indian Order of Merit (comparable with the Victoria Cross) along with two ‘marabas’ (50 acres) and Rs 500 each.
- In 2017, the Punjab government decided to observe Saragarhi Day on September 12 as a holiday.
- The British, who regained control over the fort after a few days, used burnt bricks of Saragarhi to build an obelisk for the martyrs. They also commissioned gurdwaras at Amritsar and Ferozepur in their honour.
- Even today the Khyber Scouts regiment of the Pakistani army mounts a guard and salutes the Saragarhi memorial close to Fort Lockhart.

- Now Shiromani Gurudwara Parbandhak Committee has named a hall after Saragarhi.

Strategic Significance of Saragarhi Post

- ▶ Saragarhi was the communication tower post between Fort Lockhart and Fort Gulistan.
- ▶ The two forts in the rugged North West Frontier Province (NWFP), now in Pakistan were built by Maharaja Ranjit Singh but renamed by the British.
- ▶ Though Saragarhi was usually manned by a platoon of 40 soldiers, on that fateful day, it was being held by only 21 soldiers from the 36th Sikh (now 4 Sikh).
- ▶ Saragarhi helped to link up the two important forts which housed a large number of British troops in the rugged terrain of NWFP.
- ▶ Losing Saragarhi could have opened the gates to Punjab, which was part of British India, as cited by Lt. Col. John Haughton in his autobiography The Life of Lieut. Col. John Haughton.
- ▶ The timing of the Battle of Saragarhi is crucial; it occurred during the 19th century, known as the ‘Great Game,’ a term used to describe the heightened tensions between Britain and Russia over Afghanistan and other Central Asian territories.
- ▶ From 1881 to 1885, as the Russians expanded eastwards into Turkestan, efforts were made to avoid an all-out war. A compromise was reached in 1885: a boundary commission was established in British India with the agreement of the Emir of Afghanistan, Abdur Rahman Khan, to define the spheres of British and Afghan influence.
- ▶ Following this agreement, Britain developed a ‘forward policy’ of occupying frontier lands and maintaining a presence in areas inhabited by Pathans, the tribes of the region.



PRELIMS SPECIAL

The Battle of Chamkaur

- Also known as Battle of Chamkaur Sahib or the Second battle of Chamkaur, was fought between the Khalsa, led by Guru Gobind Singh, and the coalition forces of the Mughals led by Wazir Khan and of Hindu hill chief.
- Guru Gobind Singh makes a reference to this battle in his letter Zafarnama. **Note:** Zafarnama means the “Declaration of Victory” and is the name given to the letter sent by the tenth Sikh Guru, Guru Gobind Singh in 1705 to the Emperor of India, Aurangzeb after Battle of Chamkaur Sahib.
- The period of this Battle in Chamkaur is 21, 22 and 23 December 1704.

NAGA KING CHILLI FESTIVAL

Why in News: Nagaland village Seiyhama’s annual festival celebrates raja mircha, one of the world’s hottest chillies.

GOVERNMENT SCHEMES

“JAL SANCHAY JAN BHAGIDARI” SCHEME

Why in News: The Prime Minister of India has recently launched the “Jal Sanchay Jan Bhagidari” initiative in Surat, Gujarat to enhance rainwater harvesting.

Key Details

- Building on the success of the Jal Sanchay initiative led by the Government of Gujarat, the Ministry of Jal Shakti, in collaboration with the State Government, is launching the “Jal Sanchay Jan Bhagidari” initiative in Gujarat. The Government of Gujarat has endeavoured to mobilise citizens, local bodies, industries and other stakeholders to ensure a water secure future.

Role of Community Participation in Water Conservation

- These efforts are expected to serve as a model for other states, promoting sustainable water-management practices and enhancing water security across the country,
 - Under this programme approximately 24,800 rainwater harvesting structures across the State are being constructed with community partnership.
- The Prime Minister called for urgent action on water conservation and emphasized the need to adopt the mantra of ‘Reduce, Reuse, Recharge, and Recycle’ to secure the nation’s future regarding water-related issues.

Initiatives for Water Conservation in India

- **Master Plan for Artificial Recharge to Groundwater-2020:** The Master Plan envisages construction of about 1.42 crore rain water harvesting and artificial recharge structures in the country to harness 185 Billion Cubic Metre (BCM) of monsoon rainfall.
- **Pradhan Mantri Krishi Sinchayee Yojana (PMKSY):** It aims to enhance physical access of water on farm and expand cultivable area under assured irrigation, improve on farm water use efficiency, introduce sustainable water conservation practices etc.
- **Atal Bhujal Yojana (ATAL JAL), 2019:** Its objective is to improve the management of ground water resources including rainwater harvesting in water stressed areas through community participation in identified priority areas in 7 states viz. Gujarat, Haryana, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan and Uttar Pradesh.
- **Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS):** It includes water conservation and water harvesting structures as one of the activities under its natural resource management (NRM) component.

PRELIMS SPECIAL**‘Ek Ped Maa Ke Naam’ Campaign**

- It was launched by **Prime Minister of India** campaign to commemorate the World Environment Day.
- It call for paying respect to their Mother and Mother Earth by planting saplings.
- The PM stressed the need for public participation in groundwater level restoration through afforestation.

- Recently, under the 'Ek Ped Maa Ke Naam' campaign, Indore achieved setting a world record of planting 11 lakh saplings in a single day.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

Q. Consider the following statements with reference to the Jal Jeevan Mission:

1. It aims to provide 25 liters of tapped water per person per day to all households by 2024.
2. Goa has become the first 'Har Ghar Jal State' to provide 100% household tap connections in rural areas.
3. The Jal Shakti Ministry is the nodal ministry for the implementation of the scheme.

Which of the statements given above is/are correct?

- (a) 1 and 2 only (b) 2 and 3 only
(c) 1 and 3 only (d) 1, 2 and 3

Answer: (b)

- Nutrition awareness strategies under Poshan 2.0 aim to develop sustainable health and well-being through wholesome local foods to bridge dietary gaps.
- Also focus is on diet diversity, food fortification, and popularizing use of millets.
- Further, as per the Mission Poshan 2.0 guidelines, millets need to be mandatorily supplied at least once a week and suitably integrated in Take Home Ration (not raw ration) and Hot Cooked Meals in a palatable form.
- Steps have been taken to improve nutritional quality and testing in accredited labs, strengthen delivery and leverage technology under the 'Poshan Tracker'.
- The Poshan Tracker, a cutting-edge ICT application, plays a vital role in this process, enabling timely identification and tracking of growth issues.
 - With the aid of Growth Measuring Devices (GMD) available at each Anganwadi Center (AWC), accurate data entry, and regular monitoring, the program has achieved impressive results.
 - It helps tracking a child's (0-6 age) growth pattern over time through WHO growth charts, which are essential tools used to monitor children's growth and development.
 - ◆ These charts plot key anthropometric measurements- such as height and weight- against age and sex-specific standards, providing a visual representation of a child's growth trajectory.
 - This visual representation of a child's growth trajectory enables Anganwadi Workers to assess nutritional status and detect deviations, facilitating early intervention and support.

POSHAN TRACKER INITIATIVE

Why in News: Recently, the Ministry of Women and Child Development receives National Award for e-Governance 2024 (Gold) for Poshan Tracker initiative.

POSHAN Abhiyaan

- Erstwhile National Nutrition Mission) was launched in March 2018 to achieve improvement in nutritional status of Children from 0-6 years, Adolescent Girls, Pregnant Women and Lactating Mothers in a time bound manner and to achieve reduction in stunting and wasting in children (0-6 years) as well as reduction in anemia in women, children and adolescent girls.
- **PoshanAbhiyan has now been re-aligned** as part of Mission Saksham Anganwadi and Poshan 2.0, along with Anganwadi services and revised Scheme for adolescent Girls.

Mission Poshan 2.0

- Mission Poshan 2.0 seeks to address the challenges of malnutrition in children, adolescent girls, pregnant women and lactating mothers through a strategic shift in nutrition content and delivery and by creation of a convergent eco-system to develop and promote practices that nurture health, wellness and immunity.

PRELIMS SPECIAL

About National Awards for e-Governance 2024

- National Awards for e-Governance are presented every year to recognize and promote excellence in implementation of e-Governance initiatives.
- There will be a total 16 awards under 5 categories of Award Scheme.
 - The National e-Governance Award, 2024 shall consist of 10 Gold Awards and 6 Silver Awards
- Categories
 - Government Process Re-engineering for Digital Transformation
 - ◆ Total 4 Awards 1 Gold and 1 Silver for Central level Initiatives and 1 Gold and 1 Silver for State/UT level initiatives
 - Application of Emerging Technologies for providing Citizen Centric Services
 - ◆ Total 4 Awards –1 Gold for Central level initiatives, 1 Gold and 1 Silver for State/UT level initiatives and 1 Gold for Startups

- District level initiative in e-Governance
 - ◆ Total 4 Awards – 2 Gold and 2 Silver for district level initiatives
- Research on Citizen Centric Services by Academic/ Research Institutions
 - ◆ Total 2 Awards – 1 Gold and 1 Silver for Academic / Research institutions
- Replication of Top Technological Solutions / initiatives and Scaling up
 - ◆ Total 2 Awards – 1 Gold for State/UT level initiatives and 1 Gold for District level initiatives

National Campaign

- The Rashtriya Poshan Maah is celebrated in the month of September across the country, while Poshan Pakhwada is celebrated in the month of March.
- Through these Jan Andolans, women and community, at large are sensitized on issues like importance of maternal nutrition, appropriate techniques of breastfeeding, importance of timely initiation of complimentary feeding etc.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

Q. Consider the following statements:

1. "Poshan Tracker Application" can be only accessed by Anganwadi Workers for the purpose of service delivery to the beneficiaries.
2. 'Poshan Abhiyaan' is India's flagship programme to improve nutritional outcomes for children, adolescents, pregnant women and lactating mothers.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Answer: (c)

RETIRED SPORTSPERSON EMPOWERMENT TRAINING PROGRAMME

Why in News: Ministry of Youth Affairs and Sports has recently launched "Retired Sportsperson Empowerment Training" (RESET) Programme on the occasion of National Sports Day.

About RESET Programme

- Aims to empower retired sportspersons and towards recognising and utilizing the invaluable experience and expertise of retired athletes.
- It assists in career development by providing knowledge, skills, and enhancing employability.

Vision

- To transform retired sportspersons to a second career/inning.
- To create Human Capital for Sports-Ecosystem in the country.

Objectives

- »To empower retired sportspersons with the necessary knowledge and skills to transition to a different career.
- »To offer retired sportspersons the necessary programs, resources, and tools to acquire knowledge and skills.
- »To address the existing human resource gap in the sports sector.
- »To enable athletes to pursue education and skill development programs and support them in moving to a new career domain through Education.

Eligibility

- »The athletes, who have retired from an active sports career and are aged between 20-50 years.
- »Who have been winners of an International Medal/participants in international events
- »Or have been National medalists/State medalists/participants in competitions recognized by National Sports Federations/ Indian Olympic Association/ Ministry of Youth Affairs and Sports are eligible to apply for the programme.
- »Initially, the programmes will be of two levels based on educational qualifications: Class 12th and above, and Class 11th and below.

Implementation:

- For this pilot phase of the RESET Programme, **Lakshmi Bai National Institute of Physical Education (LNIPE)** in Gwalior will be the lead institute to implement the Programme.
- The programme will be offered in hybrid mode consisting of self-paced learning through a dedicated portal, along with on-ground training and internship.
- Internships will be provided in sports organizations, sporting competitions/training camps, and leagues. Further, placement assistance, guidance for entrepreneurial ventures, etc. will be provided upon successful completion of the course.

PRELIMS SPECIAL

About National Sports Day

- It is an annual celebration on August 29th in honour of Major Dhyani Chand, India's iconic hockey player.

- Known as “The Hockey Wizard,” Dhyan Chand’s unparalleled skills and dedication to the sport left an indelible mark on the world of hockey.
- Over a career that spanned from 1926 to 1948, Dhyan Chand scored more than 1,000 goals, leading India to three consecutive Olympic gold medals in 1928, 1932, and 1936.
- Retiring as a Major in the Punjab Regiment of the Indian Army in 1956, he received the Padma Bhushan, the third-highest civilian award. Additionally, to honour his significant contributions, in 2012, the government of India decided to celebrate his birth anniversary as National Sports Day annually.

- The theme for National Sports Day 2024 is “Sport for the Promotion and Peaceful and Inclusive Societies”.
- One of the highlights of this year’s celebration is the “Champions of India: National Sports Day Quiz 2024.”

Initiatives For Development of Sports Across India

- Scheme of “Khelo India- National Programme for Development of Sports.
- Assistance to National Sports Federations
- Special Awards to Winners in International Sports Events and their Coaches
- National Sports Awards
- Pension to Meritorious Sportspersons
- Pandit Deendayal Upadhyay National Sports Welfare Scheme
- National Sports Development Fund
- Sports Training Centres through Sports Authority of India.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

Q. Consider the following statements regarding Retired Sportsperson Empowerment Training (RESET) Programmes:

1. It covers retired sportsperson aged between 20 to 50 years
2. It aims to create human capital for sports ecosystem in the country
3. It is administered by Ministry of Education

How many of the above statements are correct?

(a) Only one (b) Only two
(c) All three (d) None

Answer: (b) (1 & 2)

SWACHH BHARAT MISSION

Why in News: The construction of toilets at the national scale under India’s Swachh Bharat Mission helping in reducing infant and child mortality in the country.

Key Highlights of the Report

- The research paper named, “Toilet construction under the Swachh Bharat Mission and infant mortality in India”

was recently published in the British weekly scientific journal ‘Nature’.

- The report said toilet construction increased dramatically across India following the implementation of the Swachh Bharat Mission (SBM) in 2014.
 - The post-SBM period in India exhibited accelerated reductions in infant and child mortality compared to the pre-SBM years.
 - Based on regression estimates, the provision of toilets at scale may have contributed to averting approximately 60,000 to 70,000 infant deaths annually between 2011-2020.
- It added that the implementation of transformative sanitation programmes can deliver population health benefits in low and middle-income countries.
- Reports, found that districts with over 30 per cent toilets constructed under SBM corresponded with 5.3 fewer infant deaths and 6.8 fewer child deaths per 1,000 births.
- After SBM started, there was a twofold increase in toilet availability and a decline in open defecation to 19 per cent from 60 per cent in the first five years of the campaign.

PRELIMS SPECIAL

About Swachh Bharat Mission

- Indian government launched the Swachh Bharat Mission on October 2, 2014.
- The urban component of the mission is implemented by the Ministry of Urban Development, and the rural component by the Ministry of Drinking Water and Sanitation.
 - The mission aims to cover 1.04 crore households, provide 2.5 lakh community toilets, 2.6 lakh public toilets, and a solid waste management facility in each town.
- **Swachh Bharat Mission for Urban Areas 2.0 (2021-26):** To make all cities ‘Garbage Free’ and ensure grey and black water management in all cities other than those covered under AMRUT, make all urban local bodies as ODF+ and those with a population of less than 1 lakh as ODF++, thereby achieving the vision of safe sanitation in urban areas.
- **Swachh Bharat Mission (Gramin) 2.0 (2019-2025):** Focus on the sustainability of ODF status and Solid and Liquid Waste Management (SLWM) and making villages ODF Plus

Swachhata Hi Seva 2024 Campaign

- The nationwide campaign aims to celebrate the tenth anniversary of the Swachh Bharat Mission from 17 September to 1 October followed by the Swachh Bharat Diwas (SBD) on 2nd October 2024.
- This year’s theme, “Swabhav Swachhata, Sanskar Swachhata”, aims to instil cleanliness as a natural habit and a core societal value among all citizens.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

Q. Which of the following are campaigns under Swachh Bharat Mission?

1. Plastic se Raksha
2. Swachhta Pakhwada
3. Swachhta Shramdaan
4. Swachhta hee Seva

Select the correct answer using the code given below:

- (a) 3 and 4 only (b) 1, 2 and 4 only
 (c) 1, 2 and 3 only (d) 1, 2, 3 and 4

Answer: (d)

**PM ELECTRIC DRIVE
 REVOLUTION IN INNOVATIVE
 VEHICLE ENHANCEMENT (PM
 E-DRIVE) SCHEME**

Why in News: The Union Cabinet approved PM Electric Drive Revolution in Innovative Vehicle Enhancement (PM E-DRIVE) Scheme to enhance electric vehicle mobility in India.

Key Details

- Recently the Union Cabinet approved two major schemes PM E-DRIVE Scheme and the PM-eBus Sewa-Payment Security Mechanism (PSM) scheme with a total outlay of Rs 14,335 crore to promote the use of electric vehicles, including buses, ambulances and trucks.
- With PM E-DRIVE, India aims to become the first country to achieve 100 per cent electrification in this segment by 2030.
- The new PM E-DRIVE scheme aims to fix loopholes and shortcomings of the past FAME schemes to address problems like improper subsidy claims for imported vehicles.
- PM E-DRIVE is a new electric vehicle (EV) subsidy scheme giving ₹10,000 for each electric 2-wheeler sold till March 2025 and ₹50,000 for electric 3-wheelers.
- The scheme aims to achieve a 10% market share for electric 2-wheelers and a 15% market share for electric 3-wheelers by March 2026.
- The exclusion of electric cars from the scheme was down to the fact that they already benefit from a lower 5% GST rate.
- It also budgets ₹780 crore to modernize test agencies of the Ministry of Heavy Industries.

Which types of electric vehicles does the PM E-DRIVE scheme focus on?

- The scheme is for electric 2-wheelers, electric 3-wheelers, e-ambulances, e-trucks. as well as other emerging EVs.
- The government expects the scheme to support 24.79

lakh electric 2-wheelers, 3.16 lakh electric 3-wheelers, and 14,028 e-buses.

How will the incentives of the PM E-DRIVE scheme be availed?

- The Ministry of Heavy Industries, which is behind the scheme introduced e-vouchers for EV buyers to avail demand incentives under the PM E-DRIVE scheme, with the scheme portal generating an Aadhaar authenticated e-Voucher for the buyer and sending the link to download the e- voucher to the registered mobile number of the buyer.
- The e-voucher will be signed by the buyer and submitted to the dealer, after which, it will be uploaded on the PM E-DRIVE portal. The signed e-voucher shall be sent to the buyer and dealer through an SMS.

Significance

- The primary objective of the PM E-DRIVE scheme is to expedite the adoption of EVs by providing upfront incentives for their purchase, as well as by facilitating the establishment of essential charging infrastructure for EVs.
- The PM E-DRIVE scheme aims to promote EVs to reduce the environmental impact of transportation and improve air quality.
- The scheme promotes mass mobility by supporting means of public transportation.
- The scheme promotes an efficient, competitive and resilient EV manufacturing industry thereby promoting Aatmanirbhar Bharat.
- This will be achieved by incorporating phased manufacturing programme (PMP) which encourages domestic manufacturing and strengthening of EV supply chain.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

Q. Consider the following statements with reference to PM Electric Drive Revolution in Innovative Vehicle Enhancement (PM E-DRIVE) Scheme:

1. The Primary objective of the PM E-DRIVE Scheme is to expedite the adoption of EVs by providing upfront incentives for their purchase.
2. It aims to achieve a 100% market share for electric 2-wheelers by March 2026.

Which of the statements given above is/are correct?

- (a) 1 only (b) 2 only
 (c) Both 1 and 2 (d) Neither 1 nor 2

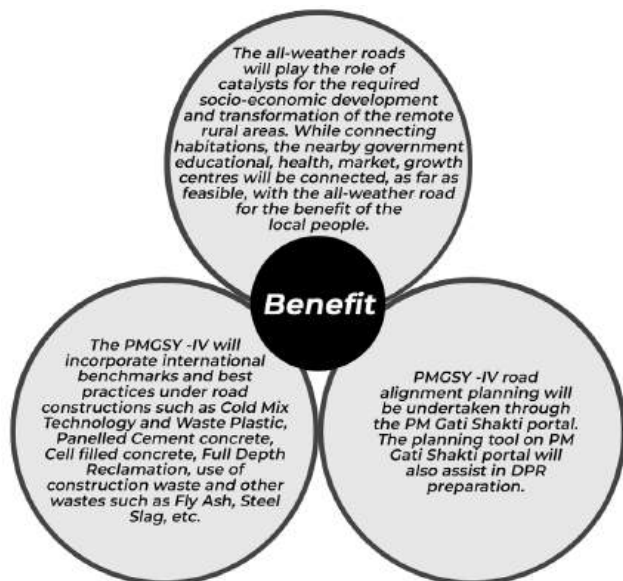
Answer: (a)

**PRADHAN MANTRI GRAM SADAK
 YOJANA - IV**

Why in News: The Union Cabinet approves construction of 62,500 km roads under the Pradhan Mantri Gram Sadak Yojana (PMGSY) – IV.

Key Details

- Pradhan Mantri Gram Sadak Yojana -IV is launched for financial year 2024-25 to 2028-29.
- The implementation of the fourth phase of the Pradhan Mantri Gram Sadak Yojana (PMGSY-IV) will provide for the construction of 62,500 km of new roads providing all-weather connectivity to 25,000 villages.
- Under this scheme 25,000 unconnected habitations of population size 500+ in plains, 250+ in NE & Hill States/UTs, special category areas (Tribal Schedule V, Aspirational Districts/Blocks, Desert areas) and 100+ in LWE affected districts, as per Census 2011 will be covered.



PRELIMS SPECIAL

About Pradhan Mantri Gram Sadak Yojana (PMGSY)

- The Pradhan Mantri Gram Sadak Yojana (PMGSY) (transl. Prime Minister’s Village Road Scheme) is a nationwide plan in India to provide good all-weather road connectivity to unconnected villages.
- This Centrally Sponsored Scheme was introduced in 2000 by the then-prime minister of India Atal Bihari Vajpayee
- The PMGSY is under the authority of the Ministry of Rural Development and was begun on 25 December 2000(Birth anniversary of late Bharat Ratna Shri Atal Bihari Vajpayee)
- Initially, it was fully funded by the central government. Later , following the recommendations of the 14th Finance Commission, it was announced that the project will be funded by both the central government (60%) and states (40%).

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

Q. Consider the following statements with reference to the Pradhan Mantri Gram Sadak Yojana -IV:

1. It is launched for financial year 2024-25 to 2028-29.

2. It is implemented by the Ministry of Rural Development.
3. It is funded by both the central government (60%) and states (40%).

Which of the statements given above is/are correct?

- (a) 1 and 2 only (b) 1 and 3 only
 (c) 2 and 3 only (d) 1, 2 and 3

(d) Answer

PRADHAN MANTRI KISAN MAANDHAN YOJANA (PM-KMY)

Why in News: Pradhan Mantri Kisan Maandhan Yojana (PM-KMY) completes 5 years on September 12,2024.

Key Benefits Under PM-KMY

- **Minimum Assured Pension:** Each subscriber to the scheme is guaranteed a minimum pension of Rs. 3000 per month upon reaching the age of 60 years
- **Family Pension:** If a subscriber passes away while receiving their pension, their spouse will be entitled to a family pension equal to 50% of the amount the subscriber was receiving i.e. Rs.1500 per month as Family Pension. This is only applicable if the spouse is not already a beneficiary of the scheme. The family pension benefit is exclusively for the spouse.
- **PM-KISAN Benefit:** SMFs can choose to use their PM-KISAN benefits to make voluntary contributions to the scheme. For this, eligible SMFs must sign and submit an enrolment-cum-auto-debit-mandate form. This will authorize automatic debit of their contributions from the bank account where their PM-KISAN benefits are credited.
- **Equal Contribution by Government:** The Central Government, through the Department of Agriculture Cooperation and Farmers Welfare, also contributes an equal amount as contributed by the eligible subscriber, to the pension Fund.
- **Monthly Contributions:** Monthly contributions are in the range from Rs. 55 to Rs. 200, based on the farmer’s age at the time of entry into the Scheme, according to the contribution chart.

Successful Implementation of PM-KMY

- All farmers with cultivable land holdings of up to 2 hectares and listed in state/UT land records as of 1st August 2019 are eligible for benefits under the scheme. As of August 6, 2024, a total of 23.38 lakh farmers have joined the scheme.[1]
- Under the scheme, Bihar leads with over 3.4 lakh registrations while Jharkhand ranks second with over 2.5 lakh registrations.

Leaving the Pension Scheme

- 1** If an eligible subscriber exits the Scheme within less than ten years of joining, then the share of contribution will be returned along with the savings bank rate of interest payable thereon.
- 2** If the subscriber exits after ten years but before reaching age sixty, they will receive their contributions plus accumulated interest, either as earned by the Pension Fund or at the savings bank rate, whichever is higher.
- 3** Suppose a subscriber dies while making regular contributions. In that case, their spouse can either continue the Scheme with regular contributions or exit by receiving the subscriber's contributions plus accumulated interest, as earned by the Pension Fund or at the savings bank rate, whichever is higher.
- 4** Upon the subscriber's and spouse's death, the remaining corpus shall be returned to the fund.

Conclusion

Over five years of implementation, the PM-KMY has significantly empowered Small and Marginal Farmers (SMFs) across India. One of the key achievements of PM-KMY is its role in providing financial stability to farmers, many of whom face uncertain futures due to the seasonal nature of agriculture and fluctuating incomes.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

- Q. Consider the following statements with reference to the Pradhan Mantri Kisan Maandhan Yojana (PM-KMY):
1. Each subscriber to this scheme is guaranteed a minimum pension of Rs. 3000 per month upon reaching the age of 60 years.
 2. All farmers with cultivable land holdings of up to 10 hectares are eligible for benefits under this scheme.
 3. The Bihar has registered the highest number of registrations under this scheme.

Which of the statements given above is/are correct?

- (a) 1 and 2 only (b) 1 and 3 only
 (c) 2 only (d) 1, 2 and 3

Answer: (b)

SHILP DIDI MAHOTSAV

Why in News: Union Minister of Textiles recently participated in the 'Shilp Didi Mahotsav,' dedicated to the Shilp Didi Programme, organised at Dilli Haat, INA, New Delhi.

Shilp Didi Mahotsav

- Shilp Didis were being provided with an opportunity to showcase their crafts at Dilli Haat from 16th August 2024 to 31st August 2024.

- The aim of this Mahotsav was to give them marketing opportunities in addition to e-commerce presence to increase their income under the programme.
- The Mahotsav provided a unique platform for the Shilp Didis to **expand their market reach and attract new customers for their handicraft creations.**

About Shilp Didi Programme

- The office of Development Commissioner (Handicrafts) under the aegis of Ministry of Textiles has launched the 'Shilp Didi Programme' on a pilot basis for 100 days.
- The initiatives commenced with e-training from June 2024 and includes components of E-commerce on-boarding, Entrepreneurship Development, Regulatory and social media On-boarding, Marketing Opportunities, etc.
- The primary objective of the Shilp Didi Programme is to foster economic empowerment and financial independence among female artisans throughout India.
- A baseline survey identified 100 women artisans, known as Shilp Didis, representing 72 districts across 23 states. The programme covers a total of 30 different crafts, reflecting the diversity within the sector.

PRELIMS SPECIAL

From April 2023 to March 2024, the government awarded GI tags to several handloom products, enhancing their recognition and economic value. These products include:

- **Barabanki Handloom Products** from Uttar Pradesh
- **Chedibutta Saree** from Tamil Nadu
- **Jodhpur Bandhej Craft** from Rajasthan
- **Basohli Pashmina Woolen Products** from Jammu & Kashmir
- **Rangwali Pichhoda** of Kumaon from Uttarakhand
- **Tangail Saree** from West Bengal
- **Garad Saree** from West Bengal
- **Korial saree** from West Bengal

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

Q. The Shilp Didi programme sometimes seen in the news is launched by ?

- (a) Ministry of Culture (b) Ministry of Education
 (c) Ministry of Textiles (d) None of the above

Answer: (c)

NITI AAYOG REPORT ON EDIBLE OILS

Why in News: NITI Aayog has recently released report on 'Pathways and Strategies for Accelerating Growth in Edible Oils Towards Atmanirbharta'.

Key Highlights of the Report

- The report highlights that over the past decades, per capita consumption of edible oil in the country has seen a dramatic rise, reaching 19.7 kg/year.
- This surge in demand has significantly outpaced domestic production, leading to a heavy reliance on imports to meet both domestic and industrial needs.
- The report comprehensively explores the current state of the country's edible oil sector and its future potential.
- It presents a detailed roadmap to address existing challenges, focusing on bridging the demand-supply gap and developing new approaches to attain self-sufficiency.
- The report considers **three distinct approaches for demand forecasting** to gain a multifaceted understanding of future edible oil needs:
 - **Static/Household Approach** utilizing population projections and baseline per capita consumption data, assuming a short-term static pattern in consumption behavior.
 - **Normative Approach** based on the recommended healthy intake levels established by the ICMR-National Institute of Nutrition.
 - **Behavioristic Approach** recognizing the potential for behavioral shifts in food consumption patterns due to evolving lifestyles and dietary habits driven by increasing income levels and price fluctuations under two scenarios:
 - ◆ Where consumption is capped at 25.3 kg per capita (the average of developed countries), the demand-supply gap is projected to be 22.3 MT by 2030 and 15.20 MT by 2047.
 - ◆ Where a higher consumption level of 40.3 kg per capita (comparable to the USA), the gap widens to 29.5 MT by 2030 and 40 MT by 2047.
- To achieve self-sufficiency in this sector, the report suggests several strategic interventions to bridge the existing gap and ensure long-term sustainability. The **proposed strategy** is structured across three key pillars
 - Crop Retention and Diversification
 - Horizontal Expansion
 - ◆ Horizontal Expansion Strategy aims to strategically increase the area dedicated to cultivating edible oil crops.
 - ◆ This strategy seeks to bring more land under cultivation for specific oilseeds.
 - Vertical Expansion
 - ◆ Vertical Expansion Strategy focuses on enhancing the yield of existing oilseed cultivation.
 - ◆ This can be achieved through improved farming practices, better-quality seeds, and advanced production technologies.
- The **state-wise quadrant approach** outlined in the report offers a valuable tool for achieving "Atmanirbharta" in edible oils.
- By strategically targeting these clusters and implementing tailored interventions, the country can maximize its production potential and effectively address the near-term challenges posed by potential consumption increases.

Conclusion

In 2022-23, India imported 16.5 million tonnes (MT) of edible oils, with domestic production fulfilling only 40-45% of the country's requirements. This situation presents a substantial challenge to the country's goal of achieving self-sufficiency in edible oils. Overall, the proposed strategic interventions suggested in the report could achieve projected edible oil supplies of 36.2 MT and 70.2 MT, by 2030 and 2047 respectively.

PRELIMS SPECIAL

- **National Mission on Edible Oil-OilPalm- (NMEO-OP):** Aims escalating oil palm cultivation and elevating Crude Palm Oil production to 11.20 lakh tonnes by 2025-26.
 - It offers special assistance of Rs. 70,000 per hectare to farmers for planting material and management.
 - Also providing Rs. 2,90,000 for the purchase of harvesting tools to farmers for palm oil cultivation and assistance of Rs. 25 lakh for establishing custom hiring centers (CHC).

- As of 14 March 2024, the scheme is operational in 15 states nationwide, covering a potential area of 21.75 lakh hectares.
- There are several indigenous trees in India which can provide edible oils, such as mahua, karanj, sal, kokum, kusum, coconut tree etc.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

Q. Consider the following statements with reference to the ' Pathways and Strategies for Accelerating Growth in Edible Oils Towards Atmanirbharta' report:

1. Per-capita consumption of edible oil has decreased continuously throughout the country over the last decade.
2. India heavily relies on imports to meet both domestic as well as industrial needs of edible oils.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Answer: (b)

WHO REPORT ON ROAD SAFETY

Why in News: The World Health Organization regional office for South-East Asia has recently released a report on road safety.

Key Details

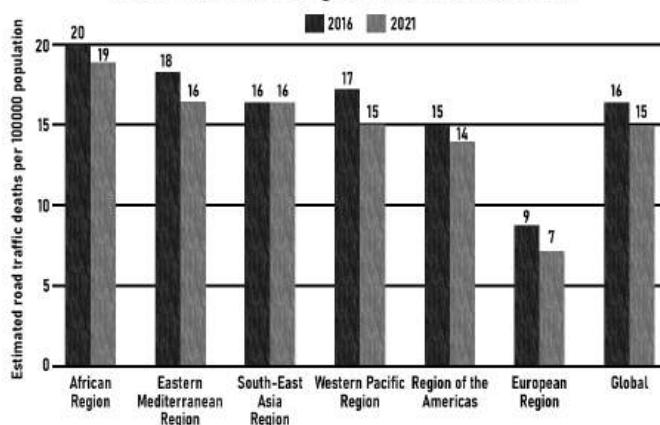
- The 'WHO South-East Asia Regional Status Report on Road Safety: Towards Safer and Sustainable Mobility' was launched at the 15th World Conference on Injury Prevention and Safety Promotion (Safety 2024).
- The report outlines road traffic injury patterns in our countries and highlights best practices and country-specific interventions.
- Road safety is a well-established public health and developmental agenda and also an integral part of the UN Sustainable Development Goals (SDGs).

Highlights of the Report

- Estimated road traffic deaths per 100,000 population remain high in nearly all countries of the South-East Asia Region.
 - The region accounted for 3,30,223 of the 1.19 million estimated global road traffic deaths in 2021, accounting for 28% of the global burden.

- In the South East Asia Region, vulnerable road users (pedestrians, motorized two- and three-wheeler users and cyclists) constitute 66% of all the reported road traffic deaths.
- While the share of drivers/riders of two-/three-wheeled motorized vehicles itself is 46%.
- Undergoing a phase of rapid urbanization, the countries of the region are witnessing relatively recent growth of highway networks and a sharp increase in the number of vehicles on the road.
- Moreover, countries of the Region share crucial commonalities that contribute to road safety challenges.
 - These include a high and increasing proportion of motorized two-three wheelers, inadequate systematic data collection on traffic-related injuries and disabilities, lack of comprehensive trauma registries, poor pedestrian and cyclist infrastructure, high-speed roads traversing villages, and limited access to efficient postcrash response systems.

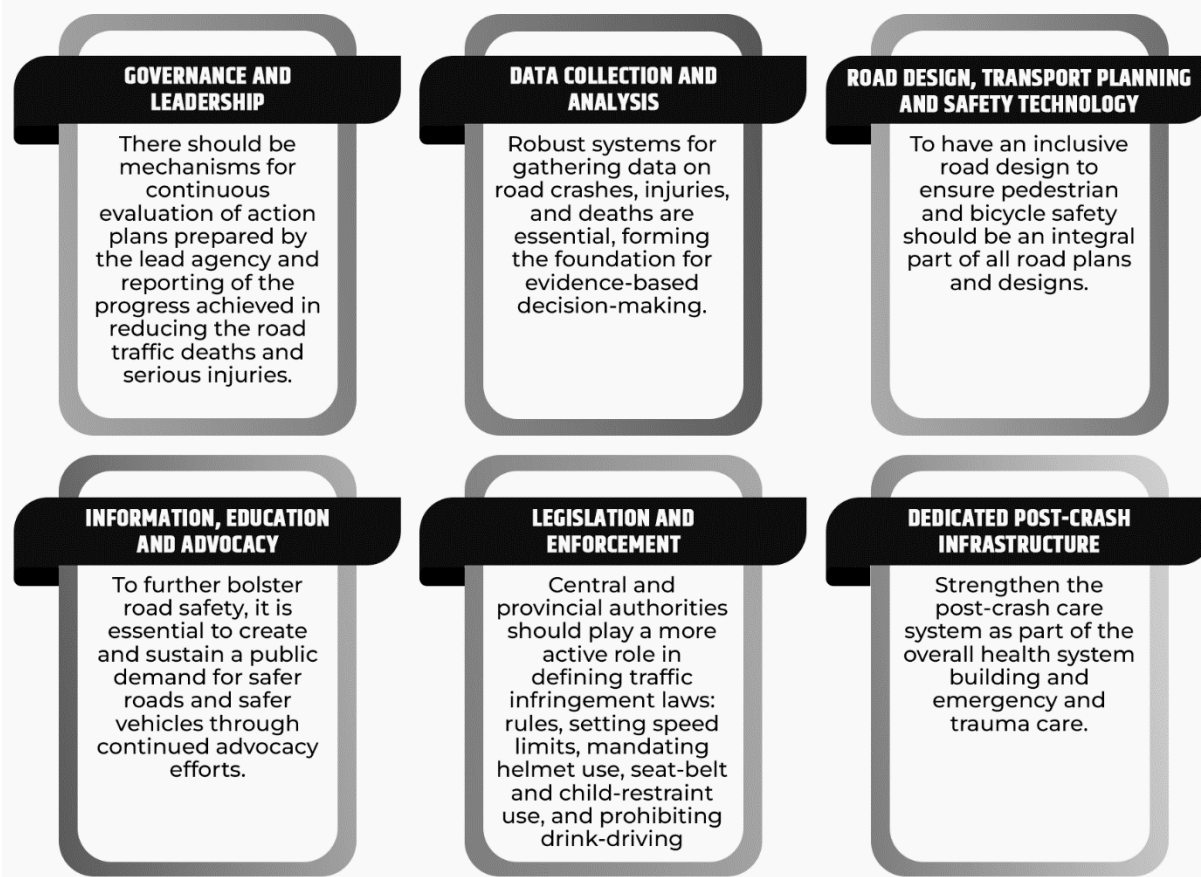
Estimated road traffic death rates per 100 000 population across the WHO regions, in 2016 and 2021



Measures to strengthen road safety in the WHO South-East Asia Region

- **Safe road infrastructure:** Road infrastructure design and operation must prioritize minimizing risks for all users.
- Road safety inspections or audits
- Make multimodal transport planning a part of the road safety strategies
- **Road user behaviour:** Education and enforcement aspects of road safety intervention can be effective only when combined with the necessary engineering interventions to make roads safer.
- Motorcycle helmet use; Seat-belt and child-restraint system

PRIORITY AREAS OF INTERVENTIONS FOR THE WHO SOUTH-EAST ASIA REGION



Recommended Priority Areas of Interventions for India

- Safety audits and safe design of all new and existing roads.
- Improvement in the crash data recording and reporting system.
- Set a post-crash emergency care target and prepare an action plan to achieve that in a time bound manner.

Initiatives taken by the GoI to address the issue of Road Safety in India:

- **Education**
 - **Road Safety Advocacy Scheme** to provide financial assistance to various agencies for raising awareness about road safety and for administering road safety programs.
 - Observance of **National Road Safety Month/Week** every year for spreading awareness and strengthening road safety.
 - Scheme for setting up of Institutes of Driving Training & Research (IDTRs), Regional Driving Training Centres (RDTCs) and Driving Training Centres (DTCs) at state/district level across the Country.

• Engineering

- **Road engineering**
 - ◆ Road Safety Audit (RSA) of all National Highways (NHs) has been made mandatory through third party auditors/ experts at all stages i.e. design, construction, operation and maintenance etc.
 - ◆ High priority is accorded to identification and rectification of black spots / accident spots on National Highways.
- **Vehicle engineering**
 - ◆ Mandatory provision of an airbag for the passenger seated on the front seat of a vehicle, next to the driver.
 - ◆ Prescribed norms related to safety measures for children below four years of age, riding or being carried on a motor cycle.
 - ◆ It also specifies use of a safety harness, crash helmet and restricts speed to 40kmph.

• Emergency care

- Protection of Good Samaritan.
- Enhanced compensation of victims of Hit and Run motor accidents

- Provisions for ambulances with paramedical staff/ Emergency Medical Technician/Nurse at toll plazas on the completed corridor of National Highways.
- Ministry along with National Health Authority (NHA), has implemented a pilot program for providing cashless treatment to victims of road accidents in Chandigarh and Assam.

Overall Key Recommendations for Road Safety

- Establish a central agency to coordinate design, engineering, and urban planning while considering contextual and human factors.
- Strengthen assessment and inspection processes by developing standardized criteria.
- Conduct regular road audits to identify and address safety issues.
- Introduce road safety awareness and advocacy programmes in educational institutions.
- Implement time-bound targets to ensure the enforcement of road safety laws and policies.
- Leverage technology, such as CCTV systems, for real-time monitoring of road rule compliance.
- Expand the network of emergency care facilities to improve post-crash care.
- Apply uniform and standardized data collection tools for accurate reporting and analysis.
- Align road design with star ratings corresponding to the International Road Assessment Programme (IRAP) standards.
- Conduct awareness and advocacy campaigns to drive improvements in road safety, with a focus on enforcement.
- Strengthen enforcement and compliance with road safety laws to ensure a safer road environment.
- Integrate road safety into other processes such as urban planning, environment policy, reduction of economic inequality, and so on.

PRELIMS SPECIAL

FACTS

- The WHO South-East (SE) Asia Region has 11 Member States: Bangladesh, Bhutan, Democratic People’s Republic of Korea, India, Indonesia, Maldives, Myanmar, Nepal, Sri Lanka, Thailand and TimorLeste.
- In September 2020, the UN General Assembly adopted the Decade of Action for Road Safety 2021–2030, with the ambitious target of reducing at least 50% of road traffic deaths and injuries by 2030.
- In 2023, WHO launched the Global Status Report on Road Safety (GSRRS 2023).

EXPECTED QUESTIONS FOR UPSC CSE

Prelims MCQ

- Q. Which institution released the report titled ‘South-East Asia Regional Status Report on Road Safety’?
- (a) World Health Organisation
 - (b) World Trade Organisation
 - (c) World Economic Forum
 - (d) World Bank

Answer: (a)

Descriptive Question

- Q. Discuss the initiatives taken by the Government of India for road safety in India. What further measures can be taken to improve road safety and reduce accident rates in country? [10 marks] [150 words]

A HOUSEHOLD CONSUMPTION EXPENDITURE SURVEY

Why in News: The Economic Advisory Council to the Prime Minister (EAC-PM) recently released a report titled Changes in India’s Food Consumption and Policy Implications: A Comprehensive Analysis of Household Consumption Expenditure Survey 2022-23 and 2011-12.

Key Details

- Significant changes are unfolding in India’s food consumption pattern, with serious implications for our national agriculture, health, nutrition, and overall welfare policies that target poorer sections of society.
- The changing consumption basket of Indians will also impact the calculation of the Consumer Price Index in the future.
- A comprehensive analysis of the Household Consumption Expenditure Survey 2022–23 and comparisons with 2011–12 reveal striking changes in food consumption patterns over the last ten years, with potential implications for health outcomes.

Observations from the Report

- There has been a significant increase in households’ average monthly per capita expenditure across rural and urban India across all states and UTs.
 - Growth for rural households was higher than for urban households, 164% for rural households versus 146% for urban households.
- The share of total household expenditure on food has declined substantially in rural and urban areas and across all states and UTs.

- It is the first time in modern India (post-independence) that average household spending on food is less than half the overall monthly spending of households and is a marker of significant progress.
- Within food items, the share of expenditure on cereal has declined significantly across rural and urban areas.
 - This decline was more substantial for the bottom 20% of the households in rural and urban areas.
- These changes in the composition of household expenditure reflect changes in household demand and as well as notable improvements in supply factors, such as infrastructure, better storage, and efficient transportation, which have expanded the markets for perishable items such as fresh fruits, milk & milk products, eggs, fish, and meat, making them more accessible and affordable across all regions of India.
- Across regions and consumption classes, a significant increase in the share of household expenditure on served and packaged processed food was observed.
 - This increase was universal across the classes but more pronounced for the country's top 20% of households and significantly more in urban areas.
 - This phenomenon was more pronounced for the bottom 20% of the households. Such schemes like PMGKAY, which provides free food grains to approximately 800 million eligible people across the country, seem to have performed the role of an expansionary fiscal policy where households are spending their 'saved expenditure' from cereals on diverse food items like fresh fruits, milk & milk products, eggs, fish & meat etc.
- Seasonality in the consumption of certain food items has reduced significantly.
 - This means that the variations in consumption across months have fallen for all classes of people.
- The National Institute of Nutrition has published the Indian Food Conversion Table.
 - Using this, per capita micronutrient intake (in terms of adult female equivalent), iron, Zinc, folate, vitamin A, vitamins B1, B2, B3, B6, B12, vitamin C, and Calcium have been estimated.
 - The estimated average daily intake of micronutrients varied across consumption classes and states.
- A dietary diversity index has been constructed using the micronutrient intake from various food categories.
 - While cereal consumption has declined, leading to a decrease in micronutrients like iron and Zinc, there's been a significant improvement in dietary diversity across consumption classes and states.
- Significant variations from the mean and the median in the average daily intake of micronutrients and dietary diversity within consumption classes and states/UTs.
 - This has important policy implications, as the impact will not necessarily be uniform.
- Policies that aim to reduce anaemia among children and women would need to focus on improving iron intake and, more importantly, consider the dietary diversity of iron sources.

Additional Considerations

- The report acknowledges the limitations of excluding served and packaged processed food from the micronutrient analysis.
 - A separate study on this aspect is recommended due to its potential health implications.
- The report's findings on the variations in micronutrient intake and dietary diversity within populations emphasize the need for context-specific interventions.
- The report provides valuable insights into India's evolving food consumption and nutrition landscape.
- The findings emphasize the importance of dietary diversity in improving nutritional outcomes and reducing Anemia prevalence.
- The study's policy implications highlight the need for a multi-faceted approach that addresses food security and nutrition through agricultural policy, nutrition interventions, and targeted programs.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

Q. The report titled "Changes in India's Food Consumption and Policy Implications: A Comprehensive Analysis of Household Consumption Expenditure Survey 2022-23 and 2011-12" is released by?

- (a) Economic Advisory Council to the Prime Minister (EAC-PM)
- (b) Ministry of Consumer Affairs, Food and Public Distribution
- (c) National Statistical Office (NSO)
- (d) Food and Agriculture Organization (FAO)

Answer: (a)

RELATIVE ECONOMIC PERFORMANCE OF INDIAN STATES

Why in News: The Economic Advisory Council to the Prime Minister (EAC-PM) recently released a report titled Relative Economic Performance of Indian States: 1960-61 to 2023-24.

Key Details

- Relative performance of states, measured using two indicators:
 - Share in India's GDP
 - Relative per capita income.

- The state's share in India's GDP is calculated by dividing the Gross State Domestic Product (GSDP) of the state by the sum of GSDP of all states.
- Relative per capita income is calculated as the ratio of the per capita Net State Domestic Product (NSDP) of the state as a percentage of the all-India per capita Net National Product (or Net National Income in some years).
 - Per capita NSDP means that it does not include remittances which may be important for states like Kerala, Bihar and Uttar Pradesh.

Key Observations from the Report

- **Southern States**
 - Before 1991, southern states did not show expectational performance.
 - However, since the economic liberalization of 1991, the southern states have emerged as the leading performers.
 - In 2023-24, Karnataka, Andhra Pradesh, Telangana, Kerala and Tamil Nadu together accounted for approximately 30% of India's GDP.
 - Per capita income of all southern states became higher than the national average after 1991.
- **Western States**
 - Maharashtra and Gujarat have consistently performed well throughout the study period.
 - Maharashtra has maintained the highest share of India's GDP for almost all of the period.
 - Gujarat's share remained at broadly the same levels until 2000-01, before beginning to increase rapidly—from 6.4% in 2000-01 to 8.1% in 2022-23.
 - Both Gujarat and Maharashtra have had per capita incomes exceeding the national average since the 1960s.
 - In 2022-23, the per capita income of Goa was nearly three times the national average. With this, it is second in terms of per capita income after Sikkim.
- **Northern States**
 - Among the northern states, Delhi and Haryana have performed notably well, while Punjab's economy has deteriorated after 1991.
 - Despite its small size, Delhi saw its share of India's GDP increase from 1.4% to 3.6% during this period.
 - Punjab and Haryana, which were once part of the same state, have experienced diverging economic trajectories. Punjab's GDP share grew during the 1960s, mainly due to the Green Revolution, but then plateaued at around 4.3% until 1990-91.
 - Haryana's share of India's GDP now exceeds that of Punjab, and its relative per capita income has reached 176.8%, compared to Punjab's 106.7% in 2023-24.
- **Eastern States**
 - West Bengal, which held the third-largest share of national GDP at 10.5% in 1960-61, now accounts for only 5.6% in 2023-24.
 - West Bengal's per capita income was above the national average in 1960-61 at 127.5%, but its growth failed to keep pace with national trends. As a result, its relative per capita income declined to 83.7% in 2023-24.
 - Odisha which was also seeing a consistent decline in terms of relative per capita income from 1960s to 1990-91 (70.9% to 54.3%), has seen a significant turnaround since then. Its relative per capita income increased from 54.3% in 1990-91 to 88.5% in 2023-24.
- **Central States**
 - In the 1960s, undivided Uttar Pradesh was the largest economic powerhouse in the country, with a share of 14.4% in India's GDP in 1960-61. However, its share started to decline thereafter, which continued even after bifurcation.
 - Share of UP (bifurcated) in national GDP flattened out at around 8.2% in 2020-21, before increasing marginally to become 8.4% in 2023-24.
 - Madhya Pradesh has experienced a notable turnaround in its relative per capita income since 2010, following a five-decade period of decline (82.4% in 1960-61 to 60.1% in 2010-11). Its relative per capita income increased from 60.1% in 2010-11 to 77.4% in 2023-24.
- **North-Eastern States**
 - In 1980-81, Sikkim's per capita income was below the national average. Its per capita income surged from around 100% of the national average in 2000-01 to 320% in 2023-24.
 - Assam, which initially had a per capita income slightly above the national average (103% in 1960-61), meanwhile experienced a decline in its relative per capita income and reached 61.2% in 2010-11. Since then, Assam's relative per capita income has been on the rise, reaching 73.7% in 2023-24.
- **Overall Observation**
 - The western and southern regions of the country are outperforming others, with notable success also observed in parts of the north.
 - The stark contrast between Haryana and Punjab warrants further investigation to understand its policy implications.
 - The eastern part of the country continues to be a concern.
 - The maritime states have clearly outperformed the other states, with the exception of West Bengal.
 - Even the coastal state of Odisha which was traditionally a laggard state has seen improved performance in the last two decades.

Economic Advisory Council to the Prime Minister (EAC-PM)

- It is an independent, a non-constitutional and non permanent body constituted to give advice on economic and related issues to the Government of India, specifically to the Prime Minister.
- The **Terms of Reference of EAC-PM** include analyzing any issue, economic or otherwise, referred to it by the Prime Minister and advising him thereon, addressing issues of macroeconomic importance and presenting views thereon to the Prime Minister. These could be either suo-motu or on reference from the Prime Minister or anyone else. They also include attending to any other task as may be desired by the Prime Minister from time to time.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

Q. Consider the following statements about **Economic Advisory Council** :

1. It is an independent body constituted to give advice on economic and related issues to the Government of India, specifically to the Prime Minister.
2. The Council's advice is mandatory for the Prime Minister.
3. At present, the chairman of EAC-PM is Dr. Bibek Debroy.

How many statements are correct:

- (a) 1 only (b) 2 only
 (c) All three (d) None of them.

Answer (b) 1 and 3

PANDEMIC PREPAREDNESS

Why in News: NITI Aayog has released an Expert Group report titled 'Future Pandemic Preparedness and Emergency Response- A Framework for Action'.

Key highlights of the Report

- NITI Aayog today released an Expert Group report titled '**Future Pandemic Preparedness and Emergency Response —A Framework for Action**'. The expert group in the report has provided a blueprint for the country to prepare for any future public health emergency or pandemic and have a rapid response system in place.
- **Future threats:** The COVID-19 contagion is undoubtedly not the last pandemic. Given the unpredictably, changing planetary ecology, climate and human-animal-plant dynamics, new potentially, large-scale infectious threats to human health are inevitable. The WHO has warned the world that 75% of future public health threats are likely to be zoonotic threats (which could be due to emerging, re-emerging and new pathogens).

The recommendations of the Pandemic Preparedness and Emergency Response Framework (PPER) are in four pillars:

Governance, Legislation, Finance and Management

- Enacting a new Public Health Emergency Act.
- Creating an institutionalised empowered governance mechanism for Public Health Emergencies. An Empowered Group of Secretaries on PPER chaired by the Cabinet Secretary.
- A Continuous Monitoring Group to be constituted co-chaired by the Secretary Health and Secretary DHR.
- A well-defined SOP manual for rapid response to be prepared.
- Setting up of a special Pandemic Preparedness and Emergency Response fund for all PPER activities of surveillance, data management, forecasting and modeling, research, innovation and manufacture, development of counter-measures, infrastructure and capacity building.

Surveillance, Data Management, Forecasting, Modelling, Early Predictive Warning

- Creating a well-connected/integrated robust surveillance network linking epidemiological genomic and clinical data, including humans, animals and the environment.
- Establishing a harmonized system for data collection, access, sharing, analysis, and a unified data portal for infectious diseases.
- Building a strong modelling and forecasting network for early prediction of emerging threats.
- Creating a strong biosecurity network of BSL3 and BSL 4 facilities for characterization and epidemiological study of all priority pathogens and known/unknown pathogens.

Research & Innovation, Manufacture, Infrastructure, Capacity Building

- Focused research on priority pathogens to develop countermeasures.
- Development of countermeasures-diagnostics, drugs, vaccines.
- Allocating Pandemic Preparedness and Emergency Response fund for High-risk Research and Innovation.
- Setting up an Institute of Innovation for New Platform technologies and vaccine research, development and manufacture.
- Scaling manufacturing capacities and logistic supply chains for availability of counter measures Creating strong forward and backward linkages with vertical integration to develop strong supply chains, for countermeasures.
- Creating Centres of Excellence for Skilling Human Resources in identified gap areas.

Risk Communication, Community Engagement, Private Sector Partnerships and International Collaborations

- Setting up of a specialised Risk communication unit with Pre approved SOPs and protocols for release and dissemination of information on a regular basis to different stakeholders.
- Having pre-approved instrument, guidelines and agreements for Private sector participation in surveillance, research, manufacture and disease management including testing, vaccination and treatment.
- Community engagement SOPs to be developed for proper disease management Building strong Partnership models at Centre, State, district and community level and collaboration with the international organisations.

Way Forward

- The expert group in the report has provided a blueprint for the country to prepare for any future public health emergency or pandemic and have a rapid response system.
- From examining the lessons learned and challenges faced

during the COVID-19 pandemic to recommendations and a roadmap for governance and management of public health emergencies in the future, this report is a starting point for the country's pandemic preparedness and prevention efforts.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

Q. The report titled 'Future Pandemic Preparedness and Emergency Response- A Framework for Action' is released by:

- (a) NITI Aayog
- (b) Ministry of Health and Family Welfare
- (c) World Health Organization (WHO)
- (d) Indian Council of Medical Research (ICMR)

(a) Answer

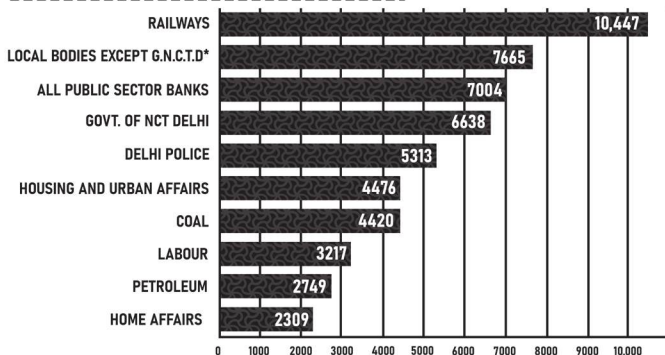
CVC REPORT ON CORRUPTION

Why in News: A recent CVC report shows highest corruption complaints against railway employees, Delhi local bodies, and public sector banks in 2023.

Key Highlights of the Report

- As many as 74,203 graft complaints were received against all categories of officers/employees in 2023, of which 66,373 were disposed of and 7,830 were pending.
- The highest 10,447 complaints were made against railway employees, followed by 7,665 against staffers of "local bodies except GNCTD" (Government of National Capital Territory of Delhi)

Graft complaints received



Corruption Laws in India

- **The Prevention of Corruption Act, 1988:** If a public servant accepts a valuable thing without paying for it

or paying inadequately from a person with whom he is involved in a business transaction in his official capacity, he shall be penalized with minimum punishment of six months and maximum punishment of five years and fine.

- **The Benami Transactions (Prohibition) Act, 1988:** The Act prohibits any benami transaction (purchase of property in false name of another person who does not pay for the property) except when a person purchases property in his wife's or unmarried daughter's name.
- **Under the new Bharatiya Nyaya Sanhita, 2023, Article 173.** Punishment for bribery: Whoever commits the offence of bribery shall be punished with imprisonment of either description for a term which may extend to one year, or with fine, or with both.

Process followed to investigate and prosecute corrupt public servants

- The three main authorities involved in inquiring, investigating and prosecuting corruption cases are the Central Vigilance Commission (CVC), the Central Bureau of Investigation (CBI) and the state Anti-Corruption Bureau (ACB).
- The CBI and state ACBs investigate cases related to corruption under the Prevention of Corruption Act, 1988 and the Indian Penal Code, 1860.
 - The CBI's jurisdiction is the central government and Union Territories while the state ACBs investigate cases within the states. States can refer cases to the CBI.
- The CVC can refer cases either to the Central Vigilance Officer (CVO) in each department or to the CBI.
 - The CVC or the CVO recommends the action to be taken against a public servant but the decision to take any disciplinary action against a civil servant rests on the department authority.
- **PMLA 2002:** The Prevention of Money Laundering Act, 2002 (PMLA) is an Act of the Parliament of India enacted to prevent money laundering and provide for the confiscation of property derived from money laundering.

PRELIMS SPECIAL

About Central Vigilance Commission

- **Central Vigilance Commission (CVC)** is an Indian governmental body created in 1964 on the recommendations of the Committee on Prevention of Corruption, headed by K. Santhanam to address governmental corruption.
- **Status:** In 2003, the Parliament enacted a law conferring statutory status on the CVC. It has the status of an autonomous body, free of control from any executive authority.
- **Functions:** It is charged with monitoring all vigilance activity under the Central Government of India. It advises various authorities in central Government organisations in planning, executing, reviewing, and reforming their vigilance work.

- **Appointment** : The Central Vigilance Commissioner and the Vigilance Commissioners are appointed by the President on recommendation of a Committee consisting of the Prime Minister (Chairperson), the Minister of Home Affairs (Member) and the Leader of the Opposition in the Lok Sabha.
- **Removal** : A member of the commission can be removed from his office only by order of the President on the ground of proved misbehaviour or incapacity after the Supreme Court, on a reference made to it by the President.
- **Report**: CVC submits its report to the President
- **Power of Investigation**: CVC has no investigation wings of its own as it depends on CBI.
- **Agencies under CVC**: Secretariat, Chief Technical Examiners' Wing (CTE), Commissioners for Departmental Inquiries (CDI), The Directorate General of Vigilance.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

Q. Consider the following statements:

1. CVC is a non-statutory body similar to CBI.
2. The Central Vigilance Commissioner and the Vigilance Commissioners are appointed by the President on recommendation of a Committee consisting of the Prime Minister (Chairperson), the Chief Justice of India and the Leader of the Opposition in the Lok Sabha.

Select the correct statements:

- (a) 1 only (b) 2 only
 (c) Both 1 and 2 (d) Neither 1 nor 2

Answer (d)

RESOURCING THE ENERGY TRANSITION

Why in News: UN Secretary-General's Panel on Critical Energy Transition Minerals recently released a report titled **Resourcing the energy transition: Principles to guide critical energy transition minerals towards equity and justice.**

Key Details

- United Nations Secretary General established the Panel on Critical Energy Transition Minerals, to develop Guiding Principles which can serve as guardrails for the energy transition.
- The principles build on existing international norms and legal obligations to which governments have already committed and are accompanied by a set of specific,

actionable recommendations so that everyone can benefit from the opportunities inherent in a transition to renewable energy.

- **Critical Energy Transition Minerals** are minerals necessary to construct, produce, distribute and store renewable energy.
 - They include the copper, cobalt, nickel, lithium, graphite, rare earth elements (REEs) and aluminium required for electric vehicles and battery storage; the silicon, cadmium, tellurium and selenium (to name a few) that build solar panels. Wind power requires copper. Hydropower uses copper too, and chromium, zinc and more aluminium.
- For countries with the critical energy transition minerals required for these technologies – including developing countries in Africa, Asia, Latin America and the Pacific – the opportunity is significant. At the same time there must be no regression in the hard-won individual and collective rights of Indigenous Peoples. Respect for this is absolute.

Guiding Principles on Critical Energy Transition Minerals - 7 Principles

- Human rights must be at the core of all mineral value chains.
- The integrity of the planet, its environment and biodiversity must be safeguarded.
- Justice and equity must underpin mineral value chains.
- Development must be fostered through benefit sharing, value addition and economic diversification.
- Investments, finance and trade must be responsible and fair.
- Transparency, accountability and anti-corruption measures are necessary to ensure good governance.
- Multilateral and international cooperation must underpin global action and promote peace and security.

Recommendations

To embed and maintain these Guiding Principles across critical energy transition mineral value chains, the Panel has made a number of actionable recommendations that leverage the United Nations in the creation of key bodies and processes. These include the establishment of:

- A **High-Level Expert Advisory Group** to accelerate greater benefit-sharing, value addition and economic diversification in critical energy transition minerals value chains as well as responsible and fair trade, investment, finance, and taxation.
- A **global traceability, transparency and accountability framework** along the entire mineral value chain – from mining to recycling – to strengthen due diligence, facilitate corporate accountability and build a global market for critical energy transition minerals, though the framework should not be used as a unilateral trade barrier.

- A **Global Mining Legacy Fund** to build trust and address legacy issues as a result of derelict, owner-less or abandoned mines, and strengthen financial assurance mechanisms for mine closure and rehabilitation.
- An initiative that empowers artisanal and small scale miners to become agents of transformation to foster development, environmental stewardship and human rights.
- **Equitable targets and timelines** for the implementation of material efficiency and circularity approaches across the entire life cycle of critical energy transition minerals.

- The United States was among about 60 countries that endorsed a “blueprint for action” to govern responsible use of AI in the military on September 10, while China did not support the legally non-binding document.

Key Highlights - The Seven Recommendations

UN 7 Recommendations

- International scientific panel on AI**
Create an independent panel of multidisciplinary AI experts to survey capabilities, opportunities, risks and uncertainties and advise on trends and research needs.
- Policy dialogue on AI governance**
Launch a twice-yearly intergovernmental and multi-stakeholder policy dialogue at the UN share best practices, promote common understandings, and discuss scientific panel reports.
- AI standards exchange**
Establish an exchange bringing together standards organizations, companies, civil society and the scientific panel to develop a register of AI standards and definitions and identify gaps.
- Capacity development network**
Form a network linking UN-affiliated centers to build AI governance capacity of officials, provide compute access and training data to researchers and entrepreneurs, and offer educational opportunities.
- Global fund for AI**
Create an independent fund receiving public and private contributions to put a floor under the AI divide by providing enablers like compute access, best practice tools, data sets and AI model repositories to those in need.
- Global AI data framework**
Develop a framework through an inclusive process outlining principles for governing AI training data, establishing provenance and use standards, and instituting data stewardship and exchange mechanisms.
- AI office within the UN Secretariat**
Set up a light, agile office reporting to the Secretary-General to support the other proposals, engage stakeholders, advise on AI matters and promote a coherent UN voice.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

Q. Consider the following:

1. Copper	2. Cobalt
3. Nickel	4. Lithium

How many of the above are the Critical Energy Transition Minerals?

(a) Only one	(b) Only two
(c) Only three	(d) All four

(d) Answer

GOVERNING AI FOR HUMANITY REPORT

Why in News: The United Nations released its final report “Governing AI for Humanity” proposing seven recommendations.

Key Details

- The advisory body called for the establishment of a panel to provide impartial and reliable scientific knowledge about AI and address information asymmetries between AI labs and the rest of the world.
- Since the release of Microsoft-backed OpenAI’s ChatGPT in 2022, the use of AI has spread rapidly, raising concerns about fueling misinformation, fake news and infringement of copyrighted material.
- Only a handful of countries have created laws to govern the spread of AI tools. The European Union has been ahead of the rest by passing a comprehensive AI Act compared with the United States’ approach of voluntary compliance while China has aimed to maintain social stability and state control.

Need For Global Governance of AI

- Merging artificial intelligence (AI) and global governance, global AI governance focuses on defining terms to deepen understanding, promote collaboration and create informed policies.
- It emphasizes multi-stakeholder and multi-level cooperation in managing AI’s global impacts.
- AI’s societal impacts are broad, offering exceptional benefits while carrying unintended risks.
- Its rise poses geopolitical challenges, affecting transparency, privacy and power dynamics in both democratic and non-democratic states.
- Empirical and normative research is essential in forming global AI governance, guiding ethical values and legal practices for ethical data use and unbiased algorithm development.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

Q. Consider the following statements about ChatGPT:

1. It is an AI service of the Google - backed firm OpenAI.
2. It is a chatbot that generates human-like responses to text input.

3. It uses the latest advances in natural language processing and machine learning to generate intelligent and engaging responses to user input.

How many statements are correct:

- (a) Only 1
- (b) Only 2
- (c) All three
- (d) None of them.

Answer (b) 2 and 3

FAST-TRACK COURTS

Why in News: The India Child Protection (ICP) organization has released a report titled 'Fast Tracking Justice'.

Key Highlights of the Report

A report released by the India Child Protection said that Fast-track special courts (FTSCs) are much more efficient than other courts in handling rape cases and those related to the Protection of Children from Sexual Offences (POCSO) Act.

- The report also said West Bengal, recorded less than 2% rate of disposal — the lowest in India — in such cases, apart from the fact that only five out of the 123 earmarked FTSCs are functioning in the State.
- The report, titled 'Fast Tracking Justice' and focusing on the role of FTSCs in reducing case backlogs, said such courts across India disposed of 83% of the cases in 2022 compared with 10% by the conventional courts.

About Fast track special courts

- The Centre launched the FTSC scheme in October 2019 following a Supreme Court directive to set up special courts for expeditious disposal of cases of rape and sexual assault on children.
- The Scheme was initially implemented for one year,
 - The Scheme has now been extended till 31.03.2026, at an outlay of Rs. 1952.23 cr. with Rs. 1207.24 cr. as Central Share to be incurred from Nirbhaya Fund.
- The funds are released on CSS pattern (60:40, 90:10) to cover the salaries of 1 Judicial Officer along with 7

support Staff and a Flexi Grant for meeting the day-to-day expenses.

- Under the FTSCs Scheme, funds are released to the States/UTs on a reimbursement basis, determined by the number of functional courts in State/UT concerned.
- The functional FTSCs include 410 exclusively for POCSO cases.
- The ICP report said the FTSCs showed "remarkable efficiency" by disposing of 52% of the 4,16,638 rape and POCSO cases taken up since the inception of the scheme. The disposal rate kept improving from 83% in 2022 to 94% in 2023.

About India Child Protection

- **Established:** 2005
- The India Child Protection (ICP) is a child rights protection organisation dedicated to combatting child sexual abuse and related crimes, including child trafficking, exploitation of children in the digital space, and child marriage.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

Q. Consider the following statements about Fast track special courts scheme:

1. The Centre launched the FTSC scheme in October 2019 following a Supreme Court directive to set up special courts for expeditious disposal of cases of rape and sexual assault on children.
2. It is a Central Sector Scheme with 100% central funding.

Which of the above statements given above is/are correct:

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Answer (a)

PERSONALITIES IN NEWS

SARAT CHANDRA BOSE

Why in News: The 135th Birth Anniversary of Sarat Chandra Bose was celebrated on 6th September 2024.

About Sarat Chandra Bose

- Sarat Chandra Bose was born to Janakinath Bose and Prabhavati Devi in Cuttack, Odisha on 6 September 1889.
- Sarat Chandra Bose, the older sibling of Netaji Subhas Chandra Bose, served as the primary sponsor and advocate for his younger brother's initiatives in the Indian independence movement.
 - In addition to this, he was actively involved with the National Congress and other political endeavours aimed at opposing the British government.
- After his early education in Cuttack and matriculation at the age of 12, he had his higher education in Kolkata.
- He completed his MA from the Calcutta University in 1909, and qualified as a lawyer in 1911.
 - Sarat Chandra who was the first in the family to go to England and qualify for the Bar (1912-1914).
 - With the legendary Nripendra Nath Sircar as his mentor, Sarat Chandra achieved great fame as a barrister with exceptional powers of advocacy and penetrating cross-examination.
- He was also elected as an Alderman multiple times in the Calcutta Corporation and a Councillor from 1930 to 1932.

**Role in India's Independence Movement**

- By the end of the 1920s, Sarat Chandra had become a front-ranking Congress leader.
- In 1928, he became a member of the Bengal Legislative Council.
- He played a prominent part in the boycott of the Simon Commission.
- Bose left his professional practice to join the Civil Disobedience Movement in 1930.
- For his involvement in this movement, Sarat Chandra Bose was imprisoned under Regulation III of 1818 for more than three years in 1932 at the Seoni and Jabalpur Jails, followed by internment at his own house in Kurseong.

- In 1931, he had openly led the defence in the Chittagong Armoury Raid Case.
- He supported and bankrolled the revolutionaries in Bangalore.
- Bose was involved with parties having socialist alignment such as the Forward Bloc, founded by his brother Subash Chandra Bose
 - Sarat Bose was also arrested after the escape of Subhas the day before he was due to join as Cabinet Minister.
- He was placed under house arrest on 11th December 1941, over British suspicion that he was colluding with Japanese forces. He was under such arrest for four years.
- "His press" referred to Forward, which had been started by 'Deshbandhu' Chittaranjan as the official mouthpiece of the Swarajya Party, later renamed New Forward, and thereafter Liberty, with Sarat Chandra as its managing director.
- Under his stewardship, the publication, as well as the Bengali daily Banglar Katha and the weekly Atmashakti, which were renamed Bangabani and Nabashakti respectively, set new standards in fearless and honest journalism.
- In 1929, he also established a news agency— Orient Press Agency. Much later, in the 1940s, he started and edited The Nation.
- Sarat Chandra Bose also envisaged India as a union of socialist republics. To popularise and propagate this idea, he published The Socialist Republican, a periodical, and a daily newspaper The Nation in 1948. He also published Mahajati, a Bengali weekly.
- He played an active part in quelling the communal riots of 1946, and strongly advised the Viceroy to disband the Muslim League ministry in Bengal, and also dismiss governor of Bengal Sir Frederick Burrows.
- He toured eastern Bengal, and while in Noakhali, discussed possible solutions to the communal problems with Mahatma Gandhi.
- In Kolkata, he also organised relief work with doctors and medical students under the Indian National Ambulance Corps (INAC).

Contribution to Constitution Making

- He also became a member of the Congress Working Committee and a minister in the interim government which had been set up.

- In 1946 itself, he opposed the cabinet mission plan, resigned from the interim government, thereafter from the Central Legislative Assembly, and finally, on January 6, 1947 from the Congress Working Committee.
- Bose was elected to the Assembly from Bengal, through a Congress ticket. However, his term in the Constituent Assembly was short-lived due to his disagreement with the Congress on partition of Bengal and Punjab.

Towards and Post Independence

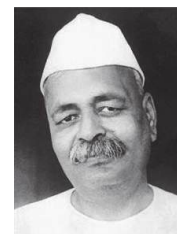
- Bose vehemently opposed the partition of Bengal and Punjab over religious lines and resigned from the Congress Working Committee on 6th January 1947.
- He started a protest campaign against Mountbatten Plan in February 1947 and strived for the formation of a United Independent Bengal.
- Sarat Chandra Bose contemplated a socialist India with a strong bond of friendship with her neighbours. He proposed that the newly independent South Asian countries form an alliance to safeguard their Independence, promote national development, and defend their neutrality.
 - Soon after India achieved her independence (i.e. dominion status) on August 15, 1947, Sarat Chandra advocated the setting up of a regional organisation with India, Pakistan, Nepal, Burma and Ceylon as its constituent members.
- He envisaged India to become a Socialist Republic and published newspapers such as The Socialist Republican, Mahajati, and The Nation to voice his opinions.
- In August 1947, Sarat Chandra Bose formed the Socialist Republican Party, after his long association with the Congress had ended in January, 1947.
- In 1949, Sarat Chandra formed the United Socialist Organisation, and sought to bring all the socialist forces of the country on a common platform.
 - He also established a Provisional Left Coordination Committee, and thereafter formed the Left Coordination Council.
- Sarat Chandra Bose's passing away on February 20, 1950.

GOVIND BALLABH PANT

Why in News: Uttar Pradesh Chief Minister Yogi Adityanath paid tributes to Govind Ballabh Pant, the first chief minister of the state, on the occasion of his 136th birth anniversary.

About Govind Ballabh Pant

- Govind Ballabh Pant was born on 10 September 1887 in Almora, Uttarakhand.
- After graduating from Muir Central College, he obtained a law degree from the School of Law, Allahabad (1909). Soon after, he started practicing law at Ranikhet (1910).
- He was inspired as a student by the movement against the partition of Bengal and went to attend the annual Congress session at Kashi in 1905.
- Pant enrolled as an advocate at the Allahabad High Court in 1909. He settled down in Nainital where he soon rose to become the leader of the Bar.
- As a young lawyer, he helped a village council in Kashipur in 1914 in challenging a law that required locals to provide free transportation to British officials.



Role in India's Independence Movement

- Pant started the Kumaon Parishad in 1916 and was elected to the All-India Congress Committee, soon becoming actively involved in Congress politics.
- He got elected to the United Provinces Legislative Council on a Swaraj Party ticket in 1923.
- When the Simon Commission came to India to study and recommend constitutional reforms in 1928, it was boycotted by almost all Indian political factions because of its all-white composition.
 - Pant participated in a protest against it in Lucknow, where the police brutally lathi-charged the protesters.
 - As a result of this attack, he was left with a permanent disability.
- Pant was elected as the President of the United Province Provincial Congress Committee in 1926 and went on to become a part of the National Working Committee in 1946.
- He was made a member of the Congress Working Committee in 1931, drawing him close to the national high command.
- In 1935, he was elected to the U. P. Legislative Council.
- In 1937, he became the Prime Minister of the United Province until all the Congress ministries resigned in 1939 to protest against India's forced involvement in the Second World War.
- He was one of several leaders preemptively arrested in 1930 for planning the Civil Disobedience Movement, and then again in 1933, 1940, and 1942.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

Q. Consider the following newspapers:

1. The Socialist Republican
2. Mahajati
3. Kesari
4. The Nation

How many of the above were published by Sarat Chandra Bose?

- (a) Only one (b) Only two
(c) All three (d) None

Answer: (c) (1, 2 and 4 only)

- Pant was the first to initiate the 'Salt Satyagraha' campaign, and the 'Quit India' Movement (1942) in Almora.

Contribution to Constitution Making

- Pant was elected to the Constituent Assembly from United Province. In the Assembly, he spoke on separate electorates, citizenship, the right to property, and federalism.

Post Independence

- Pant was elected as the Deputy Speaker of the United Provinces Legislature on 4 January 1951.
- He was later elected as the Chairman of the Rules of Procedure Committee of the House and served on all major committees of the Legislative Assembly.
- Pant was the first Chief Minister of Uttar Pradesh, leading the state for almost a decade up till 1955.
- He then went on to serve as the Home Minister in the Nehru Cabinet from 1955 until his death in 1961.
- He received India's highest civilian honour, the Bharat Ratna, in 1957. He passed away on 18 May 1957.

SHYAMLAL GUPTA

Why in News: 128th Birth Anniversary of Shyamlal Gupta.

About Shyamlal Gupta

- His pen name – Parshad. Shyamlal Gupta was born in Narwal, Kanpur on 9th September 1896 to Kaushalya Devi Visheshwar Prasad.
- He was a staunch believer of Ramayana and at the age of 15, he composed verses like Savaiya, Ghanakshari, Harigeetika and many more.
- He actively participated in the Indian freedom struggle.
- Like the other freedom fighters of that time, Gupta was also arrested by the British government in 1921, but he continued to work towards the freedom of India after being released. Later, he was arrested again in 1930, 1942 and 1944. He was held as a political prisoner eight times in six years.
- Gupta remained the President of the Fatehpur District Congress Committee for 19 years. During this time he led main operations like 'Salt Satyagraha' and 'Quit India Movement'.
- As a personal ritual, he did not use any footwear or umbrella until India got independence.
- He established and operated Dosar Vaish Inter College and Orphanage, Girls School, Ganesh Vidyapeeth, Ganesh Sevashram, Dosar Vaish Mahasabha and Vaish Patra Samiti.
- He actively contributed to women's education, dowry protest and widow remarriage.



- He started editing the publication of a monthly letter named 'Sachiv'.
- He penned the famous patriotic song - **Vijayi vishwa tiranga pyara, Jhanda Uncha rahe hamara.**
 - Shyamlal Gupta was imprisoned and fined Rs 500 for composing the "Jhanda" song. The song became immensely popular, and among several patriotic songs written at that time, it was titled – **Jhanda Geet.**
 - Netaji Subhash Chandra Bose, as president of the Haripura session of the Congress in 1938, accepted it as the flag song.
 - This song was used in the movie "Azaadi Ki Raah Par" in 1948 that filled the audience with a sense of nationalism and pride.
- In 1973, he was felicitated with Padma Shri. At the age of 81, Shyamlal Gupta passed away on the night of 10 August 1977.
- After his death, many memorials were built for him in Kanpur and Narwal.
 - The girls' school established by him in Narwal was named 'Padmashree Shyamlal Gupta', and the Shyamlal Gupta library was established in Phulbagh, Kanpur.
- His life-size statue was installed at Phoolbagh on 10 August 1994. It was unveiled on his 99th birthday.
- On March 4, 1997, two decades after his death, Shankar Dayal Sharma, then-President of India, issued a postage stamp in his honour.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

- Q. The famous patriotic song "Vijayi vishwa tiranga pyara, Jhanda Uncha rahe hamara" was composed by
- (a) Jadulal Narandas
 - (b) Prabhudas Lallubhjaj Thakkar
 - (c) Rabindranath Tagore
 - (d) Shyamlal Gupta

Answer: (d)

EV RAMASAMY NAICKER

Why in News: Rationalist social reformer EV Ramasamy Naicker was remembered on the occasion of his 146th birth anniversary.

About EV Ramasamy Naicker

- Born in 1879, Erode Venkatappa Ramasamy is remembered for the Self Respect Movement to redeem the identity and self-respect of Tamils.



- He envisaged a Dravida homeland of Dravida Nadu, and launched a political party, Dravidar Kazhagam (DK).
- He started his political career as a Congress worker in his hometown Erode.
- After failing to bend the Congress to his view, Periyar resigned from the party in 1925, and associated himself with the Justice Party and the Self Respect Movement, which opposed the dominance of Brahmins in social life, especially the bureaucracy.
- His fame spread beyond the Tamil region during the Vaikom Satyagraha of 1924, a mass movement to demand that lower caste persons be given the right to use a public path in front of the famous Vaikom temple. He would be referred to as Vaikom Veerar (Hero of Vaikom).
- During the 1920s and 30s, he combined social and political reform, and challenged the conservatism of the Congress and the mainstream national movement in the Tamil region.
- In the 1930s, when the Congress ministry imposed Hindi, he drew a parallel with the Aryanisation process, and claimed it was an attack on Tamil identity and self-respect.
- He reconstructed the Tamil identity as an egalitarian ideal that was originally unpolluted by the caste system, and counterposed it against the Indian identity championed by the Congress.
- Under him, the Dravidian Movement became a struggle against caste and an assertion of Tamil national identity.
- In the 1940s, Periyar launched Dravidar Kazhagam, which espoused an independent Dravida Nadu comprising Tamil, Malayalam, Telugu, and Kannada speakers.
 - The Dravidian linguistic family was the foundation on which he based his idea of a Dravida national identity.
- Periyar died in 1973 at the age of 94.

Legacy of EV Ramasamy Naicker

- He is revered by his followers as Periyar.
- For the average Tamil, Periyar today is an ideology. He stands for a politics that foregrounded social equality, self-respect, and linguistic pride.
- As a social reformer, he focused on social, cultural and gender inequalities, and his reform agenda questioned matters of faith, gender and tradition.
- The Self Respect Movement he led promoted weddings without rituals, and sanctioned property as well as divorce rights for women.
 - He appealed to people to give up the caste suffix in their names, and to not mention caste.
 - He instituted inter-dining with food cooked by Dalits in public conferences in the 1930s.
- Over the years, Periyar has transcended the political divide as well as the faultlines of religion and caste, and come to be revered as Thanthai Periyar, the father figure of modern Tamil Nadu.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

- Q. The political party named “Dravidar Kazhagam” (DK) was launched by:
- Govind Ballabh Pant
 - Sir Mokshagundam Visvesvaraya
 - EV Ramasamy Naicker
 - S. P. Ayyaswamy Mudaliar.

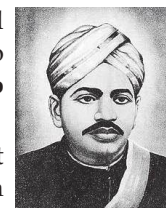
Answer: (c)

VALLINAYAGAM OLAGANATHAN CHIDAMBARAM PILLAI

Why in News: 152nd Birth Anniversary of V.O. Chidambaram Pillai.

About Vallinayagam Olaganathan Chidambaram Pillai

- V.O. Chidambaram Pillai was called ‘Kappalottiya Tamilar’ (the Tamilian who ran the ship) as he was the **first Indian to run a Swadeshi Ship**.
- After becoming an Advocate he left the profession and joined the freedom struggle.
- From 1892 Chidambaram was influenced by Lokamanya Tilak, and became his disciple. Along with Subramanya Siva and Subramanya Bharathi, he inspired the people to revolt against the Britishers.
- He entered politics in 1905 following the partition of Bengal. Towards the end of 1905, he visited Madras and was drawn closer to the Swadeshi Movement initiated by Bal Gangadhar Tilak and Lala Lajpat Rai.
- He was drawn towards Ramakrishna Mission and came into contact with Subramania Bharati and the Mandayam family.
- By 1906, VOC won the support of merchants and industrialists in Turicorin and Tirunelveli for the idea of establishing a Swadeshi merchant shipping outfit by the name of the **Swadeshi Steam Navigation Company (SSNCo)**.
- In response to the British India Steam Navigation Company’s trade monopoly, Chidambaram started the first Indian-owned shipping company.
 - Realizing the need for the Swadeshi Shipping Company to own its own vessels, Chidambaram travelled around India selling shares in the company to raise capital.
- He and Siva were aided in their efforts by a number of



Tirunelveli-based lawyers, who formed an organisation called the Swadeshi Sangam, or 'National Volunteers'.

- The Court imposed a sentence of two life imprisonments (in effect 40 years). The sentence was perhaps a reflection of the fear that the British had for VOC and the need to contain the rebellion and secure that others would not follow in Chidambaram Pillai's footsteps.
- Aurobindo Ghosh acclaimed VOC in *Bande Mataram* newspaper.
- The greatness of VOC is that whoever comes in his contact would become a patriot. He has inspired hundreds of people, particularly very ordinary people like cobblers, farmers, barbers etc.
- He was also an erudite scholar. He wrote a commentary on the *Thirukural* and compiled ancient works of Tamil grammar, *Tholkappiam*.

EXPECTED QUESTION FOR UPSC

Prelims MCQ

Q. What significant role did Vallinayagam Olganathan Chidambaram Pillai play in the Swadeshi Movement?

- (a) He founded the first Indian-owned Swadeshi Shipping Company.
- (b) He led a revolution in the textile industry.
- (c) He established a Swadeshi bank for Indian merchants.
- (d) He started a newspaper promoting Swadeshi ideals.

Answer: (a)

SIR MOKSHAGUNDAM VISVESVARAYA

Why in News: September 15 is marked as the birthday of Sir Mokshagundam Visvesvaraya credited for his role as a civil engineer and administrator in colonial India.

Sir Mokshagundam Visvesvaraya (1861-1962)

- Born on September 15, 1861, in the Muddenahalli village of Karnataka, Visvesvaraya completed his school education in his hometown and later on went to study Bachelor of Arts at the University of Madras.
- He then pursued a diploma in civil engineering at the College of Science in Pune. Having played a role in major public works projects across the nation, he later served as the 19th Dewan of Mysore and wrote two books on the Indian economy.
- On November 15, 1909, he joined the Mysore service as Chief Engineer, ultimately assuming the position of the 19th Dewan of Mysore.



- After taking voluntary retirement, he presided as chairman or became a member of various committees including the Bombay Technical and Industrial Education Committee, Bombay University Committee for Promoting Chemical Industries and the Cauvery Canal Committee.

M Visvesvaraya's Significant Works

- He was responsible for significant engineering projects in India, including the **Krishna Raja Sagara dam** in Mandya, which helped convert nearby wasteland into fertile land and became the primary source of drinking water for many neighbouring cities.
- Some of his significant works include the introduction of the **block system** of irrigation in the Deccan canals in 1899
- He was appointed a Companion of the Order of the Indian Empire (CIE) in recognition of his achievements and contribution to Indian society.
- Beyond his astonishing achievements in engineering, Sir M. Visvesvaraya is credited for his extraordinary work in accelerating industrialisation and education in India.
- His books, **Reconstructing India** and **Planned Economy of India** were published in 1920 and 1934, respectively.
- Visvesvaraya was instrumental in the setting up of the University of Mysore in July 1916, as he was the Dewan of Mysore at the time.
- He is considered as the father of engineering in India.
- He received the Indian Republic's highest honour, the Bharat Ratna, in 1955.
- Notable projects
 - Hyderabad City flood-protection scheme
 - The Krishna Raja Sagara (KRS) lake and dam project

PRELIMS SPECIAL

National Engineers Day

- National Engineer's Day is celebrated on September 15 every year across the country to mark the birth anniversary of M Visvesvaraya.
- In 1968, the Government of India declared Sir M Visvesvaraya's birth anniversary as Engineers' Day. Since then, this day has been marked to recognise and acknowledge all engineers who have contributed and still do so to build a modern and developed India.
- Engineers' Day celebrates the dedication, creativity and achievements of engineers in society. Engineers play an important role in solving complicated problems, advancing technology and raising the standard of living. The day is a reminder of the importance of engineering in the growth and development of the country.
- It also encourages current and future generations to push their boundaries. Various events, seminars, lectures and workshops are also organised on this day to honour the engineers.

DR. SARVEPALLI RADHAKRISHNAN

Why in News: Recently India celebrated Teacher's day on 5th September.

About Dr Sarvepalli Radhakrishnan

- Sarvepalli Radhakrishnan was an Indian politician, philosopher and statesman who served as the second president of India from 1962 to 1967. He previously served as the first vice president of India from 1952 to 1962.
- He was the second ambassador of India to the Soviet Union from 1949 to 1952. He was also the fourth vice-chancellor of Banaras Hindu University from 1939 to 1948 and the second vice-chancellor of Andhra University from 1931 to 1936.
- He is considered one of the most influential and distinguished 20th century scholars of comparative religion and philosophy.
 - He held the King George V Chair of Mental and Moral Science at the University of Calcutta from 1921 to 1932 and Spalding Chair of Eastern Religion and Ethics at University of Oxford from 1936 to 1952.
- He led the Indian delegation to the United Nations Educational, Scientific and Cultural Organization (UNESCO) and was elected Chairman of UNESCO's executive board in 1948.
- His philosophy was grounded in Advaita Vedanta, reinterpreting this tradition for a contemporary understanding. He defended Hinduism against what he called "uninformed Western criticism", contributing to the formation of contemporary Hindu identity.
- He has been influential in shaping the understanding of Hinduism, in both India and the west, and earned a reputation as a bridge-builder between India and the West.
- His brilliance garnered him 16 Nobel Prize nominations in Literature and another 11 in Peace.
- He was awarded several high awards during his life, including a knighthood in 1931, the Bharat Ratna, the highest civilian award in India, in 1954, and honorary membership of the British Royal Order of Merit in 1963.
- He was also one of the founders of Helpage India, a non profit organisation for elderly underprivileged in India.
- He believed that "teachers should be the best minds in the country".
- Teachers' Day marks the birth anniversary of Dr Sarvepalli Radhakrishnan. The first Teachers' Day was celebrated in India on September 5, 1962, following Dr. Radhakrishnan's suggestion.



- He served as a professor at prestigious institutions like the University of Calcutta and Oxford University.
- The Theme for Teachers Day 2024 is 'Empowering Educators: Strengthening Resilience, Building Sustainability'.
- Note: World Teachers' Day is held annually on 5 October to celebrate all teachers around the globe.
 - ◆ World Teachers' Day is co-convened in partnership with the International Labour Organization (ILO), UNICEF and Education International (EI)
- He died on April 16, 1975, in Chennai, marking the end of a life dedicated to education, philosophy, and nation-building.

EXPECTED QUESTION FOR UPSC

Prelims MCQ

Q. He was an Indian politician and philosopher who served as the second President of India and the first Vice President of India. His philosophy was rooted in Advaita Vedanta. He was knighted in 1931, awarded the Bharat Ratna in 1954, and granted honorary membership in the British Royal Order of Merit in 1963. The above description refers to:

- R. Venkataraman
- Dr. Sarvepalli Radhakrishnan
- Gopal Swarup Pathak
- Varahagiri Venkata Giri

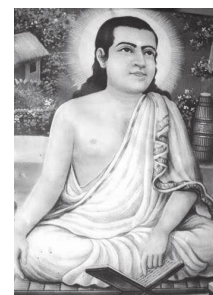
Answer: (b)

SRIMANTA SANKARADEVA

Why in News: Assam govt signs MoU with Visva Bharati University to set up Srimanta Sankaradeva chair.

Srimanta Sankaradeva

- Sankaradeva was a polymath whose contribution to the greater Assamese society is both multitudinous as well as multifaceted.
- His contributions to the cultural, spiritual and religious spheres unveiled a new age of literature, art and culture in Assamese society.
- The spiritual and religious outlook and ideals of Sankaradeva were expressed through the principles of eka-sarana-nama-dharma, the bhakti tradition which was initiated and propagated by him during the 15th century.



Sankaradeva's philosophical and religious aspects of the Neo-Vaishnava Bhakti traditions:

- The religion and bhakti tradition propagated by

Sankaradeva is known as eka-sarana-nama-dharma. It is also known as the Mahapurushiya Dharma.

- The cardinal principle of the eka-sarana-nama-dharma lay in the worship of a single deity, Vishnu, primarily in his incarnation as Krishna.
- Etymologically, the term 'sarana' implies seeking refuge, shelter or protection. Hence, the essence of the eka-sarana-nama-dharma lay in seeking refuge in one God.
- The teachings of Sankaradeva and the religious tenets propagated by him were primarily based on Bhagavata Purana.
- He emphasised the observance of only two forms of Bhakti, out of the total nine forms:
 - ◆ Sravana - Hearing the name of God
 - ◆ Kirtana - Chanting the name of God
- To propagate the philosophical and spiritual tenets of the Neo-Vaishnava Bhakti traditions, he developed certain practices and institutions. These included the establishment of cultural institutions like Namghar and Satras which formed centres for congregational prayers and emphasised the maintenance of internal and external purity.

Sankaradeva's contributions to the field of literature, art and culture:

- His literary compositions include translations, devotional literature, doctrinal treaties, devotional songs, compilations and adaptations.
- He used Brajwali language to compose his literature.
- His works:
 - ◆ Gunamala: Contains essence of Bhagvata Purana in six kirtans.
 - ◆ Harishchandra Upakhyaana
 - ◆ Rukmini Harana Kavya
 - ◆ Bhakti Pradipa
 - ◆ Bhatimas: Form of poetry innovated by him which are sung in the praise of a Guru or God.
 - ◆ Borgeets: Devotional songs
 - ◆ Ankiya Naats: Plays
 - ◆ Vrindavani Vastra: Art specimen Sankaradeva was associated with.

EXPECTED QUESTIONS FOR UPSC

Prelims MCQ

Q. Srimanta Sankaradeva was follower of:

- (a) Neo-Vaishnavism
- (b) Shaivism
- (c) Shakti traditions
- (d) Tantricism

(a) Answer

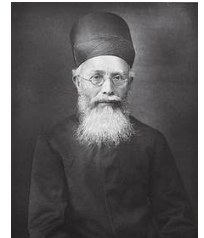
Descriptive Question

Q. Examine the role of Shankaradeva in promoting Neo-Vaishnavism in Assam during the 15th century. [150 words] [10 marks]

DADABHAI NAOROJI

Why in News: 199th Birth Anniversary of Dadabhai Naoroji.

About Dadabhai Naoroji



- He became the first Indian to be appointed Professor at Elphinstone College, Mumbai.
- On 27 June 1855 he left for London to join business as a partner in Cama & Co., the first Indian company to be established in London.
- He was the founder-editor of the journal **Rast Goftar** in Bombay in 1851.
- He founded the **London Zoroastrian Association** in 1861. He was also founding member of the **East India Association** and **London Indian Society**.
- In 1874 he was appointed the Dewan of Baroda.
- In July 1875 he was elected a Member of the Municipal Corporation, Bombay.
- In 1883, he started a newspaper called **Voice of India**.
- In August 1885 he joined the Bombay Legislative Council at the invitation of the Governor, Lord Reay.
- On 31 January 1885, when the Bombay Presidency Association came into being, he was elected as one of its Vice - Presidents.
- He became the president of Indian National Congress (INC) in following years:
 - 1886: Calcutta
 - 1893: Lahore
 - 1906: Calcutta
- In 1902 he was elected as a Member of the Liberal Party in the House of Commons, representing Central Finsbury, he was the first British Indian MP.
- His monumental treatise on the economic and political exploitation of the British in India **Poverty and Un-British Rule in India**, published in 1901 remains a gospel of Indian economic nationalism.
- The economic exploitation of the British was one the major driving forces of Indian nationalism in its formative stages and the most deserving credit for popularizing the anti-Indian economic policies of the imperialists undoubtedly goes to the 'Grand Old Man of India', Dadabhai Naoroji and his path-breaking theory of **Drain of Wealth**.
- Published Works
 - Poverty of India (1876)
 - Poverty and Un-British Rule in India (1901)

GURU PADMASAMBHAVA

Why in News: Recently, international Buddhist Confederation, in collaboration with the Nava Nalanda Mahavihara organised a two-day International Conference titled "Exploring the Life and Living Legacy of Guru Padmasambhava at Nalanda, Bihar.



Key Details

The conference highlighted Guru Padmasambhava's ability to adapt the core tenets of Buddha Dhamma to local cultures and sensibilities, using local symbols and rituals to make the teachings of Lord Buddha accessible to diverse communities.

Guru Padmasambhava

- Guru Padmasambhava, famously known Guru Rinpoche lived in the eighth century in ancient India.
 - He is considered as a pioneer and is credited with dissemination of Buddha Dhamma to numerous present-day countries that fall in the Himalayan belt region.
 - He represents a consolidation of many strands of culture ranging from Yogic and Tantric practices to meditation, art, music, dance, magic, folklore and religious teachings.
 - Guru Rinpoche is revered in numerous areas in the Himalayas for spreading the message of Dhamma and leaving behind monuments and relics of great importance.
 - He is credited with having spread the message of Buddha Dhamma to the countries and regions located in the Himalayan belt, including India, Nepal, Pakistan, Bhutan, Bangladesh and Tibet. Guru Rinpoche is also referred to as Mahadev in some local Nepali cultural narratives.
- Each of these locations carry the imprint of the Guru Padmasambhava tradition in the form of monuments, relics and folklore associated with his spiritual and religious activities.
 - He also represents a consolidation of many strands of culture ranging from Yogic and Tantric practices to meditation, art, music, dance, magic and religious teachings.

International Buddhist Confederation (IBC)

- The IBC is a Buddhist umbrella body with its base in New Delhi that serves as a common platform for Buddhists worldwide.
- It was formally registered on November 2, 2012, and as per statutory requirements under Indian law, a 10-member provisional Governing Body was formed, which has been working on IBC's formal structure.

- The Membership of the IBC is open to Buddhist Organizations - whether International, National or Regional in nature, monasteries, Viharas, Nunneries, temples, Sangha Bodies (of Monks, Nuns, Upasaka, Upasikas), institutions, and entities. *Ibc does not cater to individual membership.*
- All new members shall be granted an Associate Membership for the first three (3) years and thereafter shall be eligible to apply for Permanent Institutional Membership of the Confederation, provided the member is able to provide a meaningful contribution towards fostering the aims and objectives of the IBC.
- IBC currently has a membership comprising more than 320 organisations, both monastic and lay, in 39 countries.

Aims and Objectives

- Providing a united and common platform for all Buddhist traditions and organizations in the spirit of diversity and plurality to serve humanity and the path of Dhamma.
- Lending a united voice to all Buddhist organizations towards addressing, engaging and evolving a Buddhist response to issues of Buddhist and global concern.
- Working with national, state, local governments, global and multilateral bodies and organizations on issues of shared concern.
- Acting united against all forms of violence and propagating compassion and the concept of interdependent nature to foster true peace in the world.
- Working towards putting the Buddhist principle of welfare of all sentient beings in practice for preservation of the environment and nature conversation.
- Fostering interfaith understanding through dialogue exchange and collaboration.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

- Q. Consider the following statements regarding guru padmasambhava:
1. He was contemporary of Gautam Buddha.
 2. He is well known for spreading message of Dhamma in Himalayan belt region.
 3. He presided over the second Buddhist council held at Vaishali.

Which of the statements given above is/are correct?

- (a) 1 and 2 only (b) 2 only
 (c) 1 and 3 only (d) 1, 2 and 3

(b) Answer

ARTICLES FROM YOJANA

SEPTEMBER - 2024

PUBLIC FINANCE AND DEVELOPMENT: EVALUATION OF INDIA'S BUDGETARY PRIORITIES (2024-25)

Introduction

- The budget for 2024-25 outlines key sectors for economic growth and social welfare, focusing on nine priority areas, including agriculture, employment, human resource development, manufacturing, urban development, energy security, infrastructure, innovation, and next-generation reforms.

1. Productivity and Resilience in Agriculture

Agriculture is crucial for India, supporting 42.3% of the population and contributing 18.2% to GDP. The budget emphasizes transforming the agricultural sector for food security, income enhancement, productivity, and climate resilience.

- Agricultural Research**
 - Funding for research in public and private sectors.
 - Introduction of 109 high-yielding, climate-resilient crop varieties across 32 field and horticultural crops.
- Promotion of Natural Farming**
 - Bharatiya Prakartik Krishi Paddhati, a traditional farming approach, will be supported.
 - 1 crore farmers will be aided in transitioning to natural farming over two years.
- Self-Sufficiency in Pulses and Oilseeds**
 - Focus on reducing dependence on imports by increasing production, storage, and marketing of pulses and oilseeds.
- Vegetable Production and Supply Chains**
 - Addressing post-harvest losses through large-scale vegetable production clusters and support for farmer producer organizations (FPOs), cooperatives, and startups.
- Digital Public Infrastructure (DPI) for Agriculture**
 - Central government to partner with states for DPI implementation.
 - Enabling innovative solutions for crop planning, inputs, credit, insurance, and market intelligence.

2. Employment and Skilling

India's demographic dividend can boost economic growth

but faces challenges like skill mismatches and unemployment. The budget introduces schemes to bridge these gaps.

- Employment-linked Incentive Scheme-A (First-timers)**
 - Targets 2.1 crore youth with salaries up to ₹1 lakh per month.
 - Government to pay up to ₹15,000 in three installments directly to employees.
- Employment-linked Incentive Scheme-B (Manufacturing)**
 - Aims to create jobs in manufacturing for 30 lakh first-time employees.
- Employment-linked Incentive Scheme-C (Support to Employers)**
 - Incentivizes employment for 50 lakh people across sectors.
- Skilling**
 - New centrally-sponsored scheme with ₹60,000 crore outlay to skill 20 lakh youth over five years, upgrading 1000 ITIs.
 - Internship opportunities at top companies for 1 crore youth aged 21-24, with a monthly stipend of ₹5000.

3. Inclusive Human Resource Development and Social Justice

The budget prioritizes social justice and equitable resource distribution across various demographic groups.

- Saturation Approach for Social Justice**
 - Ensures all eligible individuals benefit from education, healthcare, and other programs, focusing on artisans, craftsmen, SC, ST, women entrepreneurs, and street vendors.
- Purvodaya**
 - Comprehensive development of eastern India through infrastructure and economic opportunities.
- Women-led Development**
 - Allocates ₹3 lakh crore to schemes benefiting women and girls.
- Pradhan Mantri Janjatiya Unnat Gram Abhiyan**
 - To benefit over 5 crore tribal people in 63,000 villages.
- Expansion of India Post Payment Bank (IPPB)**
 - Over 100 new branches will be opened in tribal regions.

- **Education, Healthcare, and Housing**
 - 12% increase in allocation for education, aiming to improve quality and expand access to digital tools.

4. Manufacturing and Services

The budget introduces initiatives to boost the MSME sector and promote manufacturing.

- **Credit Guarantee Scheme for MSMEs**
 - Government-backed loans for purchasing machinery and equipment without collateral.
- **Credit Support for MSMEs during Stress Periods**
 - A new mechanism to maintain bank credit for MSMEs facing financial difficulties.
- **Mandatory Onboarding in TReDS**
 - Turnover threshold for mandatory onboarding on the Trade Receivables Discounting System reduced from ₹500 crore to ₹250 crore.

5. Urban Development

Revitalizing cities through urban development initiatives is a key focus of the budget.

- **Cities as Growth Hubs**
 - Collaboration between central and state governments to transform cities into growth hubs through economic and transit planning.
- **Creative Development of Cities**
 - A framework for policies and market-based mechanisms for redeveloping existing urban areas.
- **Transit-Oriented Development**
 - Focus on 14 large cities with a population over 30 lakh.
- **Urban Housing**
 - ₹10 lakh crore investment to build 1 crore houses for urban poor and middle-class families over five years.
- **Water Supply and Sanitation**
 - Partnership with states and multilateral development banks for water, sewage, and waste management in 100 large cities.

6. Energy Security

The budget allocates resources to ensure a smooth transition to renewable energy and improve energy security.

- **Energy Transition**
 - ₹1.5 lakh crore allocated for renewable energy projects like solar, wind, and green hydrogen.
- **PM Surya Ghar Muft Bijli Yojana**
 - Installation of rooftop solar plants, providing 1 crore households with free electricity (up to 300 units per month).

- **Pumped Storage Policy**
 - Promotion of storage pumps for electricity.
- **R&D in Small and Modular Nuclear Reactors**
 - Support for advanced nuclear technology.
- **Advanced Ultra Super Critical (AUSC) Thermal Power Plants**
 - Fiscal support for setting up an 800 MW AUSC thermal power plant as a joint venture between NTPC and BHEL.

7. Infrastructure

Infrastructure investment has a high multiplier effect on employment and productivity.

- **Government Infrastructure Investment**
 - Central government to allocate ₹11,11,111 crore for capital expenditure.
 - States to increase capital investment under the Special Assistance Scheme.
- **Private Infrastructure Investment**
 - Promotion of private sector investment through viability gap funding, enabling policies, and financing frameworks.
- **Pradhan Mantri Gram Sadak Yojana (PMGSY) – Phase IV**
 - All-weather connectivity for an additional 25,000 rural habitations.
- **Tourism Infrastructure**
 - Development of iconic tourist destinations with central and state government collaboration.

8. Innovation, Research, and Development

The budget emphasizes R&D and innovation to drive economic growth and competitiveness.

- **Anusandhan National Research Fund**
 - Operationalizing a national research fund and creating a ₹1 lakh crore financing pool to spur private sector-led R&D.

9. Next Generation Reforms

To foster a more efficient and competitive economy, the budget outlines next-generation reforms.

- **Economic Policy Framework**
 - Defining the approach to economic development and planning the next wave of reforms.
- **Land-related Reforms**
 - Part of the 50-year interest-free loan to states will be allocated for land reforms in both rural and urban areas.
- **Foreign Direct Investment (FDI) and Overseas Investment Reforms**
 - Simplification of rules for FDI and overseas investments to attract more foreign capital and promote the use of the Indian rupee in international transactions.

FOCUS ON THE MANUFACTURING AND SERVICES SECTORS

Introduction

Manufacturing and services are key sectors driving India's economy, with the government targeting substantial growth in both areas. The budget for 2024-25 emphasizes initiatives to boost manufacturing, particularly through MSMEs, while also strengthening the services sector, which plays a dominant role in GDP and employment.

1. Manufacturing Sector

The manufacturing industry in India has been a cornerstone of economic growth, contributing 16-17% of GDP pre-pandemic. It plays a critical role in India's path to becoming a major global manufacturing hub by 2030, with the capacity to export goods worth \$1 trillion.

- **Contribution to the Economy**
 - Manufacturing accounts for 17% of India's GDP and employs over 27.3 million workers.
 - The government aims for 25% of economic output from manufacturing by 2025.
- **Key Initiatives and Policies**
 - SAMARTH Udyog Bharat 4.0: The government's advanced manufacturing initiative, promoting competitiveness in the capital goods market.
 - National Manufacturing Policy: Targets increasing manufacturing's share in GDP to 25% by 2025.
 - PLI Scheme for Manufacturing: Launched in 2022, aims to develop core manufacturing sectors to match global standards.
 - Industry 4.0: India is transitioning towards automated, process-driven manufacturing to increase efficiency and production.
- **Foreign Technical Collaborations**
 - Rise in foreign collaborations, especially in mobile phones, electronics, and food processing sectors, with the US, Germany, and Japan as key technology partners.
- **Manufacturing Competence During the Pandemic**
 - During COVID-19, India demonstrated its manufacturing capabilities by rapidly producing pharmaceuticals and vaccines, improving its global perception as a reliable manufacturing destination.
- **Attractive Destination for Foreign Investment**
 - India's streamlined regulatory processes, R&D opportunities, and ability to manufacture high-quality products have made it favorable for foreign companies.

2. Support for MSMEs (Micro, Small, and Medium Enterprises)

- The budget for 2024-25 puts a strong focus on promoting MSMEs, especially in labor-intensive manufacturing. MSMEs play a vital role in economic growth, employment generation, and industrial output.
- **Term Loans for MSMEs**
 - The government will facilitate term loans for MSMEs to purchase machinery and equipment without collateral or third-party guarantees.
- **Self-financed Guarantee Fund**
 - A guarantee fund will cover up to ₹100 crore for each applicant, although loan amounts can be larger.
- **Credit Continuity for MSMEs in Stress Periods**
 - A new mechanism will ensure credit continuity when MSMEs are in the Special Mention Account (SMA) stage, helping them avoid becoming non-performing assets (NPAs).
- **Increase in MUDRA Loan Limit**
 - The loan limit under the MUDRA scheme will increase from ₹10 lakh to ₹20 lakh for entrepreneurs who have successfully repaid previous loans under the 'Tarun' category.
- **TReDS Platform**
 - The turnover threshold for mandatory onboarding on the Trade Receivables Discounting System (TReDS) platform will be reduced from ₹500 crore to ₹250 crore, helping MSMEs unlock working capital.
- **Expansion of SIDBI**
 - The Small Industries Development Bank of India (SIDBI) will expand by opening new branches in major MSME clusters within three years.
- **Food Irradiation Units and E-commerce Export Hubs**
 - Financial support will be provided to set up 50 multi-product food irradiation units in the MSME sector.
 - E-commerce export hubs will be established in a Public-Private Partnership (PPP) model to help MSMEs and traditional artisans sell products internationally.
- **Green Manufacturing**
 - The budget encourages the adoption of eco-friendly technologies, with subsidies for industries transitioning to greener manufacturing methods.
- **Infrastructure Development**
 - Substantial investment is earmarked for industrial corridors, facilitating smoother logistics and enhancing supply chain management.

3. Services Sector

The services sector is the dominant contributor to India's GDP, accounting for significant foreign investment, exports, and large-scale employment.

ENERGY SECURITY

Introduction

Energy security is crucial for India's economic, social, and political stability, especially as the country's energy demand is expected to grow significantly. As of June 2024, 54.5% of India's power comes from thermal sources, while 45.5% is derived from non-fossil fuel sources, including 1.8% from nuclear power.

1. Definition and Importance of Energy Security

According to the International Energy Agency (IEA), energy security refers to the uninterrupted availability of energy sources at an affordable price. For India, energy security is defined as the ability to ensure a reliable, sustainable, and uninterrupted supply of energy that meets its economic, social, and political needs.

Four Key Objectives of India's Energy Policy

- Affordable access to energy for all citizens.
- Improved energy security and independence by reducing dependency on imports.
- Sustainability through clean and renewable energy initiatives.
- Economic growth driven by stable and reliable energy supply.

India currently depends heavily on imported oil, gas, and coal, which constitutes 90% of the country's commercial primary energy supply. The challenge of energy security lies in diversifying energy sources, reducing fossil fuel demand, and investing in renewable energy.

Projected Growth in Energy Demand

The Economic Survey 2023-24 predicts that India's energy needs will increase 2 to 2.5 times by 2047 to meet its growing economic aspirations. To achieve energy security, the country must invest in both domestic production and diversification of import sources, while reducing energy consumption through efficiency measures.

2. Budget 2024-25: Key Measures for Energy Security

The 2024-25 budget introduces several important measures to enhance energy security, focusing on research and development, infrastructure, and renewable energy technologies.

Major Initiatives and Allocations:

- **Collaboration on Small Modular Reactors:** The government will partner with the private sector to develop Bharat Small Modular Reactors (SMRs) and explore new nuclear technologies.
- **Energy Transition Pathways:** A policy document will outline strategies to balance employment growth with environmental sustainability.
- **Promotion of Pumped Storage Projects:** These projects

- **Contribution to the Economy**
 - Encompasses diverse industries such as trade, transport, hotels, communication, finance, insurance, real estate, business services, construction, and more.
 - The sector has high employment elasticity, meaning it has the potential to generate highly productive jobs and drive revenue.
- **Growth Drivers**
 - The sector has seen double-digit growth in recent years, supported by digital technologies and government institutional frameworks.
- **Government Initiatives**
 - Skill India Program: Aims to skill and upskill 400 million people by 2022, primarily through private sector-driven initiatives.
 - Make in India Program: While primarily focused on manufacturing, it also benefits the services sector by boosting demand for related services.

4. Union Budget 2024-25 and Strategic Measures

- **Focus on MSMEs**
 - The budget outlines a series of measures to promote and protect MSMEs, with particular emphasis on labor-intensive manufacturing, access to credit, and stress-period support.
- **Infrastructure and Green Manufacturing**
 - Investment in industrial corridors and green manufacturing technologies is designed to enhance the country's global competitiveness and drive sustainable development.
- **Services Sector Promotion**
 - The budget supports the expansion of the services sector through digital transformation, skill development, and institutional support.

5. Synergy Between Manufacturing, Services, and Startups

- The strategic measures outlined in the budget will create a dynamic economy through the synergy between the manufacturing and services sectors.
- With the growth of a robust startup ecosystem, India is positioned to achieve sustained economic growth, create employment opportunities, and enhance living standards.

6. Conclusion

The Union Budget 2024-25 marks a significant step towards realizing the vision of "Viksit Bharat" (Developed India). Through its focus on manufacturing and services, the budget aims to drive economic growth, foster job creation, and improve the standard of living across the country. By promoting MSMEs, encouraging foreign investments, and supporting green manufacturing, India is on the path to becoming a global manufacturing hub while simultaneously strengthening its services sector.

will store electricity to integrate more renewable power, addressing the variability and intermittency of renewable energy.

- **Advanced Ultra Supercritical (AUSC) Technology:** A joint venture between NTPC and BHEL will set up a 800 MW thermal plant using AUSC technology.
- **'Hard to Abate' Industries:** A roadmap will be developed to help transition these industries to a carbon market mode.
- **PM Suraj Ghar Muft Bijli Yojana:** A scheme to install rooftop solar plants for 1 crore households, offering free electricity up to 300 units per month.

Budget Allocations:

- Ministry of New and Renewable Energy (MNRE): ₹19,100 crore, marking an 86.7% increase from the previous year.
- Ministry of Power: ₹20,502 crore.
- Ministry of Coal: ₹192.58 crore.
- Ministry of Petroleum and Natural Gas: ₹15,930.26 crore.

3. Major Renewable Energy Schemes and Policies

India's commitment to renewable energy and sustainability is evident in various schemes launched to enhance energy security and reduce dependency on fossil fuels.

Key MNRE Schemes:

- **KUSUM Scheme:** Aims to increase farmers' income, promote irrigation, and reduce the agricultural sector's dependence on diesel.
- **National Green Hydrogen Mission:** Seeks to make India a global hub for the production and export of green hydrogen by 2030, supporting clean energy transition and self-sufficiency.
- **National Offshore Wind Energy Policy (2023):** Focuses on the development of offshore wind energy projects to expand India's renewable energy portfolio.
- **Pumped Storage Policy:** Enhances energy storage solutions, ensuring better integration of renewable energy into the grid.
- **Critical Mineral Mission:** Focuses on domestic production and recycling of critical minerals required for renewable technologies and electric vehicles (EVs).

4. Present Status of India's Energy Use

India's energy profile is characterized by:

1. High use of biomass in the total primary energy supply.
2. Heavy dependence on imported petroleum.
3. Significant use of domestic coal for electricity generation.

Despite heavy reliance on fossil fuels, India has made strides in renewable energy (RE). Non-fossil fuel sources account for 45.5% of the total power capacity in 2024, compared to 32% in 2014. Notably, India has surpassed its target under the Paris Agreement to generate 40% of its power from non-fossil fuel sources by 2030.

5. Policy Initiatives and Challenges

Major Policy Initiatives:

- **PM Surya Ghar Muft Bijli Yojana:** A solar energy initiative launched in February 2024 with an outlay of ₹75,021 crore, expected to add 30 GW of solar capacity and reduce 720 million tonnes of CO₂.
- **National Offshore Wind Energy Policy:** Encourages offshore wind energy projects.
- **Indian Green Hydrogen Mission:** Targets 5 million metric tonnes of green hydrogen by 2030, with incentives to boost electrolyzer manufacturing.
- **Critical Mineral Mission:** Aims to secure critical minerals for renewable energy technologies and electric vehicles by exempting customs duty on 25 key minerals, including lithium, cobalt, and rare earth elements.
- **Coal Gasification Mission:** Aims to gasify 100 million tonnes of coal by 2030, reducing reliance on imported natural gas and ammonia while lowering emissions.

Challenges:

- India faces several obstacles in achieving energy security:
- **Intermittency of Renewable Energy:** The variability of renewable sources like wind and solar poses challenges for maintaining a stable energy supply.
- **Land and Water Scarcity:** Expanding renewable energy infrastructure requires vast amounts of land and water, which are limited resources in India.
- **Dependency on Critical Minerals:** The production of renewable technologies such as solar panels and batteries relies on critical minerals like lithium and cobalt, which are geographically concentrated and subject to geopolitical tensions.
- **Solar PV Waste:** The recycling of solar photovoltaic (SPV) panels presents environmental risks due to toxic metals, as their lifespan ends after 25-30 years.

6. The Road Ahead

India's energy demand is set to rise as the country strives towards its Viksit Bharat (Developed India) goal. The transition to renewable energy must be managed carefully to avoid efficiency losses and ensure energy system stability. Expanding RE, especially through green hydrogen, offshore wind, and energy storage solutions, will be critical for India's energy security. However, addressing the challenges of land use, mineral dependency, and energy waste will be essential for long-term sustainability.

Conclusion

India's focus on energy security through diversification, renewable energy expansion, and reducing fossil fuel reliance is essential for meeting its future economic and developmental needs. The 2024-25 budget lays a strong foundation for achieving this, but continued innovation, investment, and policy measures will be required to navigate the challenges ahead. With a balanced approach, India can ensure a secure and sustainable energy future.

ARTICLES FROM KURUKSHETRA

SEPTEMBER 2024

BUDGET 2024-25: STRENGTHENING RURAL ECONOMY

Budget 2024-25: Strengthening the Rural Economy

The 2024-25 budget aims to fortify India's rural economy through focused investments in agriculture, employment, infrastructure, and welfare. By addressing the core challenges of rural development, the budget outlines a comprehensive framework to ensure equitable growth, wealth generation, and enhanced consumption in rural India.

1. Key Themes of the Budget:

- **Agricultural Transformation:** Focus on a resilient and productive agriculture sector to drive rural economic growth, increase employment, and boost rural incomes.
- **Rural Livelihoods and Infrastructure:** Significant allocations to skill development, animal husbandry, and rural infrastructure programs to enhance rural livelihoods.
- **Employment Generation:** Creating non-farm employment, particularly in rural areas, is prioritized to reduce regional disparities and support the growing workforce.
- **Health and Wellbeing:** Investments in healthcare schemes to improve access, affordability, and quality, with a strong focus on financial protection for rural populations.

2. Key Budget Allocations:

Sector	2024-25 Allocation	Increase Over 2023-24
Skill Development and Entrepreneurship	38.65% increase	
Animal Husbandry, Dairying, and Fisheries	27.10% increase	
Agriculture and Farmers' Welfare	Rs. 1.52 lakh crore	4.91% increase
Rashtriya Krishi Vikas Yojana	21.85% increase	
Pradhan Mantri Matsya Sampada Yojana	58.60% increase	

Pradhan Mantri Krishi Sinchayee Yojana	Rs. 9,339 crore	32.82% increase
MGNREGA	Rs. 86,000 crore	43.33% increase
National Rural Livelihood Mission (NRLM)	6.49% increase	
Pradhan Mantri Awas Yojana (PMAY)	Rs. 54,500 crore	70.31% increase
Pradhan Mantri Gram Sadak Yojana (PMGSY)	Rs. 19,000 crore	Rs. 2,000 crore increase
Ayushman Bharat (PMJAY)	Rs. 7,300 crore	7.35% increase

3. Key Focus Areas:

A. Agriculture and Farmers' Welfare

- **Budget Allocation:** Rs. 1.52 lakh crore
- **Key Initiatives:**
 - Extension of **Pradhan Mantri Garib Kalyan Anna Yojana** for five years, covering over 80 crore people.
 - 21.85% increase in allocation for **Rashtriya Krishi Vikas Yojana**.
 - **Pradhan Mantri Matsya Sampada Yojana** received a 58.60% hike to boost fisheries.
 - Expansion of **horticulture clusters**, introduction of **digital land registries** backed by crop surveys, and development of **109 high-yield crop varieties**.
 - Focus on **organic farming** and agricultural diversification through earmarking horticulture clusters.
 - Risk mitigation in agriculture through modernization of agro-logistics, marketing avenues, and improved insurance for crops and livestock.

B. Irrigation and Water Management

- **Pradhan Mantri Krishi Sinchayee Yojana (PMKSY):**
 - Allocation: Rs. 9,339 crore (32.82% increase)
 - Key components include:
 - ◆ Accelerated Irrigation Benefits Programme (AIBP)

- ◆ Command Area Development and Water Management (CADWM)
- ◆ Har Khet Ko Pani
- ◆ Per Drop More Crop

C. Employment Generation

- **MGNREGA:**
 - Allocation: Rs. 86,000 crore
 - Aims to create rural wage employment but needs reform to improve asset creation and project quality.
 - Studies indicate potential for enhanced community-level assets, but challenges persist due to poor planning and supervision.
- **National Rural Livelihood Mission (NRLM):**
 - NRLM focuses on self-employment and skill development through **Self Help Groups (SHGs)**.
 - **Deendayal Upadhyaya Grameen Kaushal Yojana (DDU-GKY)** and **DAY-NRLM** aim to provide financial support and promote livelihood activities.
 - Core financial interventions like the **Revolving Fund (RF)** and **Community Investment Fund (CIF)** enable SHGs to diversify economic activities and scale up livelihood ventures.

D. Rural Infrastructure Development

- **Pradhan Mantri Awas Yojana (PMAY):**
 - Budget: Rs. 54,500 crore (70.31% increase)
 - Plans to construct 3 crore additional houses across rural and urban areas.
 - Emphasis on **beneficiary participation** in the construction process to ensure the use of durable, cost-effective local technologies.
- **Pradhan Mantri Gram Sadak Yojana (PMGSY):**
 - Budget: Rs. 19,000 crore (Rs. 2,000 crore higher than 2023-24)
 - Focus on enhancing rural connectivity with a three-tier quality monitoring system.
 - Calls for better district rural road planning and prioritization of construction.

E. Health Initiatives

- **Ayushman Bharat (PMJAY):**
 - Allocation: Rs. 7,300 crore (7.35% increase)
 - World's largest government-funded health insurance scheme, benefiting over 34.7 crore citizens and covering 7.37 crore hospital admissions.
 - Aim: Improve accessibility and affordability of healthcare services in rural areas.

4. Challenges in Rural Development:

- **Low Productivity in Agriculture:** Fragmented land holdings and inadequate marketing infrastructure continue to limit agricultural performance, while the impact of climate change further exacerbates these challenges.

- **Employment Creation:** Non-farm employment opportunities remain scarce, necessitating greater investments in rural industries and skill development to absorb the growing workforce.
- **Risk Mitigation in Agriculture:** The need for enhanced risk mitigation instruments, such as insurance schemes for crops and livestock, remains critical to stabilizing rural incomes.
- **Quality Control in Rural Employment Programs:** MGNREGA's focus on quantity over quality in asset creation has hindered the long-term benefits of the program. Better project design, execution, and supervision are needed to maximize its impact.

Conclusion:

The 2024-25 budget outlines a clear strategy to strengthen India's rural economy by enhancing agricultural productivity, expanding employment opportunities, improving rural infrastructure, and ensuring better healthcare access. These measures are critical to achieving inclusive growth and transforming rural India into a hub of economic activity and sustainable development.

BLUEPRINT FOR SUSTAINED GROWTH IN RURAL INDIA

According to the Economic Survey 2022-23, 65% of India's population resides in rural areas, with agriculture being the main source of livelihood for 47% of the population. However, rural India faces significant challenges such as illiteracy, caste and gender discrimination, limited market access for farmers, a shortage of grain storage, a dominance of middlemen, and a lack of financial awareness. Compounded by poor health infrastructure, inadequate drinking water, insufficient communication systems, and unreliable electricity, these factors make sustainable rural growth a pressing need.

1. Key Challenges in Rural Development

- **Illiteracy and Social Discrimination:** Illiteracy rates are high, and issues such as caste and gender discrimination continue to hinder growth.
- **Limited Market Access:** Farmers have limited access to markets due to the prevalence of middlemen, a lack of storage facilities, and financial illiteracy.
- **Inadequate Infrastructure:** The absence of essential infrastructure like proper roads, electricity, health services, and clean drinking water further exacerbates rural challenges.
- **Dependence on Agriculture:** The majority of rural residents rely on agriculture for income, which has low profitability. Pseudo employment is prevalent, where tasks that can be done by one person are carried out by many.
- **Decreasing Agricultural Contribution:** The contribution of agriculture to GDP is declining due to increasing urbanization and industrialization.

2. Sectors for Sustainable Growth

A. Infrastructure and Connectivity

Budgetary Support for MGNREGA:

- **Provision:** Rs. 86,000 crore.
- **Purpose:** Generates employment and strengthens rural infrastructure.

Pradhan Mantri Awas Yojana (PMAY):

- **Provision:** Rs. 2.2 lakh crore over 5 years, with an additional Rs. 10 lakh crore investment.
- **Objective:** Provide affordable housing for the poor and lower middle class.

Jal Jeevan Mission:

- **Budget:** Rs. 70,000 crore.
- **Objective:** Provide clean drinking water to every household, with a target to cover maximum households in rural areas by expanding access initiated in 2019.

Pradhan Mantri Gram Sadak Yojana (PMGSY):

- **Budget:** Rs. 19,000 crore.
- **Objective:** Connect villages to urban areas through paved roads, facilitating better access to markets and services.

B. Education and Skill Development

Holistic Education (Samagra Shiksha):

- **Allocation:** Rs. 37,500 crore.
- **Objective:** Ensure holistic education for all, improving literacy and overall learning in rural areas.

Skill Development for Youth:

- **Budget:** Rs. 2 lakh crore for skilling 4.1 crore youth over five years.
- **Initiatives:** Upgrade 1,000 industrial training institutes (ITIs) into hubs of excellence. Aims to provide 1 crore internships to youth in the top 500 companies in the country, offering a stipend of Rs. 5,000 monthly.

Organized Sector Employment Support:

- **Incentives:** Rs. 15,000 will be given to youth entering organized employment for the first time, in three installments.
- **EPFO Incentives:** Government will provide EPFO-linked incentives to first-time employees and their employers for four years.

C. Healthcare Initiatives

National Health Mission (NHM):

- **Budget:** Rs. 28,000 crore.
- **Objective:** Improve access to quality healthcare in rural areas, focusing on children, women, and marginalized communities.

Ayushman Bharat (PMJAY):

- **Budget:** Rs. 7,300 crore.

- **Eligibility:** Targets Scheduled Castes (SC), Scheduled Tribes (ST), families with no earning members above 16 years, and those earning less than Rs. 2.5 lakh per annum.
- **Objective:** Provides health insurance to economically weaker sections and marginalized groups.

Saksham Anganwadi and Nutrition 2.0:

- **Budget:** Rs. 21,000 crore.
- **Objective:** Protect children, adolescents, pregnant women, and lactating mothers from malnutrition through improved nutrition distribution.

D. Agricultural and Allied Sectors

Crop Insurance Scheme:

- **Budget:** Rs. 14,600 crore.
- **Objective:** Provide financial protection to farmers against crop loss due to floods, droughts, or other natural disasters.

Subsidies for Fertilizers:

- **Budget:** Rs. 1.19 lakh crore.
- **Objective:** Provide urea subsidies to farmers to reduce the cost of crop production and increase agricultural productivity.

Pradhan Mantri Garib Kalyan Anna Yojana (PMGKAY):

- **Budget:** Rs. 2.05 lakh crore.
- **Scope:** 81.35 crore beneficiaries, with 35 kg of food grains provided per Antyodaya Anna Yojana (AAY) household and 5 kg per person for Priority Households (PHH).

Pradhan Mantri Vishwakarma Yojana:

- **Budget:** Rs. 4,800 crore.
- **Objective:** Support artisans and craftsmen in the unorganized sector, providing financial aid and helping them become economically self-reliant.

E. Environmental Sustainability and Cleanliness

Swachh Bharat Mission:

- **Budget:** Rs. 12,000 crore.
- **Objective:** Promote cleanliness and hygiene to reduce the spread of diseases and decrease healthcare expenses.

3. Government Initiatives for Economic Empowerment

Pradhan Mantri Employment Generation Programme (PMEGP):

- **Budget:** Rs. 2,300 crore.
- **Objective:** Encourage self-employment by promoting small enterprises in rural and urban areas, particularly focusing on stemming migration by creating local employment opportunities.

Internship and Employment Opportunities:

- **Scope:** Internship opportunities will be provided to 1

core youth in the top 500 companies over the next five years, with a monthly stipend of Rs. 5,000.

- **Long-Term Benefits:** This initiative will help the youth

gain practical knowledge and increase their chances of employment or self-employment.

4. Budgetary Provisions for Key Schemes

Scheme	Budget 2024-25 Allocation	Focus Area
MGNREGA	Rs. 86,000 crore	Rural employment through infrastructure projects
Pradhan Mantri Awas Yojana (PMAY)	Rs. 2.2 lakh crore (5 years)	Affordable housing for poor and lower middle class
Jal Jeevan Mission	Rs. 70,000 crore	Providing clean drinking water
National Health Mission (NHM)	Rs. 28,000 crore	Improving healthcare in rural areas
Saksham Anganwadi and Nutrition 2.0	Rs. 21,000 crore	Nutritional support for vulnerable groups
Crop Insurance Scheme	Rs. 14,600 crore	Risk mitigation for farmers
Swachh Bharat Mission	Rs. 12,000 crore	Promoting cleanliness and hygiene
Pradhan Mantri Vishwakarma Yojana	Rs. 4,800 crore	Supporting artisans in the unorganized sector
Fertilizer Subsidies	Rs. 1.19 lakh crore	Fertilizer subsidies to increase crop productivity
Pradhan Mantri Garib Kalyan Anna Yojana	Rs. 2.05 lakh crore	Food security for 81.35 crore beneficiaries

Conclusion

To continue rural development, basic amenities such as roads, electricity, healthcare, education, and clean drinking water must be made available. Efforts to eliminate gender and caste inequalities are essential for balanced growth. The government’s provisions across various sectors, including agriculture, health, employment, education, and

infrastructure, aim to ensure sustainable rural growth. The integration of schemes like MGNREGA, PMAY, Jal Jeevan Mission, National Health Mission, Swachh Bharat, Ayushman Bharat, and others provides a comprehensive framework for improving livelihoods, enhancing productivity, and ensuring long-term prosperity in rural India.

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CLIMATE CHANGE AND ITS IMPACT ON CHILDREN'S HEALTH

Why in News: According to Gates Foundation, Climate crisis pushing millions of children into hunger and disease.

Key Details

- The latest Goalkeepers Report by the Bill & Melinda Gates Foundation has warned that climate change could push an additional 40 million children to stunting and 28 million more to wasting between 2024 and 2050.
- The report, titled *A Race to Nourish a Warming World*, was released September 17, 2024 and outlined the dire consequences of climate change on global child health. Rising temperatures, extreme weather events, and changes in rainfall patterns are all contributing to food insecurity, malnutrition, and disease.
- The 2024 report highlighted how rising temperatures, erratic rainfall patterns and more frequent extreme weather events are disrupting food production systems, particularly in vulnerable regions. These disruptions are exacerbating existing food insecurity and malnutrition, leading to a vicious cycle of poverty and poor health.
- Climate change would, therefore, lead to a surge in stunting, where children failed to reach their full physical and mental potential and wasting, which caused emaciation and developmental delays.
- In 2023, 148 million children suffered from stunting and 45 million were affected by wasting, according to the World Health Organization. These numbers were expected to rise drastically unless global efforts to address malnutrition were scaled up.

Solutions

The report called for a global effort to address the root causes of hunger, including poverty, inequality and climate change. Key recommendations include:

- **Investing in climate-smart agriculture:** Supporting farmers in adopting practices that can improve yields while reducing their environmental impact.
- **Strengthening social protection systems:** Providing safety nets to vulnerable populations, particularly those affected by climate-related disasters.
- **Improving nutrition:** Ensuring that children have access to nutritious food and healthcare.
- **Accelerating progress on gender equality:** Empowering

women and girls, who play a crucial role in food production and nutrition.

PRELIMS SPECIAL

The Goalkeepers Report is an annual paper published by the foundation that focuses on global development challenges and progress made towards achieving the United Nations-mandated Sustainable Development Goals (SDG).

Way Forward

- Ultimately, the report called for a concerted global response, urging governments, donors and institutions to invest in solutions that could simultaneously address malnutrition and build resilience to climate change.

CEMENTED ARTIFICIAL REEFS

Why in News: Cemented artificial reefs are a viable solution for reviving aquatic life.

About Artificial reefs

- Artificial reefs are structures that may be submerged underwater along the coastal areas to provide conducive habitats for reef-dwelling organisms.
- **Structural functions :** The structures cannot mimic the biological functions of natural coral reefs, like nitrogen-fixing and regulation of the carbon cycle in the water. But they fulfill some structural functions, such as providing shelter and space for reproduction of many fish, prawn and crab species.
- **Shelter:** They can also break the strong seawaves to create more conducive conditions for the growth of seaweed, seagrasses and marine plants that provide food to other organisms. They aid in restoration of such ecosystems.
- **Carbon mitigation:** With proper survey and study of target areas, such experiments can help not just maintain biodiversity but also mitigate greenhouse gas emissions by facilitating the growth of carbon-absorbing marine plants, and boost livelihoods of communities living near the area.

Example of Application

- The scientists chose a part of the Chilika lake near Satapada as it is home to several fishing families. The decline in the catch of fisheries at the lake, as well as a

loss of biodiversity lead to the introduction of artificial reefs in the lake.

- The scientists took the help of fishers and other local people in Satapada in constructing and submerging the 100 structures, lined up to create an artificial reef wall 200 m long spread over an area of 0.5 sq km. They submerged the first 40 structures in September 2023 and the remaining 60 in February 2024.

- Various species have taken well to these reefs and made it their home is good news for Chilika lake

Earlier applications

- The earliest experiment was conducted by the Indian Council of Agricultural Research-Central Marine Fisheries Institute (ICAR-CMFRI) in Lakshadweep and Tuticorin. In Tamil Nadu, ICAR-CMFRI and the state government have deployed artificial reef modules in at least 207 sites.

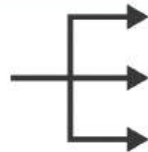
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PERFORMANCE OF AGRICULTURE SECTOR 2014–24: IMPLICATIONS FOR SHORT- AND MEDIUM-TERM STRATEGY

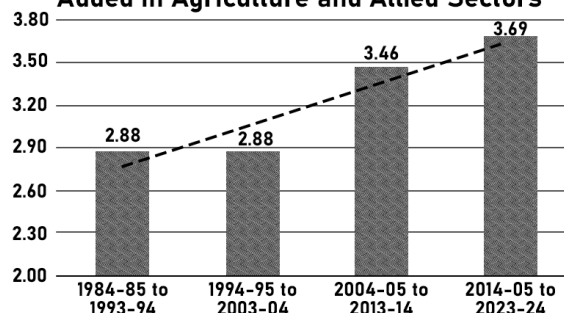
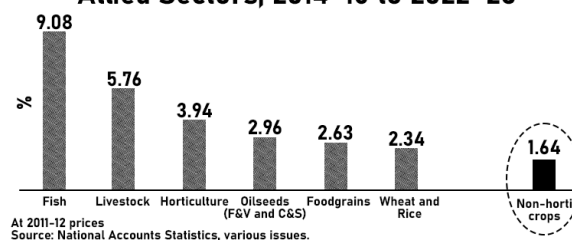
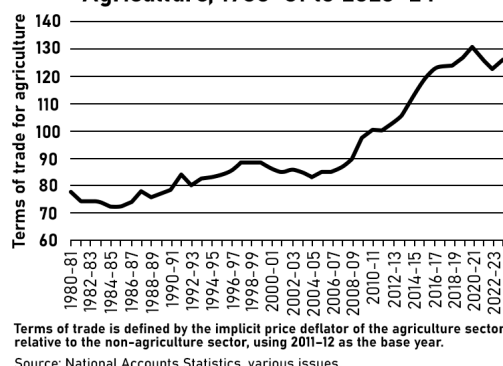
Context: India's agriculture growth has shown a steady acceleration over the last two decades, reaching historically high levels in the last 10 years. However, large variations remain in the performance of different sub-sectors and commodity groups.

Introduction

- Over the last few years, India's agriculture sector has shown its best performance in terms of output and income growth.
- Since 2011–12, agricultural commodity prices (wholesale price index) have risen faster than non-agricultural prices.
- Adjusted for price increases, agricultural income grew by 5.23% annually over the last 10 years against a growth rate of 6.24% in the non-agriculture sector and 5.80% in the economy overall. Thus, the difference in the growth rate of income in the agriculture and the non-agriculture sectors is very small.
- Despite positive growth, some experts continue to raise concerns about poor agricultural performance and rural distress.

An Empirical Analysis of the Performance of the Agriculture Sector

- **Disaggregated Growth**
- As per the definition followed in the national accounting system, the term agriculture and allied sectors includes four sub-sectors—crops, livestock, fisheries and forestry.
 - Crops and livestock together are referred to as the agriculture sector.
 - The crops sector is further classified in two major groups—horticulture and non-horticulture.
 - ◆ Non-horticulture includes cereals, pulses, oilseeds, fibre crops, sugar cane, drugs and narcotics, rubber, guar seeds, fodder and other minor and miscellaneous crops. These are also called field crops.

Trends in Annual Growth of Gross Value Added in Agriculture and Allied Sectors**Growth in Value of Output of Agriculture and Allied Sectors, 2014–15 to 2022–23****Terms of Trade for Agriculture, 1980–81 to 2023–24**

- Average annual growth rates in agriculture and allied sectors based on the value of output at 2011–12 prices.
 - Among the various sub-sectors, fisheries experienced the highest growth in the value of output, at 9.08% per annum.
 - While the output of the livestock sector grew at 5.76%, the crops sector output growth stood at just 2.34% per year.
 - Within the crops segment, horticulture saw a 3.94% growth in output, whereas the growth of non-horticulture crop output was at a meager 1.64%.

- The total output of all the segments together grew at 3.78% per annum.
- Crops covered under minimum support price (MSP) experienced less than half of the growth in the output of non-MSP crops.
- Even in the absence of price support, horticulture crops showed close to 4% growth in output.
- Livestock and fisheries, where there is no government intervention in output prices, showed very impressive and unprecedented output growth in the last decade.
 - Demand-side factors are much more effective in facilitating growth, compared to government support.
- Case of Oilseeds
 - Both the growth and the level of the domestic output of oilseeds has fallen far short of domestic demand for vegetable oils.
 - This gap is filled by imports, which have been swelling for a long time now. The failure to achieve breakthrough in the productivity of oilseeds in the country is the major reason behind this widening gap.

Crop Diversification

- Accelerated agricultural growth during the last two decades has been a result of diversification towards horticulture crops, livestock, and fisheries.
 - This diversification was driven by the rising demand for fruits, vegetables, dairy, egg, meat, and fish.
- Between 2004–05 and 2020–21, the terms of trade (TOT) for agriculture—measured by the implicit price deflator of the agriculture sector relative to the non-agriculture sector—increased from 83.5 to 130.8.
 - ToT is defined by the implicit price deflator of the agriculture sector relative to the non-agriculture sector, using 2011–12 as the base year.
- The high growth in the agriculture sector since 2004–05 has been mainly driven by rising real prices for farm produce. This factor has become more dominant after 2011–12.
- The contributory factors to the continuing shift in TOT in favour of agriculture were:
 - strong consumer demand for agricultural products
 - rising marginal cost of production
 - increasing wage rate in rural areas across the country
 - improvement in producers' margin
 - shrinking natural resource base
 - deficit in technology breakthrough.
- Increasing TOT for agriculture also translates to a rise in food inflation and real food prices.
- An important reason why high agricultural growth has not led to a downward pressure on agrifood prices could be the nature of technological change in the sector.

State-Level Growth

- Disaggregated annual growth rates in income (GVA) at the state level, between 2014–15 and 2022–23.
 - Andhra Pradesh recorded the highest growth rate in income from agriculture and allied sectors, at 8% per annum—twice the national figure.
 - Madhya Pradesh (MP) came second with an annual growth rate of 6.9%.
 - The growth rate in GVA of agriculture in Andhra Pradesh and MP is higher than that of the non-agriculture sector.
 - Telangana, Tamil Nadu, Karnataka, Chhattisgarh, and Odisha recorded more than 5% annual growth in GVA of agriculture and allied sectors.
 - Kerala is the only state where GVA declined during the period.
 - Uttarakhand also showed poor growth in agriculture income.

Performance of Horticulture and Non-horticulture Crops

- To facilitate a better assessment of the crops sector, it has been divided into horticulture (fruits, vegetables and condiments and spices) and non-horticulture (cereals, pulses, oilseeds, fodder, cotton, sugar cane).
- Growth rates in value of output in Horticulture Sector during 2014-15 to 2022-23
 - Except in Odisha and Telangana, the performance of horticulture crops was much better than that of non-horticulture crops across the country in the last decade.
 - Telangana is the only state which recorded a negative growth in the output of horticulture crops.
- At the national level, the output of non horticulture crops increased by a meager 1.64% per annum.
 - In a majority of the states, the growth rate in the output of these crops was lower than the population growth rate.
 - Across five major states, non-horticulture crops experienced a negative output growth. These include agriculturally progressive states like Haryana and Punjab, besides Himachal Pradesh, Kerala, and Uttarakhand.

Challenges Ahead

- **Stagnation in Traditional Crops:** Regions focusing on traditional crops face stagnation and higher risk due to output fluctuations.
- **Lack of Livestock Activities:** Nearly 47% of agricultural households do not pursue livestock, leading to stagnation in income.
- **Government Interference:** Crops under government price support (MSP) like wheat and rice have shown lower growth, while liberalised markets for horticulture and livestock have outperformed.

Way Forward

- **Diversification:** Farmers need to be encouraged to diversify into high-growth sectors like horticulture, livestock, and fisheries.
- **Improving Traditional Crop Growth:** States with poor crop growth must focus on improving productivity through modern technology and efficiency.
- **Targeted Interventions:** Policies should focus on high-value crops, modern technology, and diversification to sustain a growth rate above 4%.

Conclusion

To sustain growth over 4%, technology must lead the way in the agriculture sector. Consolidating gains in high-value agriculture and addressing regional disparities are key. A production plan and targeted strategies to boost traditional crop output, by promoting diversification into horticulture, livestock, and fisheries, will support higher growth and inclusive prosperity, aligning with the Viksit Bharat vision.

ROADBLOCKS TO INDIAN RAILWAYS 'MISSION 3,000 MT'

Why in News: Indian Railways has set loading targets of 3,000 million tonnes by 2027 and 3,600 MT by 2030–31, to achieve 45% of freight share by 2030–31. This article analyses the operational characteristics of Indian Railways and identifies several issues.

About Indian Railways

- **Network:** Indian Railways operates the fourth largest rail network in the world with 68,043 route kilometres (km) in 2021–22.
- **Expansion post independence:** Between 1950–51 and 2021–22, Indian Railways has increased running track length by 1.7 times, from 51,315 km to 1,02,831 km.
- **Largest Employer:** Indian Railways is among the largest employers in the world employing 1.2 million workers .
- **Change in Rail share in freight transport:** However, its continued dominance as the backbone of the economy has been waning over the years for both passenger and freight operations. Particularly, rail share in freight transport has declined steadily from 85% in 1951 to 60% in 1991, and in 2022, it accounted for less than 30% of the total freight movement.

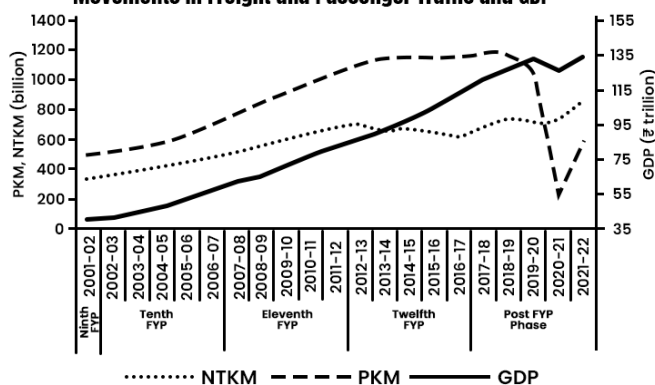
Factors limiting Indian Railways' freight business

- **Traffic Performance :**
 - The rate of growth of passenger movement (passenger kilometres [PKM]) and freight movement (net tonne-km [NTKM]) was hit during the Twelfth FYP (2012–13 to 2016–17) as depicted in.
 - The poor performance of Indian Railways during the

Twelfth Plan despite a consistently high growth rate of the economy indicates a gradual decoupling of GDP and traffic performance.

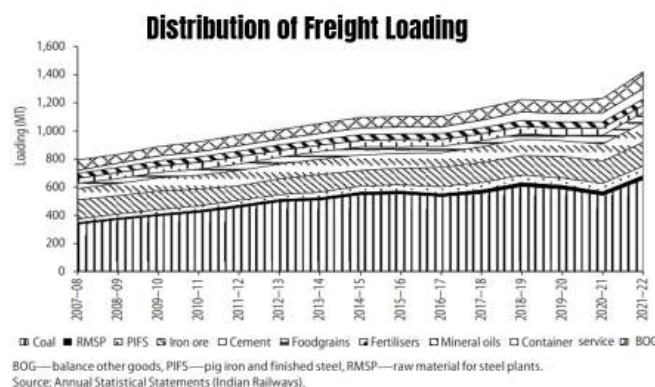
- These can largely be attributed to Indian Railways' failure to adapt to the changing needs of customers (for example, flexibility in booking tickets, quality of service, competitive tariff structure, availability of specific types of wagons, timely delivery of goods, etc) and capacity constraints to match demand.
- The freight business of railways is dependent on agricultural and industrial products (primarily bulk commodities) and a larger contribution of services to GDP has possibly led to the disconnect between GDP growth and rail freight movement.

Movements in Freight and Passenger Traffic and GDP



GDP at 2011–12 constant prices. Source: National Accounts Statistics (MoSPI), Annual Statistical Statements (Indian Railways).

Freight Traffic



- However, the average lead has been declining over the years. Historically, with increasing industrialisation, the manufacturing and consumption centres have started moving closer to each other, leading to a decline in lead.
- Further, economic liberalisation and withdrawal of uniform pricing systems in cement and steel also changed the freight movement pattern. Indian Railways has been reliant on four major bulk commodities: coal, iron ore, steel, and cement for the majority of its loading.

Financial Performance Indian Railways has been

associated with increasing overhead costs that reduce its competitiveness vis-à-vis other modes of transport.

- Increasing expenditure (with the growing burden of overhead costs) and a slowdown in revenue mobilisation are reflected through the increasing trend in its operating ratio (OR). Since 2007–08, the OR depicts a rising trend and has remained above 90%.
- Revenue fell by 22% in 2020–21 compared to 2019–20 due to the ensuing pandemic, and rebounded in 2021–22, growing by 22%. ~ The quinquennial growth in earnings from freight (in real terms) has slowed down considerably. It is observed that despite the increase in freight rates at current prices, the average freight rates (adjusted for inflation) for all commodities except coal exhibit a declining trend post 2015–16.
- **Cross subsidisation:** Indian Railways sources the majority of its revenue from freight movement as the passenger segment is subsidised under the “social service obligation” of the government. Freight earnings on average contribute to 70% of traffic revenue.
- **Unstable Revenue Growth:** Historically, Indian Railways has been sourcing a major share of its freight revenue from coal transport.
 - ~ Growing (and high) dependency on revenue and a high percentage of freight operation on account of coal shipment indicate that Indian Railways is failing to diversify its revenue sources for its freight operation. A part of it is linked to an “implicit” obligation in giving preference towards coal shipment (for thermal power stations and core sector industries) at the cost of other freight operations.

Steps to be taken to address declining freight business of Indian railways

- Tapping the long-haul containerised and other commodities shipment through
 - (i) supporting ecosystem development;
 - (ii) better and widespread network of terminal infrastructure;
 - (iii) adoption of newer container designs (for example, dwarf containers); and
 - (iv) assurance of fast delivery .
- **Elasticity of Freight Demand**
 - Price elasticity can be effectively utilised in transportation research to estimate the responses of freight demand to freight rate (price). The price elasticity of demand for a commodity or service is the percentage change in quantity resulting from a percentage change in price.

- **Need for a ‘Satisfaction Index’**
 - Railways can construct a composite “satisfaction index” (for each of the bulk commodities) to measure the performance of the railways in freight transportation.
 - This will aid Indian Railways in assessing the main reasons behind its declining freight share despite the inelastic demand for bulk commodities and regaining its lost share.

Government Initiatives

- **National rail plan (NRP):** Indian Railways has formulated the national rail plan (NRP) that envisions achieving a rail share of 45% in freight transport by 2030–31, which requires augmenting its capacity to cater to the future increase in demand for infrastructure.
 - As an interim target towards the NRP goal of achieving 3,600 million tonnes (MT) of freight loading by 2030–31, Indian Railways has envisioned freight loading of 3,000 MT by 2027.
- **Other Micro - Initiatives:** There have been several micro initiatives as well to attract more passengers to railways by **upgrading terminals, introducing premium trains, improving average speed, provisioning of improved passenger amenities**, and so on.

Way Forward

- The article suggests that the diversification of revenue sources is a sine qua non for the commercial viability of freight operations.
- Particularly, Indian Railways needs to focus on designing its services towards catering to the high value automobile movement and container segment.
- Also, Indian Railways should consider collecting customer feedback on different parameters associated with the delivery of a commodity/ consignment, to construct a composite “satisfaction index” to assess the factors impeding the growth of the modal share of Indian Railways in freight operation.

EXPECTED QUESTION FOR UPSC CSE

Descriptive Question

Q. Why has Railways’ share in freight traffic movement consistently declining over the years? What are some of the initiatives taken regarding the issue? What are the Steps to be taken to address declining freight business of Indian railways? [15 marks] [250 words]

AWARDS AND PRIZES

	Award	Winner	Details
1.	Ramon Magsaysay Award	Hayao Miyazaki	<ul style="list-style-type: none"> The Ramon Magsaysay Award, established in 1957 is one of the most prestigious honors in Asia. It was created to commemorate Ramon Magsaysay, the third president of the Philippines, who was known for his integrity in governance and public service.
2.	Olympic Order in Gold	Emmanuel Macron	<ul style="list-style-type: none"> The Olympic Order, established in 1975, is the highest award of the Olympic Movement. It is awarded for particularly distinguished contributions to the Olympic Movement, i.e. recognition of efforts worthy of merit in the cause of sport. President Emmanuel Macron of France was awarded the Olympic Order in gold. This prestigious distinction was bestowed upon him by the International Olympic Committee (IOC) in recognition of his unwavering support for the Olympic Games Paris 2024
3.	National Awards for e-Governance 2024	-	<ul style="list-style-type: none"> National Awards for e-Governance are presented every year to recognize and promote excellence in implementation of e-Governance initiatives. There will be a total 16 awards under 5 categories of Award Scheme. The National e-Governance Award, 2024 shall consist of 10 Gold Awards and 6 Silver Awards
4.	National Teachers' Awards 2024	-	<ul style="list-style-type: none"> On September 5, 2024, India celebrated Teachers' Day with a prestigious ceremony in New Delhi, where President Droupadi Murmu conferred the National Teachers' Award 2024 to 82 exceptional educators from across the country. This annual event, commemorating the birth anniversary of Dr. Sarvepalli Radhakrishnan, recognizes the pivotal role of teachers in shaping the nation's future.
5.	Swachh Vayu Survekshan Award 2024	Category 1 - Surat Category 2 - Firozabad Category 3 - Raebareli	<ul style="list-style-type: none"> Swachh Vayu Survekshan is an initiative by MoEF&CC to rank cities on the basis of implementation of activities approved under city action plan and air quality in 130 NCAP cities. Best performing NCAP cities were awarded under three categories. <ul style="list-style-type: none"> ➤ Category 1 (Population > 10 lakh) ➤ Category 2 (Population 3-10 lakh) ➤ Category 3 (Population < 3 lakh)

6.	National Florence Nightingale Awards 2024	-	<ul style="list-style-type: none"> The National Florence Nightingale Awards were established by the Ministry of Health and Family Welfare, Government of India. These awards serve a dual purpose: <ul style="list-style-type: none"> ➤ To recognize the exceptional services provided by nursing personnel across the country. ➤ To honor the legacy of Florence Nightingale, the pioneering British nurse who set the standards for modern nursing practices.
7.	Emmy Awards 2024	-	<ul style="list-style-type: none"> The 76th Primetime Emmy Awards ceremony, held at the Peacock Theater in Los Angeles on September 16, 2024, marked a significant event in the television industry. Outstanding Drama Series: Shōgun Best Lead Actor in a Drama Series: Hiroyuki Sanada Best Lead Actress in a Drama Series: Anna Sawai Best Directing for a Drama Series: Frederick E. O. Toye
8.	Rajbhasha Kirti Award	V. Srinivas	<ul style="list-style-type: none"> During Hindi Diwas Celebrations, the Secretary of Administrative Reforms and Public Grievances (DARPG), Mr. V. Srinivas, was awarded the Rajbhasha Kirti Puraskar. This award recognized DARPG's exemplary performance in promoting the use of Hindi as the Official Language under the Ministry of Home Affairs for 2023-24.
9.	FIDE 100 Awards	Male Player - Magnus Carlsen Female Player - Judit Polgar	<ul style="list-style-type: none"> The centenary of the International Chess Federation, celebrated the exceptional achievements and contributions of individuals, groups, and organizations within the chess community.
10.	Miss India Worldwide 2024	Dhruvi Patel	<ul style="list-style-type: none"> Miss India Worldwide is a beauty pageant which draws contestants from India and from among members of the Indian diaspora residing in other countries. It is conducted by India Festival Committee (IFC). It is the longest running Indian pageant outside of India.
11.	Guinness World Record	Chiranjeevi	<ul style="list-style-type: none"> Chiranjeevi has been officially recognized by Guinness World Records as the most prolific actor/dancer in the Indian film industry.
12.	India's Official Entry for Oscars 2025	Laapataa Ladies	<ul style="list-style-type: none"> Film Federation of India has officially announced that filmmaker Kiran Rao's "Laapataa Ladies" has been chosen as India's official entry in the Best Foreign Film Category for the Oscars 2025.
13.	Miss Universe India 2024	Rhea Singha	<ul style="list-style-type: none"> Rhea Singha, a 19-year-old model from Gujarat, was crowned Miss Universe India 2024 in Jaipur. She will represent India at the global Miss Universe competition in Mexico.
14.	Ekalabya Puraskar	Pratyasa Ray	<ul style="list-style-type: none"> Ekalabya Puraskar was instituted by charitable body IMPaCT (Indian Metals Public Charitable Trust (IMPaCT)) in 1993 and managed by IMFA, the leading ferro alloys producer in the country. It is now considered the most prestigious sports award in Odisha. The award is given every year to young sportspersons of Odisha in recognition of their outstanding performance in the preceding two years.

15.	Global Prestige Award at the House of Lords	Vinod Bachchan	<ul style="list-style-type: none"> Bollywood producer Vinod Bachchan received the prestigious Global Prestige Award at the House of Lords, UK Parliament, recognizing his significant contributions to the Indian film industry.
16.	ICC Lifetime Achievement Award for 2023	Deepak C Mehta	<ul style="list-style-type: none"> Industrialist Deepak C Mehta, Chairman and Managing Director of Deepak Nitrite Limited, has been conferred the prestigious Lifetime Achievement Award by the Indian Chemical Council (ICC) at the 59th ICC Annual Awards Function in Mumbai.
17.	Best Tourism Villages Competition-2024	-	<ul style="list-style-type: none"> Ministry of Tourism announced the winners of the Best Tourism Villages Competition 2024 on the occasion of World Tourism Day 2024. This award competition was the 2nd edition since its launching. The Best Tourism Villages Competition seeks to honor a village that best exemplifies a rural tourism destination. The award has been given into a total of 8 different categories.

OBITUARIES IN NEWS

	DATE	PERSON	IMPORTANT INFORMATION
1.	5 September 2024	Aruna Vasudev	<ul style="list-style-type: none"> She an eminent Indian film scholar, critic, festival curator and painter. Known by her formidable sobriquet 'Mother of Asian Cinema', Aruna was celebrated for her passionate evangelism of Indian and Asian films.
2.	12 September 2024	Sitaram Yechury	<ul style="list-style-type: none"> He was an Indian Marxist politician and was the General Secretary of the Communist Party of India (Marxist).

IMPORTANT DAYS IN SEPTEMBER

	Date	Day	Significance / Remark / Detail
1.	1 September - 7 September 2024	National Nutrition Week	<ul style="list-style-type: none"> It is an annual observance in India. This week-long event is dedicated to raising awareness about the critical role of nutrition in our lives and promoting healthy eating habits among people of all ages.
2.	2 September 2024	World Coconut Day	<ul style="list-style-type: none"> World Coconut Day was established in 2009 by the Asian and Pacific Coconut Community (APCC), an intergovernmental organisation under the United Nations Economic and Social Commission for Asia and the Pacific.
4.	5 September 2024	National Teacher's Day	<ul style="list-style-type: none"> This day honors the birth anniversary of Dr. Sarvepalli Radhakrishnan, a great teacher and the second President of India.
5.	5 September 2024	International Day of Charity	<ul style="list-style-type: none"> The International Day of Charity was established with the objective of sensitizing and mobilizing people, NGOs, and stakeholders all around the world to help others through volunteer and philanthropic activities.

6.	7 September 2024	Ganesh Chaturthi	<ul style="list-style-type: none"> Ganesh Chaturthi is a major Hindu festival celebrating the birth of Lord Ganesha, the remover of obstacles and the god of wisdom and prosperity.
7.	7 September 2024	International Vulture Awareness Day 2024	<ul style="list-style-type: none"> The first Saturday of September marks International Vulture Awareness Day (IVAD), an annual event dedicated to raising awareness about vultures. The initiative began in South Africa.
8.	7 September 2024	International Day of Police Cooperation 2024	<ul style="list-style-type: none"> The International Day of Police Cooperation was officially designated by the United Nations General Assembly through a resolution adopted on December 16, 2022. The choice of September 7 as the date for this observance is significant, as it coincides with the centenary of INTERPOL. The International Criminal Police Commission (ICPC), INTERPOL's predecessor, was established on September 7, 1923.
9.	8 September 2024	International Literacy Day	<ul style="list-style-type: none"> Since 1967, International Literacy Day (ILD) has been observed annually on September 8th across the globe. This day serves as a crucial reminder to policymakers, practitioners, and the public about the critical importance of literacy in creating a more literate, just, peaceful, and sustainable society.
10.	9 September 2024	International Day to Protect Education from Attack	<ul style="list-style-type: none"> The International Day to Protect Education from Attack was established through a landmark resolution at the United Nations General Assembly (UNGA). This initiative was spearheaded by the State of Qatar and Her Highness Sheikha Moza bint Nasser.
11.	11 September 2024	National Forest Martyrs Day	<ul style="list-style-type: none"> National Forest Martyrs Day, observed annually on September 11 in India, stands as a solemn tribute to the brave individuals who have sacrificed their lives in the protection of the nation's forests, wildlife, and biodiversity.
12.	14 September 2024	Hindi Diwas	<ul style="list-style-type: none"> Hindi Diwas is celebrated on 14th September every year to honor the adoption of Hindi as one of the official languages of India in 1949.
13.	15 September 2024	National Engineer Day	<ul style="list-style-type: none"> To honor the contributions of engineers and commemorate the birth anniversary of M. Visvesvaraya, National Engineer day was celebrated on the 15th September.
14.	15 September 2024	International Day of Democracy	<ul style="list-style-type: none"> Every year on September 15, people across the globe unite to commemorate the International Day of Democracy. Established by the United Nations General Assembly in 2007, this day serves as a powerful reminder of the importance of democratic principles and practices in our societies.
15.	16 September 2024	World Ozone Day	<ul style="list-style-type: none"> In 1994, the United Nations General Assembly proclaimed September 16 as the International Day for the Preservation of the Ozone Layer, commemorating the signing date of the Montreal Protocol in 1987.

16.	16 September 2024	International Day of Science, Technology and Innovation for the South	<ul style="list-style-type: none"> The establishment of the International Day of Science, Technology and Innovation for the South marks on 16th September a crucial step towards addressing these challenges and reaffirming the global commitment to inclusive development.
17.	17 September 2024	World Patient Safety Day	<ul style="list-style-type: none"> On September 17, 2024, the world observed World Patient Safety Day, an annual event dedicated to raising awareness about patient safety and promoting collaboration among healthcare stakeholders. Theme: Improving diagnosis for patient safety
18.	21 September 2024	International Day of Peace	<ul style="list-style-type: none"> Theme: Cultivating a Culture of Peace
19.	22 September 2024	World Rhino Day	<ul style="list-style-type: none"> World Rhino Day is a day of awareness for all five rhino species and the work being done to save them. Since 2011, World Rhino Day has been celebrated internationally on September 22nd by rhino experts and advocates around the world. On World Rhino Day, the International Rhino Foundation celebrates the five species of rhinos and all those who care about them.
20.	23 September 2024	International Day of Sign Languages	<ul style="list-style-type: none"> The UN General Assembly has proclaimed 23 September as the International Day of Sign Languages in order to raise awareness of the importance of sign language in the full realization of the human rights of people who are deaf. This celebration arises from the 2017 UN General Assembly Resolution A/RES/72/16, which recognizes 23rd September as the International Day of Sign Languages.
21.	25 September 2024	Antyodaya Day	<ul style="list-style-type: none"> Antyodaya Diwas is an annual occasion in India commemorating the birth anniversary of Indian leader Pandit Deendayal Upadhyaya. India observes Antyodaya Diwas on September 25th to honor Pandit Deen Dayal Upadhyaya.
22.	25 September 2024	World Pharmacists Day	<ul style="list-style-type: none"> World Pharmacist Day is observed annually on September 25th. The roots of World Pharmacist Day can be traced back to the founding of the International Pharmaceutical Federation (FIP) on September 25, 1912.
23.	26 September 2024	International Day for the Total Elimination of Nuclear Weapons	<ul style="list-style-type: none"> In 2013, the United Nations General Assembly (UNGA) took a significant step towards global nuclear disarmament by declaring September 26 as the International Day for the Total Elimination of Nuclear Weapons, also known as Nuclear Abolition Day. This declaration was formalized through UNGA Resolution 68/32.

24.	26 September 2024	World Maritime Day	<ul style="list-style-type: none"> World Maritime Day 2024, celebrated on 26 September 2024, embraces the theme "Navigating the Future: Safety First!" This theme underscores the International Maritime Organization's (IMO) commitment to enhancing maritime safety and security, protecting the marine environment, and ensuring that regulatory developments keep pace with technological advancements.
25.	26 September 2024	World Environmental Health Day	<ul style="list-style-type: none"> World Environmental Health Day, observed on September 26th every year, aims to raise awareness about the correlation between environmental and human health. It also highlights how addressing issues like water and air pollution, food safety, and waste management is important for public health.
26.	26 September 2024	World Contraception Day	<ul style="list-style-type: none"> Theme: A choice for all. Freedom to plan, power to choose.
27.	27 September 2024	World Tourism Day	<ul style="list-style-type: none"> World Tourism Day has been held on 27 September each year since 1980. The date marks the anniversary of the adoption of the Statutes of the Organization in 1970, paving the way for the establishment of UN Tourism five years later. Theme: Tourism and Peace
28.	28 September 2024	International Day for Universal Access to Information	<ul style="list-style-type: none"> On 17 November 2015, the United Nations Educational, Scientific and Cultural Organization (UNESCO) declared 28 September as International Day for Universal Access to Information. Considering that several civil society organizations and government bodies in the world have adopted and currently celebrate this observance, the UN General Assembly also adopted 28 September 2019 as the International Day for Universal Access to Information.
29.	28 September 2024	World Rabies Day	<ul style="list-style-type: none"> It is celebrated annually to raise awareness about rabies prevention and to highlight progress in defeating this horrifying disease. 28 September also marks the anniversary of Louis Pasteur's death, the French chemist and microbiologist, who developed the first rabies vaccine.
30.	29 September 2024	World Heart Day	<ul style="list-style-type: none"> The World Heart Day provides an opportunity for WHO and its Member States to join the global call to raise awareness about heart health and accelerate actions to prevent, detect and manage cardiovascular diseases.
31.	30 September 2024	International Translation Day	<ul style="list-style-type: none"> 30 September celebrates the feast of St. Jerome, the Bible translator, who is considered the patron saint of translators. On 24 May 2017, the General Assembly adopted resolution 71/288 on the role of language professionals in connecting nations and fostering peace, understanding and development, and declared 30 September as International Translation Day.

IMPORTANT SUMMIT/CONFERENCE IN NEWS

	Summit/Conference	Details
1.	Joint Commander's Conference of Indian Armed Forces	<ul style="list-style-type: none"> The first Joint Commander's Conference of the Armed Forces was held in Lucknow. It marks a new era in the coordination and integration of India's military forces. Theme: Sashakt aur Surakshit Bharat: Transforming Armed Forces
2.	Asia-Pacific Ministerial Conference on Civil Aviation (APMC)	<ul style="list-style-type: none"> Union Minister for Civil Aviation, Shri Kinjarapu Rammohan Naidu, inaugurated the 2nd Asia-Pacific Ministerial Conference on Civil Aviation (APMC) in New Delhi.
3.	International Conference on Green Hydrogen	<ul style="list-style-type: none"> PM Modi virtually inaugurated the 2nd International Conference on Green Hydrogen. The conference aims to position India as a leader in the global green hydrogen ecosystem by discussing recent technological advances and fostering strategic investments and partnerships to accelerate green hydrogen adoption.
4.	United Nations General Assembly (UNGA) Session	<ul style="list-style-type: none"> United Nations General Assembly provides an opportunity to member states a unique forum for multilateral discussions on international issues, this year 79th session of UNGA started on 10th September. Philemon Yang from Cameroon is the new president of UNGA this year.
5.	National Security Strategies Conference 2024	<ul style="list-style-type: none"> Union Home Minister Amit Shah inaugurated 2 days National Security Strategies Conference 2024 in New Delhi. This conference is focused on various aspects of security and its challenges.
6.	Dialogue on Montreal Protocol	<ul style="list-style-type: none"> On the 30th World Ozone Day event, the Ministry of Environment, Forest and Climate Change (MoEFCC), organized a dialogue on the theme of Montreal Protocol : Advancing Climate Action.
7.	G20 Agriculture Ministerial Meeting	<ul style="list-style-type: none"> India participated in the G20 Agriculture Ministerial Meeting in Cuiabá, Brazil. Indian delegation led by Minister of State for Agriculture and Farmers' Welfare, Ram Nath Thakur, engaged in bilateral discussions with several global partners to enhance agricultural cooperation and address market access issues.
8.	India Water Week 2024	<ul style="list-style-type: none"> Ministry of Jal Shakti organized 8th India Water Week 2024 from 17th to 20th September. Conceptualized and organized first in 2012, the Ministry of Jal Shakti, Government of India is organizing the India Water Week 2024 biannually. Seven editions of events have been organized in 2012, 2013, 2015, 2016, 2017, 2019 and 2022.
9.	EU-India Water Forum	<ul style="list-style-type: none"> India and the European Union (EU) agreed to enhance cooperation in sustainable water management at the 6th EU-India Water Forum held on the sidelines of the 8th India Water Week, in New Delhi.
10.	COP9 Bureau + Formal Meeting of the Fund Approval Committee under the UNESCO International Convention against Doping in Sport	<ul style="list-style-type: none"> India hosted the 2nd Formal Meeting of the COP9 (Conference of Parties) Bureau and the 3rd Formal Meeting of the Fund Approval Committee under the UNESCO (United Nations Educational, Scientific and Cultural Organization) International Convention against Doping in Sport. The purpose of the International Convention against Doping in Sport within the framework of the strategy and programme of activities of UNESCO in the area of physical education and sport, is to promote the prevention of and the fight against doping in sport, with a view to its elimination.

11.	World Food India 2024	<ul style="list-style-type: none"> Ministry of Food Processing Industries hosted the third edition of World Food India 2024, from September 19 to 22. The largest event for the food processing and allied sectors in India, this prestigious gathering brought together industry leaders from across the globe.
12.	Global Food Regulators Summit 2024	<ul style="list-style-type: none"> The second edition of the Global Food Regulators Summit was inaugurated on September 20, 2024, in New Delhi, marking a significant milestone in international cooperation for food safety and regulation. This high-profile event, organized alongside the 3rd World Food India 2024, brings together food regulators and experts from around the world to discuss critical issues in food safety and standards.
13.	Inclusion Conclave	<ul style="list-style-type: none"> Union Minister of Youth Affairs & Sports, Dr. Mansukh Mandaviya inaugurated the Second Edition of the Inclusion Conclave organized by National Anti-Doping Agency (NADA), India. The Conclave aims to create a more inclusive landscape in anti-doping efforts, focusing on diversity, accessibility, and the protection of athletes' rights.
14.	Quad Leaders' Summit	<ul style="list-style-type: none"> Prime Minister Narendra Modi participated in the sixth Quad Leaders' Summit in Wilmington, Delaware on 21 September 2024, hosted by the President of the United States of America, Joseph R. Biden, Prime Minister of Australia Mr. Anthony Albanese and Prime Minister of Japan Fumio Kishida also participated.

IMPORTANT TERMS IN NEWS

	Term	Meaning and Details
1.	Agent Orange	<ul style="list-style-type: none"> Agent Orange was a toxic, plant-killing chemical (herbicide) that the U.S. military used to clear foliage during the Vietnam conflict. It is linked to cancer, birth defects and other disabilities.
2.	Irradiation Technology	<ul style="list-style-type: none"> It involves exposing food, whether packaged or in bulk, to ionising radiation in a controlled environment. This method reduces the risk of foodborne illnesses by eliminating harmful microorganisms.
3.	Project Strawberry	<ul style="list-style-type: none"> The earlier code of the OpenAI Project-Q or Q star has been codenamed Project Strawberry. It uses a new and powerful large language model (LLM).
4.	Salt Pan Lands	<ul style="list-style-type: none"> These comprise parcels of low-lying lands where seawater flows in at certain times and leaves behind salt and other minerals. It falls under the Coastal Regulation Zone (CRZ) - 1B category, where no economic activity is allowed except salt extraction and natural gas exploration. Andhra Pradesh (20,716 acres) boasts the largest expanse of such land, followed by Tamil Nadu (17,095 acres) and Maharashtra (12,662 acres).
5.	Punganur Cow Breed	<ul style="list-style-type: none"> The Punganur is an indigenous cow breed native to the Punganoor, Vayalpadu, Madanapalli, and Palamaneer talukas of the Chittoor district of southern Andhra Pradesh. They are a unique dwarf breed, considered the shortest-humped cattle in the world.

SEPTEMBER - DAILY MCQs FROM THE HINDU & INDIAN EXPRESS

DAILY MCQs PRACTICE

2nd September

Q1. Consider the following statements with reference to the members of the 'National Judiciary Appointments Committee (NJAC)' according to the Constitutional amendment?

1. The President
2. The Chief Justice of India
3. The Law Minister

How many of the above is/are correct?

- (a) Only one (b) Only two
(c) All three (d) None

Q2. Consider the following statements with reference to 'The Delhi Air Pollution Plan':

1. Central Pollution Control Board (CPCB) implements and monitors the Delhi air pollution plan.
2. Green War Room is established by the Delhi government to contribute to the air pollution plan.

Which of the statements given above is/are correct?

- (a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

Q3. Consider the following statements regarding Rule 170 of the Drugs and Cosmetics Act:

1. It was introduced in 2018 to prevent misleading advertisements of AYUSH products.
2. It prohibits AYUSH drug manufacturers from advertising their products without approval and allotment of a unique identification number from the state licensing authority.

Which of the statements above is/are correct?

- (a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

Q4. Consider the following countries:

1. Congo 2. Angola
3. Botswana 4. Zambia

How many of the above countries share land border with Namibia?

- (a) Only one (b) Only two
(c) Only three (d) All four

3rd September

Q5. Consider the following with reference to the key focus area of the 'Forum on China-Africa Cooperation (FOCAC)?

1. Military training
2. Technology transfer
3. Space exploration
4. Infrastructure development

How many of the above pairs is/are *not* correct?

- (a) Only two (b) Only three
(c) All four (d) None

Q6. Consider the following statements with reference to 'The Unified Lending Interface (ULI) of Reserve Bank of India':

1. It has a common and standardized APIs for a plug and play approach.
2. It facilitates seamless and consent-based flow of digital information.
3. It can facilitate only financial data but not the other data.
4. It will eliminate the need for collateral for smaller and rural borrowers.

Which of the statements above is/are correct?

- (a) 1 and 2 only (b) 2 and 3 only
(c) 1 and 4 only (d) 3 and 4 only

Q7. Consider the following statements regarding e-Shram Portal:

1. It is developed by Ministry of Labour & Employment for creating a National Database of Unorganized Workers (NDUW).
2. It is the first-ever national database of unorganised workers including migrant workers, construction workers, gig and platform workers, etc.

Which of the statements above is/are correct?

- (a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

Q8. Which of the following African country is witnessing a civil war over the last one year within its territory between two warring factions?

- (a) Tanzania (b) Djibouti
(c) Malawi (d) Sudan

4th September

Q9. Consider the following statements with reference to 'The Global Digital Compact (GDC)':

1. It strives to address the Sustainable Development Goals (SDGs) and inclusive digital environment.
2. The G20 typically facilitates the discussions and agreements related to GDC's.

Which of the statements above is/are correct?

- (a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

Q10. Consider the following statements with reference to 'The International Criminal Court':

1. It was established under the Treaty of Rome.
2. It aims to prosecute individuals for crimes against humanity, war crimes, and genocide.
3. Human trafficking is not a crime under the jurisdiction of the International Criminal Court.

Which of the statements above is/are correct?

- (a) 1 and 2 only (b) 1 and 3 only
(c) 2 and 3 only (d) 1, 2, and 3

Q11. Which of the following Tech companies is working on a powerful AI model under the name 'Project Strawberry'?

- (a) Meta (b) Microsoft
(c) Google-Alphabet (d) None

Q12. Consider the following sectors:

1. Leather 2. Gems and Jewellery
3. Marine Products

Which of the above are labour-intensive sectors in Indian economy?

- (a) 1 only (b) 2 and 3 only
(c) 1,2 and 3 (d) None

5th September

Q13. Consider the following statements:

Statement 1: The Cauvery Water Management Authority (CWMA) replaced the Cauvery River Authority (CRA).

Statement 2: Its primary purpose is to ensure water conservation across the southern states.

Which of the following is correct in respect of the above statements?

- (a) Both the statements are correct and Statement 2 is the correct explanation for the Statement 1
(b) Both the statements are correct but Statement 2 is not the correct explanation for the Statement 1
(c) Statement 1 is correct but Statement 2 is incorrect
(d) Statement 1 is incorrect but Statement 2 is correct

Q14. Consider the following with reference to the applications of 'Advanced Chemistry Cell (ACC) Battery Storage':

1. Cooking appliances 2. Electric Vehicles (EVs)
3. Refrigerators 4. Medical Devices
5. Smartphones

Which of the above is/are correct?

- (a) Only three (b) Only four
(c) All five (d) None

Q15. He was one of India's most popular academicians. He held the prestigious King George V Chair at the Calcutta University from 1921-1932 and was the fourth vice-chancellor of Banaras Hindu University from 1939-1948. He was one of the foremost proponents of the non-dualist Advaita Vedanta tradition in the 20th century.

The above passage describes which of the following personalities?

- (a) Madan Mohan Malviya
(b) Sarvepalli Radhakrishnan
(c) Acharya Narendra Dev
(d) Syama Prasad Mookerjee

Q16. Consider the following statements regarding Chandipura vesiculovirus (CHPV):

1. It causes viral infection that can lead to encephalitis.
2. Sandflies are the only known vector of the CHPV.
3. Children below 15 years of age are more severely affected by CHPV.

Which of the statements above are correct?

- (a) 1 and 2 only (b) 2 and 3 only
(c) 1 and 3 only (d) 1, 2 and 3

6th September

Q17. Consider the following pairs:

	Country	Projects undertaken by India
1.	Tunisia	Transmission lines
2.	Ghana	Hospitals
3.	Tanzania	Railway lines

How many of the above pairs is/are correctly matched?

- (a) Only one (b) Only two
(c) All three (d) None

Q18. With reference to 'The National Food Security Act (NFSA)', consider the following statements:

1. The Ministry of Health and Family Welfare is responsible for implementing the provisions of the NFSA at the state level.

2. It provides 15 kg of wheat and 3 kg of rice.
3. Only rural households are provided food grains at subsidized rates under the NFSA.

Which of the statements given above is/are *not* correct?

- (a) 1 and 2 only (b) 1 and 3 only
(c) 2 and 3 only (d) 1, 2, and 3

Q19. Consider the following statements regarding Law Commission of India:

1. The Law Commission of India is a Constitutional body under Article 280 of the Constitution.
2. The recommendations and orders made by the Law Commission are binding on the government.
3. The reports and orders passed by the Law Commission of India cannot be challenged in the judiciary.

How many of the above statements are correct?

- (a) Only one (b) Only two
(c) All three (d) None

Q20. Consider the following statements regarding Business Reforms Action Plan (BRAP):

1. Under BRAP, all States/UTs in the country are assessed on the basis of reforms undertaken by them on designated parameters.
2. The assessment is carried out by Department for Promotion of Industry and Internal Trade (DPIIT).
3. Among the states in India, Kerala topped the rankings under BRAP for promoting ease of doing business.

How many of the above statements are correct?

- (a) Only one (b) Only two
(c) All three (d) None

7th September

Q21. What is the impact when FPIs withdraw a significant amount of capital from a country?

- (a) The stock market stabilizes
- (b) The currency strengthens
- (c) The stock market becomes volatile and the currency may depreciate
- (d) The economy experiences rapid growth

Q22. With reference to 'The Fiscal Deficit', consider the following statements:

1. A higher government debt can lead to a higher fiscal deficit.
2. Increasing the tax can help in lowering the fiscal deficit.
3. Increasing public spending can lower the fiscal deficit.

Which of the statements given above is/are correct?

- (a) 1 and 2 only (b) 1 and 3 only
(c) 2 and 3 only (d) 1, 2, and 3

Q23. With reference to Agni-IV Missile, which of the following statement(s) is/are correct?

1. It is a surface-to-surface missile.
2. It is fuelled by liquid propellant only.
3. It can deliver a one-tonne nuclear warhead about 7500 km away

Select the correct answer using the code given below:

- (a) 1 only (b) 2 and 3 only
(c) 1 and 3 only (d) 1,2 and 3

Q24. Consider the following:

1. Foreign Currency Assets 2. Silver
3. Gold 4. Oil Reserves
5. Special Drawing Rights

Which of the above components is/are constituents of Indian Foreign Exchange Reserves?

- (a) 1,2 and 3 only (b) 2,3 and 4 only
(c) 1,3 and 5 only (d) 2, 4 and 5 only

9th September

Q 25 How does the changes in Rossby waves impact the Indian monsoon?

- (a) They can cause shifts in monsoon rainfall and affect its intensity
- (b) They help to stabilize the monsoon and reduce variability
- (c) They lead to a more predictable monsoon pattern
- (d) They do not have any effect on the Indian monsoon

Q26. Recently seen in news, the term "circum-global teleconnection" (CGT) refers to?

- (a) A specific type of cyclone
- (b) A temperature change in the Arctic region
- (c) A local weather pattern in the Indian Ocean
- (d) A large-scale atmospheric wave flowing at mid-latitudes

Q27. Consider the following statements regarding New Guinea island:

1. It is second largest island in the world after Greenland.
2. It is the most populous island in the world.
3. The island is politically shared by Papua New Guinea, Brunei, and Malaysia.

How many of the statements above are correct?

- (a) Only one (b) Only two
(c) All three (d) None

Q28. Consider the following statements regarding Plastic Pollution in the world:

1. India is the World's second largest generator of plastic pollution after China.
2. Global South emits way more plastic waste emissions than Global North.

Which of the statements above is/are correct?

- (a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

10th September

Q29. What does the "India Status Report on Road Safety 2024" mainly focus on regarding India's progress?

- (a) Major advancements in road safety
- (b) Enhanced road construction techniques
- (c) Decrease in road traffic fatalities
- (d) Slow progress in achieving international road safety targets

Q30. What is the primary goal of reviving the District Agro-Meteorology Units (DAMUs) under the Gramin Krishi Mausam Sewa (GKMS) scheme?

- (a) To privatize weather advisory services
- (b) To replace traditional farming methods
- (c) To provide sub-district level agricultural advisories using weather data
- (d) To increase the cost of weather advisories

Q31. Consider the following statements regarding the elongated tortoise:

1. It is a small-sized, critically endangered tortoise species found in South and South-East Asia.
2. Recently it was spotted for the first time in India.

Which of the statements above is/are correct?

- (a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

Q32. Sakthan Thampuran is associated with which of the contemporary Indian state?

- (a) Assam (b) Tamil Nadu
- (c) Kerala (d) Karnataka

11th September

Q33. Consider the following statements:

Statement 1: Group of ministers are the ad hoc bodies which are created to assist the cabinet to address specific policy issues.

Statement 2: The recommendations of the Group of ministers are reviewed by the Supreme Court.

Which one of the following is correct in respect of the above statements?

- (a) Both statement 1 and Statement 2 are correct and statement 2 explains statement 1

- (b) Both statement 1 and Statement 2 are correct and statement 2 does not explain statement 1

- (c) Statement 1 is correct, but Statement 2 is incorrect

- (d) Statement 2 is incorrect, but Statement 1 is correct

Q34. Consider the following with reference to 'The National Green Tribunal (NGT)':

1. It was established under the Environment Protection Act, 1986.
2. It is headed by the Union Minister for Environment.
3. Its primary role is to adjudicate environmental disputes and enforce environmental laws.

How many of the above is/are correct?

- (a) Only one (b) Only two
(c) All three (d) None

Q35. Consider the following statements regarding Polaris Dawn Mission:

1. It is a testing and development mission under the Polaris Program.
2. It aims to develop new technologies for future solar missions.
3. It is jointly executed by SpaceX and NASA.

How many of the above statements are correct?

- (a) Only one (b) Only two
(c) All three (d) None

Q36. Mollem National Park is situated in:

- (a) The Himalayas (b) The Malwa Plateau
- (c) The Eastern Ghats (d) The Western Ghats

12th September

Q37. Which of the following condition is associated with presbyopia?

- (a) Near-sightedness condition
- (b) Eye infection
- (c) Farsightedness due to aging
- (d) Double vision disorder

Q38. Consider the following statements:

Statement 1: The Public Accounts Committee (PAC) was established under The Parliament Act, 1950.

Statement 2: Its primary function is to examine the accounts and financial practices of the government.

Which one of the following is correct in respect of the above statements?

- (a) Both statement 1 and Statement 2 are correct and statement 2 explains statement 1
- (b) Both statement 1 and Statement 2 are correct and statement 2 does not explain statement 1
- (c) Statement 1 is correct, but Statement 2 is incorrect
- (d) Statement 1 is incorrect, but Statement 2 is correct

- Q39. Consider the following statements regarding salt pans:
1. Salt pans are parcels of high-lying coastal land where, seawater flows in and leaves behind salts and other minerals.
 2. Gujarat has the largest expanse of salt pan land in India.

Which of the statements above is/are correct?

- (a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

- Q40. Red River flows past which of the following cities in Asia?

- (a) Shanghai (b) Hong Kong
(c) Macau (d) Hanoi

13th September

- Q41. Consider the following with reference to 'The Finance Commission':

1. It is constituted after every 5 years by the Prime Minister.
2. Economist Arvind Panagariya is the chairman of the 16th finance commission.
3. It recommends measures for improving fiscal management and discipline.
4. It facilitates equitable distribution of financial resources between the Centre and States.

How many of the above is/are correct?

- (a) Only two (b) Only three
(c) All four (d) None

- Q42. Which of the following international organization publishes the World Employment and Social Outlook report?

- (a) International Labour Organization (ILO)
(b) World Trade Organization (WTO)
(c) United Nations (UN)
(d) International Monetary Fund (IMF)

- Q43. Consider the following statements regarding Stupas:

1. A stupa is a Buddhist commemorative monument exclusively containing sacred relics of Gautam Buddha.
2. A typical stupa is a hemispherical structure, whose origins can be traced to pre-Buddhist burial mounds in India.

Which of the statements above is/are correct?

- (a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

- Q44. What is the significance of the Battle of Saragarhi fought in 1897?

- (a) It resulted in the signing of a peace treaty between the British and Afghan tribesmen, ending conflicts in the region.

- (b) It marked the start of the second wave of Indian Rebellion against British rule.
(c) It demonstrated the bravery and loyalty of Indian soldiers in the British Indian Army, contributing to their recognition of their valour.
(d) It led to the annexation of Punjab into the British Empire.

14th September

- Q45. Consider the following with reference to 'The HSBC India PMI Survey':

1. It aims to assess the performance of the manufacturing sector.
2. Its survey is conducted on a monthly basis.
3. A PMI reading above 50 generally indicate expansion in the manufacturing sector.

How many of the above is/are correct?

- (a) Only one (b) Only two
(c) All three (d) None

- Q46. Which of the following statements are correct in respect of 'The PM Gati Shakti National Master Plan':

1. Creation of only a local level infrastructure database is a key component of the plan.
2. It aims to monitor infrastructure projects using a GIS-based ERP portal.
3. Ministry of Commerce and Industry is responsible for coordinating and implementing the plan.

Select the answer using the code given below:

- (a) 1 and 2 only (b) 2 and 3 only
(c) 1 and 3 only (d) 1, 2 & 3

- Q47. Which of the following tech giants developed the reasoning AI model 'o1' with ability to 'think'?

- (a) Google (b) Microsoft
(c) Meta (d) OpenAI

- Q48. Consider the following statements regarding history of Andaman Islands:

1. The first thorough survey of the islands was carried out by Archibald Blair.
2. The islands were used as a strategic naval base by the Pandyans in the 11th century.

Which of the statements above is/are correct?

- (a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

16th September

- Q49. Consider the following with reference to 'Vande Bharat Trains':

1. Vande Bharat train is a part of Make in India Initiative.

- Rail Coach Factory (RCF), Kapurthala is responsible for the manufacturing of Vande Bharat trains.
- The first route to be served by the Vande Bharat Express was Delhi-Varanasi.
- The maximum speed that Vande Bharat trains are designed to achieve is 160 km/h.

How many of the above is/are correct?

- (a) Only one (b) Only two
(c) Only three (d) All four

Q50. Consider the following statements:

- The CBI investigates criminal cases and corruption, while the ED investigates cases on financial crimes and money laundering.
- The CBI was established under Delhi Special Police Establishment Act, while the ED came into existence under Foreign Exchange Regulation Act (FERA).

Which of the statements given above is/are correct?

- (a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

Q51. Consider the following:

- Forests 2. Grazing land
- Farm Lands 4. Lakes and ponds

How many of the above are 'Commons'?

- (a) Only one (b) Only two
(c) Only three (d) All four

Q52. If you travel by road from Imphal to Malappuram, what is the minimum number of States within India through which you can travel, including the origin and the destination?

- (a) 6 (b) 7
(c) 8 (d) 9

17th September

Q53. Consider the following with reference to 'The Centre-State relations':

- The Seventh Schedule to the Indian Constitution distributes the power between the Union and States.
- The emergency provisions are provided in Part XVIII of the Constitution.
- Article 356 imposes a duty on the Centre to protect every State from external aggression and internal disturbance.
- Article 355 allows for the imposition of the President's rule if a State's government cannot function in accordance with constitutional provisions.

How many of the above is/are correct?

- (a) Only one (b) Only two
(c) Only three (d) All four

Q54. Who among the following is an important role of the Central Drugs Standard Control Organisation (CDSCO)?

- To regulate the pricing of pharmaceuticals
- To promote new drug discoveries
- To oversee the manufacturing and marketing of drugs and medical devices in India
- To conduct clinical trials of all the drugs given license

Q55. What is the primary function of grey matter in the human brain?

- Transmitting signals between neurons
- Processing information and controlling muscle movements
- Protecting the brain from injury
- Maintaining the brain's blood supply

Q56. Typhoon Bebinca passed through and made a landfall in which of the following countries?

- North Korea, South Korea, Japan
- Indonesia, Malaysia, Brunei
- Vietnam, Japan, China
- Philippines, Japan, China

18th September

Q57. Who among the following two countries are separated by the Blue Line, a demarcation established by the United Nations?

- Lebanon and Syria (b) Israel and Jordan
- Lebanon and Israel (d) Syria and Israel

Q58. Consider the following statements:

Statement 1: The earth's tumultuous atmosphere interferes with the telescope's functioning.

Statement 2: The higher we go, the more the air is disturbed, which is why most telescopes are erected atop mountains.

Which one of the following is correct in respect of the above statements?

- Both statement 1 and Statement 2 are correct and statement 2 explains statement 1
- Both statement 1 and Statement 2 are correct and statement 2 does not explain statement 1
- Statement 1 is correct, but Statement 2 is incorrect
- Statement 1 is incorrect, but Statement 2 is correct

Q59. Consider the following statements regarding Union Territories with legislatures:

- All the Union Territories in India are administered by the President of India.

2. Same provisions apply for the Union territories of Delhi, Jammu & Kashmir and Puducherry regarding local legislatures, council of ministers and administration.

Which of the statements above is/are correct?

- (a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

Q60. Which of the following statements best describe a Windfall Tax?

- (a) A tax imposed on companies for any unexpected profits made due to sudden, external events.
- (b) A tax levied on long-term capital gains from real estate investments.
- (c) A tax imposed on startups for exceeding revenue targets.
- (d) A tax on regular corporate profits from ongoing operations.

19th September

Q61. Consider the following with reference to 'The Summit of the Future':

1. The 'New Global Deal' under discussion at the Summit of the Future seeks to address inequalities and overhaul global governance.
2. The 'Pact for the Future,' discussed at the Summit, aims to address Social and environmental challenges for future generations.
- 3 Sustainable Development Goals (SDGs) is closely aligned with the goals of the United Nations Summit of the Future.

How many of the above is/are correct?

- (a) Only one (b) Only two
(c) All three (d) None

Q62. Consider the following with reference to 'The PM-AASHA Scheme':

1. Its primary objective is to ensure remunerative prices to farmers for their produce.
2. The Price Deficiency Payment Scheme (PDPS) under PM-AASHA is applicable to all crops
3. The maximum limit of procurement under the Price Deficiency Payment Scheme (PDPS) is 100% of the marketable surplus.

How many of the above is/are correct?

- (a) Only one (b) Only two
(c) Only three (d) None

Q63. What is '2024 PT5' recently seen in news?

- (a) A newly discovered comet in the solar system.
- (b) Space mission planned by NASA to study the moon.
- (c) A distant planet in Milky Way galaxy with water and possibility of life.

- (d) A near Earth asteroid expected to temporarily enter Earth's gravitational field.

Q64. Consider the following statements regarding Indus Water Treaty:

1. It was signed between India and Pakistan in 1960, after years of negotiations arranged by the UN.
2. It gives India unrestricted use of the three Eastern Rivers i.e. Chenab, Ravi and Sutlej.
3. Under the treaty, India is obliged to let flow of waters in the Western Rivers to Pakistan.

How many of the above statements are correct?

- (a) Only one (b) Only two
(c) All three (d) None

20th September

Q65. Consider the following with reference to the legislative assembly of the States:

1. The Article 174 of the Indian constitution provides for the composition of the State Legislative Assembly.
2. The Article 170 of the Indian Constitution provides the procedure for the dissolution of the State Legislative Assembly.
3. The Delimitation Commission reviews and amends the representation of states in the State Legislative Assemblies.

How many of the above is/are correct?

- (a) Only one (b) Only two
(c) All three (d) None

Q66. Consider the following statements:

1. The Swiss Peace Summit is organised by the United Nations.
2. The primary focus of the Swiss Peace Summit is conflict resolution and peacebuilding.

Which of the statements given above is/are correct?

- (a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

Q67. Consider the following militia groups active in West Asia:

	Group Name	Country
1.	Hezbollah	Yemen
2.	Hamas	Palestine
3.	Houthi	Lebanon

Which of the pairs above is/are correctly matched?

- (a) 1 only (b) 2 only
(c) 3 only (d) 1, 2 and 3

Q68. Which of the following are key features of a 'Soft Landing' in economics?

1. Controlled Inflation
2. High Economic Growth
3. Stable Employment

Choose the correct answer from the codes below.

- (a) 1 and 2 only (b) 2 and 3 only
(c) 1 and 3 only (d) 1,2 and 3

21th September

Q69. Consider the following with reference to 'The National Achievement Survey (NAS)':

1. The main objective of the survey is to assess the learning outcomes of students.
2. The National Council of Educational Research and Training (NCERT) is responsible for conducting the survey.
3. The survey is aligned with the Sustainable Development Goal 1 (SDG 1).
4. The survey is conducted every 3 years.

How many of the above is/are correct?

- (a) Only one (b) Only two
(c) Only three (d) All four

Q70. Which of the following Indian district is located closest to the Sri Lanka?

- (a) Kanyakumari (b) Chennai
(c) Tuticorin (d) Madurai

Q71. What is the primary objective of the Vivad se Vishwas Scheme introduced by the Government of India?

- (a) Direct tax dispute resolution
(b) Alternative dispute resolution of civil cases
(c) GST settlement
(d) Corporate social responsibility

Q72. Consider the following statements regarding Starlink project:

1. It is a satellite internet constellation project developed by SpaceX to provide high-speed broadband internet globally, especially in remote areas.
2. Starlink satellites are communication satellites orbiting in a geosynchronous orbit.
3. These satellites are impeding the work of astronomers by creating radio noise.

How many of the above statements are correct?

- (a) Only one (b) Only two
(c) All three (d) None

23rd September

Q73. Consider the following statements:

1. Maritime Initiative for Training in the Indo-Pacific (MAITRI) will train BRICS partners to monitor and secure their waters, enforce their laws, and deter unlawful behaviour.
2. India will host the first MAITRI workshop in 2025.

Which of the statements given above is/are correct?

- (a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

Q74. What is the significance of vancomycin in treating infections caused by Staphylococcus aureus?

- (a) It is effective against all Gram-negative bacteria
(b) It has minimal side effects
(c) It is commonly used for resistant strains
(d) It is the only antibiotic available

Q75. Consider the following statements regarding Indo-Pacific Economic Framework for Prosperity (IPEF):

1. It was launched by QUAD members in 2022.
2. It consists of four pillars including Trade, Supply Chains, Clean Economy and Fair Economy.

Which of the statements above is/are correct?

- (a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

Q76. Consider the following statements regarding Chess Olympiad:

1. It is an annual chess tournament organised by International Chess Federation.
2. India has won the Olympiad for the second time in 2024.
3. Gaprindashvili Trophy is awarded to the team that has the best overall performance across the open and women's divisions.

How many of the above statements are correct?

- (a) Only one (b) Only two
(c) All three (d) None

24th September

Q77. Which one of the following best describes the term greenwashing?

- (a) Non-inclusion of ecological/environmental costs in the Annual Financial Statements of a country.
(b) Conveying a false impression that a company's products are eco-friendly and environmentally sound
(c) Making mandatory provisions for environmental costs in a government project/programme
(d) Ignoring the disastrous ecological consequences while undertaking infrastructure development

- Q78. Which one of the following best describes surrogate advertising?
- An advertisement that is meant to deceive customers by providing false information.
 - An advertisement promoting a competitor's product as a strategy.
 - An advertisement promoting a banned product by indirectly promoting another product under the same brand.
 - Copying or downplaying the advertisement of a rival company or product.

- Q79. Which of the following statements are correct in respect of 'The Koodiyattom':
- Koodiyattom is a traditional theatre form of Kerala.
 - It was recognized as a UNESCO Masterpiece of the Oral and Intangible Heritage of Humanity in 2001.
 - Kalamandalam or Painkulam style is not a major tradition of Koodiyattom.

Select the answer using the code given below:

- (a) 1 and 2 only (b) 2 and 3 only
(c) 1 and 3 only (d) 1, 2 and 3

- Q80. Which of the following organization is responsible for the implementation and monitoring of the Arms Trade Treaty?
- North Atlantic Treaty Organization (NATO)
 - International Criminal Court (ICC)
 - United Nations Office for Disarmament Affairs (UNODA)
 - World Trade Organization (WTO)

25th September

- Q81. Which of the following statements are correct in respect of 'The National Credit Framework (NCrF)':
- It aims to help higher education institutions balance vocational and skill training and knowledge-generating academic pursuits.
 - The NCrF gives students the flexibility to earn credits from National Cadet Corps and National Service Scheme activities.
 - The NCrF helps institutions to remain flexible but reduces their competitiveness.

Select the answer using the code given below:

- (a) 1 and 2 only (b) 2 and 3 only
(c) 1 and 3 only (d) 1, 2 and 3

- Q82. What does the Retraction Index quantify?
- The rate at which scientific papers are retracted
 - The rate of article submissions
 - The number of citations a research paper accumulates
 - The total number of articles published by an author

- Q83. Consider the following statements regarding Film Federation of India:
- It is a statutory body under the Ministry of Information Broadcasting.
 - It presents the annual National Film Awards.
 - It selects India's official entry to the Oscars every year.

How many of the above statements are correct?

- (a) Only one (b) Only two
(c) All three (d) None

- Q84. Consider the following statements regarding the planet Venus:
- It has the highest surface temperature than any other planet in the solar system.
 - It is the planet with the highest atmospheric pressure in the solar system.

Which of the statements above is/are correct?

- (a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

26th September

- Q85. Which of the following countries are strategically vulnerable due to their dependence on critical minerals from China?
- South Korea, Germany, France, Italy
 - European Union, India, Japan, United States
 - Australia, Indonesia, Mexico, Spain
 - Brazil, South Africa, Canada, Russia

- Q86. Which of the following statements are correct in respect of 'The Lokpal and Lokayukta Act':
- The Lokpal is appointed by the Prime Minister of India.
 - It provides for the establishment of a body to oversee grievances against Public Servants.
 - Prime Minister of India is covered under the jurisdiction of the Lokpal.

Select the answer using the code given below:

- (a) 1 and 2 only (b) 2 and 3 only
(c) 1 and 3 only (d) 1, 2 and 3

- Q87. Consider the following statements regarding Minerals Security Finance Network (MSFN):
- It is a European Union (EU) led initiative aiming to strengthen cooperation among members to secure supply chains for critical minerals.
 - It is a new initiative that stems from the Minerals Security Partnership (MSP), a framework established in 2022.

Which of the statements above is/are correct?

- (a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

Q88. Consider the following statements regarding the Assam Accord:

1. The Assam Accord was signed in 1985 between the Government of India and All Assam Students' Union (AASU).
2. The Accord provided for the identification and deportation of all illegal migrants who entered Assam after March 25, 1971.
3. The Accord led to the establishment of the National Register of Citizens (NRC) in Assam.

How many of the above statements are correct?

- (a) Only one (b) Only two
(c) All three (d) None

27th September

Q89. Which of the following countries in the G4 are seeking permanent seats on the UNSC?

- (a) India, Brazil, Germany, Japan
(b) Japan, South Korea, Germany, United Kingdom
(c) Brazil, South Africa, Mexico, Argentina
(d) India, Brazil, South Africa, China

Q90. Consider the following statements:

1. The CBI is responsible for the investigation and prosecution of offenses related to terrorism under Unlawful Activities (Prevention) Act (UAPA).
2. Right to freedom of speech is restricted under the UAPA for individuals accused of terrorism.

Which of the statements given above is/are correct?

- (a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

Q91. Consider the following:

1. Climate modelling
2. Computational Biology
3. Big Data Analytics
4. Finance

How many of the above are application areas of National Supercomputing Mission?

- (a) Only one (b) Only two
(c) Only three (d) All four

Q92. Consider the following statements regarding Elephanta Caves:

1. These are rock-cut caves in Maharashtra.
2. The Sadashiva sculpture is the centrepiece of the caves.

Which of the statements above is/are correct?

- (a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

28th September

Q93. Which of the following statements are correct in respect of 'The South West Monsoon':

1. The El Niño is associated with the weakening of the southwest monsoon over India.
2. The primary source of moisture for the southwest monsoon winds is the Mediterranean Sea.
3. Differential heating of land and sea is primarily responsible for the onset of the southwest monsoon in India.

Select the answer using the code given below:

- (a) 1 and 2 only (b) 2 and 3 only
(c) 1 and 3 only (d) 1, 2 and 3

Q94. Consider the following with reference to 'The Self-Respect Movement':

1. It was initiated by Mahatma Gandhi in 1925.
2. It primarily aimed to look into the issues of the working class.
3. Swarajya publication was launched to promote the ideals of the Self-Respect Movement.

How many of the above is/are *not* correct?

- (a) Only one (b) Only two
(c) All three (d) None

Q95. In the context of economy, T+0 refers to:

- (a) Automatic reversal of a transaction without execution
- (b) Settlement of a trade before the trade is executed
- (c) Settlement of a trade on the same day the trade is executed
- (d) Settlement of a trade one day after the trade is executed

Q96. Consider the following items:

1. Luxury Cars
2. Alcohol
3. Tobacco Products
4. Petrol

On how many of the above items, compensation cess under GST is levied?

- (a) Only one (b) Only two
(c) Only three (d) All four

Q97. Which of the following statements are correct in respect of 'Israel-Lebanon relations':

1. The Red line is a boundary drawn by United Nations between Israel and Lebanon.
2. The Shebaa Farms area is a disputed territory between Israel and Lebanon.
3. The Litani River, a point of contention between Israel and Lebanon is located in Lebanon.

Select the answer using the code given below:

- (a) 1 and 2 only (b) 2 and 3 only
 (c) 1 and 3 only (d) 1, 2 and 3

Q98. What does the Verified Carbon Standard (VCS) primarily certify?

- (a) Carbon offset projects
 (b) Renewable energy projects
 (c) Water conservation projects
 (d) Sustainable agriculture practices

Q99. Jamali Kamali mosque and tomb is located in:

- (a) Lucknow (b) Agra

- (c) Fatehpur Sikri (d) Delhi

Q100. Consider the following statements regarding rice varieties grown in India:

1. Pusa-44 is a high yielding variety of paddy which grows in 120-125 days.
2. Pusa-2090 is a result of the cross between Pusa-44 and CB-501, which is an early maturing Japonica rice line.

Which of the statements above is/are correct?

- (a) 1 Only (b) 2 Only
 (c) Both 1 and 2 (d) Neither 1 nor 2

Answer Key

Q1.	b (2 & 3)	Q2.	c	Q3	c	Q4	c (2, 3 & 4)
Q5.	b (1, 2 & 3)	Q6.	a	Q7	c	Q8	d
Q9.	a	Q10.	d	Q11	d	Q12	c
Q13.	c	Q14.	a (2, 4 & 5)	Q15	b	Q16	c
Q17.	a (1 only)	Q18.	d	Q19	d	Q20	c
Q21.	c	Q22.	a	Q23	a	Q24	c
Q25.	a	Q26.	d	Q27	a (1 only)	Q28	b
Q29.	d	Q30.	c	Q31	d	Q32	c
Q33.	c	Q34.	a (3 only)	Q35.	a (1 only)	Q36.	d
Q37.	c	Q38.	d	Q39.	d	Q40.	d
Q41.	b (2, 3 & 4)	Q42.	a	Q43.	b	Q44.	c
Q45.	c	Q46.	b	Q47.	d	Q48.	a
Q49.	d	Q50.	c	Q51.	c (1, 2 & 4)	Q52.	b
Q53.	b (1 & 2 only)	Q54.	c	Q55.	b	Q56.	d
Q57.	c	Q58.	c	Q59.	c	Q60.	a
Q61.	c	Q62.	a (1 only)	Q63.	d	Q64.	a (3 only)
Q65.	a (3 only)	Q66.	b	Q67.	b	Q68.	c
Q69.	c (1, 2 & 4 only)	Q70.	a	Q71.	a	Q72.	b (1 & 3 only)
Q73.	b	Q74.	c	Q75.	b	Q76.	b (2 & 3 only)
Q77.	b	Q78.	c	Q79.	a	Q80.	c
Q81.	a	Q82.	a	Q83.	a (3 only)	Q84.	c
Q85.	b	Q86.	b	Q87.	b	Q88.	c
Q89.	a	Q90.	d	Q91.	d	Q92.	c
Q93.	c	Q94.	c				
Q95.	c	Q96.	b (1 & 3 only)				
Q97.	b	Q98.	a				
Q99.	b	Q100.	d				



DAILY MAINS ANSWER WRITING PRACTICE

- Q1. How are Small Scale Industries significant in employment creation and economic growth? Discuss the challenges to the growth of small industries. (GS 3, 15 Marks, 250 Words)
- Q2. Discuss the ways to integrate skill development and vocational training in India's education system for addressing domestic employment challenges and global competitiveness. (GS 3, 10 Marks, 150 Words)
- Q3. Discuss the significance and opportunities of the INS Arighaat nuclear submarine in India's strategic defence capabilities. (GS3, 15 Marks, 250 Words)
- Q4. What are the factors that determine cropping patterns in India? Discuss the changes happening in cropping patterns in the country. (GS3, 15 Marks, 250 Words)
- Q5. What are the different types of violence faced by women in India? Discuss the legal frameworks related to women safety in India. (GS1, 15 Marks, 250 Words)
- Q6. Amid disputes around the South China Sea, how can India's Act East policy and outreach in the Indo-Pacific can influence regional stability and balance of power? (GS2, 15 Marks, 250 Words)
- Q7. Compare the global warming potential of methane with respect to carbon dioxide. What are the major sources of methane emissions and the ways to mitigate methane emissions? (GS3, 15 Marks, 250 Words)
- Q8. What role does India's historical and cultural connections with Southeast Asia play in shaping its relations in the region? India's transition from the 'Look East' to the 'Act East' policy influenced its geopolitical strategy in the region. Comment. (GS2, 15 Marks, 250 Words)
- Q9. Parliamentary committees provide the opportunity for collaboration between two chambers of Parliament and help MPs examine matters in great detail. Discuss the origin, significance and challenges of parliamentary committees in India. (GS2, 15 Marks, 250 Words)
- Q10. What is anti-microbial resistance? Discuss the reasons for increased anti-microbial resistance in India and why is it a cause of concern. (GS3, 15 Marks, 250 Words)
- Q11. Government of India has unveiled its BioE3 (Biotechnology for Economy, Environment and Employment) policy. Discuss the potential benefits of biotechnology. How can the BioE3 policy benefit India? (GS 3, 15 Marks, 250 Words)
- Q12. What are the challenges faced by the semiconductor industry in India? Discuss the role of international collaboration in the development of the semiconductor industry in India. (GS 3, 15 Marks, 250 Words)
- Q13. Discuss the origin & structure of Great Stupa at Sanchi and its influence & reach in contemporary Europe. (GS 1, 10 Marks, 150 Words)

- Q14. What is ozone layer depletion and why is the depletion to ozone layer harmful? Discuss the significance of Montreal Protocol in addressing the ozone layer depletion. (GS1, 15 Marks, 250 Words)
- Q15. What is euthanasia? Differentiate between active and passive euthanasia. Discuss the legality and implications of passive euthanasia. (GS 2, 15 Marks, 250 Words)
- Q16. In the face of technological, ecological and institutional challenges, how can agriculture become an engine for growth in India? (GS 3, 15 Marks, 250 Words)
- Q17. Discuss the evolution of Environment Impact Assessment (EIA) in India. What are the steps involved in an Environment Impact Assessment (EIA)? (GS 3, 15 Marks, 250 Words)
- Q18. What is Quantum technology and the principles of quantum mechanics? Discuss the key domains of the National Quantum Mission. (GS3, 15 Marks, 250 Words)
- Q19. Bal Gangadhar Tilak made the Ganesh Utsav into a platform for nationalist sentiments during the Indian freedom struggle. Comment. (GS 1, 10 Marks, 150 Words)
- Q20. Describe the Indus Waters Treaty (IWT). Why does India want to renegotiate the Indus Waters Treaty? (GS 1 & 2; 10 Marks; 150 Words)
- Q21. Discuss the provisions of Article 239AA of the Indian Constitution. How are the powers of Delhi government limited compared to other state governments? (GS 2; 15 Marks; 250 Words)
- Q22. What are climate finance mechanisms under United Nations Framework Convention on Climate Change (UNFCCC). Discuss the significance of climate finance for climate action? (GS 3; 15 marks; 250 Words)
- Q23. What are the initiatives taken by the government of India to combat anti-microbial resistance (AMR)? Discuss the steps that needs to be taken to address the challenge of AMR in India. (GS 3, 15 Marks, 250 Words)
- Q24. Deepening economic and strategic ties between India and the Gulf Cooperation Council (GCC) can help address global challenges such as climate change, security, and technological innovation. Comment. (GS 2; 15 Marks; 250 Words)
- Q25. Compare the views of Mahatma Gandhi and Dr. B.R. Ambedkar on the question of separate electorates for depressed classes (Dalits) during British Raj. (GS 1; 10 Marks; 150 Words)

For Detailed Explanation

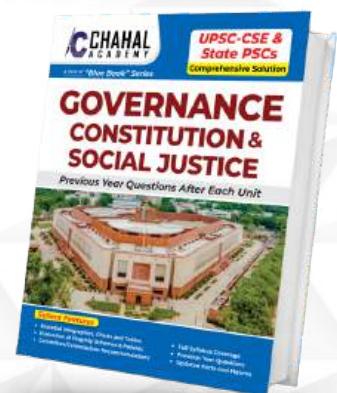
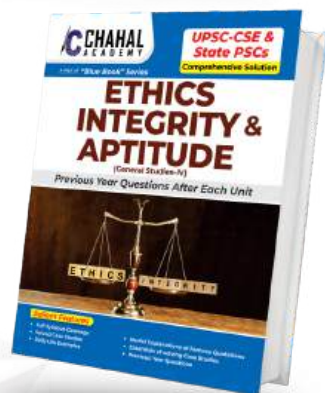
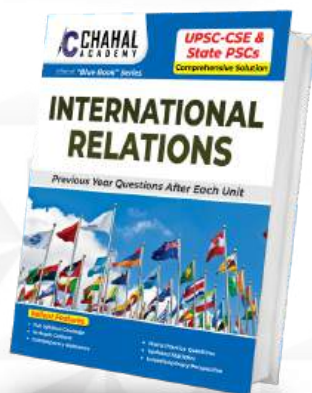
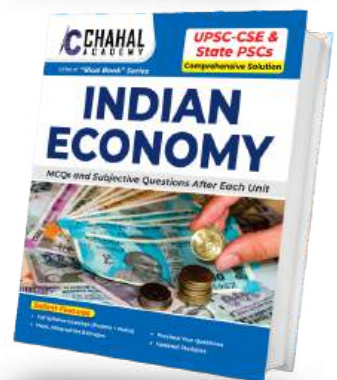
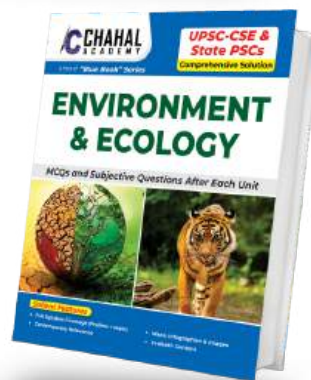
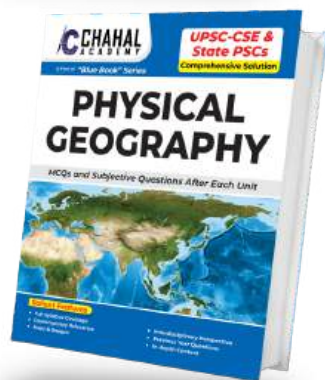
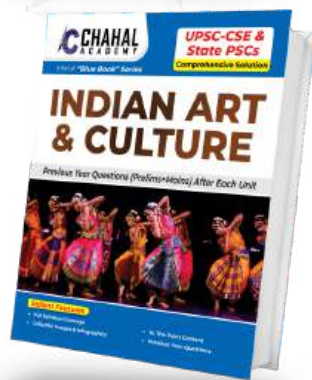
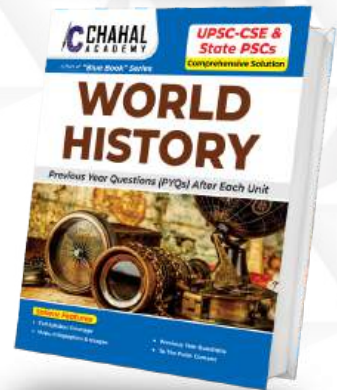
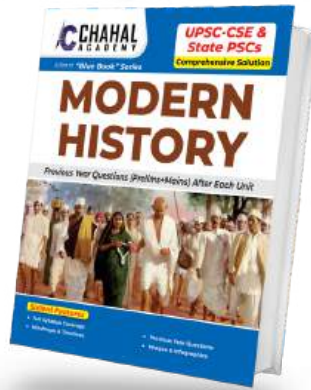
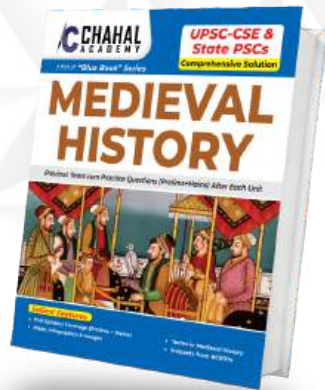
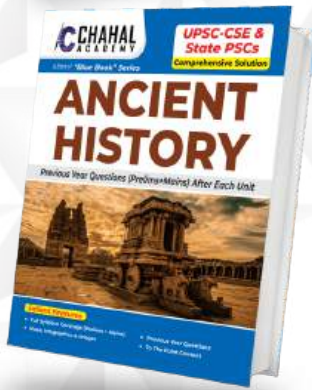
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