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Monthly MCQs

from



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- ◊ Important Days in October
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IMPORTANT ARTICLES FROM

👉 YOJANA.....	121
👉 KURUKSHETRA.....	125
👉 DOWN TO EARTH.....	129
👉 EPW.....	132
👉 FRONTLINE.....	2

**MCQs on Prelims Latest Pattern*

- Reclassification of FPI to FDI
- Genetically Modified Humans
- One Day One Genome Initiative
- G20 Rio De Janeiro Leaders' declaration
- The 2nd India-Australia Annual Summit
- World Coalition for Peace With Nature
- Sustainable-Use of Marine Protected Areas
- Prisons in India: Mapping Prison Manuals and Measures

- The Gotti Koya Tribals
- Declining Fertility Rates
- Sohrai Painting Raigad Fort
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CONTENTS

(A) POLITY & GOVERNANCE1	Standard Veterinary Treatment Guidelines..... 40
Sexual Harassment Case Cannot be Dismissed on The Basis of A 'Compromise' – Supreme Court..... 1	Central Board of Direct Taxes 40
The Supreme Court on Private Property 2	Consolidation for Regional Rural Banks.....41
Mandatory Prior Sanction to Prosecute Public Servants in Money Laundering Cases.....3	Titanium Slag Production in India.....41
Regulation of Videos on Over-the-top Platforms..... 4	Digitisation of Land Records in Rural India 42
The Draft Arbitration and Conciliation (Amendment) bill, 2024 5	(D) ENVIRONMENT & GEOGRAPHY 45
Gram Panchayats.....6	Case Study: Environmental Pollution from Rocket and Satellite Launches..... 45
Parliamentary Panel on Fake News.....7	Environment Protection (Manner of Holding Inquiry and Imposition of Penalty) Rules, 2024..... 45
CAG Report on 74 th Constitutional Amendment.....8	Biological Diversity Rules, 2024..... 47
The Constitutional Validity of the Uttar Pradesh Board of Madarsa Education Act, 2004.....10	Case Study: Sustainable use of Marine Protected Areas..... 48
Prisons in India: Mapping Prison Manuals and Measures.....12	Microplastics in the Atmosphere..... 49
51 st Chief Justice of India..... 13	Guru Ghasidas and Tamor Pingla Tiger Reserve51
(B) INTERNATIONAL RELATIONS 15	Forest Ecosystem Restoration Initiative.....53
Fight Against All Forms of Transnational Organized Crime.....15	COP16 to CBD..... 53
G20 Rio De Janeiro Leaders' declaration..... 17	National Biodiversity Strategy 54
India and China Agreement along the Line of Actual Control..... 19	World Coalition for Peace with Nature..... 55
India - Italy Relations21	Geo-engineering..... 55
The 2 nd India-Australia Annual Summit.....22	Extended Producer Responsibility (EPR)..... 57
Global South.....24	Flash Floods in Spain..... 58
The 16th BRICS Summit.....26	(E) SCIENCE & TECHNOLOGY59
Indo-European Realignment.....27	Centenary Celebrations of Iconic 'Bose-Einstein Statistics' 59
Belt and Road Initiative..... 28	Therapeutic RNA Editing in Humans 60
(C) ECONOMY & AGRICULTURE..... 30	Supermassive Black Hole LID-568..... 61
E-Shram.....30	The World's First Wooden Satellite..... 62
Asset Recovery Interagency Network-Asia Pacific (ARIN-AP)..... 31	One Day One Genome Initiative.....63
Offshore Mineral.....31	Operation Dronagiri.....64
Food Corporation of India..... 32	Genetically Modified Humans 65
India Re-Elected President of the International Solar Alliance..... 34	India's First Analog Space Mission.....66
Nutraceutical Industry in India..... 35	Space Biotech.....67
India's Equine Lab in Hisar earns global recognition36	Black Hole Tripple System 68
Power of Directorate of Revenue Intelligence under the Customs Act, 1962..... 37	Equatorial Ionospheric Processes.....68
Reclassification of FPI to FDI.....38	(F) DEFENCE & SECURITY 70
Domestic Systemically Important Banks (D-SIBs) 39	3 rd MAHASAGAR Summit..... 70
	Exercise Antariksha Abhyas-2024..... 70
	Drone Seizures along the International Border in Punjab... 71
	Adaptive Defence Strategy.....72
	India's First Long-Range Hypersonic Missile..... 73
	Advisory by Computer Emergency Response Team of India..... 74

Naseem-al-Bahr Exercise.....	77	State of Food and Agriculture 2024.....	111
Exercise GARUDA Shakti	77	Protected Planet Report 2024.....	113
(G) SOCIAL ISSUES	79	(K) PERSONALITIES IN NEWS.....	115
The Rights of Persons with Disabilities (Amendment) Rules, 2024.....	79	CV Raman	115
The Proposed 'Organised Crime Investigative Agency'.....	80	Maulana Abul Kalam Azad.....	116
Declining Fertility Rates.....	82	Guru Nanak Dev Ji	116
Urbanisation and Decline in Groundwater Reserves.....	83	Lala Lajpat Rai.....	117
The Global Health Emergency Corps	84	Ashfaqulla Khan.....	118
Case Study: Care Responsibilities.....	85	Deshbandhu Chittaranjan Das	119
U-Win Portal.....	86	Rani Channamma.....	120
The Gotti Koya Tribals.....	87	(L) ARTICLES FROM YOJANA NOVEMBER 2024	121
The Global Family Farming Forum.....	87	75 Years of the Indian Constitution: A Journey Towards Absolute Glory.....	121
Eliminating Kala-Azar as a Public Health Problem.....	88	Role of Indian Constitution in Promoting Social Justice....	122
(H) HISTORY & CULTURE	90	(M) ARTICLES FROM KURUKSHETRA NOVEMBER 2024.....	125
The First Asian Buddhist Summit.....	90	Social Security: Vital for Development and Prosperity.....	125
Mysuru Sangeetha Sugandha Festival	91	Government Schemes for Divyang Jan.....	126
Sohrai Painting	92	(N) ARTICLES FROM DOWN TO EARTH NOVEMBER 2024.....	129
Raigad Fort	93	Global Plastic Pollution	129
Thadou Convention.....	94	Antibiotics in Milk and Dairy Products.....	130
(I) GOVERNMENT SCHEMES	95	(O) ARTICLES FROM EPW NOVEMBER 2024.....	132
'TULIP' (Traditional Artisans' Upliftment Livelihood Programme).....	95	Measuring Informal Economy.....	132
Pradhan Mantri-Vidyalaxmi Scheme.....	96	Manxiety.....	133
Pradhan Mantri Vanbandhu Kalyan Yojana (PMVKY).....	96	(P) QUICK REVISION.....	134
Namo Drone Didi Scheme.....	97	Awards and Prizes.....	134
(J) REPORTS	99	Obituaries in November 2024.....	135
The GUESSS India 2023 Report.....	99	Important Days in November.....	135
The 2024 Annual Report: Economic Freedom of the World.....	100	Important Summit/Conference in News.....	138
World Economic Outlook Report.....	101	Terms in November 2024.....	139
Reducing Inequality.....	102	(Q) NOVEMBER - DAILY MCQS FROM THE HINDU & INDIAN EXPRESS.....	140
Greenhouse Gas Bulletin (GGB).....	104	Daily MCQs Practice.....	140
Global Tuberculosis Report 2024.....	105	Answer Key.....	152
Asia-Pacific (APAC) Climate Report 2024.....	107	Daily Answer Writing Practice.....	153
World Cities Report 2024.....	108		
Global Education Monitoring Report.....	109		
World Intellectual Property Indicators Report 2024.....	110		

SEXUAL HARASSMENT CASE CANNOT BE DISMISSED ON THE BASIS OF A 'COMPROMISE' – SUPREME COURT

Why in News: The Supreme Court recently ruled that a sexual harassment case under POCSO cannot be closed after a compromise is reached between the rival parties as such offences have serious impact on the society.

Key Details: About the Case

- The Supreme Court made the observation while setting aside the Rajasthan High Court's decision to quash a **Protection of Children from Sexual Offences** case against a school teacher following a compromise reached between him and the father of the minor victim.
- The High Court had quashed the case exercising its inherent powers under Section 482 CrPC "to make such orders as may be necessary to give effect to any order under this Code, or to prevent abuse of the process of any Court or otherwise to secure the ends of justice."
- Supreme Court referred to its 2012 decision in 'Gian Singh v. State of Punjab', which it said had laid down in unambiguous terms that "before exercising the power under Section 482, CrPC, the **High Court must have due regard to the nature and gravity of the crime**" and held that "heinous and serious offences could not be quashed even though a victim or victim's family and the offender had settled the dispute".
- The apex court also held that the compensation payable to the victims under Section 357A of the CrPC, now replaced by Section 396 of BNSS, and rules framed under the POCSO Act is to be made on top of any other fine imposed on the accused as punishment in case of conviction.

About Protection of Children from Sexual Offences (POCSO) Act

- Protection of Children from Sexual Offences Act was passed in 2012 to comprehensively deal with the issue of sexual offences against children.
- POCSO not only spells out the punishments for offences, but also sets out a system for support of victims and improved methods for catching offenders.
- It is a **gender neutral** law.

- Both boys and girls can be victims under POCSO.
- Both males and females can be punished for committing an offence under POCSO.
- Under POCSO child means any person below the age of 18 years.
- There are 3 broad categories of sexual offences punishable under POCSO: sexual assault, sexual harassment and using a child for pornography.
- Sexual assault committed by a police officer, a public servant or any staff of a hospital and sexual assault committed on a child below 12 years of age amounts to **aggravated sexual assault**.
- Any person can report an offence under POCSO. An offence can be reported after it has occurred, or even before it has occurred, if there is fear that such a crime may occur.
 - The child facing or fearing such abuse can also report the crime directly.
- Reporting the offence is mandatory. If a person fails to report an offence under POCSO, the person can be punished with imprisonment upto 6 months and/or with fine.
 - However it is not necessary for a child to report a crime.
- Any person who makes a false complaint or gives false information regarding an offence under POCSO, can be imprisoned for up to 6 months and/or be made to pay a fine.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

- Q. Consider the following statements regarding Protection of Children from Sexual Offences (POCSO) Act:
1. It is a gender neutral law.
 2. Under POCSO child means any person below the age of 18 years.
 3. It is not necessary for a child to report a crime.

Which of the statements given above is/are correct?

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

Answer: (d)

THE SUPREME COURT ON PRIVATE PROPERTY

Why in News: Recently, the nine-judge bench of the Supreme Court, in a majority judgement, held that not every resource owned by private players can be considered as a “material resource of the community” to be used by the government under article 39 (b) to serve the common good.

Key Details

- The majority decision dismissed such a power of acquisition by the State while noting that it reminded of a particular “rigid economic dogma” of the past.
 - The court noted that the Indian economy has already transitioned from dominance of public investment to the co-existence of public and private investments.
 - The apex court said that the interpretation, that every privately-owned property could be used by the state as material resource to “subserve the common good” postulated a “rigid economic theory which advocates greater state control of private resources”.
 - The above interpretation was introduced by Justice Krishna Iyer in his dissenting opinion in Ranganath Reddy versus State of Karnataka in 1977.
 - ◆ Justice Iyer’s opinion was relied on by subsequent Constitution Benches in Sanjeev Coke Manufacturing and Mafatlal Industries judgments in 1982 and 1997, respectively, hence necessitating a reference to the nine-judge Bench.
- Rejecting the view of Justice Iyer as one presenting a particular ideology, the apex court delivered that India has moved on from socialism to liberalisation to market-based reforms.
- The court further remarked that the vision of the Constitution framers to establish an economic democracy and to trust the wisdom of the elected governments has been the “backbone of the high growth rate of India’s economy, making it one of the fastest growing economies in the world”.
- The apex court was focussing on the contours of **Article 39(b)** of the Constitution, which mandates that the “state shall, in particular, direct its policy towards securing the ownership and control of the material resources of the community are so distributed as best to subserve the common good”.
- The majority of judges opinion held that “theoretically” privately-owned resources could be considered as material resources of the community, however an expansive view cannot be taken.
- The reference to the Constitution Bench was based on petitions filed by parties including the Property Owners Association (POA) that private properties cannot be taken over by the state under the garb of constitutional schemes under Articles 39 (b) and 31 C of the Constitution.

- The majority opinion provided four **factors** that must be considered to determine whether private property may be deemed as a material resource of the community:
 - The nature of the resource and its inherent characteristics;
 - The impact of the resource on the well-being of the community;
 - The scarcity of the resource; and
 - The consequences of the resource being concentrated in the hands of private owners.

About Articles 39(b) & 31C of the Indian Constitution

- Introduced by the Constitution (Twenty-Fifth) Amendment Act in 1971, Article 31C was meant to further the Indira Gandhi government’s stated socialist goals.
 - Article 31C protects laws enacted to ensure the “material resources of the community” are distributed for common good. It was inserted by the 25th Amendment Act of 1971.
- The original provision contained two parts.
 - The first part said “no law giving effect to the policy of the State towards securing the principles specified in clause (b) or clause (c) of article 39 shall be deemed to be void on the ground that it is inconsistent with, or takes away or abridges any of the rights conferred by article 14 [right to equality], article 19 [assorted rights including freedom of speech and freedom to practise any profession] or article 31 [right to property, repealed and replaced by Article 300 A in 1978].
 - The second half said “no law containing a declaration that it is for giving effect to such policy shall be called in question in any court on the ground that it does not give effect to such policy” — effectively protecting laws meant to give effect to Articles 39(b) and (c) from being challenged in court.
 - ◆ This part was struck down by the SC in its landmark Judgement case of Kesavananda Bharti in 1973. But the first part remained in effect.
- The Constitution (Forty-Second Amendment) Act, 1976 further expanded the scope of Article 31C to all articles in Part IV of the Constitution (Articles 36-51). But this amendment was struck down by the SC in the Minerva Mills case in 1980.

EXPECTED QUESTIONS FOR UPSC CSE

Prelims MCQ

- Q. Right to Property in India is a:
- (a) Fundamental Right
 - (b) Constitutional Right
 - (c) Natural Right
 - (d) None of The Above

Answer: (b)

Descriptive Question

Q. Critically analyze the impact of the Supreme Court’s recent judgement on private property on India’s economic policies, with reference to the transition from socialism to liberalization. [10 marks] [150 words]

MANDATORY PRIOR SANCTION TO PROSECUTE PUBLIC SERVANTS IN MONEY LAUNDERING CASES

Why in News: The Supreme Court recently held that section 197(1) of CrPC, which provides that prior sanction from the government is required to prosecute public servants and judges even in money laundering cases under the Prevention of Money Laundering Act (PMLA).

Key Details

- In a recent judgment, extending the ambit of Section 197(1) to PMLA on money laundering cases, the apex court ruled that the objective is to protect the public servants from prosecutions and to ensure that they are not prosecuted for anything they do in the discharge of their duties.
 - **Section 65** makes the provisions of the CrPC applicable to all proceedings under the PMLA, provided the same are not inconsistent with the provisions contained in the PMLA.
 - **Section 197(1)** says that when any person who is or was a Judge or Magistrate or a public servant not removable from his office save by or with the sanction of the Government is accused of any offence alleged to have been committed by him while acting in the discharge of his official duty, no Court shall take cognizance of such offence except with the previous sanction.
- The Enforcement Directorate (ED) contended that Section 71 of PMLA has an overriding effect over the other statutes, including the CrPC and the requirement of obtaining a sanction under this would be inconsistent with the provisions of the PMLA.
 - It is said the act of money laundering could not be considered to have been done in the discharge of official duties which needed protection.

Civil Servants: Constitutional Protection and Provisions

- Part XIV of the Constitution of India deals with Services under The Union and The State.
- Article 309 empowers the Parliament and the State legislature to regulate the recruitment, and conditions of service of persons appointed, to public services and posts in connection with the affairs of the Union or of any State respectively.
- **Doctrine of Pleasure**
 - **Article 310** of the Constitution of India incorporates the

English doctrine of pleasure by clearly stating that every person who is a member of a defence service or of a civil service of the Union or of an all India service or holds any post connected with defence or any civil post under the Union, holds office during the pleasure of the President, and every person who is a member of a civil service of a State or holds any civil post under a State holds office during the pleasure of the Governor of the State .

- But this power of the Government is not absolute. Article 311 puts certain restrictions on the absolute power of the President or Governor for dismissal, removal or reduction in rank of an officer.
- **According to Article 311**
 - ◆ No person who is a member of a civil service of the Union or an all India service or a civil service of a State or holds a civil post under the Union or a State shall be dismissed or removed by an authority subordinate to that by which he was appointed.
 - ◆ No such person as aforesaid shall be dismissed or removed or reduced in rank except after an inquiry in which he has been informed of the charges against him and given a reasonable opportunity of being heard in respect of those charges.
- **Civil Post:** The protective safeguards given under Article 311 are applicable only to civil servants, i.e. public officers. They are not available to defence personnel.
- **Dismissal and Removal:** Dismissal and removal are synonymous terms, but in law they acquired technical meanings by long usage in Service Rules. In case of dismissal a person is debarred from future employment, but in case of removal he is not debarred from future employment.
- **No Removal by Subordinate Authority:** No removal by subordinate authority does not mean that the dismissal or removal must be by the same authority who made the appointment or by his direct superior. It is enough if the removing authority is of the same or co- ordinate rank as the appointing authority.
- **Reduction in Rank:** Reduction in Rank means reduction from a higher rank or post to a lower rank or post and not losing place in rank or cadre. In 'State of Punjab v Kishan Das', the Supreme Court held that a mere reduction in the salary in the same cadre is not reduction in rank.
- **Inquiry:** It is mandatory under Article 311(2) to make an inquiry before the dismissal, removal or reduction in rank of a civil servant. In that inquiry the civil servant has to be informed of the charges against him and given a reasonable opportunity of being heard in respect of those charges.
- **Informed of the charges:** Informed of the charges, means serving of a charge sheet explaining the reasons of the charges leveled against the concerned officer and statement of allegations against each charge.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

Q. Under Article 310 of the Indian Constitution, the Doctrine of Pleasure applies to:

- (a) Judges of the Supreme Court
- (b) Civil servants of the Union and States
- (c) Members of Parliament
- (d) Ministers in the Union Cabinet

Answer: (b)

REGULATION OF VIDEOS ON OVER-THE-TOP PLATFORMS

Why in News: The Supreme Court dismissed a PIL seeking a direction to the Centre to set up an autonomous body to monitor and filter content and regulate videos on over-the-top (OTT) and other platforms in India, saying these are policy matters.

Key Details

- The plea has said that these platforms operate without the same checks and balances that traditional media -- like films and TV -- are subject to the Union of India and the Ministry of Information and Broadcasting introduced IT Rules 2021 to self-regulate OTT platforms however the same has been inefficient, the petition stated.
 - The plea raised the issue of the absence of any law or autonomous body governing the digital content saying it has made these digital contents available to the public at large without any filter or screening.

About Public Interest Litigation

- Public interest Litigation (PIL) means litigation filed in a court of law, for the protection of "Public Interest".
 - Any matter where the interest of the public at large is affected can be redressed by filing a Public Interest Litigation in a court of law such as Pollution, Terrorism, Road safety, Construction hazards, etc.
- The expression 'Public Interest Litigation' has been borrowed from American jurisprudence, where it was designed to provide legal representation to previously unrepresented groups like the poor, racial minorities, unorganized consumers, citizens who were passionate about environmental issues, etc.
- PIL is not defined in any statute or in any act. It has been interpreted by judges to consider the intent of the public at large.

History of Public Interest Litigation (PIL) in India

- **Hussainara Khatoon case:** In 1979, Kapila Hingorani

filed a petition and secured the release of almost 40000 undertrials from Patna's jails.

- Hingorani was a lawyer. This case was filed in the SC before a Bench led by Justice P N Bhagwati.
- Hingorani is called the 'Mother of PILs' as a result of this successful case. The court permitted Hingorani to pursue a case in which she had no personal locus standi making PILs a permanent fixture in Indian jurisprudence.
- **Justice Bhagwati and Justice V R Krishna Iyer** were among the first judges in the country to admit PILs.
 - Justice Bhagwati did not insist on the observance of procedural technicalities and even treated ordinary letters from public-minded individuals as writ petitions.

Significance of Public Interest Litigation (PIL) in India

- The original purpose of PILs has been to make justice accessible to the poor and the marginalized.
- It is an important tool to make human rights reach those who have been denied rights.
- It democratizes access to justice for all. Any citizen/agency who is capable can file petitions on behalf of those who cannot or do not have the means to do so.
- It helps in judicially monitoring state institutions like prisons, asylums, protective homes, etc.
- It is an important tool in judicial review.

Criticism of Public Interest Litigation (PIL) in India

- Off late, PILs have become a tool for publicity. People file frivolous petitions which result in the waste of time of the courts.
- People have used them with a political agenda as well.
- They unnecessarily burden the judiciary. Even if the petition is eventually dismissed, the courts spend time and effort on them before dismissing them.
- At present, only judges have the power to dismiss a petition.
- The Registry of the SC or HC only ensures that the technical requirements of filing a petition are fulfilled. As a result of which petitions are admitted to the court irrespective of the merits of the case.

Way Forward with Public Interest Litigation

- The court should not allow its process to be abused by politicians and others to delay legitimate administrative action or to gain political objectives.
- The PIL activists should be responsible and accountable.
- The court must be careful to see that the petitioner must be acting bona fide and not for personal gain.
- In shaping the relief the court must take into account its impact on those public interests.
- Since it is an extraordinary remedy available at a cheaper cost to all citizens of the country, it should not be used by all litigants as a substitute for ordinary ones or as a means to file frivolous complaints.

Expected Questions for UPSC CSE

Prelims MCQ

Q. Consider the following statements with respect to Public Interest Litigation (PIL)

1. The concept of PIL is directly mentioned in Indian constitution.
2. Even ordinary letters from public minded individuals can be treated as PIL.
3. Many people use PIL as a tool for political agenda.

How many of the above statements are correct?

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

Answer: (b) (2 & 3)

Descriptive Question

Q. Examine the contributions of Public Interest Litigation (PIL) in safeguarding the rights of marginalized sections in India. What measures can be adopted to prevent its frivolous use? [15 marks] [250 words]

THE DRAFT ARBITRATION AND CONCILIATION (AMENDMENT) BILL, 2024

Why in News: The Government of India introduced a draft Arbitration and Conciliation (Amendment) Bill, 2024.

Key Details

- The Department of Legal Affairs is presently in the process of considering further amendments in the Arbitration and Conciliation Act 1996.
- The aim and purpose is to provide further boost to institutional arbitration, reduce court intervention in arbitrations and ensure timely conclusion of arbitration proceedings.
- The Government of India has taken several steps to strengthen the dispute resolution environment in the country and to promote Ease of Doing Business and enforcement of contracts *inter-alia* through legislative interventions from time to time.

The main features of the Draft Bill are as follows:

Mediation and Conciliation Modifications

- The Draft Bill proposes omitting the conciliation provisions from the Arbitration and Conciliation Act, 1996, as these have been incorporated into the Mediation Act, 2023. Consequently, the amended act will be renamed the Arbitration Act, 1996.

Revised Definitions and Introduction of Audio-Visual Arbitration

- Recognizing the advancements in technology and the need for flexibility, the Draft Bill includes provisions for conducting arbitration proceedings via video conferencing. The Draft Bill redefines arbitration as — it means any arbitration whether or not administered by an arbitral institution and includes arbitration conducted, wholly or partly, by use of audio-video electronic means.
- The Draft Bill revises definitions within the principal Act, including clarifications on “Court,” “arbitral institution,” and “emergency arbitrator.”
- Additionally, it specifies jurisdiction for domestic and international arbitrations, assigning cases to relevant High Courts or other courts based on the arbitration seat and nature.

Emergency Arbitration

- The Draft Bill proposes a new definition of emergency arbitrator to mean an arbitrator appointed under Section 9A.

Time-bound Processes

- The Draft Bill emphasizes the importance of timely conclusion of arbitration proceedings by introducing new time limits are set for critical arbitration steps, such as resolving interim measures within 60 days and initiating proceedings within 90 days of a related court application.

Appellate Arbitral Tribunals

- The Draft Bill proposes the establishment of an Appellate Arbitral Tribunal to handle applications against arbitral awards. It aims to streamline the appeals process and reduce the burden on courts.
- This will provide an additional layer of appeal within the arbitration process, reducing the need for judicial intervention.

Arbitration Council of India

- The Draft Bill proposes empowering the Arbitration Council of India to create model rules of procedure for arbitral proceedings and recognize arbitral institutions.

Challenges related to Arbitration and Mediation in India

- **Lack of Proper Laws:** The Arbitration and Conciliation Act was introduced in 1996, and last amended in 2015. The laws must become strict and more carefully elaborated so that more and more people gain assurance in Arbitration than the Judicial System.
- **Intervention of Courts in Arbitration Proceedings:** The intervention of courts in arbitration proceedings shall be kept to minimum. Due to such interventions, those who opt for arbitration rather than pleading to a court, also result in inclination towards courts furthermore. In *White Industries Vs. Republic of India*, two issues arise: a) Intervention of judiciary and, b) Delay in arbitration. And, so it was well

(CSC) co-location and sanctioned 22,164 computers for Gram Panchayats across various States including Andhra Pradesh, Chhattisgarh, Punjab, and Telangana.

- **Elected Representatives of Panchayats to be trained in Smart Classrooms:** In a bid to modernize the Panchayat Resource Centers at the State and District level across the country, computer labs in State Panchayat Resource Centers (SPRCs) in 25 States as well as in District Panchayat Resource Centers (DPRCs) in 395 Districts will be upgraded with more computers of latest specification.
- **Investment in Panchayat Infrastructure in the Vibrant Villages of the Border Areas of North East and Jammu and Kashmir:** Over a period of last few years, a number of decisions to support the infrastructure development for PRIs in the North Eastern States and the UT of Jammu and Kashmir have been taken.

Aim of these decisions: These initiatives aim at enhancing administrative efficiency and provide essential services at the grassroots level, significantly contributing to the development of Vibrant Villages.

PRELIMS SPECIAL

About Gram Panchayats

- Gram Panchayat is the basic governing institution in Indian villages.
- It is a political institution, acting as the cabinet of a village or group of villages.
- The Gram Sabha works as the general body of the Gram Panchayat.
- The members of the gram panchayat are elected directly by the people.
- The gram panchayat is headed by an elected President and Vice President, assisted by a Secretary who serves as the administrative head of the panchayat.
- The president of a gram panchayat is known as a "Pradhan" or "Sarpanch" in Northern India.
- There are about 250,000 gram panchayats present in India

EXPECTED QUESTIONS FOR UPSC CSE

Prelims MCQ

- Q. Consider the following statements regarding Gram Panchayat:
1. It is basic governing institution of Indian villages.
 2. The members of Gram Panchayat are indirectly elected by the people.
 3. Gram panchayat is assisted by a secretary who serves as the administrative head of the Panchayat.

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

Descriptive Question

Q. The Central Empowered Committee under Rashtriya Gram Swaraj Abhiyan has proposed significant measures to strengthen Panchayati Raj Institutions. Examine. [10 marks] [150 words]

PARLIAMENTARY PANEL ON FAKE NEWS

Why in News: Parliamentary panel on IT to review mechanisms to curb fake news and OTT issues.

Background

- The World Economic Forum’s 2024 Global Risk Report has suggested that disinformation and misinformation are more severe short-term risks for a two-year period.

Key Details

- The parliamentary committee on Communications And Information Technology will also examine the emergence of new forms of currencies and their impact.
- The panel headed by the BJP’s Nishikant Dubey has also selected the impact of the emergence of Artificial Intelligence and related issues as one of its subjects.

Mandate of the Panel

- Examine the functioning of the Ministries of Information & Broadcasting; Electronics & Information Technology; and Communications.

About Fact Check Unit under IT Rules 2021

The Fact Check Unit under PIB was established in November 2019.

Objective

Acting as a deterrent to creators and disseminators of fake news and misinformation. It also provides people with an easy avenue to report suspicious and questionable information pertaining to the Government of India.

Mandate

- The FCU is mandated to counter misinformation on Government policies, initiatives and schemes either suo motu or under a reference via complaints.
- The FCU actively monitors, detects, and counters disinformation campaigns, ensuring that false information about the Government is promptly exposed and corrected.

Universal Accessibility

The PIB Fact Check Unit has also taken measures to ensure the accessibility of the fact-checks to persons with disabilities. Since images constitute a major part of social media, it is becoming increasingly imperative to provide 'Alternative text' (ALT) to ensure the universal reach of content.

PRELIMS SPECIAL

About Fake News

- We can define “fake news” as “purposefully crafted, sensational, emotionally charged, misleading or totally fabricated information that mimics the form of mainstream news”.

Types of Fake News: Fake News can be put into these 5 categories:

- False/ deceptive
 - Stories that are completely made up, no truth to them whatsoever.
 - Deliberately fabricated news that is intended to mislead or make money through clicks.
 - Entirely fake news websites or “imposter sites” that are designed to look like a real/ credible website.
 - This is the “traditional” fake news category.
- Misleading
 - Stories that contain no established baseline for truth but promote an agenda.
 - These stories will often take a tiny shred of factual information, give it their own spin, and run off with it in a completely different direction.
 - Examples that fall under this category are intended to “rile you up.”
- Slanted/ biased
 - Stories that contain truthful elements but certain facts are selectively chosen or omitted to serve an agenda (like gaining headlines).
 - The stories that fall under this category are not necessarily false. The stories report true news, but they do so in a biased way.
 - Certain content from *Fox News*, *MSNBC*, and others could fall under this category (*Fox News*, *MSNBC*, *Huffington Post*, etc. don’t have to be completely avoided, but just be aware that biases may exist).
- Manipulated
 - Content or imagery that is altered falls under this category.
 - “Doctored” or “Photoshopped” images would also be included.
- Humor (satire/ parody/ jokes)
 - Stories that are purposefully fake with no intention to cause harm but have the potential to fool people.
 - Satire news seeks to entertain and be humorous rather than mislead, but people can misinterpret the content as real.

Steps to Check Fake News

- Key initiatives taken to prevent online frauds include specific “due diligence obligations” on online and social media intermediaries to prevent the hosting, display, uploading, publishing, transmission, storage or sharing of illegal content.
 - Failure to observe due diligence as provided in the IT Rules, 2021, could see the intermediaries lose the exemption from liability for any third-party information, data or communication link, under section 79 of the IT Act.
- The consumer affairs department has also notified the Consumer Protection (ecommerce) Rules, 2020 to safeguard consumers from unfair trade practices in ecommerce.
- The Home Ministry has established the Indian Cyber Crime Coordination Centre to provide a framework and eco-system for Law Enforcement Agencies to deal with cyber-crimes in a comprehensive and coordinated manner.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

Q. Consider the following statements regarding Fact Check Unit (FCU) established by the Government of India.

1. The Fact Check Unit was established under IT rules, 2017 by Government of India.
2. FCU is administered by Press Information Bureau.
3. FCU actively monitors, detects, and counters disinformation campaigns.

How many of the above statements are correct?

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

Answer: (b) (2 and 3 only)

CAG REPORT ON 74TH CONSTITUTIONAL AMENDMENT

Why in News: Over 30 yrs after the 74th Amendment, the Comptroller and Auditor General of India flags ‘weak compliance’ with law empowering urban local bodies.

Key Details

- The CAG has found that city self-governments in 18 states that cater to 241 million residents are facing a 42 per cent gap between their resources and expenditure and that only 29 per cent of their expenditure goes towards programmatic and development work.

- The CAG found 18 states were yet to fully implement the law in spirit.

Key Highlights

Whether the States have adhered to the provisions of the 74th CAA in their municipal legislations.

- States have largely complied with the statutory provisions of the 74th CAA. However, gaps are observed with respect to the devolution of municipal functions.
- On average, 17 out of 18 functions of the Twelfth Schedule of the Constitution have been devolved to Urban Local Self-Government (ULSG) by law. Seven States distinguish such devolved functions as 'obligatory' and 'discretionary'.
- States showed weak compliance with the in-spirit reading of the 74th CAA.

The extent of actual implementation of the 74th CAA by various States with a specific focus on institutional design.

- On average, only 4 functions in the Twelfth Schedule of the Constitution have been effectively devolved to ULSGs. More than 5 functions are either performed by State parastatals or restrict the role of ULSGs to mere implementation agencies.
- No State has put in place all the necessary institutions and institutional mechanisms to enable ULSGs to effectively discharge their functions.

Assessment of the financial sustainability of ULSGs across States, in terms of both availability and management of finances.

- On an average, ULSGs generate only 32% of their funds from their own sources, leaving them highly dependent on Union and State Government grants.
- Since ULSGs are mostly dependent on the grants from the Union and State Governments, the predictability of fiscal transfers is important.
 - On an average, there was short receipt of grants revenue to ULSGs of ₹402 crore and ₹1,606 crore recommended by the Central and State Finance Commissions, respectively due to short release of funds, delay in the constitution of SFCs, non-adherence of ULSGs with the performance grant criteria, etc.
- Fiscal decentralisation measures for ULSGs are weak across India.
- Even as ULSGs are not adequately empowered with revenue sources, they struggle to optimise the revenue they have access to.
- Limited municipal own revenues, along with the increasing cost of operations, often result in an increasing resource-expenditure gap in ULSGs. In 11 States, ULSGs have an average resource-expenditure gap of 42%.
- Financial management of ULSGs is weak across States. Unrealistic budgeting have been observed in ULSGs of

13 States, with a maximum budget variance of 403% and 274% observed in receipts and expenditure respectively.

- Limited financial autonomy and weak financial management of ULSGs appear to result in low fund utilisation.
 - On an average, ULSGs in 11 States have utilised only 61% of the funds made available to them, potentially impacting municipal service delivery.

Whether ULSGs are equipped with an adequate and skilled workforce as well as enabling institutional mechanisms for effective management of human resources.

- ULSGs do not have powers over their staffing decisions and are not empowered to assess their workforce requirements.
- No State has devolved all powers regarding initiating disciplinary action and promoting staff of ULSGs.
- ULSGs do not have adequate staff. On average, they have 37% vacancies against sanctioned posts. Town Panchayats, on average, have 7% and 3% more vacancies than Municipal Corporations and Municipal Councils, respectively.
- 11 out of 15 States have notified Municipal Cadre and Recruitment Rules.
- Seven States have training institutes for their municipal functionaries. Nominations to training programmes was low.

Summary of recommendations to be adopted by State Governments to strengthen ULSGs as envisioned in the 74th CAA.

- Take action to ensure that decentralisation turns into a reality, in line with constitutional provisions.
 - Ensure efforts are been made to guarantee ULSGs an adequate degree of autonomy for the functions assigned to them, without the intervention of other agencies/parastatals.
 - Involve the ULSGs in critical functions such as planning, regulation, slum development, water supply, sanitation, etc.
- Strengthen the State Election Commissions to ensure the conduct of municipal elections every five years.
 - Entrust the task of delimitation to SECs.
 - Ensure timely conduct of municipal elections and the formation of key committees such as Ward Committees, Standing Committees and Subject Committees in the ULSGs.
- Establish platforms for citizen participation.
 - Notify enabling rules for the constitution of Ward Committees and Area Sabhas in ULSGs.
 - Constitute Ward Committees and Area Sabhas and put in place mechanism for their efficient and effective functioning.

- Strengthen planning by constituting Planning Committees.
 - Constitute Metropolitan Planning Committees (MPCs) and District Planning Committees (DPCs).
 - Conduct meetings of MPCs and DPCs regularly to ensure the efficacy of these bodies.
 - Ensure MPCs and DPCs prepare draft development plans with inputs from ULSGs.
- Strengthen the State Finance Commission (SFC).
 - Constitute SFC every five years as prescribed, to ensure the provision of funds to ULSGs.
 - Strengthen the SFC by appointing a full-time Chairperson, members and administrative staff.
 - Consider the recommendations of SFC in an appropriate and timely manner.
 - Avoid delays in implementing the recommendations made by the SFC.
 - Ensure timely transfer of SFC grants to ULSGs so that their financial position is strengthened.
- Improve the financial sustainability of ULSGs.
 - Amend laws and notify rules to ensure the levy and collection of all types of municipal taxes by ULSGs.
 - Undertake efforts to enhance the tax collection capacity of ULSGs through training of staff, provision of electronic tax payments and improved assessment processes.
 - Ensure revision in rates of taxes and user charges to enhance the resources of ULSGs.
 - Optimise property tax collection by ULSGs:
 - ◆ Establishing functional Property Tax Boards to provide technical expertise to ULSGs in compliance with the Thirteenth Finance Commission recommendation.
 - ◆ Mandating that ULSGs should levy property tax on capital value and complete GIS mapping of properties in a time-bound manner.
 - ◆ Reviewing the system of property tax to induce buoyancy.
 - ◆ Ensuring that ULSGs enforce the recovery of dues from defaulters of property tax.
 - Incentivise ULSGs to formulate their budgets systematically and realistically.
- Establish a robust workforce management system in ULSGs.
 - Give adequate powers to ULSGs over various aspects of workforce including assessment and recruitment of skilled staff to effectively discharge devolved functions and efficiently collect revenue.

- Sanctioned strength of the workforce in ULSGs should be commensurate with their functions.
- Assess workforce requirement based on population, nature of population, geographical area, etc. and take appropriate steps for filling up the vacant posts.
- Ensure adequate workforce to ULSGs, besides imparting need-based training to staff at regular intervals.

EXPECTED QUESTION FOR UPSC CSE

Descriptive Question

Q. Discuss the challenges in achieving financial sustainability for ULBs as highlighted in the CAG report. [10 marks] [150 words]

THE CONSTITUTIONAL VALIDITY OF THE UTTAR PRADESH BOARD OF MADARSA EDUCATION ACT, 2004

Why in News: The Supreme Court upheld the constitutional validity of the Uttar Pradesh Board of Madarsa Education Act, 2004 barring the provisions relating to higher education.

Key Details

- A three-judge Bench headed by Chief Justice of India D.Y. Chandrachud opined that granting these degrees contravened the University Grants Commission (UGC) Act, 1956, rendering it unconstitutional.
 - In doing so, it overruled the Allahabad High Court’s earlier ruling which struck down the entire Act for violating the principle of secularism.

About Madarsa Act

- Madarasas provide both religious education in Islamic tenets and practices as well as mainstream secular education.
- Most madarasas follow the National Council of Educational Research and Training (NCERT) curriculum.
- The Madarsa Act provides a legal framework for these institutions in UP. It has established the Uttar Pradesh Board of Madarsa Education (the Board), which prepares and prescribes course material, and conducts exams for all courses.
- The Act also gives power to the state government to create rules to regulate madarsa education.

Why did Allahabad HC quash the Act?

- On March 22, the Allahabad HC struck down the Act in its entirety, saying it violated the basic structure of the Constitution as the law flouted the principles of secularism.

- In *Kesavananda Bharati v State of Kerala* (1973), the SC had held that Parliament cannot alter the Constitution's basic structure, and in *S R Bommai v Union of India* (1994) had ruled that secularism is part of the basic structure.
- The HC said that the Act made it compulsory for students to study Islam and more modern subjects were made optional.
- It held that the state cannot "discriminate" by providing education based on religion.
- The HC also stated that the Act violated the right to free and compulsory education under Article 21A of the Constitution by denying quality education in modern subjects.
- It said the Board's powers to grant higher education degrees such as Fazil and Kamil (equivalent to a bachelor's and a postgraduate degree respectively under the Act) conflicted with the University Grants Commission Act, 1956 (UGC Act), a central law that takes precedence in matters related to education.

Why did the Supreme Court uphold the Act?

The SC set aside the HC's verdict on three main grounds:

- Basic Structure Test Not Needed
 - Constitutional amendments are tested against the basic structure doctrine, not an ordinary legislation.
 - The SC held that the argument that the amendment violates the basic structure was too vague and indefinite to determine the validity of an ordinary law.
 - In the Madarsa Act case, the SC said for a law to be struck down for violating the principle of secularism, it must be "traced to express provisions [Articles] of the Constitution".
- State can Regulate Madrasas
 - The SC said so long as the regulation is reasonable and rational, states can regulate aspects of education in minority institutions without violating their rights to handle the administration.
 - ◆ The Madarsa Act does this "without depriving the educational institutions of their minority character," the SC ruled.
 - The court also referred to Entry 25 of the Concurrent list in the Constitution which allows both states and the Centre to enact laws on the subject of "Education".
 - ◆ The court said this must be given the broadest meaning and includes institutions that provide religious education.
- Right to Education and Minority Institutions
 - In 2014, the SC heard a challenge to the constitutionality of Article 21A. The court held that the Right of Children

to Free and Compulsory Education Act, 2006 (RTE Act) must not apply to minority institutions as it may destroy their minority character.

- The SC in the Madarsa Act case referred to this decision and held that the HC had erred by striking down the law for violating the right to education.
- The court also stated that minority institutions such as madarasas have a right to provide religious education and handle their own administration under Article 30.

Why did SC strike down higher education provisions of the Act?

- The SC ruled that a part of the Madarsa Act's Section 9 — which allows the Board to prescribe coursework, conduct exams, and grant degrees to those who have finished Kamil and Fazil courses — is contrary to the UGC Act.
- Under Section 22 of the UGC Act, only universities which have been established under a central or state Act or have been "deemed" to be universities by the UGC can grant degrees. Therefore, the SC struck down a part of the Section 9.

What are the potential implications?

- The verdict sets an important precedent for balancing essential state oversight with the protection of minority rights.
- By affirming the 2024 Act's primary aim of imparting quality education, the Court reinforces a nuanced approach to secularism that embraces diversity within India's education system.
- Additionally, the ruling may prompt the Centre to reconsider its substantial budget cuts for madrasa funding, which dropped from ₹10 crore in 2023-24 to ₹2 crore in 2024-25.

EXPECTED QUESTIONS FOR UPSC CSE

Prelims MCQ

Q. Consider the following statements:

1. In 2014, Supreme Court held that Right To Education Act must not apply to minority institutions as it may destroy its minority character.
2. Minority institutions such as madrasas have a right to provide religious education under Article 30.

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

(c) Answer

Descriptive Question

Q. Critically evaluate the balance between secularism and autonomy of minority institutions in the context of Allahabad High Court and Supreme Court judgements on the Madrasa act. [10 marks] [150 words]

PRISONS IN INDIA: MAPPING PRISON MANUALS AND MEASURES

Why in News: The President of India released three publications of the Supreme Court of India at Rashtrapati Bhavan including Prisons in India: Mapping Prison Manuals and Measures for Reformation and Decongestion.

Key Insights from the Report

- **Combating stereotypes in prison manuals**
 - Many prison manuals refer to essential prison work related to conservancy and sanitation as 'menial' or 'work of degrading character', which perpetuates hierarchical view of labour.
- **Classification of prisoners based on social status**
 - Despite the prohibition in Media Pluralism Monitor (MPM), 2016, some prison laws classify prisoners into superior/special class and ordinary class and consider social status and superior mode of living as a criteria to classify prisoners to enable them to have more privileges than others.
- **Division of prison work based on caste**
 - The Report highlights that prison manuals in some States continue to retain provisions which perpetuate caste-based prejudices by assigning prison work based on the caste identity of the prisoner and employ the use of terms such as 'good caste,' 'suitable caste,' and 'high caste.'. This has been held unconstitutional in *Sukanya Shantha v. Union of India*.
- **Manual scavenging inside prisons**
 - Manual scavenging is prohibited by the Prohibition of Employment as Manual Scavengers and their Rehabilitation Act, 2013. However, as per information received from prison departments, the drains and sewers in some of the prisons are still cleaned manually using hand gloves, due to lack of an alternative method to clean.
- **Fair and equitable wage to prisoners**
 - There is a huge disparity in daily wages paid to prisoners in India ranging from Rs. 20 in Mizoram to Rs. 524 in Karnataka.
- **Mental health screening of prisoners**
 - As per an NHRC advisory, the initial health screening report of the prisoner must be signed by both the medical officer and psychologist.
- **Bail is the rule, jail is the exception**
 - Time and again, the Supreme Court has acknowledged the reluctance of the District Courts in granting bail.
- **Alternatives to imprisonment**
 - The data received from High Courts shows that the provisions of the Probation of Offenders Act, 1958 are not effectively utilised by the district judiciary.
- **Speedy trial**
 - As per data received from High Courts, cases of accused who were in custody for more than a year were pending at the stage of evidence (52.5%), appearance (37.4%) and arguments (6%) in 2023.
- **Prisoners sentenced to death**
 - As per the Prison Statistics Reports of NCRB, the rate of execution of death sentences in India is 0.3% in the period of 2006 to 2022.
- **Women Prisoners**
 - **Menstrual health:** The Prison Statistics Report, 2022 by National Crime Records Bureau (NCRB) presents that 80.2% of women prisoners belong to the age group of 18 to 50 years, and are thus most likely to be menstruating.
 - **Rights of women prisoners:** MPM 2016 and the State jail manuals do not explicitly provide for the right to reproductive choice for a woman prisoner.
- **Use of Electronic Monitoring for prison decongestion**
 - Section 29 of MPA 2023 provides for use of electronic tracking technology in case of prison leaves.
 - However, the deployment of electronic monitoring in India necessitates careful legislative scrutiny to balance public safety with individual rights, ensuring that its implementation adheres to the Constitution and principles of legality, necessity and proportionality.
- **Effective utilisation of e-prisons**
 - Integration of e-Prisons with other platforms of Inter-operable Criminal Justice System (ICJS) like Case Information System (CIS) and Crime and Criminal Tracking Network and Systems (CCTNS) will not only streamline all the prisoner information, accessible by automatic retrieval by the concerned authorities but will also reduce the delay caused due to physical correspondence of information.
 - However, as per information received from prison departments, there is a need for real time updation of data for the success of e-Prisons.

Use of Technology in Prisons

- **Electronic Tracking of Prisoners**
 - Electronic tracking of prisoners involves use of the GPS technology to track the real time geographical location of the prisoner.

- Elevated as a Supreme Court judge on January 18, 2019, Justice Khanna will superannuate on May 13, 2025, after a tenure of a little over six months.

Process of Appointment of CJI

- The Chief Justice of India and the Judges of the Supreme Court are appointed by the President under clause (2) of Article 124 of the Constitution.
- Appointment to the office of the Chief Justice of India should be of the seniormost Judge of the Supreme Court considered fit to hold the office. This convention was breached in 1965, 1973 and 1977.
- The Union Minister of Law and Justice would, at the appropriate time, seek the recommendation of the outgoing Chief Justice of India for the appointment of the next Chief Justice of India.
 - Whenever there is any doubt about the fitness of the seniormost Judge to hold the office of the Chief Justice of India, consultation with other judges as envisaged in Article 124 (2) of the Constitution would be made for appointment of the next Chief Justice of India.
 - After receipt of the recommendation of the Chief Justice of India, the Union Minister of Law, Justice and Company Affairs will put up the recommendation to the Prime Minister who will advise the President in the matter of appointment.

Role and Functions of CJI

- **Head of Judiciary:** The Chief Justice of India (CJI) is the head of the judiciary in India and the Supreme Court of India.

- Moreover, the collegium system, headed by a chief justice, decides the appointment and transfer of judges.
- **Primus inter pares:** It is common to refer to the office as primus inter pares – first amongst equals. He enjoys “administrative control” of the Supreme Court.
- **Authority on cases:** As head of the Supreme Court, the chief justice is responsible for the allocation of cases and appointment of constitutional benches which deal with important matters of law.
 - The Chief Justice also enjoys the power to list cases. This means that should they wish to do so, they may never list a Constitution Bench case at all in their tenure.
- **Decides Strength of Judges:** CJI also decides the number of judges that will hear a case.
- **Master of the Roster:** CJI has the “prerogative to constitute benches of the court and allocated cases to the benches so constituted.”

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

Q. The Chief Justice of India and the Judges of the Supreme Court are appointed by the?

(a) President (b) Prime Minister

(c) Vice President (d) None of The Above

Answer: (a)



FIGHT AGAINST ALL FORMS OF TRANSNATIONAL ORGANIZED CRIME

Why in News: On 15 November 2024, the world marks the first International Day for the Prevention of and Fight against All Forms of Transnational Organized Crime (TOC), established by General Assembly resolution 78/267.

Key Details

- This day highlights the urgent need for global solidarity to counter the rising threat of organized crime, which undermines peace, security and progress toward the Sustainable Development Goals (SDGs).
- **Theme:** Organized crime steals, corrupts and kills. It's time we pull together to push back.
- TOC Day calls for united global action.
- It recognized the importance of the prevention of and fight against transnational organized crime for the implementation of the 2030 Agenda for Sustainable Development.
- The devastating impact of organized crime threatens lives, destabilizes communities and hinders economic and social development. But despite these challenges, there is hope.
- This day serves as a rallying point for action, demonstrating that collective efforts by governments, the private sector, civil society and individuals can achieve real change.
- Led by the United Nations Office on Drugs and Crime (UNODC), this campaign showcases success stories where cooperation has led to meaningful progress, from dismantling trafficking networks to promote sustainable alternatives to illicit economies.

Significance

Raise Awareness:

Shine a light on the far-reaching impacts of organized crime on communities, economies and governance systems across the globe.

Foster Global Collaboration:

Encourage stronger partnerships between governments, civil society and the private sector to address the cross-border nature of organized crime and develop joint solutions.

Empower Communities:

Highlight grassroots efforts and community-led initiatives that build resilience against organized crime. Focus on prevention strategies to tackle the root causes of organized crime and empower local responses.

Promote Knowledge Sharing and Capacity Building:

Share innovative tools, strategies and best practices to combat organized crime while strengthening the capacity of law enforcement, the justice sector and communities.

Support Policy Development:

Advocate for policies that address the root causes and consequences of organized crime, reinforcing governance, the rule of law and human rights.

Leverage Technology for Change:

Acknowledge both the threats and opportunities posed by technology in the fight against organized crime, from the rise of cybercrime to the use of tech in more effective detection, prevention and responses.

About Transnational Organized Crime

- Slavery, Drugs, Weapons, Corruption are the hallmarks of transnational organized crime, a multi-billion-dollar industry that operates across borders, exploiting vulnerable people and undermining global security.
- Criminal networks engage in a wide range of illicit activities, including money laundering, the illegal trade in firearms, and trafficking in humans, organs, drugs, natural resources, wildlife, and even waste.
- Transnational organized crime doesn't just steal money; it steals futures, corrupts communities, and destroys lives.

- The billions lost to illicit financial flows represent missed opportunities, lost livelihoods, and deepened poverty.
- In Africa alone, equivalent to nearly \$90 billion or about 3.7% of the continent's Gross Domestic Product (GDP), is lost yearly to illicit financial flows.
- **Different Types of Trans-National Organised Crime:**
 - Drug trafficking
 - Human trafficking
 - Smuggling of migrants
 - Money laundering
 - Illicit trading in firearms
 - Crimes that affect the environment
 - Cybercrime
- **Transnational organized crime and conflict:**
 - The relationship between transnational organized crime and conflict is a vicious cycle.
 - Crime fuels conflict, and conflict creates an environment where crime thrives.
 - This destabilizing interplay undermines governments, erodes the rule of law, and weakens law enforcement, making conflict resolution even more challenging.
 - The convergence of crime and conflict poses a significant threat to peace, security, and human rights, demanding a comprehensive approach that addresses both the root causes of conflict and the criminal networks that exploit them.
- **Transnational organized crime and terrorism:**
 - Terrorists can benefit from organized crime as a significant source of financing and logistical support for their activities.
 - As highlighted in the UN Global Counter-Terrorism Strategy, terrorist groups exploit criminal activities such as arms trafficking, human trafficking, drug trafficking, and the illicit trade in natural resources to fund their operations and sustain their networks.

PRELIMS SPECIAL

United Nations Convention against Transnational Organized Crime

- The United Nations Convention against Transnational Organized Crime, adopted by General Assembly resolution 55/25 of 15 November 2000, is the main international instrument in the fight against transnational organized crime.
- It opened for signature by Member States at a High-level Political Conference convened for that purpose in Palermo, Italy, on 12-15 December 2000 and entered into force on 29 September 2003.
- The Convention is further supplemented by **three** Protocols, which target specific areas and manifestations of organized crime.
 - Protocol to Prevent, Suppress and Punish Trafficking in Persons, especially Women and Children

- ◆ It was adopted by General Assembly resolution 55/25.
- ◆ It entered into force on 25 December 2003.
- ◆ It is the first global legally binding instrument with an agreed definition on trafficking in persons.
- Protocol against the Smuggling of Migrants by Land, Sea and Air
 - ◆ It was adopted by General Assembly resolution 55/25 and entered into force on 28 January 2004.
 - ◆ It deals with the growing problem of organized criminal groups who smuggle migrants, often at high risk to the migrants and at great profit for the offenders.
 - ◆ The Protocol aims at preventing and combating the smuggling of migrants, as well as promoting cooperation among States parties, while protecting the rights of smuggled migrants and preventing the worst forms of their exploitation which often characterize the smuggling process.
- Protocol against the Illicit Manufacturing of and Trafficking in Firearms, their Parts and Components and Ammunition
 - ◆ It was adopted by General Assembly resolution 55/255 of 31 May 2001.
 - ◆ It entered into force on 3 July 2005.
 - ◆ The objective of the Protocol, which is the first legally binding instrument on small arms that has been adopted at the global level, is to promote, facilitate and strengthen cooperation among States Parties in order to prevent, combat and eradicate the illicit manufacturing of and trafficking in firearms, their parts and components and ammunition.
- In May 2011, the Indian Government ratified United Nations Convention against Transnational Organised Crime (UNTOC) and its three protocols.

EXPECTED QUESTIONS FOR UPSC CSE

Prelims MCQ

- Q. Consider the following protocols regarding organized crime:
1. Protocol to prevent, suppress and Punish trafficking in Persons, especially Women and Children.
 2. Protocol against smuggling of migrants by Land, Sea and Air.
 3. Protocol against illicit manufacturing of and trafficking in firearms, their parts and components and ammunition.

How many of the above protocols supplement the United Nations Convention against Transnational Organized Crime?

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

(c) Answer

Descriptive Question

Q. Discuss the measures to prevent Trans-national organized crime while promoting sustainable development. [10 marks] [150 words]

G20 RIO DE JANEIRO LEADERS' DECLARATION

Why in News: The G-20 Summit, 2024 concludes with the adoption of G20 Rio de Janeiro Leaders' Declaration.

Key Details

- The leaders of the G20 met in Rio de Janeiro recently to address major global challenges and crises and promote strong, sustainable, balanced and inclusive growth.
 - The leaders reaffirmed their commitment to build a
- The document also enshrines the achievements of the Brazilian presidency throughout the year, such as the Global Alliance against Hunger and Poverty, the Task Force on a Global Mobilization against Climate Change and the Call to Action on Global Governance Reform.

fair world and a sustainable planet, prioritizing the fight against inequalities in all their dimensions, without leaving anyone behind.

- The **Rio de Janeiro Leaders' Declaration** establishes actions towards concrete results, based on the priorities of the Brazilian G20 presidency:
 - **social inclusion and the fight against hunger and poverty**
 - **sustainable development, energy transitions and climate action**
 - **the reform of global governance institutions**

**International Economic and Political Situation**

- The leaders reaffirmed the role of the G20 as the premier forum for international economic cooperation.
- The leaders recognised that inequality within and among countries is at the root of most global challenges that the World face and is aggravated by them.
- They observed good prospects of a soft landing of the global economy, although multiple challenges remain
- and some downside risks have increased amid elevated uncertainty.
- The leaders noted with distress the immense human suffering and the adverse impact of wars and conflicts around the world.
- The leaders recommitted to advancing the goal of a world free of nuclear weapons and a safer place for all and will uphold our obligations in this regard.

- They condemned terrorism in all its forms and manifestations.

Social Inclusion and the Fight against Hunger and Poverty

- The leaders underscored the G20 commitment to the importance of food security and nutrition and of the progressive realization of the right to adequate food as reaffirmed through the Deccan High-Level Principles.
- They called for speedy implementation of the **G20 2023 Action Plan on Accelerating Progress on the SDGs**.
- The leaders endorsed the Rio de Janeiro G20 Ministerial Declaration on International Tax Cooperation. Progressive taxation is one of the key tools to reduce domestic inequalities, strengthen fiscal sustainability, foster budget consolidation, promote strong, sustainable, balanced, and inclusive growth and facilitate the achievement of the SDGs.
- They welcomed the inaugural convening of the G20 Research and Innovation Working Group in 2024 and reaffirm the importance of open, fair, diverse, and mutually beneficial international cooperation in research and innovation.
- **Employment:** The leaders reaffirmed their commitments to:
 - protect workers’ rights as described in the International Labour Organization’s Declaration on Fundamental Principles and Rights at Work, empowering workers and eradicating forced labor, ending modern slavery and human trafficking as well as eliminating all forms of child labor;
 - ensure occupational safety and health and access to adequate social protection for all workers;
 - focus their efforts and policies on guaranteeing a just transition in all sectors;
 - bridge digital divides and prioritize the inclusion of people in vulnerable situations;
 - develop and implement comprehensive policies that dismantle discriminatory social and cultural norms as well as legal barriers to ensure women’s equal, full and meaningful participation in our economies;
 - promote social dialogue and collective bargaining.

The Reform of Global Governance Institutions

- **United Nations**
 - The leaders pledged to reform the **Security Council** through a transformative reform that aligns it with the realities and demands of the 21st century, makes it more representative, inclusive, efficient, effective, democratic and accountable, and more transparent to the whole of the UN membership.
 - They pledged to strengthen the **Economic and Social Council (ECOSOC)** through greater synergies and coherence with UN Agencies, Funds and Programs to better promote sustainable development in its three

dimensions and to assist member states in achieving the SDGs.

• **International Financial Architecture**

- The leaders reaffirmed their commitment in the New Delhi Leaders’ Declaration to collectively mobilize more headroom and concessional finance to boost World Bank capacity to help low- and middle-income countries that need help in addressing global challenges, with a clear framework for the allocation of scarce concessional resources, and to provide strong support for the poorest countries.

• **Multilateral Trading System**

- On the 30th anniversary of the Marrakesh Agreement, the leaders reiterated their support to work towards the necessary reform of the WTO to improve all its functions, with a view to address current trade challenges and enabling trade to serve as an engine of growth and prosperity for all.

• **Artificial Intelligence**

- The leaders acknowledged that the development, deployment and use of emerging technologies, including artificial intelligence, can provide many opportunities to workers, but also poses ethical concerns and risks for their rights and well-being.
- The leaders looked forward to the continuation of the work of the **Digital Economy Working Group**, as well as to discussions in the G20 in a High-Level Initiative/Task-Force on Artificial Intelligence and Innovation to support these efforts, under the South African Presidency.

For an Inclusive and Effective G20

- The leaders welcomed the African Union as a full member of the G20. Africa’s voice should be amplified in the G20 and all other international fora.
- In 2024, the G20 continued to reinforce the group’s role as an inclusive and effective forum.

Conclusion

G-20 remains resolute in its commitment to fight hunger, poverty, and inequality, promoting sustainable development in its economic, social, and environmental dimensions, and reforming global governance.

PRELIMS SPECIAL

About G-20

- It is the main forum for international economic cooperation. It plays an important role in defining and strengthening global architecture and governance on all major international economic issues.
- Initially, the G20 focused mainly on general macroeconomic issues, but expanded its agenda to include topics such as trade,

sustainable development, health, agriculture, energy, the environment, climate change and the fight against corruption.

- **Members:** The G20 is made up of 19 countries (Argentina, Australia, Brasil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, Korea, Mexico, Saudi Arabia, South Africa, Russia, Türkiye, UK and USA) and two regional bodies: the African Union and the European Union.
- The members of the G20 represent around 85% of the world's GDP, more than 75% of world trade and around two-thirds of the world's population.
- The G20 Summit is the meeting between the Heads of State or Government of the member countries.
- The G20 has annually rotating presidencies.

EXPECTED QUESTIONS FOR UPSC CSE

Prelims MCQ

Q. The recent G20 summit, 2024 was held in ...

- (a) Russia
- (b) Brazil
- (c) Canada
- (d) Italy

Answer: (b)

Descriptive Question

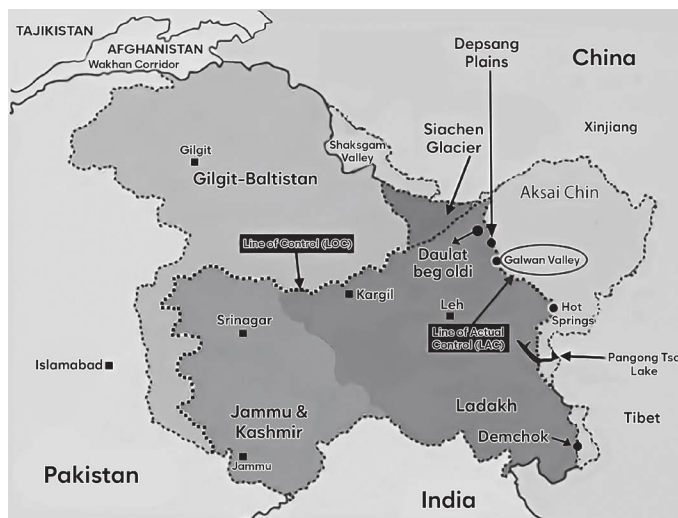
Q. Discuss the various priorities set by the Rio de Janeiro G20 leaders Declaration and discuss how these priorities address global challenges like inequality, conflict and climate change. [15 marks] [250 words]

INDIA AND CHINA AGREEMENT ALONG THE LINE OF ACTUAL CONTROL

Why in News: India and China have reached an agreement on the patrolling arrangements along the Line of Actual Control (LAC) in eastern Ladakh.

Key Details

- Indian and Chinese negotiators have arrived at an agreement on patrolling arrangements along the Line of Actual Control (LAC), leading to disengagement and a resolution of the issues that had arisen in these areas in 2020.
- The announcement was followed by a bilateral meeting between Prime Minister Narendra Modi and China's President Xi Jinping on the sidelines of the BRICS leaders' summit in Kazan, Russia.



Contours of agreement

- The two sides have agreed to restore patrolling rights to each other in the Depsang Plains and Demchok region- these are areas where the problems are called legacy issues, predating the 2020 Chinese incursions.
 - This means that Indian troops can patrol up to patrolling point (PP) 10 to 13 in the Depsang Plains, and in Charding nullah of Demchok.
- The agreement on patrolling arrangements is expected to lead to disengagement, de-escalation and demilitarisation in areas where 50,000 to 60,000 troops are stationed on each side. This process has begun in the last week of October.
- According to Foreign Secretary of India:
 - In Demchok and Depsang, patrolling and grazing activities will resume as it was pre-May 2020.
 - In the pending areas under discussion, patrolling and indeed grazing activities, wherever applicable, will revert to the situation as it obtained in 2020.
 - The previous disengagement at friction points such as Galwan Valley, north and south banks of Pangong Tso, Gogra-Hot Springs area have not been reopened for negotiations.
 - India is focused on disengagement first, and discussions on de-escalation and de-induction will happen at the appropriate time.

Patrolling the Border

- The patrolling pact announced by India is the key pillar of the agreement.
- Patrolling is one of the key elements of border management between India and China. Since there is no physical line on the ground that corresponds to maps, Indian troops are expected to go up to the Indian perception of the border before returning to base.
- Typically, soldiers either walk or drive up to the patrolling points and leave behind a sign of their presence there.

This could be anything Indian like an empty packet of cigarettes or a matchbox made in India.

- Article 4 of the 2005 border pact codifies the conduct of the troops in case of a face-off. Some of the stipulated guidelines are:
 - If the border personnel of the two sides come to a face-to-face situation due to differences in the alignment of the LAC or any other reason, they shall exercise self-restraint and take all necessary steps to avoid an escalation of the situation.
 - Throughout the face-to-face situation, neither side shall use force or threaten to use force against the other.
 - Both sides shall treat each other with courtesy and refrain from any provocative actions.
 - Neither side shall put up marks or signs on the spots.

Ground Situation

- Disengagement is complete at Depsang and Demchok in eastern Ladakh. Armies of India and China removed the temporary and semi-permanent structures that were set up since April 2020.
- The agreement was reached after a series of talks at the political, diplomatic, and military levels.
- A broad framework agreement was reached first at the diplomatic level before a detailed technical agreement for ground implementation was concluded between the Corps Commanders of the two countries on October 21, 2024.
- This is only with respect to the last two remaining friction points, Depsang and Demchok, and there is no change in status at the other friction points where buffer zones were set up since the disengagement from 2020-2022.

Background

- Since April 2020, the Chinese People's Liberation Army (PLA) has amassed a large number of troops and armaments in eastern Ladakh and other areas along the 3,488 km LAC.
- The PLA moved into Indian territory and built fortified structures and defences, in an attempt to permanently alter the status quo on the ground.
- While there are differences in perception of the alignment of the LAC, both sides have, over the years, concluded a series of agreements to maintain peace at the border.
- On May 5, 2020, clashes erupted on the north bank of Pangong Tso in which over 70 Indian soldiers were injured.
- The norm was that the Indian Army would patrol the area up to Finger 8, and the Chinese ingress blocked this routine.
- On May 9, 2020 clashes were reported at Naku La in north Sikkim.
- India responded by mobilising additional troops and equipment to match the Chinese build-up.
- Since then, both sides have amassed over 50,000 troops on each side, deployed a range of long-range firepower and equipment, and have undertaken massive infrastructure build-up.

Situation in Arunachal Pradesh

- There was also an understanding over Yangtse in Arunachal Pradesh, that Chinese patrols would be allowed like before and their movement will not be blocked.
- Yangtse in Tawang is one of the identified disputed areas between the two countries and has witnessed consistent transgressions since 2011.
- On December 9, 2022, Indian soldiers clashed with the Chinese resulting in injuries.
- The face-off led to a physical scuffle in which the Indian Army prevented the PLA from transgressing into Indian territory.
- Army sources denied any quid pro quo in the latest agreement but admitted that talks are on in all sectors along the LAC.

Way Forward

- The disengagement process at five friction points was completed in September 2022. Depsang and Demchok proved to be tricky, and the latest agreement on disengagement brings hope for the next steps, which are de-escalation and de-induction.
- Details on new patrolling norms will have to be worked out to remove the buffer zones and resume patrolling as earlier.
- The current agreement will restore the ground status to one that existed before April 2020 at Depsang and Demchok. This means that the Indian Army will again be able to patrol up to the Patrolling Points (PP) 10, 11, 11A, 12, and 13 in the strategic Depsang area which have been off limits since the stand-off.

Number of Patrolling Points and Salami Slicing

- There are 65 PPs starting from Karakoram Pass to Chumur which are to be patrolled regularly by Indian forces.
- Out of 65 PPs, India's presence is lost in 26 PPs due to restrictive or no patrolling by the Indian Security Forces (ISF).
- Later on, China forces us to accept the fact that, as such areas have not seen the presence of ISFs or civilians since long, the Chinese were present in these areas.
- This leads to a shift in the border under control of ISFs towards Chinese side and a buffer zone is created in all such pockets which ultimately leads to loss of control over these areas by India. This tactic of PLA to grab land inch-by-inch is known as **Salami Slicing**.
- This underscores why patrolling is critical along the LAC, particularly in the strategic Depsang plains.

EXPECTED QUESTIONS FOR UPSC CSE**Prelims MCQ**

- Q. What does the term 'Salami Slicing' refer to?
- Rapid and visible aggression in a single move
 - Strategy of gradual encroachment in disputed areas
 - Method of dividing financial assets for investment
 - None of The Above

Answer: (b)

Descriptive Question

- Q. Discuss the significance of the recent agreement between India and China along the Line of Actual Control (LAC). How does this agreement address legacy issues while ensuring peace and stability in the region. [15 marks] [250 words]

INDIA - ITALY RELATIONS

Why in News: India & Italy held a bilateral meeting on the sidelines of G20 Summit in Brazil & unveiled a 5-year Joint Strategic Action Plan outlining their vision for collaboration in key sectors.

Key Details

- At the G20 Summit in Rio de Janeiro, Prime Minister Narendra Modi and Italian Prime Minister Giorgia Meloni held a crucial bilateral meeting that focused on expanding the India-Italy relationship.
- The discussions centered on practical steps to deepen cooperation in various sectors, including trade, defence, space, science and technology, and cultural exchanges.
- The outcome was a set of initiatives designed to enhance collaboration over the next five years.

Key Initiatives from the meeting**Economic Cooperation and Investments**

- Leverage the work of the Joint Commission for Economic Cooperation and of the Italy-India Joint Working Group on Food Processing.
- Promote the participation in trade fairs and periodic business fora, with the involvement of industrial and economic associations and chambers of commerce.
- Promote industrial partnerships, technological centres and mutual investment, also in automotive, semiconductors, infrastructure and advanced manufacturing.

Connectivity

- Foster cooperation on sustainable transport in the context of environment sustainability and climate change.
- Enhance collaboration in maritime and land infrastructure

also in the framework of the India - Middle East - Europe Economic Corridor (IMEEC) and conclude the Agreement on cooperation in the maritime and port sector.

Science, Technology, IT, Innovation and Start-ups

- Explore new avenues of cooperation in Industry 4.0, advanced manufacturing, clean energy, critical minerals extraction and refining, involving academia and industries, including SMEs and start-ups of the two countries.
- Initiate the Indo-Italian Innovation and Incubation Exchange Programme to leverage collective expertise and capacity for fostering scientific innovation and incubation ecosystems of academic and research institutions.

Space Sector

- Expand the cooperation between the Italian Space Agency (ASI) and the Indian Space Research Organisation (ISRO) to include projects of common interest in Earth observation, heliophysics and space exploration with emphasis on lunar science.
- Organize, ideally by mid-2025, a mission to India by an Italian delegation of representatives of the space industry, with a focus on research, space exploration and commercial collaboration.

Energy Transition

- Organise "Tech Summits" to share best practices and experiences, promote knowledge of each other's industrial eco-systems and facilitate industrial partnerships.
- Work together to strengthen the Global Biofuels Alliance and International Solar Alliance.

Defence Cooperation

- Enhance maritime cooperation, including in the field of maritime pollution response and maritime search and rescue.
- Negotiate a Defence Industrial Roadmap, between the two Ministries of Defence and promote a Memorandum of Understanding (MoU) between the Society of Indian Defence Manufacturers (SIDM) and the Italian Industries Federation for Aerospace, Defence and Security (AIAD).

Security Cooperation

- Continue to hold yearly bilateral meetings of the Joint Working Group on Combating International Terrorism and Transnational Crime.
- Strengthen cooperation in the fight against terrorism at the bilateral, regional and international forums.

Culture, Academic and People-to-People Exchanges, Cinema and Tourism

- Increase collaboration and exchanges between universities and higher education institutions of the two countries as well as cooperation in the field of technical and vocational education.

- Promote exhibitions and cultural initiatives to deepen mutual knowledge, also through the establishment of partnerships between museums.
- Work on increasing film co-productions and filmmaking in their respective countries.
- Strengthen bilateral collaboration on preservation and restoration of old and heritage sites and buildings.

Way Forward

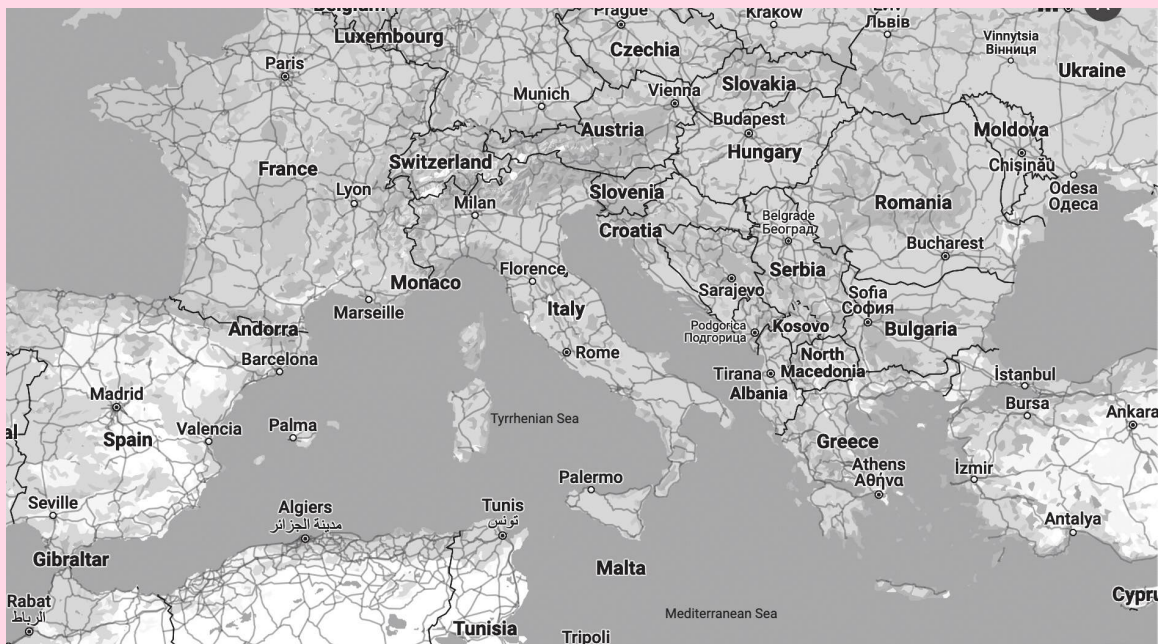
- The meeting between Prime Ministers Modi and Meloni underscored both countries’ commitment to expanding their partnership in a variety of fields.
- With clear action plans now in place, India and Italy are well-positioned to strengthen their ties over the next five years.

PRELIMS SPECIAL

About Italy

- Italy is a country in South Western Europe. It consists of a peninsula that extends into the Mediterranean Sea, with the Alps on its northern land border, as well as nearly 800 islands, notably Sicily and Sardinia.

- Italy shares its borders with France, Switzerland, Austria, Slovenia, and two enclaves: Vatican City and San Marino.
- It is the tenth-largest country in Europe by area, covering 301,340 km² (116,350 sq mi), and third-most populous member state of the European Union, with a population of nearly 60 million.
- Italy’s capital and largest city is Rome.



EXPECTED QUESTIONS FOR UPSC CSE

Prelims MCQ

Q. Consider the following countries:

1. Austria
2. Slovenia
3. France
4. Switzerland

Which of the above countries share a border with Italy?

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

(d) Answer:

Descriptive Question

Q. Highlight the key areas of collaboration between India and Italy and its potential impact to boost mutual growth? [10 marks] [150 words]

THE 2ND INDIA-AUSTRALIA ANNUAL SUMMIT

Why in News: Prime Minister of Indian and Prime Minister of Australia held the 2nd India-Australia Annual Summit on the sidelines of the G20 Summit in Rio de Janeiro on 19 November.

Key Details

- The Prime Ministers reaffirmed their support for

strengthening the India-Australia Comprehensive Strategic Partnership.

- They discussed cooperation in the areas of defence and security, trade and investments, education, skills and mobility, renewable energy, space, sports and people-to-people ties.

- A **Joint Statement** was issued on the occasion.
- Both sides also exchanged views on regional and global issues of mutual interest.
- They also reiterated their commitment for a peaceful, stable and prosperous Indo-Pacific Region, based on respect for international law.
- The 1st Annual Summit was held on 10 March 2023 in New Delhi during the State Visit of Prime Minister Albanese to India.

Key Highlights of Joint Declaration

Economy, Trade and Investments

- Prime Ministers expressed satisfaction at the increasing two-way trade, business engagements and market access for goods and services enabled under the landmark India-Australia Economic Cooperation and Trade Agreement (ECTA).
- Make in India and Future Made in Australia have complementarity and collaborative potential and could help create new jobs, unlock economic growth and secure future prosperity in a changing world.
- Prime Ministers welcomed the extension of the Australia-India Business Exchange (AIBX) programme for another four years from July 2024.
 - The AIBX continues to boost the confidence and capabilities of Australian and Indian businesses to connect and develop mutually beneficial partnerships.

Energy, Science and Technology, Space

- Prime Ministers welcomed the launch of the India-Australia Renewable Energy Partnership (REP) which would provide the framework for practical cooperation in priority areas such as solar PV, green hydrogen, energy storage, two-way investment in renewable energy projects and allied areas; and upgraded skills training for the renewables workforce of the future.
- Prime Ministers noted progress under the Memorandum of Understanding between India's Khanij Bidesh Ltd. (KABIL) and Australia's Critical Minerals Office as an opportunity to grow commercial links and advance supply chain diversification interests.
- **Space:** Prime Ministers welcomed the growing space partnership between the two countries, both at space agency and space industry levels.

- Cooperation to support the Gaganyaan missions, the planned launch of Australian satellites on-board an Indian launch vehicle in 2026 and joint projects between the respective space industries exemplify this deepening collaboration.

Defence and Security Cooperation

- Prime Ministers welcomed sustained progress under the defence and security pillar of the Comprehensive Strategic Partnership.
 - They expressed intent to renew and strengthen the Joint Declaration on Defence and Security Cooperation in 2025, to reflect ambition in both countries' elevated defence and security partnership and strategic convergence.
- The leaders appreciated the growing frequency and complexity of defence exercises and exchanges and the increasing interoperability through implementation of the Mutual Logistics Support Arrangement.
- **Indo-Pacific:** Prime Ministers welcomed arrangements for enhancing maritime domain awareness, and increased and reciprocal defence information-sharing to deepen operational defence cooperation, address shared concerns and challenges, and work towards an open, inclusive, peaceful, stable and prosperous Indo-Pacific.

Parliamentary cooperation: Prime Ministers reiterated that inter-parliamentary cooperation is an important component of the Comprehensive Strategic Partnership and looked forward to continued exchanges.

Education, Sports and People-to-People Ties

- Opening of the new Consulate-General of Australia in Bengaluru and the new Consulate-General of India in Brisbane will further strengthen trade and investment relations and deepen cultural links.
- The leaders welcomed the launch of Australia's Working Holiday Maker visa programme for India in October 2024, and looked forward to the commencement of Australia's Mobility Arrangement for Talented Early-professionals Scheme (MATES), which will promote mobility of early professionals and provide Australian industry access to some of India's most talented STEM graduates.
- **Education:** Prime Ministers expressed satisfaction at Australian universities establishing their campuses in India. They noted that the second Australia India Education and Skills Council meeting held in October 2024 helped in advancing educational and skills cooperation.
- **Sports:** Sport offers significant opportunities to foster bilateral ties, enhance people-to-people links and cultural exchanges. The leaders agreed to engage on capacity building, focusing inter alia on training and workforce

development, sports science and medicine, and major sporting event management.

Regional and Multilateral Cooperation

Indo-Pacific

Prime Ministers reiterated their commitment to support an open, inclusive, stable, peaceful and prosperous Indo-Pacific where sovereignty and territorial integrity are respected.

Quad

Prime Ministers reiterated their commitment to strengthening cooperation through the Quad as a force for global good which delivers real, positive and enduring impact for the Indo-Pacific, to advance their shared vision for a region that is free, open, inclusive and resilient.

ASEAN

Prime Ministers reaffirmed their commitment to ASEAN centrality and the ASEAN-led regional architecture including the East Asia Summit (EAS), the ASEAN Regional Forum and the ASEAN Defence Ministers' Meeting Plus.

PRELIMS SPECIAL

The **Australia-India Economic Cooperation and Trade Agreement (ECTA)** is an interim agreement between Australia and India that entered into force on December 29, 2022:

- **Tariff reductions:** Over 85% of Australian goods exports to India are now tariff-free, and 96% of imports from India are also tariff-free. These percentages are set to increase to 90% and 100%, respectively, by January 1, 2026.

EXPECTED QUESTIONS FOR UPSC CSE

Prelims MCQ

Q. Consider the following statements regarding Australia-India Economic Cooperation and trade Agreement (ECTA):

1. Australia-India ECTA led to 85% Australian exports to India becoming tariff free.
2. It led to 96% of Indian exports to Australia becoming tariff free.
3. It is expected to ensure 100% of Indian exports to Australia by January 1, 2026.

How many of the above statements are correct?

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

Answer: (c)

Descriptive Question

Q. Recently India-Australia concluded their 2nd India-Australia Annual Summit. Discuss its impact on the India-Australia Comprehensive Strategic Partnership in fostering bilateral ties. [10 Marks] [150 words]

GLOBAL SOUTH

Why in News: Union Finance Minister highlighted the contributions of the Global South to the foundations of Multilateral Development Banks at the 1944 Bretton Woods conference.

Key Details

- Union Finance Minister emphasized on embedding diverse voices in decision-making to ensure a truly inclusive and global development framework.
- India's stance that the World Bank should adopt a strictly evidence-based and data-driven approach when preparing global indices and country comparators such as the Worldwide Governance Indicators and the new B-Ready index.
- She affirmed hope that the World Bank would chart the future path with a renewed commitment by addressing key priorities, empowering regions, and fostering partnerships, to create a future-ready institution capable of accelerating progress.

About Global South

- The G77, from Central and South America, Africa, Asia and Oceania, and refers to itself as the "global south".
- Many countries that fall under the 'Global South' umbrella have long felt that their views have not been heard or their interests have not been adequately reflected in international agreements or multinational forums.

Features of Global South

- **Newly Industrialized Status:** These countries are in the process of industrialization and have been described as newly industrialized.
- **Important Countries:** Prominent countries within the Global South include Brazil, China, India, Indonesia, and Mexico, known for their large populations and economies.
- **Lower-income Countries:** The Global South primarily consists of lower-income countries located in Africa, Asia, and South America.
- **Geopolitical Background:** Geopolitically, these nations have a history of imperialism and colonial rule.



Significance of the Global South in contemporary world

- **Geo Political importance:** The international system is witnessing geopolitical changes and a push for competitive great power hegemony. The United States leads with its goal for primacy in the international system. The U.S.’s national security documents advocate curbing China’s rise, weakening Russia’s capabilities, securing Europe behind U.S. leadership and building satellite alliances with countries which conform to U.S. interests and values. But other players have different agendas and the Global South matters more than before.
- **Economic importance:** The countries of the Global South have gradually broken away from the neoliberal development model based on the Washington Consensus and have become more aware of the need to learn from each other’s development experience and knowledge in the course of their international exchanges.
- A common aspiration of the Global South has been to achieve the development and modernization of their countries through new-type industrialization.
- The countries of the global South are no longer content to serve as suppliers of raw materials and markets for merchandise sales in the fourth industrial revolution, but wish to participate deeply in it through the use of science, technology, and innovation.
- **Geostrategic importance:** Multilateral mechanisms dedicated to global and regional security governance, such as the Shanghai Cooperation Organization (SCO) and the BRICS cooperation mechanism, are making efforts to give strategic leadership to the global south.
- Inclusion of African Union in G20 recently and expansion of BRICS highlight the growing importance of the global south.

Conclusion

- Collaboration between the Global South and India can lead to significant advancements in various fields.
- India’s development partnerships prioritize consultation, outcome orientation, people-centric approaches, and respect for the sovereignty of partner countries.
- Distinguishing India’s approach from that of China can help avoid debt traps and financially unsound undertakings, promoting sustainable development within the Global South.

EXPECTED QUESTIONS FOR UPSC CSE

Prelims MCQ

Q. With reference to the G77, consider the following statements:

1. G77 was established to promote interests of developing countries in United Nations.
2. Members of G77 grouping are collectively known as Global South countries.
3. Around 134 countries are members of G77 grouping.

Which of the statements given above is/are correct?

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

Answer: (c)

Descriptive Question

Q. Discuss the features and significance of Global South in contemporary world governance. [10 marks] [150 words]

THE 16TH BRICS SUMMIT

Why in News: Prime Minister of India participated in the 16th BRICS Summit held under Russia's Chairship, in Kazan.

Key Details about the Summit

- The BRICS leaders had productive discussions including on strengthening multilateralism, countering terrorism, fostering economic growth, pursuing sustainable development and bringing spotlight on the concerns of the Global South.
- The leaders welcomed the 13 new BRICS partner countries.
- **Theme:** Strengthening Multilateralism for Just Global Development and Security
- The Summit offered a valuable opportunity to assess the progress of initiatives launched by BRICS and to identify potential areas for future collaboration.
- Prime Minister Modi addressed two sessions of the BRICS Summit. In his address, PM noted that the Summit is happening at a time when the world is undergoing several uncertainties and challenges including conflicts, adverse climatic impacts, and cyber threats, placing greater expectations upon BRICS.
- PM suggested that the group take a people-centric approach to tackle these challenges.
- PM also underlined the need for early adoption of a Comprehensive Convention on International Terrorism at the United Nations to combat the menace of terrorism.
- PM called upon BRICS to proactively push for global governance reforms. Recalling the Voice of Global South Summits hosted by India during its G-20 Presidency, he stressed that the group must give primacy to the concerns of the Global South.
- Prime Minister elaborated on the recent green initiatives undertaken by India including the International Solar Alliance, Coalition for Disaster Resilient Infrastructure, Mission LIFE and Green Credit initiative announced during COP28. He invited BRICS countries to join these initiatives.
- At the conclusion of the Summit, the leaders adopted the Kazan Declaration.

Key Takeaways from the Kazan Declaration

- **On Ukraine:**
 - The leaders emphasized that all states should act consistently with the Purposes and Principles of the UN Charter in their entirety and interrelation.
- **On West Asia:**
 - They note with appreciation relevant proposals of mediation and good offices, aimed at a peaceful resolution of the conflict through dialogue and diplomacy.
 - The leaders reiterated their grave concern at the deterioration of the situation and humanitarian crisis in the Occupied Palestinian Territory, in particular the unprecedented escalation of violence in the Gaza Strip and in West Bank as a result of the Israeli military offensive, which led to mass killing and injury of civilians, forced displacement and widespread destruction of civilian infrastructure.
 - They expressed alarm over the situation in Southern Lebanon. They condemned the loss of civilian lives and the immense damage to civilian infrastructure resulting from attacks by Israel in residential areas in Lebanon and call for immediate cessation of military acts.
- **On Western Sanctions:**
 - The leaders are deeply concerned about the disruptive effect of unlawful unilateral coercive measures, including illegal sanctions, on the world economy, international trade, and the achievement of the sustainable development goals.
- **On International Financial System's Reform:**
 - The leaders underscored the need to reform the current international financial architecture to meet the global financial challenges including global economic governance to make the international financial architecture more inclusive and just.
- **On BRICS Grain Exchange:**
 - The leaders welcomed the initiative of the Russian side to establish a grain (commodities) trading platform within BRICS (the BRICS Grain Exchange) and to subsequently develop it including expanding it to other agricultural sectors.
- **On BRICS Cross-border Payment System:**
 - The leaders recognised the widespread benefits of faster, low cost, more efficient, transparent, safe and inclusive cross-border payment instruments built upon the principle of minimizing trade barriers and non-discriminatory access.
 - They welcomed the use of local currencies in financial transactions between BRICS countries and their trading partners.
- **On BRICS Clear Depository:**
 - The leaders agreed to discuss and study the feasibility of establishment of an independent cross-border settlement and depository infrastructure, BRICS Clear, an initiative to complement the existing financial market infrastructure, as well as BRICS independent reinsurance capacity, including BRICS (Re)Insurance Company, with participation on a voluntary basis.

- **On Financial Innovation:**
 - The leaders welcomed the BRICS Interbank Cooperation Mechanism (ICM) focus on facilitating and expanding innovative financial practices and approaches for projects and programmes, including finding acceptable mechanisms of financing in local currencies.
- **On the IMF:**
 - The leaders reaffirmed their commitment to maintaining a strong and effective Global Financial Safety Net with a quota-based and adequately resourced IMF at its centre.
- **On G20:**
 - The leaders recognised the importance of the continued and productive functioning of the G20, based on consensus with a focus on result-oriented outcomes.
- **On Prevention of Future Pandemics:**
 - The leaders supported the initiatives of the BRICS R&D Vaccine Center, further development of the BRICS Integrated Early Warning System for preventing mass infectious diseases risks.
- **On Big Cats:**
 - The leaders appreciated the efforts of their countries to preserve rare species and noting the high vulnerability of big cats.
 - They took note of India’s initiative to create an International Big Cats Alliance and encouraged BRICS countries to work together to make further contributions to the conservation of big cats.

indicate an attempt by New Delhi to engage with Europe’s biggest economies bilaterally.

- While Mr. Scholz’s visit was a scheduled engagement for the bi-annual Inter-Government Consultations, this was his third visit since 2023; Prime Minister Narendra Modi had visited Germany in 2022.
- In a first in 18 years, Spain’s PM arrived in India for strategic talks on defence and trade.
- The two-day visit of Mr. Sánchez (officially called the President of the Government of Spain) shone a spotlight on unnoticed India-Spain bilateral ties.

Key developments with Germany

- There were MoUs on innovation and technology, skilling and mobility, and green energy cooperation, as well as improving trade, pegged at \$26 billion, with about \$27 billion in German investments.
- The conversation over trade and investment intensified with both leaders attending the Asia-Pacific Conference of German Business, a first in India, amidst an attempt by German businesses to reduce their exposure in China.

Key developments with Spain

- Trade between India and Spain is nearly \$10 billion, and Spain is India’s 16th largest investor.
- Despite its relatively lower stakes in India’s economy, Spain is increasingly seen as a technology and engineering partner; one of the MoUs signed was for rail transport.
- The highlight of the visit was the inauguration of an Airbus-Tata private sector plant to assemble C-295 aircraft for the Indian Air Force.

Similar agendas, different destinations

- **Competition to enter the Indian market:** Both Germany and Spain are seeking to capitalise on India’s lucrative market for defence partnerships and exports due to an ease in regulations for foreign entrants and the entry of local private sector companies in the defence space.
- **Military Purchases:** Germany’s Thyssenkrupp and Spain’s Navantia are in competition to co-produce six conventional submarines with Indian firms. Sanchez’s stopover in Vadodara, Gujarat, saw the inauguration of the Airbus and Tata Aircraft Complex.
- **Reliable Partners:** European countries are catapulting themselves as reliable security partners for India while simultaneously boosting the “Make in India” programme and initiatives to indigenise defence production, weaning New Delhi off Russian arms dependencies.

EXPECTED QUESTIONS FOR UPSC CSE

Prelims MCQ

Q. In which of the following countries Kazan province is located?

- (a) Brazil (b) Turkmenistan
(c) Russia (d) Iran

(c) :Answer

Descriptive Question

Q. Analyze the key outcomes of the 16th BRICS Summit, highlighting its significance for global governance. [15 marks] [250 words]

INDO-EUROPEAN REALIGNMENT

Why in News: Leaders of Germany, Spain visited India recently.

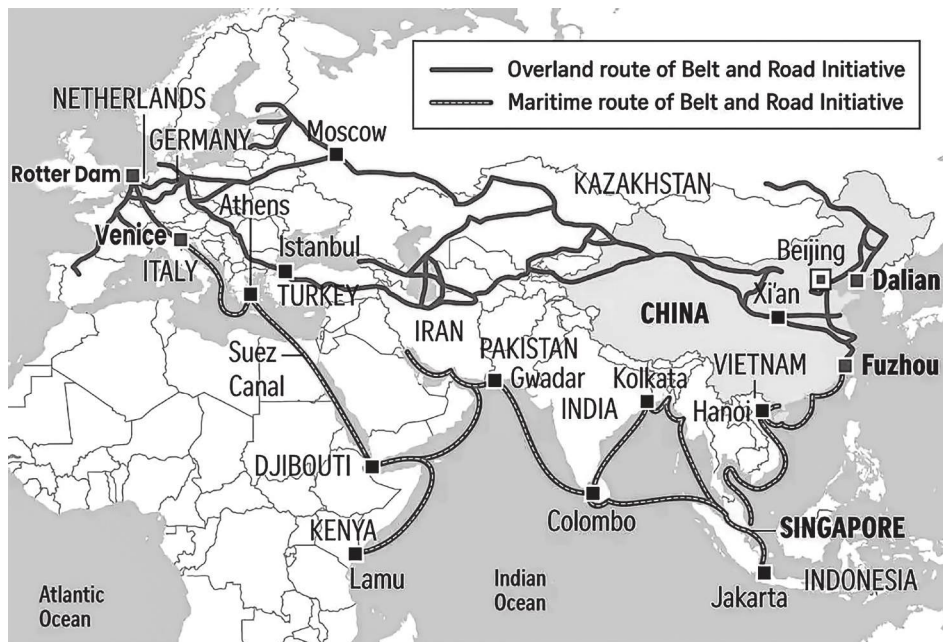
Key Details

- The back-to-back visits to India by German Chancellor Olaf Scholz and Spain’s Prime Minister Pedro Sánchez

The Visits in the background of Russia - Ukraine conflict

- The timing of the visits followed just after Mr. Modi’s Russia visit for the BRICS summit, and his meetings with Russian President Vladimir Putin and Chinese President Xi Jinping, which shows how India continues to balance ties amid the Russia-Ukraine conflict.
- India expressed deep concerns over the loss of life in the Ukraine conflict and the need for lasting peace, in joint statements with Germany and Spain. But the statements deferred to a degree in the paragraphs on the West Asian crisis.
- The statement with Germany squarely condemned Hamas for its actions on October 7 last year, and called for the immediate release of Israeli hostages.
- The statement with Spain did not name Hamas, and emphasised the need to protect civilians and for all parties to comply with international law. Spain has taken a step away from other European countries by recognising Palestine and blocking all shipments of armaments including from India to Israel.
- It is important that India continues to engage with European countries individually, as well as with the European Union, especially with such evidence that even the closest partners have nuanced differences on geopolitical issues of the day.

About Belt and Road Initiative



- The Belt and Road Initiative (BRI), known in China as the One Belt One Road and sometimes referred to as the New Silk Road, is a global infrastructure development strategy adopted by the Chinese government in 2013 to invest in more than 150 countries and international organizations.
- The BRI is composed of six urban development land corridors linked by road, rail, energy, and digital

BELT AND ROAD INITIATIVE

Why in News: Brazil has decided not to Join China’s Multi-Billion-Dollar Belt And Road Initiative.

Key Details

- Brazil has decided not to join China’s multi-billion-dollar Belt and Road Initiative (BRI).
- It has become the second country after India in the BRICS bloc to reject Beijing’s mega project.
- Celso Amorim, special presidential adviser for international affairs, told Brazilian newspaper O Globo that instead of joining BRI, Brazil will seek alternative ways to collaborate with Chinese investors.
- The prevailing opinion in Brazil is that joining China’s flagship infrastructure project would not only fail to bring any tangible benefits for Brazil in the short term, but could also make relations with a potential Trump administration more difficult.
- The Lula da Silva government’s decision contradicts China’s plans to make Brazil’s joining of the initiative a centrepiece of Chinese President Xi Jinping’s state visit to Brasilia on November 20.

infrastructure and the Maritime Silk Road linked by the development of ports.

India and Brazil Relations

- **Introduction:** India and Brazil share a very close and multifaceted relationship both at bilateral level as well as in plurilateral forums such as BRICS, BASIC, G-20, G-4,

IBSA, International Solar Alliance, as well as in the larger multilateral bodies such as the UN, WTO, UNESCO, and WIPO.

- **Diplomatic ties:** Diplomatic relations were established in 1948, with both countries opening the embassies in the same year. India has a Consulate General in Sao Paulo while Brazil has a Consulate General in Mumbai. India opened its Embassy in Rio de Janeiro, which was later moved to Brasilia in 1971.
- **About Partnership:** The two countries have been Strategic Partners since 2006. The bilateral relationship is based on a common global vision, shared democratic values, and a commitment to foster economic growth with social inclusion for the welfare of the people of both countries.

Trade and Investment

- In 2021, India became the 5th largest trading partner of Brazil and the bilateral trade between India and Brazil increased by 63.5% to US\$ 11.53 billion compared to US\$ 7.052 billion in 2020. ~ In 2023, India's export was US\$6.9 billion while India's import was US\$4.7 billion. Major Indian exports to Brazil include processed Petroleum products, Agro-chemicals (insecticides, fungicides), Chemicals, Pharmaceuticals, Engineering products, Textured filament yarn, and Unwrought Aluminum.
- Brazilian exports to India included Crude oil, soya oil, Gold (non-monetary), cane sugar, cotton, gum, wood and turpentine oils, chemicals (carboxylic acids) and iron ore and concentrates.
- Total Indian investment in Brazil is estimated to be more than US\$ 6 billion. Brazilian investments in India are around US\$ 1 billion. Sterlite Group from India has

recently won a power transmission project worth US\$ 800 million and is planning to invest approximately US\$ 2 billion in Brazil. United Phosphorus Limited has set-up a new plant in Sao Paulo for US\$ 150 million and are keen to develop pulses segment including chickpeas and lentils. Major Indian companies in Brazil are Glenmark, ZydusCadila, Sun Pharma, Dr. Reddy's Laboratories, Pidilite etc.

EXPECTED QUESTIONS FOR UPSC CSE

Prelims MCQ

Q. Consider the following statements regarding Belt Road Initiative:

1. Belt Road Initiative is a global infrastructure development strategy adopted by China.
2. All BRICS members countries except India joined China led Belt Road Initiative.

Which of the statements given above are correct?

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

Answer: (a)

Descriptive Question

Q. Discuss the trade and investment potential between India and Brazil, highlighting the opportunities and challenges in deepening economic ties. [10 marks] [150 words]

E-SHRAM

Why in News: Ministry of Labour & Employment to Launch 'eShram-One Stop Solution' for Unorganized Workers.

e-Shram One Stop Solution

A Single window for Unorganized workers

Ensuring the availability of all key **Social Security & Welfare Schemes**



Key Details

- **About e-shram:** eShram-One Stop Solution will act as a mediator to ensure that unorganized workers have easy access to a variety of Government schemes/programs.
- This initiative will help unorganized workers become aware of the schemes designed for them.
- It was launched on August 26, 2021 by the Ministry of Labour and Employment.

Aim of the Scheme:

- It aims to register 38 crore unorganized workers across India, including construction laborers, migrant workers, street vendors, and domestic workers, to provide them access to social security schemes through a centralized database.
- If a worker registers on the e-Shram portal and meets with an accident, they are eligible to receive a compensation of Rs 2 lakh in case of death or permanent disability, and Rs 1 lakh for partial disability.

Coverage of Schemes

Twelve schemes of different Central Ministries / Departments have already been integrated/ mapped with the eShram such as:

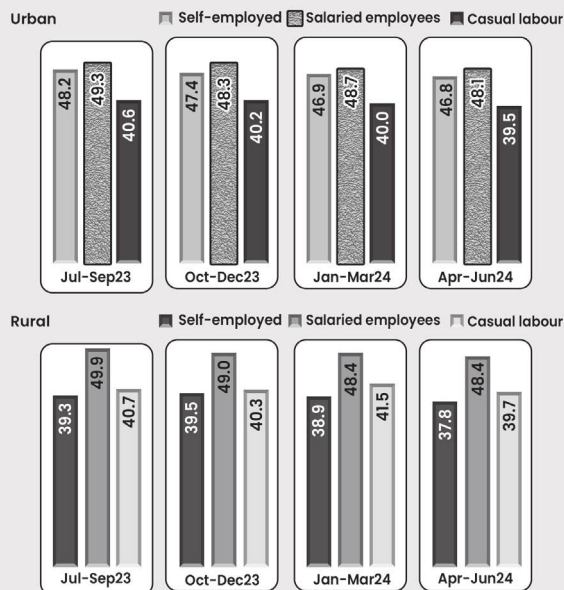
- ▶ Pradhan Mantri Shram Yogi Maan-Dhan Yojana (PM-SYM)
- ▶ National Pension Scheme for Traders and Self-employed Persons (NPS)
- ▶ Pradhan Mantri Jeevan Jyoti Yojana (PMJJBY)
- ▶ Pradhan Mantri Suraksha Bima Yojana (PMSBY)
- ▶ Atal Pension Yojana
- ▶ Public Distribution System (PDS)
- ▶ Pradhan Mantri Awaas Yojana – Gramin (PMAY-G)
- ▶ National Social Assistance Programme (NSAP) – Old Age Protection
- ▶ Ayushman Bharat-Pradhan Mantri Jan Arogya Yojana (AB-PMJAY)
- ▶ Pradhan Mantri Kisan Mandhan Yojana
- ▶ National Safai Karamcharis Finance and Development Corporation (NSKFCO)
- ▶ Self-employment Scheme for Rehabilitation of Manual Scavengers
- ▶ Health Insurance Scheme for Weavers (HIS)

Workers in the Unorganised Sector

- According to the Annual Survey of Unincorporated Sector Enterprises 2021-22 and 2022-23, the informal sector's contribution to national income has dropped. Between 2015-16 and 2022-23, informal businesses with hired workers declined.
- The total number of workers in the unorganised sector went down from 111.3 million in 2015-16 to 110 million in 2022-23. These workers represent almost half of all the non-farm, non-construction workers in the Indian economy.

Average Rural Self-Employed Works Much Less Hours Than Urban Counterpart

Average weekly working hours by different status workers in employment



Source: PLFS Annual Report 2023-24

Conclusion

Since the launch of e-Shram on August 26, 2021, it has achieved significant milestones with over 30 crore unorganized workers enrolled and it has demonstrated its widespread appeal among unorganized labour.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

Q. Consider the following schemes

1. PM Shram Yogi Maan Dhan Yojana
2. Atal Pension Yojana
3. PM Kisan Maan Dhan Yojana

How many of the above schemes are integrated with the e-shram portal?

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

Answer: (c)

- **Aide Enforcement Directorate:** The platform has enabled the agency in accessing and sharing intelligence informally, paving the way for formal actions through bilateral or multilateral agreements.

About Asset Recovery Interagency Network-Asia Pacific (ARIN-AP)

- It is a prominent multi-agency network dedicated to tackling the proceeds of crime in the Asia-Pacific region and a member of the Global CARIN Network.
- ARIN-AP was established to facilitate cross-border collaboration on asset tracing, freezing, and confiscation.
- It includes 28 member jurisdictions and nine observers and serves as an informal yet robust network as part of CARIN Network.
- The Secretariat is located in the South Korean Supreme Prosecutors' Office.
- It operates through a network of contact points, enabling effective communication and intelligence exchange among member agencies, and of over 100 jurisdictions in CARIN Network with the ED representing India as the nodal agency.

ASSET RECOVERY INTERAGENCY NETWORK-ASIA PACIFIC (ARIN-AP)

Why in News: India, represented by the Directorate of Enforcement (ED), has been included in the Steering Committee of the Asset Recovery Interagency Network-Asia Pacific.

Key Details

- India will assume the presidency of the network and host the Annual General Meeting (AGM) in 2026.
- This milestone provides a unique platform to reinforce India's leadership in asset recovery and enhance cooperation with regional and international partners.

Advantages of Inclusion of India in Steering Committee of ARIN-AP

- **Tracing across borders:** Aids in tracing assets related to criminal activities, both movable and immovable, across borders.
- **Promote ARIN-AP's Mission:** India can contribute to ARIN-AP's decision-making and administrative responsibilities, furthering its mission to combat economic crimes and support asset recovery at a global scale.
- **Expedite Crime Solving and Recovery:** Through ARIN-AP and the larger Camden Asset Recovery Inter-Agency Network (CARIN), agencies can exchange information on individuals, assets, and companies informally, often expediting the identification and recovery of proceeds of crime.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

Q. What are the benefits of India becoming a member of the steering committee of Asset Recovery Interagency Network - Asia Pacific?

1. Tracing the assets related to criminal activities across the national border.
2. Combating economic crimes and support asset recovery at a global scale.
3. Aid Enforcement Directorate of India in accessing and sharing intelligence.

How many of the above statements are correct?

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

Answer: (c)

OFFSHORE MINERAL

Why in News: Centre introduces new royalty rates ahead of first offshore mineral auction, marking a significant step in resource management.

RATES DECODED

■ Construction sand	₹40/tonne
■ Polymetallic nodules	3% of avg sale price (ASP)
■ Overburden/waste	₹10/tonne
■ Dolomite	₹50/tonne
■ Limestone/lime mud	₹50/tonne
■ Brown ilmenite (leucosene), ilmenite, rutile, zircon	2% of ASP
■ Garnet	3% of ASP
■ Gold	1.5% of London Bullion Market Association price
■ Silver	5% of London Metal Exchange price
■ Manganese ore	3% of ASP
■ Monazite	₹125/tonne
■ Sillimanite	2.5% of ASP
■ All other unspecified minerals	10% of ASP



Note: Royalties based on % of ASP or market prices are on an ad valorem basis; Source: Ministry of Mines

Key Details

- The central government has introduced royalty rates for construction sand, polymetallic nodules, and overburden or waste—key minerals to be extracted through offshore mining.
- The rate for dolomite, limestone, and lime mud too will be revised. This comes as the Centre is preparing to bring 20 blocks for auction in the coming months.
- The government is updating rates to meet rising market demand and account for the commercial value of these resources.
- The royalty rates are defined under the Offshore Areas Mineral (Development and Regulation) Act, 2002.
- The Act has established ad valorem royalty rates for key minerals, meaning that rates are based on the mineral's sale value rather than the quantity produced.

PRELIMS SPECIAL

About Offshore Mining

- Offshore mining refers to the extraction of minerals or precious stones from the seabed, where material is usually pumped ashore and tailings are left on the beach, altering its profile and structure, leading to ecosystem disruption.
- Technically, offshore mining is the process of retrieving mineral deposits from the deep seabed, at a depth of more than 200 metres.
- In the process, poly-metallic nodules, including precipitated iron oxy-hydroxides and manganese oxides, onto which metals such as nickel, cobalt, copper, titanium and rare earth elements gather, are sorted, and unwanted sediments are flushed back into the sea.

The "National Mineral Mission" in India

- Currently referred to as the "Critical Minerals Mission," is a government initiative aimed at securing the country's access to essential minerals crucial for economic growth and the transition to a net-zero economy, by boosting domestic exploration, production, recycling, and potentially acquiring

critical mineral assets overseas, primarily focusing on minerals vital for clean energy technologies like electric vehicles and renewable energy sources.

Key points about the National Mineral Mission:

Focus on critical minerals:

- The mission specifically targets "critical minerals" which are considered essential for the economy but have high import dependency, like lithium, cobalt, nickel, and graphite.

Objectives:

- Increase domestic exploration and mining of critical minerals.
- Develop technology for mineral processing and beneficiation
- Establish recycling infrastructure for critical minerals from end-of-life products
- Explore opportunities to acquire critical mineral assets abroad

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

Q. Consider the following statements regarding Offshore Mining:

1. Offshore mining refers to the extraction of minerals from sea bed.
2. It extracts minerals from depth less than 200 metres.

Which of the above given statements is/are correct?

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

Answer: (c)

FOOD CORPORATION OF INDIA

Why in News: The Union Cabinet recently approved infusion of equity in Food Corporation of India by way of conversion of Ways and Means Advance to equity in 2024-25.

Key Details

- The decision is aimed at bolstering the agricultural sector and ensuring the welfare of farmers nationwide. This strategic move shows the Government's steadfast commitment to support farmers and fortifying India's agrarian economy.
- **Significance**
 - The infusion of Equity is a significant step towards enhancing the operational capabilities of FCI in fulfilling its mandate effectively.
 - FCI resorts to short term borrowings to match the gap of fund requirement. This infusion will help to lower the interest burden and will ultimately reduce the subsidy of the Government of India.
 - The Government's dual commitment to MSP-based

procurement and investment in FCI's operational capabilities signifies a collaborative effort towards empowering farmers, fortifying the agricultural sector, and ensuring food security for the nation.

Challenges Associated with the FCI as per the Standing Committee on Food, Consumer Affairs, and Public Distribution

- **Low Direct Procurement by FCI**
 - Most procurement operations are carried out by state agencies, with FCI handling less than 5% of direct procurement.
- **Limited Adoption of Decentralised Procurement**
 - Only a few states have adopted the decentralised procurement scheme for wheat and rice, even after 23 years of its inception.
- **Rejection of Foodgrains on Technical Grounds**
 - Farmers often face hardships due to the rejection of foodgrains for non-bonafide reasons, such as moisture content, leading to distress sales.
- **Underutilisation of Owned Storage Capacity**
 - Despite audits, FCI-owned storage facilities remain underutilised, with high reliance on costlier hired storage facilities.
- **Delayed Construction of Storage Infrastructure**
 - Targets for constructing godowns, especially in critical regions like northeastern states, Jammu & Kashmir, and island territories, are not met.
- **Damage to Foodgrains**
 - High levels of damaged food grains are reported due to factors like pest attacks, rain, floods, and poor-quality procurement. This leads to significant monetary losses.
- **High Transit Losses**
 - Substantial losses during transit are reported (e.g., Rs. 281 crore during April-October 2020), due to leakages, corruption, and poor monitoring.
- **Corruption and Diversion of Foodgrains**
 - Complaints about leakages, diversion of foodgrains, and corruption persist despite existing monitoring mechanisms.
- **Accountability Issues**
 - There is a lack of strict accountability for officials responsible for losses due to negligence or inefficiency.

Way Forward

The committee recommended measures such as strengthening infrastructure, expediting storage projects, improving monitoring systems, and holding officials accountable to address these challenges.

PRELIMS SPECIAL

Food Corporation of India

- **Pre-Independence**
 - During World War II India faced acute food shortages and to meet the exigencies a separate Food Department was

established on 1st December 1942 under the Commerce Member of the Governor General's Council.

- **Post-Independence**
 - The Food Department was re-designated as the Ministry of Food on 29th August 1947. As per available records, the Directorate of Sugar and Vanaspati was part of the Food Ministry in 1947.
 - On 1st February 1951 the Ministry of Agriculture was combined with the Ministry of Food to constitute the Ministry of Food and Agriculture, for greater administrative efficiency and economy.
 - Over time as the work expanded significantly, two separate ministries, namely the Ministry of Food and Ministry of Agriculture were formed in October 1956 but they were again merged on 17th April 1957 as the Ministry of Food and Agriculture.
 - On 30th December 1958, the work related to the Central and State Warehousing Corporations was transferred to the Department of Food, in the Ministry of Food and Agriculture.
- **Vision:** Ensuring food security for citizens of the country.
- **Mission:** Efficient procurement at Minimum Support Price (MSP), safe storage and efficient distribution of foodgrains.
- **Objectives**
 - To implement the National Food Security Act, 2013, throughout the country.
 - To undertake price support operation through efficient procurement of wheat, paddy /rice and coarse grains.
 - To strengthen the Targeted Public Distribution System.
 - Development, Promotion and Diversification of Sugar industry.
 - Development and Rejuvenation of Warehousing Sector.

EXPECTED QUESTIONS FOR UPSC CSE

Prelims MCQ

Q. Consider the following statements regarding Food Corporation of India (FCI):

1. Recently Union cabinet approved infusion of equity of Rs. 10,700 crore in FCI by Ways and Means Advance in equity in 2024-25
2. FCI aims to implement the National Food Security Act, 2013 throughout the country
3. FCI also focusses on development and rejuvenation of warehousing sector

Which of the statements given above are correct?

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

Answer: (d)

Descriptive Question

- Q. Discuss the challenges faced by Food Corporation of India in fulfilling its mandate of food grain procurement and distribution. Suggest measures to address these challenges. [10 marks] [150 words]

INDIA RE-ELECTED PRESIDENT OF THE INTERNATIONAL SOLAR ALLIANCE

Why in News: India has been re-elected as the President of the International Solar Alliance (ISA) from 2024 - 2026 during the seventh session of the ISA Assembly, underscoring its pivotal role in global solar energy initiatives.

Key Details

- Ghana and Seychelles were appointed as Vice Presidents for Africa, while the Commonwealth of Australia and Sri Lanka took the positions for Asia and the Pacific.
- Germany and Italy will represent Europe and the Others region, with Grenada and Suriname representing Latin America and the Caribbean
- During this session, several significant initiatives, programs, and funding schemes aimed at supporting solar energy projects and fostering global cooperation were presented and discussed.
- On the concluding day of the session, the practical implementation of agrivoltaic systems was showcased to the delegates of various countries.

About Agrivoltaics

- Agrivoltaics is the use of land for both agriculture and solar photovoltaic energy generation. It's also sometimes referred to as agrisolar, dual use solar, low impact solar.
- Agrivoltaic farming is the practice of growing crops underneath solar panels.
- **Benefits of Agrivoltaics**
 - **Increased land efficiency:** One of the primary benefits of agrivoltaics is its ability to increase land efficiency. Traditional solar farms require large areas of land, often displacing agricultural activities. Agrivoltaics addresses this issue by enabling the same land to be used for both energy production and farming. This dual-use approach reduces the need for additional land and helps optimize space utilization.
 - **Enhanced Crop Yields:** Agrivoltaics can also improve crop yields through shading provided by solar panels. The partial shade from the panels reduces heat stress on plants and leads to less evaporation, leading to healthier crops. This can result in higher productivity and better crop quality overall.
 - **Sustainability and environmental impact:** The benefits of agrivoltaics extend to environmental sustainability. By combining solar energy production

with agriculture, this approach helps minimize land use changes and reduces the environmental footprint of both energy and farming activities. Agrivoltaics supports biodiversity by preserving natural habitats and reduces the need for separate solar farms, thereby limiting land conversion.

- **Economic advantages:** In addition to environmental benefits, agrivoltaics offers economic advantages. Farmers can generate additional income from selling solar energy while continuing their agricultural operations. This can help offset the costs of implementing solar technology and provide a new revenue stream for farming businesses.

Key Initiatives during 7th Session of the International Solar Alliance (ISA)

- The **SolarX Startup Challenge**, introduced at COP27, supported innovative solar businesses in ISA Member Countries.
- The **STAR-C Initiative** strengthened solar technology skills in developing economies, while the **Global Solar Facility** catalyzed investment in underserved regions, particularly Africa.
- The **Viability Gap Funding Scheme** provided grants to solar projects in Least Developed Countries and Small Island Developing States, easing financial barriers.
- The **Solar Data Portal** offered real-time data to inform investment decisions, and the **International Solar Festival** fostered global collaboration on solar solutions.
- Additionally, the **Green Hydrogen Innovation Centre** explored synergies between solar energy and hydrogen, and the **ISA Knowledge Series** and **World Solar Reports** promoted research, insights, and market trends, positioning ISA as a leading advocate for solar energy worldwide.

PRELIMS SPECIAL**About International Solar Alliance**

- The ISA is a global intergovernmental organization dedicated to advancing solar power adoption for a carbon-neutral future.
- The ISA is a collaborative initiative between India and France aimed at uniting efforts to combat climate change by implementing solar energy solutions. It was conceptualized on the side lines of COP21 in Paris in 2015.
- Following a 2020 amendment to its Framework Agreement, all UN member states are now eligible to join the Alliance. Currently, 100+ countries are signatories, with 90+ countries having ratified to become full members.
- Its mission is to unlock \$1 trillion in solar investments by 2030 while reducing technology and financing costs.
- Headquartered in India, the ISA collaborates with multilateral development banks, private and public sectors, civil society, and international institutions to implement cost-effective solar solutions, especially in Least Developed Countries (LDCs) and Small Island Developing States (SIDS) Member Countries.

• **Note:** The 3rd edition of the World Solar Report series was released at the 7th Assembly of the International Solar Alliance focusing on global solar growth, investment trends, technological advancements, and Africa's green hydrogen potential were released.

• **Report Highlights:**

- **Rise in Solar Capacity:** In just two decades, global solar capacity has exploded from 1.22 GW in 2000 to an astounding 1,418.97 GW in 2023—a staggering 40% annual growth rate.
- **Solar Industry Employment Boom:** The clean energy industry now fuels 16.2 million jobs, with solar leading the charge at 7.1 million—up 44% from 2022's 4.9 million.

EXPECTED QUESTIONS FOR UPSC CSE

Prelims MCQ

Q. What is agri voltaics?

- (a) The practice of installing solar panels in deserts.
- (b) Growing crops and generating solar energy simultaneously.
- (c) Using agricultural waste like stubble to generate thermal bioenergy.
- (d) Farming algae for biofuel production.

(b) :Answer

Descriptive Question

Q. Discuss the concept of agrivoltaics and its potential benefits in addressing the challenges of climate change. [10 marks] [150 words]

NUTRACEUTICAL INDUSTRY IN INDIA

Why in News: India's nutraceutical industry is poised for significant growth in the next five years with supportive initiatives.

About Nutraceutical

• Nutraceutic is a term derived from "nutrition" and "pharmaceutics." The term is applied to products that are isolated from herbal products, dietary supplements (nutrients), specific diets, and processed foods such as cereals, soups, and beverages that other than nutrition are also used as medicine.

Some examples of nutraceuticals include:

- Green tea
- Blueberries
- Amino acids
- Vitamin D

- Pomegranate peels and seeds
- Raw white garlic

Background

- The global nutraceutical market is currently estimated at around \$400 billion, blending the fields of food, pharmaceuticals, and biotechnology.
- India stands out as a key player, supported by its rich heritage of traditional knowledge, especially in Ayurveda, and a unique ecosystem that fosters growth in this sector.
- However, India's share remains under 2% globally, primarily due to a lack of defined industry classification within Indian ministries, limiting targeted sector support.

India's Nutraceutical Market Growth

- India's nutraceutical market is prepped to be a global leader at USD 4-5 billion. It is expected to grow approximately USD 18 billion by 2025.
- The dietary supplements market in India is valued at USD 3924.44 million in 2020 and reports say that it will reach USD 10,198.57 million by 2026 that is 22% growth rate year on year.
- The ongoing pandemic and the rising importance about preventive healthcare has led to the exponential growth of this sector.
- Indian population has begun to believe in immunity-boosting supplements and has led to a significant shift in buying patterns and market behaviour.
- Vitamin capsules, chewable tablets and gummies are examples of the open-minded buying behaviour of consumers of healthcare products.

Rise of Preventative Healthcare

- Preventive healthcare has become an important line of defence during the pandemic proving the nutraceuticals sector to be a strong economic partner to the people.
- Even after the pandemic severity has minimized, nutraceuticals purchases are soaring. The second wave proved that the nutraceutical sector has built and will continue to grow its presence in the market.
- The global market for nutraceuticals is huge at approximately USD 117 billion, the Indian nutraceutical industry can step up to combat health issues in India amidst ongoing pandemic and significantly contribute to India's Gross Domestic Product (GDP).
- The consumption of potential nutrients and micro-nutrients like Vitamin A, Vitamin D, Vitamin C, folate, selenium, zinc, etc. has substantially increased for better immunity.
- According to a study by Nutrition and Dietary Supplements, many ingredients can be included in daily diet to possibly gain immunity or protection against coronavirus. Polyphenols, leguminous seeds containing plant protease inhibitors, as well as proteins, such as whey protein could be incorporated into the daily diet.

Key Statistics for Nutraceuticals in India

- Trade Scenario: India exported 47% of its herbal exports production and 13% of dietary supplements produced in 2018.
- 100% FDI is permitted in the manufacturing of nutraceuticals under automatic route.
- Functional beverages make up to 32% of the functional F&B market.
- India has the largest number of FDA approved plants located outside the USA.

Key advantages for India in the Nutraceutical Industry

- A longstanding history in health science, especially Ayurveda, offering unique traditional knowledge.
- The presence of 52 agroclimatic zones, making India ideal for cultivating medicinal plants.
- A robust hub of over 1,700 medicinal plants, including globally recognized curcumin, bacopa and ashwagandha, awaiting modern scientific validation.
- Expertise in pharmaceutical formulation, influencing high-quality nutraceutical standards.
- A thriving startup ecosystem and a growing number of successful nutraceutical companies catalysing sectoral growth.

Measure to Attract Investors & Entrepreneurs

- The Food Safety and Standards Authority of India (FSSAI) is about to establish regulations for nutraceuticals in India in line with international standards to attract new entrepreneurs to the nutraceutical field.
- Once these regulations are implemented, it will pave a way for huge foreign investment, especially from new players, making the industry valuation double in a very short period.

Government Initiatives

- Harmonized System of Nomenclature (HSN) codes
- Remission of Duties and Taxes on Export Products (RoDTEP) Scheme
- Production-Linked Incentive (PLI) scheme for Nutraceuticals

Way Forward

India’s nutraceutical sector is set for unprecedented growth. India aims to position itself as a global leader in nutraceuticals, combining traditional knowledge with modern science to attract global partnerships and investments.

EXPECTED QUESTIONS FOR UPSC CSE

Prelims MCQ

Q. Consider the following statements regarding nutraceutical industry in India:

1. India allows 100% FDI in manufacturing of nutraceuticals under automatic route.

2. India has the largest number of FDA approved plants located outside of USA.

Which of the above given statements is/are correct?

(a) 1 only (b) 2 only

(c) Both 1 and 2 (d) Neither 1 nor 2

(c) :Answer

Descriptive Question

Q. Discuss the current status and challenges of India’s nutraceutical sector. Suggest measures to improve the same. [15 marks] [250 words]

INDIA’S EQUINE LAB IN HISAR EARNS GLOBAL RECOGNITION

Why in News: The Indian Council of Agricultural Research-National Research Centre on Equines (ICAR-NRC Equine) in Hisar has been granted World Organisation for Animal Health (WOAH) Reference Laboratory status for Equine Piroplasmosis.

Key Details

- The official designation of ICAR-NRC Equine as a WOAH Reference Laboratory will be formally announced at the 92nd WOAH General Session and World Assembly of Delegates in May 2025.
- NRC Equine will now play a key role in international collaborations, providing advanced diagnostic services, sharing technical expertise, and leading research initiatives on equine piroplasmosis.
- This recognition makes ICAR-NRC Equine the fourth laboratory in India’s Animal Husbandry sector to receive WOAH Reference Laboratory status, joining ICAR-National Institute of High Security Animal Disease, Bhopal (Avian Influenza); Veterinary College, Karnataka Veterinary Animal and Fisheries Sciences University, Bangalore (Rabies); and ICAR- National Institute for Veterinary Epidemiology and Disease Informatics, Bangalore (PPR and Leptospirosis).
- **Significance**
 - This global recognition underscores Department of Animal Husbandry and Dairying (DAHD’s) sustained commitment to enhancing India’s scientific capabilities, diagnostic infrastructure, and leadership in tackling critical animal health challenges.
 - This milestone achievement is a step towards advancing India’s diagnostic capabilities, establishing partnerships, and solidifying India’s leadership in animal health.
 - It also highlights India’s growing influence in global animal health, particularly in combating equine piroplasmosis, a disease with substantial implications for the international equine industry.

- WOAH Reference Laboratory status not only affirms India's adherence to the highest international standards in research and diagnostics but also reinforces India's contributions to global animal health.

PRELIMS SPECIAL

About Equine Piroplasmosis disease

- Equine piroplasmosis, caused by the **tick-borne protozoan** parasites Babesia caballi and Theileria equi, affects horses, donkeys, mules, and zebras and poses a serious threat to the health of these animals, with significant economic impact.
- It has a reported seroprevalence rate of 15-25% across India.

About World Organisation for Animal Health (WOAH)

- It is the global authority on animal health. Founded in 1924 as the Office International des Epizooties (OIE), in May 2003 it adopted the common name World Organisation for Animal Health.
- An intergovernmental organisation, it focuses on transparently disseminating information on animal diseases, improving animal health globally and thus build a safer, healthier and more sustainable world.
- The Organisation was founded as a response to a cattle plague called rinderpest, which swept across the globe, ravaging livestock and devastating livelihoods.
- The crisis clearly demonstrated how animal diseases can pose a threat to food security and economic growth, and that the global community needed to address them in a coordinated way.
- Headquartered in Paris, the Organisation maintains permanent relations with over 70 international and regional organisations and has Regional and Sub-regional Offices worldwide.
- Together, the Organisation and its Members coordinate the global response to animal health emergencies, the prevention of zoonotic diseases, the promotion of animal health and welfare, and better access to animal health care.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

Q. The disease Equine Piroplasmosis is caused by?

- (a) Protozoa (b) Virus
- (c) Bacteria (d) Algae

Answer: (a)

POWER OF DIRECTORATE OF REVENUE INTELLIGENCE UNDER THE CUSTOMS ACT, 1962

Why in News: The Supreme Court recently overturned the apex court's 2021 verdict and ruled that Directorate of Revenue Intelligence (DRI) officers have the authority to issue notices and recover dues under the Customs Act, 1962.

Key Details

- Allowing a petition seeking review of the top court's decision in 2021 in **Canon India Pvt Ltd vs Commissioner of Customs** filed by the customs department, a bench headed by CJI D Y Chandrachud and comprising Justices J B Pardiwala and Manoj Misra passed the order.
 - In 2021, a three-judge bench headed by then CJI Sharad Bobde had held that for a DRI officer to exercise the functions of a Customs officer, the Centre must specifically exercise its power to entrust such functions on "other officers" under Section 6 of the Customs Act.
 - The 2021 judgment had held that DRI officers did not have powers to issue showcause notices under the Customs Act, 1962.
- The recent judgement authorised DRI officers to issue recovery notices under Section 28 of the Customs Act, 1962.
- The court ordered that all pending cases relating to show-cause notices under Section 28 of the Customs Act must now be decided according to this verdict.
- The ruling further directed high courts to align with this interpretation in related cases and instructed that pending appeals before the Supreme court to follow the new guidelines.

PRELIMS SPECIAL

About Customs Act 1962

- The Customs Act 1962 deals with customs duties, imports, exports, and related issues. It was created to bring together and update the rules about customs. This act provides the legal basis for charging and collecting customs duties.
- It explains how goods should be cleared at customs ports and airports. It gives customs officials the power to manage the movement of goods across borders, stop smuggling, and ensure that international trade agreements are followed.
- **Objectives of the Act**
 - **Imposition and Collection of Duties:** The Act governs the assessment and collection of customs duties on goods imported into or exported from India. This supports revenue generation, protects domestic industries, and aligns with trade policies.
 - **Prevention of Smuggling:** It includes provisions to combat illegal trade activities, ensuring the security and stability of the nation's economy.
 - **Regulation of Trade:** The Act provides a structured framework for regulating imports and exports, covering documentation, clearance procedures, and compliance requirements.
 - **Support for Legitimate Trade:** By streamlining processes, enabling electronic filings, and ensuring quicker clearances, the Act facilitates lawful trade while maintaining necessary checks.

About Directorate of Revenue Intelligence

- Directorate of Revenue Intelligence was constituted on 4th December 1957, for dealing exclusively with the work relating to the collection and study of information on smuggling activities and the deployment of all anti-smuggling resources at the all India level, besides arranging training for the intelligence and Investigation officers of the Custom Houses and Central Excise Collectorate deployed on similar work.
- It is the apex anti-smuggling agency of India, working under the Central Board of Indirect Taxes & Customs, Ministry of Finance, Government of India.
- It is tasked with detecting and curbing smuggling of contraband, including drug trafficking and illicit international trade in wildlife and environmentally sensitive items, as well as combating commercial frauds related to international trade and evasion of Customs duty.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

Q. Consider the following statements regarding the Customs Act, 1962:

1. The Customs Act, 1962 deals with custom duties, imports, exports and related issues.
2. This act provides the legal basis for charging and collecting custom duties.
3. It includes provisions to combat illegal trade activities.

How many of the above statements are correct?

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

Answer: (c)

- **New Criteria:** The framework allows foreign portfolio investors (FPIs) exceeding the 10% investment limit to reclassify their holdings as foreign direct investment (FDI).

Difference between FDI and FPI

FDI	FPI
It is the investment made by an individual or company to a foreign country's business.	It refers to investments made by an entity or individual into foreign financial assets such as stocks, mutual funds, bonds, etc.
It involves acquiring a stake in a foreign company with full or complete control over the investors.	It involves purchasing a minority stake in a foreign company with very little control over the investors.
It is a long-term investment option.	It is a short-term investment done for quick returns.
It has a high risk attached.	The risk factor totally depends on the performance of the financial assets.
It isn't easy to exit from FDI and is very time-consuming.	These are much simpler and faster, and an investor can anytime exit the market by selling their financial assets.
In FDI vs FPI, FDI has more regulations, including a limit to investing in foreign countries.	There are fewer regulations, and the government is keen on getting investment from foreign investors.

RECLASSIFICATION OF FPI TO FDI

Why in News: The Reserve Bank of India recently issued an operational framework for reclassification of investment made by a foreign portfolio investor to foreign direct investment (FDI) if the entity breaches the prescribed limit

Key Details

- Markets regulator Sebi too has issued a circular on procedure for reclassification of FPI investment to FDI.
- **Previous Criteria:** Currently, an investment made by foreign portfolio investor (FPI) along with its investor group should be less than 10 percent of the total paid-up equity capital on a fully diluted basis.

Pros and Cons of FDI and FPI

	FDI	FPI
Pros	It can be used for fund expansion, creating new jobs, transferring technology, exporting goods and services, increasing productivity, and improving a country's payment balance.	It helps in portfolio diversification, access to new markets, better returns, currency hedging, better liquidity, and improved domestic economy.

Cons	It can lead to loss of control, dependency on foreign countries, displacement of local businesses, negative impact on the environment and culture, and also a cause of inflation.	With FPI, there are chances of exploitation, short-term focus, market and currency fluctuation, dependency on foreign money, and even political unrest.
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EXPECTED QUESTIONS FOR UPSC CSE

Prelims MCQ

Q. Consider the following statements regarding Foreign Direct Investment:

1. It is a short term investment done for quick returns.
2. The investor can anytime exit the market by selling their financial assets.
3. Currently, an investment made under FDI should be less than 10% of total paid up equity capital.

How many of the above statements are correct?

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

Answer: (a) 2 only

Descriptive Question

Q. Compare and contrast FDI & FPI and discuss their respective roles in the context of India's economic development. [10 marks] [150 words]

DOMESTIC SYSTEMICALLY IMPORTANT BANKS (D-SIBs)

Why in News: Reserve Bank of India (RBI) releases 2024 list of Domestic Systemically Important Banks (D-SIBs).

Key Details

- State Bank of India, HDFC Bank and ICICI Bank continue to be identified as Domestic Systemically Important Banks (D-SIBs) in the 2024 list of this category.
- They have been named under the same bucketing structure as in the 2023 list of D-SIBs.
- Under the framework for dealing with Domestic Systemically Important Banks (D-SIBs) the Reserve Bank needs to disclose the names of banks designated as D-SIBs starting from 2015 and place these banks in appropriate buckets depending upon their Systemic Importance Scores (SISs).

About Domestic Systemically Important Banks

- Some banks, due to their size, cross-jurisdictional activities, complexity, lack of substitutability and interconnectedness, become systemically important. The disorderly failure of these banks has the potential to cause significant disruption to the essential services they provide to the banking system, and in turn, to the overall economic activity.
- Therefore, the continued functioning of Systemically Important Banks (SIBs) is critical for the uninterrupted availability of essential banking services to the real economy.
- SIBs are perceived as banks that are 'Too Big To Fail (TBTF)'.
- Due to this perception, these banks enjoy certain advantages in the funding markets.

Different buckets under which D-SIBs are placed

- Banks are allocated different buckets based on their systemic importance score.
- The RBI has placed SBI in bucket 4, HDFC Bank in bucket 3 and ICICI Bank in bucket 1.

Capital requirements for D-SIBs

- Based on the bucket in which a D-SIB is placed, an additional common equity requirement has to be applied to it.
- The additional capital requirement ranges from 0.20 per cent to 0.80 per cent of risk weighted assets, depending upon the bucket D-SIBs are plotted into.

Global SIBs

- The Financial Stability Board (FSB), in consultation with Basel Committee on Banking Supervision (BCBS) and national authorities, has identified the 2023 list of global systemically important banks (G-SIBs).
- The G-SIBs include JP Morgan Chase, Bank of America, Citigroup, HSBC, Agricultural Bank of China, Bank of China, Barclays and BNP Paribas.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

Q. Consider the following banks:

1. State Bank of India 2. HDFC Bank
3. ICICI Bank

How many of the above banks are categorized as the Domestic Systemically Important Banks by the Reserve Bank of India?

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

Answer: (c)

STANDARD VETERINARY TREATMENT GUIDELINES

Why in News: Ministry of Animal Husbandry, Dairying and Fisheries released Standard Veterinary Treatment Guidelines (SVTG).

Key Details

- The Standard Veterinary Treatment Guidelines (SVTGs) aims to reduce and regulate the use of antibiotics to treat diseases found among the livestock and poultry. The SVTG also provides for the use of Ayurvedic drugs in veterinary treatment.
- The SVTGs will empower veterinarians and animal health professionals to deliver standardized, rational treatment, ensuring improved animal health across.
- It is for the first time that the Centre has come up with a standard set for treatment of almost all diseases of animals and birds.

About Standard Veterinary Treatment Guidelines (SVTG)

- The Standard Veterinary Treatment Guidelines (SVTG) for livestock and poultry is a document comprising of a chapter on each disease with different sub-heads, viz., Definition and Causative agent, Transmission, Clinical signs, Lesions, Diagnosis (including differential diagnosis), Treatment and Control, and Biosecurity Measures.

Key features of the Guidelines

- **Developed by Experts:** The SVTG is developed by a group of about 80 Expert Veterinarians/Clinicians having enormous field experience.
- **Uniform guidelines across country:** Standard treatment guidelines have been synthesized for almost all diseases of livestock and poultry common in the country.
- **Diagnostic Criteria:** Important clinical diagnostic criteria including differential diagnosis for all the selected diseases listed in SVTG – are given.
- **A Ready Reckoner:** The SVTG is also published as a digital small, durable pocket size manual – as Ready Reckoner which makes it convenient to be accessed through mobile phones.
- **Live document:** The SVTG is a dynamic “Live” document and will be updated frequently based on the field experience and globally evolving scenarios and developments in the veterinary treatment domain.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

- Q. Consider the following statements regarding Standard Veterinary Treatment guidelines:
1. The guidelines are released by Ministry of Health and Family Welfare.
 2. The guidelines aims to ensure uniform guidelines across country.

3. The guidelines are available in digital small, durable pocket size manual.

How many of the above statements are correct?

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

(b) Answer

CENTRAL BOARD OF DIRECT TAXES

Why in News: The Central Board of Direct Taxes (CBDT) has released a notification related to tolerance limit for transfer pricing and arm’s length price.

Key Details

- The Central Board of Direct Taxes (CBDT) has issued notification dated October 18, 2024 notifying the tolerance range for AY 2024-25.
- The notification of tolerance range shall provide certainty to taxpayers and reduce the risk perception associated with pricing of a transaction in transfer pricing.
- The tolerance range for transfer pricing is as follows:
- The tolerance ranges shall be 1% for transactions in the nature of “wholesale trading” and 3% for others, respectively, as notified last year and
- The term ‘wholesale trading’, shall be defined as an international transaction or specified domestic transaction of trading in goods which fulfil all the following conditions:
 - Purchase cost of finished goods is 80% or more of the total cost pertaining to such trading activities; and
 - Average monthly closing inventory of goods is 10% or less of sales pertaining to such trading activities.

About Transfer Pricing

- Transfer pricing is a technique used by multinational corporations to shift profits out of the countries where they operate and into tax havens.
- The technique involves a multinational selling itself goods and services at an artificially high price. By using its subsidiary in a tax haven to charge an inflated cost from its subsidiary in another country.
- Eg. buying boxes of pens from the tax haven-based subsidiary for \$200 for a pen, the multinational corporation “moves” its profits out of the country where it genuinely does business and into a tax haven where it has to pay very little or no tax on profit.

Arm’s Length Principle

- The basis of transfer pricing is the Arm’s Length Principle, as it is known internationally.
- This principle states that the price agreed in a transaction

between two related parties must be the same as the price agreed in a comparable transaction between two unrelated parties.

PRELIMS SPECIAL

About Central Board of Direct Taxes (CBDT)

- The Central Board of Direct Taxes (CBDT) is a part of the Department of Revenue in the Ministry of Finance.
- It oversees the administration of direct taxes, including income tax and corporate tax, through the Income Tax Department.
- The CBDT was constituted in 1964 under the Central Board of Revenue Act, 1963. The counterpart for indirect taxes is the Central Board of Indirect Taxes and Customs (CBIC).
- On one hand, CBDT provides essential inputs for policy and planning of direct taxes in India, at the same time it is also responsible for administration of direct tax laws through the Income Tax Department. Information about member's name, contact details, roles and responsibilities, etc.

CONSOLIDATION FOR REGIONAL RURAL BANKS

Why in News: To achieve operational efficiency and cost rationalisation, Finance Ministry has initiated the fourth round of consolidation for Regional Rural Banks. .

Key Details

- The "One State-One RRB" strategy, aims to reduce overhead costs, expand capital, and improve technological efficiency within the RRB framework.
- As per the Finance Ministry, 15 RRBs operating in various states would be merged and the number of Regional Rural Banks (RRBs) is likely to come down to 28 from 43 at present.
 - Among states that will see consolidation of RRBs include Andhra Pradesh, which has the maximum number of RRBs (4 each), Uttar Pradesh and West Bengal (3 each), and Bihar, Gujarat, Jammu & Kashmir, Karnataka, Madhya Pradesh, Maharashtra, Odisha and Rajasthan (2 each).
 - The consolidation is expected to further enhance operational efficiency and help RRBs lessen their dependence on government capital infusions.
- Earlier in June, two bank unions -- AIBOC and AIBEA -- had demanded the merger of RRBs with their respective Sponsor Banks to ensure overall efficiency and viability of the banking sector.
- The merger of RRBs with their sponsor banks will be a seamless technological transition, the All India Bank Officers' Confederation (AIBOC) and All India Bank Employees Association (AIBEA) said in a letter addressed to Finance Minister Nirmala Sitharaman.

Need and Significance of Consolidation

- To maintain the unique strength of Regional Rural Banks (RRBs) in staying closely connected to local communities, and considering their rural reach and alignment with local agro-climatic and geographical conditions, there is a need to consolidate RRBs further.
- Moving towards the goal of 'One State-One RRB' can help achieve better efficiency and reduce costs.

About Regional Rural Banks (RRBs)

- These banks were formed under the RRB Act, 1976, with an objective to provide credit and other facilities to small farmers, agricultural labourers and artisans in rural areas.
- The Act was amended in 2015 whereby such banks were permitted to raise capital from sources other than the Centre, states and sponsor banks.
- Currently, the Centre holds 50% in RRBs, while 35% and 15% are with the concerned sponsor banks and state governments, respectively.
- Even after stake dilution, the shareholding of the Centre and the sponsor public sector banks together cannot fall below 51%, according to the amended Act.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

Q. Consider the following statements:

1. Regional Rural Banks are formed under the Regional Rural Banks Act, 1976.
2. Centre, state and concerned sponsored bank holds 50%, 35% and 15% stake in Regional Rural Banks.

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

(a) Answer

TITANIUM SLAG PRODUCTION IN INDIA

Why in News: Indian Rare Earths Limited, (IREL) and Ust-Kamenogorsk Titanium and Magnesium Plant JSC, (UKTMP JSC) Kazakhstan Signed an Agreement to Establish Indo-Kazakh Joint Venture Company (JVC): IREUK Titanium Limited for production of Ti Slag in India.

Key Details

- The JVC will act as a catalyst in developing Titanium value chain within India as it shall beneficiate low grade Ilmenite into high grade Titanium Feedstock and also result in employment generation opportunity in the State of Odisha.

- UKTMP JSC, Kazakhstan is one of the world's largest vertically integrated titanium producers, from raw material extraction to high value-added products that includes titanium sponge and ingots.
- The products of UKTMP JSC are certified by all world manufacturers of the aerospace industry viz. Boeing & Airbus. 100% of titanium products are exported to highly developed countries.

Significance of the Deal

- The joint venture company envisages to synergize the strength of the respective companies by establishing plant in titanium value chain for producing Titanium Slag by utilizing IREL's Ilmenite from Odisha.
- UKTMP JSC shall provide the technology of producing Ti Slag and shall off take the agreed quantities for input to their Ti sponge plant.
- It will pave the way for Atmanirbharata in the field of Titanium slag production in the country.

About Titanium Slag

- Titanium slag is produced traditionally from ilmenite concentrates in an ore-thermal electric furnace using the carbothermal reduction. Most of the ferrous oxides are converted into an associated alloyed metal. Titanium oxides and some impurity elements are converted into the slag.
- Titanium is Most Commonly Found with Iron
 - Titanium is an element that is most commonly found with iron within a mineral oxide known as ilmenite, as well as in a less widely available ore known as rutile. Iron ore with a high content of titanium is first processed for its iron content, the material left over is known as slag.

Significance of Titanium Slag

- Titanium slag is a major source of raw material that is supplied to pigment companies. It comprises around 39% of their feedstock that can be compared to 33% from natural ilmenite.
- Titanium slag is used as a replacement of natural rutile in the same way as it is a replacement for synthetic rutile. This means the metal and pigment industries around the world no longer have to rely solely on natural minerals.
- The main advantage in using titanium slag is because of its high titanium content, its low generation of waste, its suitability for use in chloride and sulphate processing and its low chemical cost.

Processes Used to Produce Titanium Dioxide

- There are two commonly used processes used in the manufacturing of titanium dioxide pigment from titanium slag.
- These processes being the chloride and sulphate processes. Both processes produce the same final result, namely, titanium dioxide pigment anatase grade (TDPAG) and titanium dioxide pigment rutile grade (TDPRG).
- One of the most common processes used to create Titanium slag entails the titanium concentrate being

processed by means of a closed Electric Arc Furnace (EAF). The titanium slag produced by this means is first cooled before being crushed into a powder. It is then packaged. The by-products from this method of titanium slag production include iron powder and pig iron.

- The EAF process of producing titanium slag has the advantage of only occupying a small space, despite it being able to keep up a high capacity production level producing better grades of titanium. This high quality slag is ideal for TiO₂ production as it reduces the need to use concentrated sulphuric acid by a third.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

Q. Consider the following statements regarding Titanium slag:

1. Titanium is an element that is most commonly found with iron within a mineral oxide known as ilmenite.
2. It is major source of raw material for pigment industries.
3. Titanium dioxide is extracted from titanium slag via chloride and sulphate processes.

How many of the above statements are correct?

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

Answer: (d)

DIGITISATION OF LAND RECORDS IN RURAL INDIA

Why in News: Ministry of Rural Development says 95% of Land Records in Rural India Digitised.

Background and Introduction

- Rural India is undergoing a significant transformation with the digitization of land records, modernizing the management of land ownership.
- Union Minister of Rural Development Shivraj Singh Chouhan recently emphasized the importance of this shift, addressing long-standing challenges related to complex paperwork and ownership disputes.
- The minister noted that nearly 95% of land records have been digitized in rural India since 2016, marking a critical advancement towards ensuring secure and accessible land ownership in rural areas.

Digitisation of Land Records and Key Components

- The digitisation of land records involves a series of interconnected components. This includes the digitisation of existing paper records through data entry and scanning processes.
- Geographic Information System (GIS) mapping is then employed to spatially represent land parcels, creating a comprehensive and accurate overview.
- The establishment of a centralised database ensures the systematic storage and retrieval of digitised land records.
- Finally, online accessibility through web portals ensures that stakeholders can easily retrieve and verify land-related information.

Need for Digitization of Land Records

- The digitization of land records in India has transformed land management by addressing traditional challenges like disputes, fraud, and inefficient manual processes.
 - Now, ownership information is easily accessible online, enhancing transparency and reducing illegal encroachments.
- Digitized records simplify dispute resolution, easing court burdens, and empower marginalized communities by improving access to land rights.
- Integration with geospatial mapping enhances land management, enabling accurate surveys and planning.
- During land acquisitions or disasters, digital records ensure fair and timely compensation.

Significance and Benefits

- Digitization of Land Records has paved the way for a more transparent, accessible, and efficient land governance system in India.
- Digitisation of land records holds immense significance, as it has the potential to enhance transparency in land-related transactions, reduce property ownership disputes and make land management efficient.
- The benefits extend to improved governance, quicker retrieval of information, reduced corruption, and increased accessibility to land-related data.
 - This, in turn, contributes to the establishment of a robust and reliable land tenure system.

Government Efforts

- The government has been proactive in promoting digitisation of land records.
- Initiatives such as the **National Land Records Modernisation Programme** and the **Digital India Land Records Modernisation Programme** have been pivotal in driving this process.
 - These initiatives provide financial and technological support to the states, encouraging the adoption and implementation of digital land management systems.

Issues and Challenges

- ▲ Despite the progress made, several challenges persist.
- ▲ Legacy data issues, stakeholders' resistance to change, infrastructure gaps in certain regions, and legal and procedural complexities pose hurdles to achieving seamless digitisation.
- ▲ Addressing these challenges requires a concerted effort to **ensure a smooth transition to digital land records.**

Impact on the investment scenario

- ▲ **Digitisation of land records** is expected to be a game-changer for the Indian real estate sector.
- ▲ Enhanced **transparency and reliability** of information reduce the risks associated with investments.
- ▲ Investors gain confidence in the system's ability to provide accurate and up-to-date data, facilitating smoother transactions.
 - This attracts domestic and global investments into the real estate market, contributing to its growth.

Role in Policy Making

- Digital land records will play a key role in the government's impactful policymaking.
- The availability of accurate, real-time data empowers the government to make evidence-based decisions related to land use planning, infrastructure development and urbanisation policies.
 - This, in turn, is expected to foster overall economic growth and development by aligning policies with actual land-related scenarios.
- The digitisation of land records in India represents a transformative initiative with profound implications.
- Beyond modernising the land management system, it contributes significantly to transparent governance, facilitates efficient investment scenarios in the real estate sector, and leads to informed policy-making at the governmental level.
- As the digitisation process advances, its positive impact on land management and related sectors is expected to become increasingly evident.

PRELIMS SPECIAL

Digital India Land Records Modernization Programme (DILRMP)

- The Digital India Land Records Modernization Programme (DILRMP), previously known as the National Land Record Modernization Programme, was restructured as a Central Sector Scheme in April 2016, with full funding from the central government.
- Its main goal is to establish a modern and transparent land records management system by developing an Integrated Land Information Management System.
- This system aims to provide real-time land information, optimize land use, benefit landowners and potential buyers, support policy-making, reduce land disputes, prevent fraudulent transactions, eliminate physical visits to offices, and enable data sharing with various organizations.

Key Initiatives under DILRMP

- **Unique Land Parcel Identification Number (ULPIN)**
 - The ULPIN or “Bhu-Aadhar” provides a 14-digit alphanumeric code for each land parcel, based on its geo-coordinates.
 - Implemented in 29 States/UTs, it helps streamline real estate transactions, resolve property disputes, and improve disaster management efforts.
- **National Generic Document Registration System (NGDRS)**
 - NGDRS or e-Registration provides a uniform process for deed/document registration across the country, allowing online entry, payments, appointments, and document searches.
 - So far, 18 States/UTs have adopted it, and 12 others share data with the national portal.
- **e-Court Integration**
 - Linking land records with e-Courts aims to provide authentic land information to the judiciary, aiding in faster case resolution and reducing land disputes. Integration has been cleared in 26 States/UTs.
- **Transliteration of Land Records**
 - To overcome language barriers in accessing land records, the program is transliterating land documents into any of the 22 languages listed in Schedule VIII of the Indian Constitution. This is already in use in 17 States/UTs.

- **Bhoomi Samman**

- Under this initiative, 168 districts across 16 States have achieved Platinum Grading for completing over 99% of the program’s core components, including land record computerization and map digitization.

EXPECTED QUESTIONS FOR UPSC CSE

Prelims MCQ

Q. Consider the following key initiatives with respect to land management in India:

1. Bhu-Aadhar
2. National Generic Document Registration System
3. Bhoomi Samman

How many of the above key initiatives come under Digital India Land Records Modernization Programme (DILRMP)?

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

Answer: (c)

Descriptive Question

Q. Critically analyze how the digitisation of land records can address challenges related to land ownership disputes and inefficient manual processes in India. [15 marks] [250 words]

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CASE STUDY – ENVIRONMENTAL POLLUTION FROM ROCKET AND SATELLITE LAUNCHES

Why in News: With the space race heating up once again after the Cold War, the number of rockets and satellite launches has increased drastically which might be the reason behind the next big environmental emergency.

Increasing Space Activities

- **Ten-Fold Rise:** The space industry is booming. Over the past 15 years, the number of rockets launched per year has nearly tripled, and the number of satellites orbiting the planet has increased tenfold.
- **Growing Space Junk:** The amount of space debris falling back to Earth has doubled over the past 10 years. A few hundred tons of old space junk now vaporizes in the atmosphere every year.
- **Rise in Mega Constellations:** Experts expect that around 100,000 spacecraft may circle Earth by the end of this decade. The majority of those satellites will belong to one of the mega constellation projects, such as SpaceX's Starlink, that are currently planned or being deployed.

Rising Challenges

- **Increase Earth's temperature:** Most rockets in use today run on fossil fuels and release soot, which absorbs heat and could increase temperatures in the upper levels of Earth's atmosphere.
- **Risk to Ozone:** The atmospheric incineration of satellites produces aluminum oxides, which too can alter the planet's thermal balance. Both types of emissions also have the potential to destroy ozone, the protective gas that keeps dangerous ultraviolet (UV) radiation from reaching Earth's surface.
- **Rise in Temperature anomalies:** A study, presented at a conference of the American Institute of Aeronautics and Astronautics in Florida in January, found that the increase in concentrations of aluminum oxides in the stratosphere could produce "significant temperature anomalies" in the stratosphere. Each rocket launch produces 50-75 tonnes of CO₂ per passenger, significantly higher than airplane flights (1-3 tonnes of CO₂).
- **Impact on Earth's Magnetic Field:** Shroud of metallic ash that is forming in the stratosphere as a result of the satellite reentries may interfere with Earth's magnetic

field. The satellite dust could weaken the magnetic field, the researchers think, possibly allowing more harmful cosmic radiation to reach the planet's surface.

Way Forward

- Research into atmospheric effects of rocket flights and satellite air pollution is still in its early stages. However, the space industry doesn't have time to waste. With the expected growth in the number of both reentering satellites and rocket launches, the world could soon have another major environmental crisis on its hands.
- Starting earlier would probably mean a better chance to prevent serious problems. Just like with CO₂ emissions, if it happened earlier, we would have a better response to global warming.

EXPECTED QUESTIONS FOR UPSC CSE

Prelims MCQ

Q. With reference to increasing satellite launches, consider the following statements:

1. It can cause damage to Ozone layer
2. Rise in temperature anomalies
3. Interference with magnetic field

How many of the above can be possible impacts of increasing satellite launches?

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

Answer: (c)

Descriptive Question

Q. Discuss the impact of an increasing number of rocket and satellite launches on Earth's atmosphere and magnetic field. [10 marks] [150 words]

ENVIRONMENT PROTECTION (MANNER OF HOLDING INQUIRY AND IMPOSITION OF PENALTY) RULES, 2024

Why in News: MoEFCC issues new rules for inquiries, penalties after SC's pollution order

Key Details

- In response to the Supreme Court's (SC's) strong stance on unchecked environmental violations, the Ministry of

Environment, Forest, and Climate Change (MoEFCC) has introduced new rules for conducting inquiries and imposing penalties on polluters.

- **Factors to consider:** The updated rules outline key factors to consider when determining the penalties' scale. Adjudicating officers are instructed to assess elements such as the project's location and size, the industry type, and the specific nature of the violation.
- **Violations:** Violations may include operating without environmental clearance, failing to meet required environmental standards, or breaching conditions attached to granted clearances.
- **New features:** A notable feature of the new rules is the emphasis on timely resolution, mandating that inquiries be completed within six months from the date of notice. This deadline aims to prevent delays and ensure that violations are addressed promptly, reinforcing the government's commitment to environmental compliance and accountability.
- **Authorised Bodies:** Under these new rules, complaints against environmental regulation violators can be initiated by key bodies, including the Central Pollution Control Board, State Pollution Control Boards, Pollution Control Committees, CAQM, and MoEFCC regional offices.
- **Process:**
 - Upon receiving a complaint, the designated adjudicating officer must initiate an inquiry within 30 days, as specified in Section 15C of the Environment (Protection) Act.
 - The adjudicating officer will issue a notice to the alleged violator, outlining the nature of the contravention and requiring a response.
 - The violator is given at least 15 days to reply and may be asked to appear in person or through a legal representative if further inquiry is deemed necessary.
- **Key Violations:**
 - Operating without environmental clearance
 - Failing to meet required environmental standards
 - Breaching conditions tied to granted clearances
- **Penalty considerations**
 - Health impacts of violations
 - Financial benefits gained from non-compliance
 - Frequency and severity of repeated violations
- **Timely resolution**
 - Six-month deadline for inquiry completion from notice date
 - Focus on prompt action to uphold environmental accountability

PRELIMS SPECIAL

Environment Protection Act, 1986

- Environment Protection Act, 1986 is an Act of the Parliament of India. It was enacted in May 1986 and came into force on 19 November 1986.
- It has 26 sections and 4 chapters.
- The Act is widely considered to have been a response to the Bhopal gas leak.
- The Act was passed by the Government of India under the Article 253 of the Constitution of India, which empowers the union government to enact laws to give effect to international agreements signed by the country.
- The purpose of the Act is to implement the decisions of the United Nations Conference on the Human Environment.
- Important chapters of the Act:
 - **Chapter 1:** Consists of Preliminary information such as Short Title, Extend, Date of Commencement and Definitions.
 - **Chapter 2:** The definitions are given in the second section of the Act. Chapter two describes general powers of the Central Government.
 - **Chapter 3:** It gives the Central Government the power to take action to protect the environment.
 - **Chapter 4:** Allows the government to appoint officers to achieve these objectives. It also gives the government the power to give direction to closure, prohibition or regulation of industry, pollution.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

Q. Consider the following environmental regulator bodies?

1. Central Pollution Control Board
2. State Pollution Control Board
3. Ministry of Environment, Forests and Climate Change regional offices

How many of the above environmental regulator bodies are entrusted with initiating inquiry against environmental violations under Environment protection (Manner of holding inquiry and imposition of penalty) rules, 2024?

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

Answer: (c)

BIOLOGICAL DIVERSITY RULES, 2024

Why in News: The Ministry of Environment, Forest and Climate Change (MoEFCC) notified the Biological Diversity Rules, 2024.

Key Details

- Recently, the Ministry of Environment, Forest and Climate Change issued the Biological Diversity Rules, 2024, marking a significant update to the regulatory framework established by the Biological Diversity Act of 2002.
- This new set of rules supersedes the previous 2004 regulations and aims to enhance the management and conservation of biological diversity in India.

About New Rules

- **Manner of selection and appointment of chairperson**
 - The Chairperson shall be appointed by the central government.
 - Every appointment of Chairperson under sub-rule
 - Shall be made either on deputation basis including short-term contract or by selection from outside the government and in case, the appointment is through deputation from the Government or a short-term contract, the applicant shall not be below the rank of additional secretary to the Government of India.
- **Term of office of the Chairperson**
 - The Chairperson shall hold office for a term of three years from the date of publication of appointment and shall be eligible for re-appointment: Provided that no chairperson shall hold office as such after he attains the age of sixty-five years or his term of office expires whichever is earlier.
 - The Chairperson may resign from the office by giving one-month notice in writing to the central government.
- **Pay and allowances**
 - A Chairperson shall be entitled to a pay equivalent to that of a Secretary to the Government of India.
 - In case, a retired person is appointed as chairperson, pay shall be fixed in accordance with the extant orders of the central government as applicable to such persons.
 - A Chairperson shall be entitled to such allowances, leave, pension, provident fund, medical facilities, rent free accommodation or house rent allowance, other perquisites, as are admissible to the officers of the central government of equivalent rank.
- **Filling of vacancies of non-official Members:**
 - A non-official member may resign from office at any

time by giving one month notice in writing addressed to the central government under intimation to the chairperson.

- On acceptance of the resignation by the central government or on the expiry of the period of notice, the seat of that member in the authority shall become vacant.
- A casual vacancy of a non-official member shall be filled up by a fresh nomination and the person nominated to fill the vacancy shall hold office only for the remainder of the term of the member in whose place such member was nominated.
- **Removal of the Members:**
 - No Member shall be removed from office on any ground specified in section 11 of the Act, without conducting an inquiry by the central government and without giving such member a reasonable opportunity of being heard.

- **General Functions of Authority**

The Authority may:

- administer the National Biodiversity Fund;
- sanction grants to the State Biodiversity Boards or Union territory Biodiversity Councils and Biodiversity Management Committees for specific purposes;
- decide on the format and contents of the mutually agreed terms of the various agreements to be executed between the parties embodying the approvals of the authority;
- provide technical and legal advice, clarifications and guidance to the State Biodiversity Boards or Union territory Biodiversity Councils for implementing the provisions of the Act;
- coordinate the activities of the State Biodiversity Boards and the Union territory Biodiversity Councils;
- specify the electronic and/ or manual formats of the People's Biodiversity Register and lay down the procedure for documentation of information related to biodiversity, its periodic updating, securely maintaining it in an electronic or digitised form and for sharing of such information;
- develop databases and documentation systems for biological resources and traditional knowledge associated thereto through People's Biodiversity Registers in a given geographical area;
- provide guidance and technical support to the Biodiversity Management Committees through the State Biodiversity Board or Union territory Biodiversity Council or directly, if required for

preparation, validation and maintenance of biodiversity registers;

- (i) report to the central government about the functioning of the Authority and implementation of the act.

• Powers and duties of Chairperson

- The Chairperson shall have overall control of the day-to-day activities of the authority.
- The Chairperson shall have the powers of general superintendence over the officials of the authority and issuing necessary directions for the conduct and management of the functions of the Authority.
- The Chairperson, either directly or through the member-secretary or any other officer of the authority authorised for the purpose, may sanction or disburse all payments against the approved budget.
- The Chairperson shall have powers for granting administrative, financial and technical sanctions to all the proposals.
- The Authority may delegate any of its power under section 16 of the Act to the Member-Secretary or to any officer of the Authority not below the rank of a Section Officer in the Government of India.
- The Chairperson shall take all necessary measures for the implementation of all decisions taken by the Authority in proper manner.
- In case of any present and imminent emergency situations like epidemics and pandemics particularly those that threaten, or damage human, animal or plant health as determined at national and international level, the Chairperson may exercise the powers of the Authority for granting expeditious approvals and shall place all such approvals before the next meeting of the Authority for approval.
- The Chairperson shall exercise such other powers and perform such other functions as may be delegated to him by the Authority or the Central Government from time to time

CASE STUDY: SUSTAINABLE-USE OF MARINE PROTECTED AREAS

The Study: Well-designed and managed marine protected areas (MPA) could conserve biodiversity and improve nutritional security, benefitting the health and livelihoods of communities dependent on marine resources.

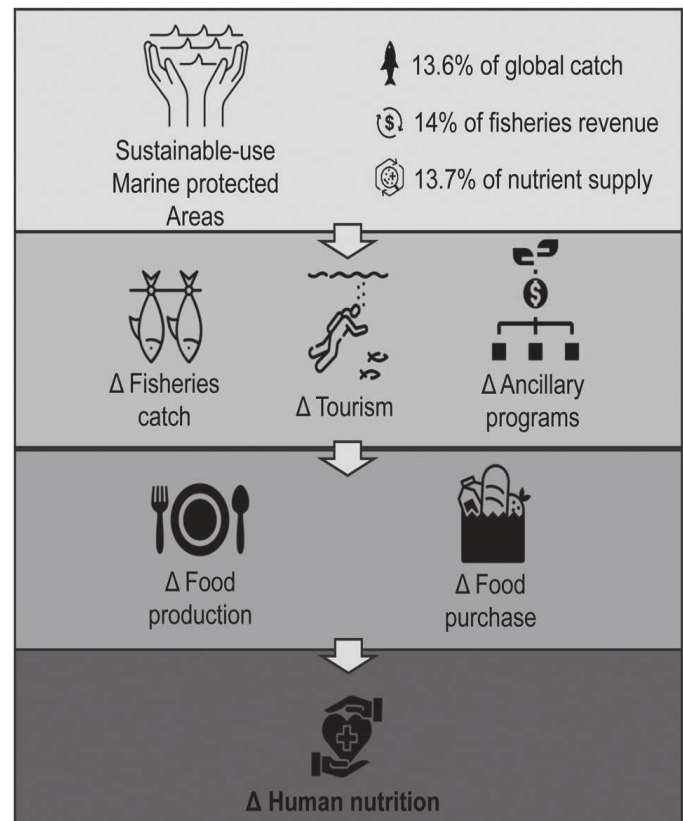
Highlights of the Study

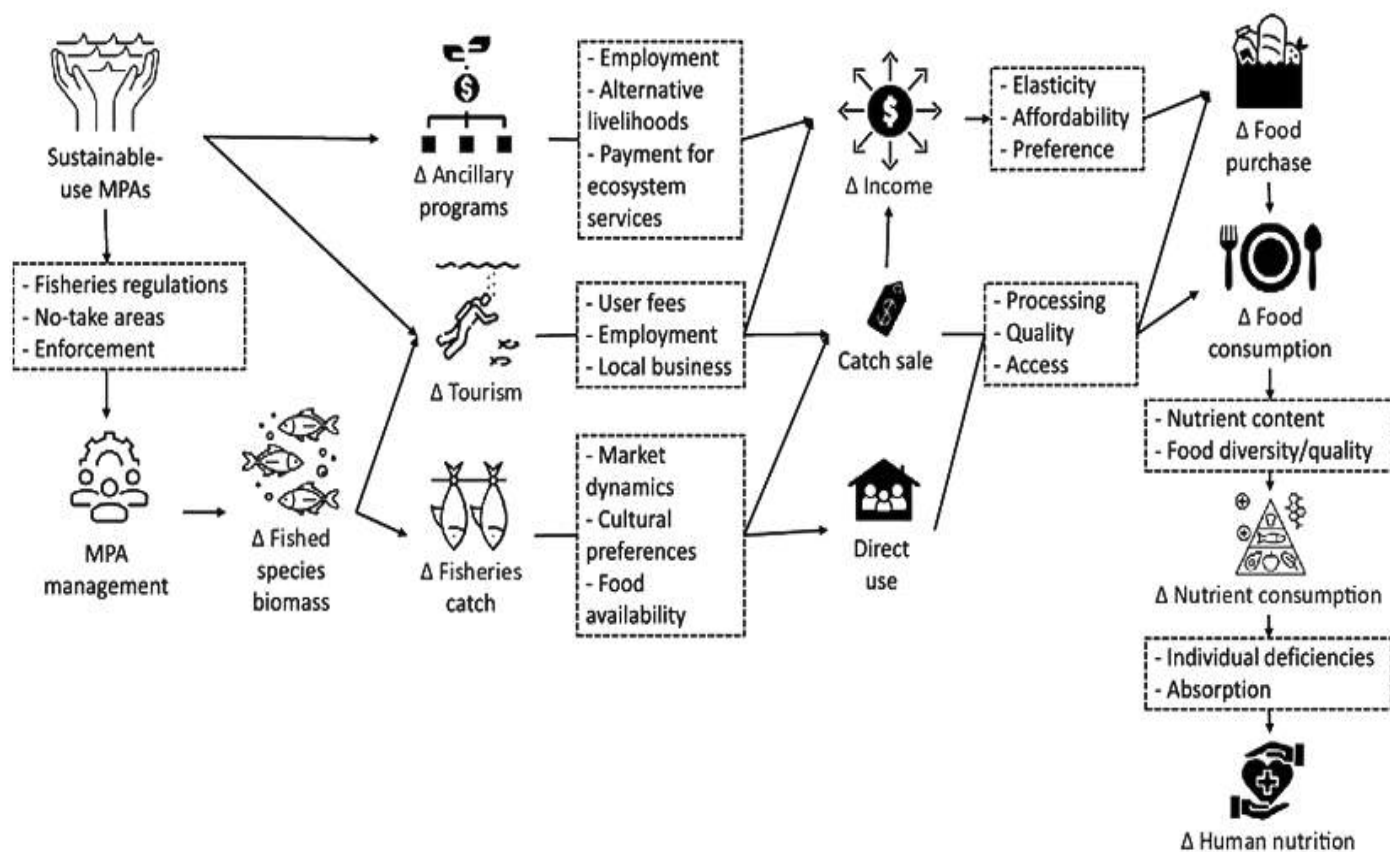
- Sustainable-use MPAs contribute up to 14% of global fisheries nutrient supply.
- MPAs can enhance nutrition via increased fisheries, tourism, and ancillary programs.

- Nutritional benefits depend on MPA management, design, governance, and context.
- Few studies directly link MPAs to human health, highlighting a key research gap.

Summary of the Study

- Aquatic foods are a vital source of nutrients for coastal communities around the world.
- The global commitment to expand marine protected areas (MPAs) means it is critical to understand how MPAs affect human nutrition and health.
- In the study, literature was reviewed to identify the major pathways through which sustainable-use MPAs, those that allow for fishing activities within their borders, affect human nutrition and health.
- It was found that sustainable-use MPAs often affect nutrition through three main pathways:
 - changes in fisheries catch,
 - changes in tourism activity,
 - changes in ancillary programs
- It was estimated that sustainable-use MPAs contribute an average of 13.6% of global catch, 14% of fisheries revenue, and 13.7% of nutrient supply. Given dire global nutritional vulnerabilities, the potential impacts of MPAs on diets should be a key consideration in MPA expansion discussions.





Conceptual framework that details the major pathways reported in the literature by which sustainable-use MPAs can affect human nutrition.

EXPECTED QUESTIONS FOR UPSC CSE

Prelims MCQ

Q. Consider the following statements regarding Marine Protected Areas:

1. Marine Protected Areas contribute more than 25% of global fisheries nutrient supply.
2. Increase in area of Marine Protected Areas can minimize global nutritional vulnerabilities.

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) 2 only

MICROPLASTICS IN THE ATMOSPHERE

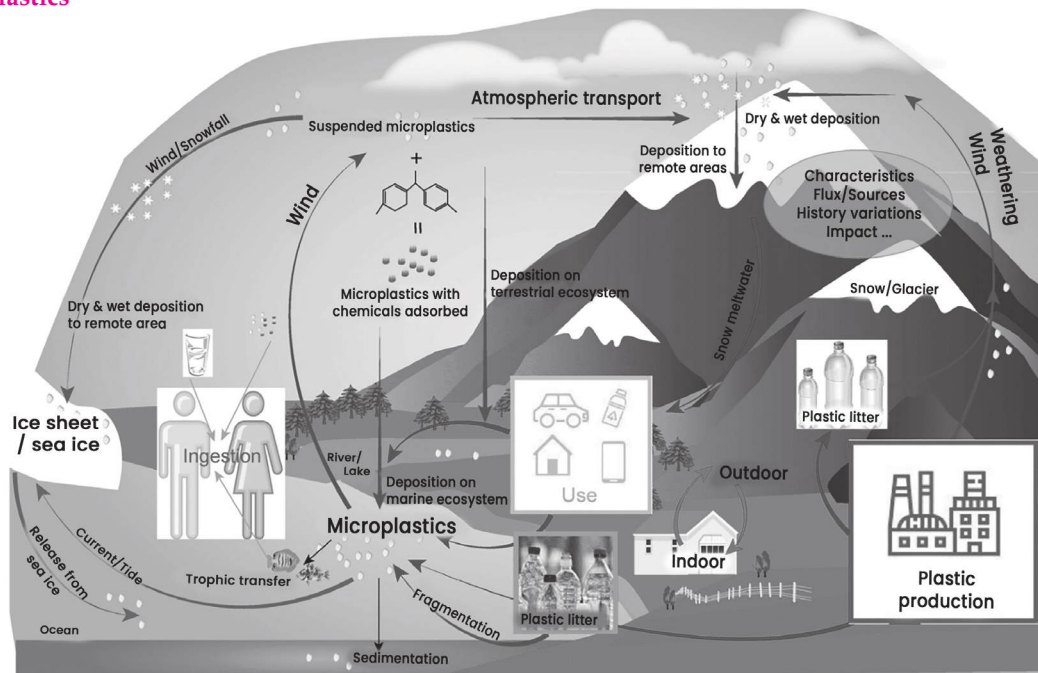
Why in News: New research reveals that microplastics in the atmosphere (clouds & environment) could be affecting weather and climate.

Key Details

- The study, published in the journal *Environmental Science and Technology: Air*, demonstrated that microplastics act as ice nucleating particles, microscopic aerosols that facilitate the formation of ice crystals in clouds.
- This means that microplastics could impact precipitation patterns, weather forecasting, climate modeling and even aviation safety by influencing how atmospheric ice crystals form clouds.

Understanding the process

- Clouds form when water vapor – an invisible gas in the atmosphere – sticks to tiny floating particles, such as dust, and turns into liquid water droplets or ice crystals.
- Study shows that microplastic particles can have the same effects, producing ice crystals at temperatures 5 to 10 degrees Celsius warmer than droplets without microplastics.
- Any kind of defect in the water droplet, whether that’s dust, bacteria or microplastics, can give ice something to form -- or nucleate -- around. That tiny structure is just enough to trigger the water droplet to freeze at warmer temperatures.



Microplastics are small plastic pieces less than five millimeters long. Microplastics come from a variety of sources, including from larger plastic debris that degrades into smaller and smaller pieces. In addition, microbeads, a type of microplastic, are very tiny pieces of manufactured polyethylene plastic that are added as exfoliants to health and beauty products, such as some cleansers and toothpaste.

- **Survivability:** Microplastics (MPs) are ubiquitous in the atmosphere, with an average lifetime of 1 week to several weeks.
- **Sources of Origin:** They originate from various sources, including direct emissions from industrial activities, fragmentation of larger plastic debris, and transport from terrestrial and aquatic environments.
- **Impacts of Microplastics:**
 - Atmospheric MPs (AMPs) have been reported to play vital impacts on human health, climate forcing, and air quality.
 - It could absorb and release harmful chemicals, potentially affecting human health through ingestion or inhalation.
 - Additionally, it could contribute to the absorption and scattering of solar radiation, potentially altering the Earth’s radiation balance.
 - However, there is great uncertainty about their health and climate effects. Therefore, the transformation mechanisms of Atmospheric Microplastics (AMPs) are still poorly understood, hampering our ability to model responses to changes in AMPs.

Initiatives to control and ban uses of plastics

- **Regulations by the MoEFCC**
 - The Government of India notified the Plastic Waste

Management Rules, 2016, in suppression of the earlier Plastic Waste (Management and Handling) Rules, 2011, wherein the minimum allowed thickness of plastic carry bags was increased from 40 microns to 50 microns.

- Thereafter, the MoEFCC notified the Plastic Waste Management (Amendment) Rules, 2018, that phased out the multilayered plastic (MLP), which is “non-recyclable, or non-energy recoverable, or with no alternate use.”
- The Plastic Waste Management (Amendment) Rules, 2021, prohibited the manufacture, import, stocking, distribution, sale, and use of SUP, including polystyrene and expanded polystyrene, commodities from July 1, 2022.
- The MoEFCC notified the Guidelines on EPR for plastic packaging through the Plastic Waste Management (Amendment) Rules, 2022 stipulating mandatory targets on EPR, recycling of plastic packaging waste, reuse of rigid plastic packaging and use of recycled plastic content.
- **Regulations by the MoHUA**
 - Under Swachh Bharat Mission-Urban (SBM-U) 2.0, the MoHUA has made efforts towards source segregation, collection, transportation, and processing of plastic waste. Material Recovery Facility (MRF) has been set up in all urban local bodies (ULBs), and awareness generation initiatives have been taken up for reducing SUP products and encouraging the use of substitute products.
 - A ‘Plastic Waste Management Advisory’ was developed on sustainable management of plastic waste through ‘reduce, reuse, recycle and recover’ techniques.

- For effective monitoring of compliance with plastic waste management regulations, several online platforms are made functional, including the National Dashboard on the elimination of SUPs, Central Pollution Control Board (CPCB), Monitoring Module for Compliance on Elimination of SUPs, and CPCB Grievance Redressal App.

GURU GHASIDAS AND TAMOR PINGLA TIGER RESERVE

Why in News: Chhattisgarh government notified the areas comprising the Guru Ghasidas National Park and Tamor Pingla Wildlife Sanctuary as the 56th TR of India.

Way Forward

- Concerted actions by the government, NGOs, private sector, as well as voluntary actions by local authorities, businesses, schools, and communities involved in circular economy approach are pertinent for a sustainable plastic waste management system.
- The Government of India must bring about a comprehensive and circular economy approach to reduce plastic waste, increase plastics value recovery, and tackle plastic pollution with a goal to achieve 'zero plastic waste by 2030'.

Key Details

- **Notifying Authority:** The Government of Chhattisgarh, on advice of the National Tiger Conservation Authority (NTCA), notified the Guru Ghasidas - Tamor Pingla Tiger Reserve.
- **Region:** The reserve spans across Manendragarh-Chirmiri-Bharatpur, Korea, Surajpur and Balrampur districts of Chhattisgarh.
- **Area:** The tiger reserve, encompassing a total area of 2829.38 sq.kms, includes a core/critical tiger habitat of 2049.2 sq.kms, comprising the Guru Ghasidas National Park and Tamor Pingla Wildlife Sanctuary, and has a buffer of 780.15 sq.kms.
- This makes it the third largest tiger reserve in the country after Nagarjunasagar-Srisailem Tiger Reserve in Andhra Pradesh and Manas Tiger Reserve in Assam.
- **Landscape:** Nestled in the Chota Nagpur plateau and partly in Baghelkhand plateau, the tiger reserve is blessed with varied terrains, dense forests, streams and rivers favourable for harbouring a rich faunal diversity and contains critical habitats for the tiger.
- **Flora and Fauna:** A total of 753 species, including 365 invertebrates and 388 vertebrates, have been documented from Guru Ghasidas-Tamor Pingla Tiger Reserve by the Zoological Survey of India. The invertebrate fauna is represented mostly by the class insecta. The vertebrate fauna includes 230 species of birds and 55 species of mammals comprising several threatened species from both the groups.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

Q. Consider the following statements about microplastics:

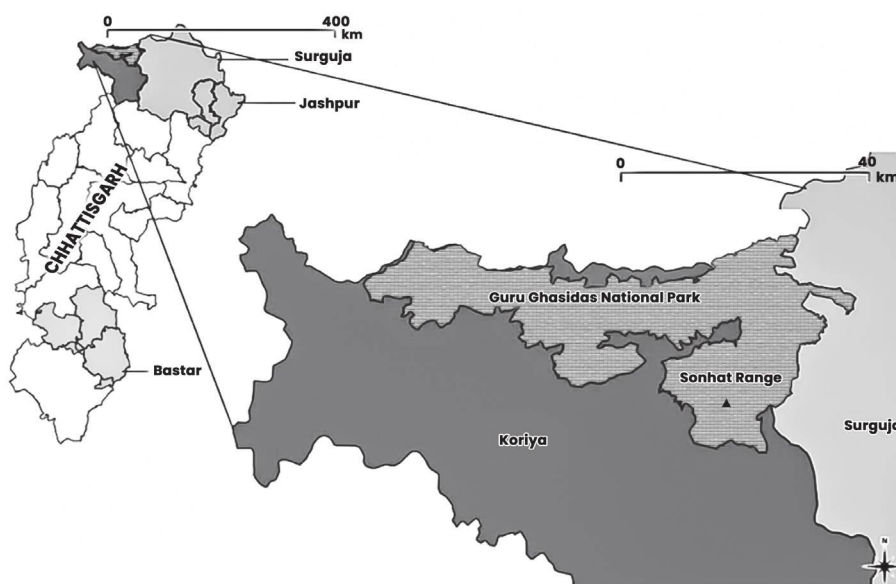
1. Ice crystal can be formed at around microplastic particles as nucleate.
2. They can originate from direct emissions from industrial activities.

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)

About Guru Ghasidas National Park



- **Location and Area** It is a national park in Manendragarh-Chirmiri-Bharatpur district of Chhattisgarh and Singrauli district of Madhya Pradesh, India. It covers an area of 2,300 km² (890 sq mi) and is a part of the Sanjay-Dubri Tiger Reserve.

Tamor Pingla Wildlife Sanctuary



- **Flora and Fauna**
 - The national park hosts mostly tropical forests of Sal trees.
 - The Bengal tiger, Indian leopard, Spotted deer, Sambar deer, wild boar, Nilgai, Chinkara, Civet, Porcupine, Monitor lizard, and 309 species of birds are found here.
- **Vegetation:** It is located in the dry deciduous forests ecoregion.

About Tamor Pingla Wildlife Sanctuary

- **Location and Area :** Spread over 608.55 km² (234.96 sq mi), Tamor Pingla Wildlife Sanctuary is located in Surajpur District, Chhattisgarh, in central India. It is named after Tamor Hill and Pingla Nalla, the old and prominent features of the area.
- **History:** This was notified as a Wildlife Sanctuary in 1978. In 2011, it was notified by Chhattisgarh's Government as a part of Surguja Jashpur Elephant Reserve.
- **Flora and Fauna**
 - The area consists of sal and bamboo forests.
 - The sanctuary supports Asian elephant, Bengal tiger, Indian leopard, bears, sambar, nilgai, chital, bison, chousingha, chinkara, muntjac, boar, dhole, wolf, jackal, hyena, hare, cobras, pythons, red jungle fowl, gray jungle fowl and green pigeon.

PRELIMS SPECIAL

About National Park

- A national park, according to the Indian Ministry of Environment and Forests, is an area, whether within a sanctuary or not, that can be notified by the state government to be constituted as a National Park, for the purpose of protecting, propagating, or developing wildlife or the environment therein.
- Under the terms of Chapter IV of the Wildlife Protection Act of 1972, no human activity is permitted within the national park unless it is approved by the state's Chief Wildlife Warden.
- Within a national park, grazing, habitation, and other human activities are strictly prohibited.
- It is even illegal to collect firewood and other forest products. Animals are better protected because they are not in contact with humans.
- However, keep in mind that national parks are not intended for any specific species. Rather, they promote and safeguard the diversity of forest life.

About Wildlife Sanctuary

- A wildlife sanctuary is a location where animals can be relocated and live safely for the rest of their lives. Unlike animal shelters, wildlife sanctuaries do not seek to place animals with groups or individuals.
- In addition, wildlife sanctuaries protect a wide range of animals and birds, including the Great Indian Bustard, Musk Deer, and Black Buck.
- Only very limited human activity is permitted in animal sanctuaries.
- Animal hunting and poaching are strictly forbidden, and trees and plants may not be felled for agricultural or other purposes.
- Visitors can walk through wildlife sanctuaries for educational, recreational, or research purposes.

About Tiger Reserve

- The Tiger Reserve is a legally designated conservation area dedicated to the conservation of striped big cats.
- In contrast, a tiger reserve could be a national park or wildlife sanctuary. For example, the Sariska Tiger Reserve is also a national park.
- This is not to say that every tiger reserve must be designated as a national park or sanctuary. Some of them exist solely as tiger reserves because they were established specifically for tiger conservation and protection.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

Q. Recently Tamor Pingle wildlife sanctuary was in news, it is located in?

- (a) Jharkhand
- (b) Chhattisgarh
- (c) Odisha
- (d) None of The Above

Answer: (b)

FOREST ECOSYSTEM RESTORATION INITIATIVE

Why in News: The Forest Ecosystem Restoration Initiative (FERI) celebrated the 10th anniversary of its inception.

Key Details

- The Forest Ecosystem Restoration Initiative (FERI) was launched as a partnership between the Korea Forest Service (KFS) and the Convention on Biological Diversity (CBD) Secretariat.
- The global Initiative is implemented by the CBD Secretariat which provides a unique opportunity for building necessary partnerships, ensuring a regionally balanced approach and linkages to the key CBD processes.

Objectives of FERI

- FERI was designed to assist developing countries in operationalizing national targets and plans for ecosystem conservation and restoration in line with Aichi Biodiversity Targets 5, 14 and 15.
- To ensure the effective delivery of these tasks, the Initiative is structured around four main pillars:
 - i. Producing knowledge products and developing decision support tools;
 - ii. Developing capacity through workshops and learning events;
 - iii. Providing direct support to countries to support the implementation of the targets;
 - iv. Enhancing partnerships, communication and awareness on forest restoration.

Contribution of FERI

Country-tailored activities grounded in COP decisions:

Being welcomed by CBD Parties enables FERI to play a unique role in connecting the global biodiversity agenda to the national restoration policy.

From local restoration actions to global outreach:

Throughout its journey, FERI's actions expanded in scope, from focusing on local restoration such as supporting restoration projects in 12 countries.

Data-based actions:

FERI has built the capacity of countries to develop area-specific and time-bound restoration targets through in-depth assessments and a series of regional workshops.

Mainstreaming biodiversity in the restoration agenda:

The Initiative has raised awareness among national policymakers and international organizations through decision-support tools and platforms.

Consolidating partnerships for timely action:

After the adoption of KMGBF, FERI assessed the needs of facilitated co-learning to support countries in reviewing their national restoration targets, and built a Roadmap for KMGBF Target 2.

Way Forward

- FERI's story so far serves to highlight the importance of building solid foundations with collaborative engagement, and FERI will continue to utilize this approach to support KMGBF implementation.
- As the international environmental community faces new and critical turning points for biodiversity, FERI embodies the belief that these turning points should be addressed collectively, and it will continue to build a united front for the restoration of our planet's ecosystems.

EXPECTED QUESTIONS FOR UPSC CSE

Prelims MCQ

Q. With reference to the 'Forest Ecosystem Restoration Initiative' (FERI), consider the following statements:

1. FERI was designed to assist developing countries in operationalizing national targets and plans for ecosystem conservation and restoration in line with Aichi biodiversity targets.
2. FERI is launched as the a partnership between the Korea Forest Service (KFS) and Convention on Biological Diversity (CBD) Secretariat.
3. FERI has raised awareness among national policymakers and international organization through decision support tools and platforms.

Which of the statements given above is/are correct?

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

(p) Answer:

Q. How does the Forest Ecosystem Restoration Initiative (FERI) align with Aichi biodiversity targets? Highlights the key strategies adopted by (FERI) to promote forest restoration. [15 marks] [250 words]

COP16 TO CBD

Why in News: Recently, the 16th Conference of Parties (COP16) to the Convention on Biological Diversity (CBD) was concluded in Cali, Colombia.

Key Highlights

- The COP16 to CBD is on the verge of operationalising a multilateral mechanism (MLM) for sharing benefits arising from the use of digital sequence information (DSI) of genetic materials.
- The proposed MLM legitimises the "unaccountable sharing and use" of DSI through databases controlled by developed countries, justifying it as essential for maintaining a globally integrated DSI dataset for researchers across nations.

- **Cali Fund:** Under the agreed guidelines, large companies and other major entities benefiting commercially from DSI uses should contribute to “the Cali Fund,” based on a percentage of their profits or revenues.
 - The model targets larger companies most reliant on DSI and exempts academic, public research institutions and other entities using DSI but not directly benefiting.
- In Cali Parties made important strides towards the achievement of the 23 action targets of the Kunming-Montreal Global Biodiversity Framework (KMGBF), adopted at COP 15 in Montreal.

About Kunming-Montreal Global Biodiversity Framework (KMGBF)

- The Kunming-Montreal Global Biodiversity Framework (GBF) is an outcome of the 2022 United Nations Biodiversity Conference.
- The GBF was adopted by the 15th Conference of Parties (COP15) to the Convention on Biological Diversity (CBD) on 19 December 2022.
- It has been promoted as a “Paris Agreement for Nature”.
- The GBF is not a legally binding treaty.
- **Aim:** It is expected to have a major impact in countries around the world as they endeavor to meet their targets, through the development of new plans and regulations.

Target 13 under Kunming-Montreal Global Biodiversity Framework (KMGBF)

- Increase the Sharing of Benefits from Genetic Resources, Digital Sequence Information and Traditional Knowledge.
- Take effective legal, policy, administrative and capacity-building measures at all levels, as appropriate, to ensure the fair and equitable sharing of benefits that arise from the utilization of genetic resources and from digital sequence information on genetic resources, as well as traditional knowledge associated with genetic resources, and facilitating appropriate access to genetic resources, and by 2030 facilitating a significant increase of the benefits shared, in accordance with applicable international access and benefit-sharing instruments.

About Digital Sequence Information (DSI)

- Digital sequence information (DSI) plays a fundamental role in environmental and biological research, contributing to understand the molecular basis of life and evolution and of the ways in which genes can potentially be manipulated to provide new therapies and cures for diseases, new energy sources and other new products.
- It also plays an important roles in taxonomy, identifying and mitigating risks to threatened species, tracking illegal trade, identifying the geographical origin of products and planning conservation management.

About Digital Biopiracy

- Digital biopiracy refers to the use of digital technologies and infrastructures, such as sequence databases, to bypass prior informed consent (PIC) and benefit-sharing requirements while utilising genetic resources, thereby monopolising R&D outcomes through IP.

EXPECTED QUESTIONS FOR UPSC CSE

Prelims MCQ

Q. 16th Conference of Parties to the Convention on Biological Diversity was recently in news, It was held in?

- (a) Cali, Colombia
- (b) Baku, Azerbaijan
- (c) Paris, France
- (d) None Of The Above

Answer: (a)

Descriptive Question

Q. Discuss the significance of the Kunming-Montreal Global Biodiversity Framework. [10 marks] [150 words]

NATIONAL BIODIVERSITY STRATEGY

Why in News: India launches updated National Biodiversity Strategy and Action Plan at COP 16 to the Convention on Biological Diversity (CBD) in Colombia.

Key Details

- The document was released during a special event called ‘Roadmap for achieving the Kunming-Montreal Global Biodiversity Framework (KMGBF) targets and release of India’s updated NBSAP’ in Cali, Colombia.
- **Key points about the KMGBF targets:**
 - **30x30 target:** A central goal is to protect at least 30% of the world’s land and marine areas by 2030.
 - **Restoration focus:** Significant emphasis on restoring degraded ecosystems across terrestrial, inland water, and marine environments.
 - **Species conservation:** Aims to halt species extinction and protect genetic diversity.
 - **Sustainable use:** Promoting sustainable use of biodiversity to minimize human impact.

Background

India, as a party to the Convention on Biological Diversity (CBD), developed its initial NBSAP, titled “National Policy and Macro Level Action Strategy on Biodiversity” in 1999.

About the updated National Biodiversity Strategy and Action Plan (NBSAP)

- **Wholesome approach:** India has adopted the ‘Whole-

of-Government' and 'Whole-of-Society' approach in updating its NBSAP.

- **Strategies to tackle environmental challenges:** The updated NBSAP acknowledges environmental challenges and outlines strategies to address them through ecosystem restoration, species recovery programmes, and community-driven conservation efforts focusing on the restoration of degraded ecosystems, the protection of wetlands, and the sustainable management of marine and coastal areas.
- **Bottom-up Approach:** The updated NBSAP emphasizes the adoption of a transformative approach and focuses on an ecosystem-based management approach, a bottom-up approach for implementation, mainstreaming biodiversity, sectoral integration, and inter-agency cooperation.
- **Analysing current trends:** It also provides insight into the current status of biodiversity across India and trends therein, existing policy and institutional framework, biodiversity expenditure, and potential biodiversity finance solutions.

WORLD COALITION FOR PEACE WITH NATURE

Why in News: The Peace with Nature coalition was launched recently at the 16th meeting of the Conference of the Parties to the Convention on Biological Diversity (COP 16) in Cali, Colombia.

World Coalition for Peace with Nature

- The World Coalition for Peace with Nature, living well in balance and in Harmony with Mother Earth is a call for action to enhance national and international efforts and commitments towards achieving a balanced and harmonious relationship with nature to ensure greater sustainability, by protecting nature, and the conservation, restoration and sustainable use of our global biodiversity.
- **The Declaration:**
 - Recognised that a harmonious and peaceful relationship between human beings and nature is fundamental for the sustainability of our planet and its living and non-living resources, for the well-being and enjoyment of present and future generations, and for conserving the intrinsic value of nature, hence making it imperative to make peace with nature and actively work towards conserving and restoring biodiversity.
 - Recognised the need to promote greater awareness and strengthen efforts at local, subnational, national, regional and global levels in matters of human rights, peace among peoples, sustainability, social and environmental justice.
 - Reaffirmed the United Nations Declaration on the Rights of Indigenous Peoples, cultures and traditional practices contributes to sustainable and

equitable development and proper management of the environment.

- Recognised that One Health approach is based on the understanding of the inseparable relation between healthy ecosystems and people's health and thus creates sustainable and holistic solutions.
- Recalled the negative impact of deforestation and forest degradation on biodiversity, and the need to halt and reverse it.
- Recognised that there can be no sustainable development without peace, nor peace without sustainable development.
- **Parties Call for Action and Life:** Efforts that are fundamental to reverse environmental deterioration and achieve peace with nature, living well in balance and in harmony with Mother Earth.
 - The parties of the convention called to change the relationship between humans and nature to address environmental challenges in a comprehensive manner, and to make peace with nature.
 - They reaffirmed the importance of the Vision, Mission, Goals and Targets of the Kunming-Montreal Global Biodiversity Framework and of its swift, full and effective implementation, which should follow a human rights-based approach.
 - They committed to make efforts to mobilize the whole of government and the whole of society, empowering local action, as from this source comes the power of this coalition, with the potential to be reached and mobilize billions to spark collective action for change.

PRELIMS SPECIAL

Convention on Biological Diversity (CBD)

- The Convention on Biological Diversity (CBD) entered into force on 29 December 1993.
- It has 3 main objectives:
 - The conservation of biological diversity
 - The sustainable use of the components of biological diversity
 - The fair and equitable sharing of the benefits arising out of the utilization of genetic resources.
- The **Conference of the Parties (COP)** is the governing body of the Convention, and advances implementation of the Convention through the decisions it takes at its periodic meetings.

GEOENGINEERING

Why in News: Despite 'geoengineering' concerns, a new study proposes spraying diamond dust to cool Earth.

Key Details

- A new study has argued that spraying millions of tonnes of diamond dust in the Earth's upper atmosphere every year could help cool down the Earth and combat global warming.

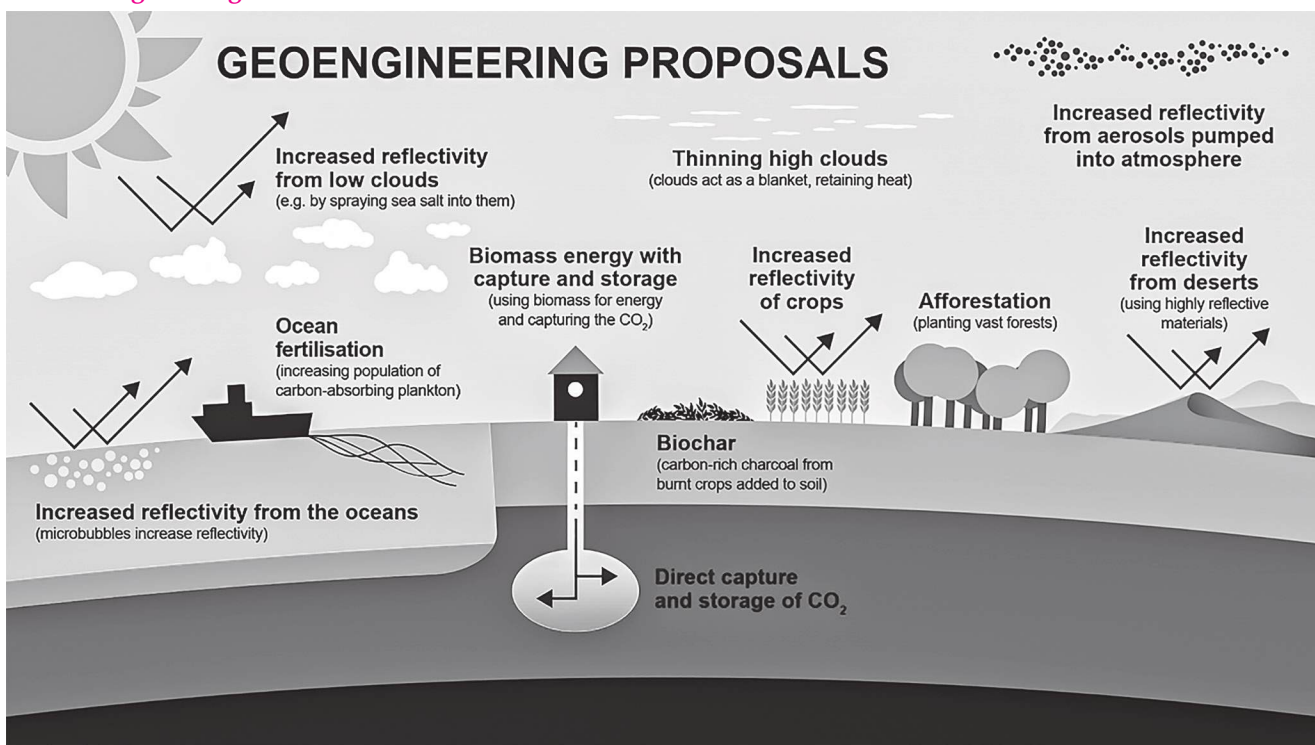
- Several other compounds, such as sulphur, calcium, aluminium, and silicon, have been suggested previously for the same work.
- The central idea here is to scatter material that can reflect solar radiation into Space and prevent it from reaching Earth, thereby cooling down the planet. The installation of space-based mirrors has also been proposed.
- The new study published in *Geophysical Research Letters* found that diamonds would be more effective in doing the job than any other material previously considered.

Concerns of Geoengineering

- **Threat to global forest cover:** The large-scale conversion of existing land to Geoengineering projects could cause global forest cover to fall by as much as 10% and biodiversity “intactness” to decline by up to 7%.

- **Threat to Natural resources:** The research confirms findings that Geoengineering techniques such as Solar geo-engineering may have a significant adverse impact on land and freshwater.
- **Aerosols can impact Global temperatures:** Aerosols have a limited lifetime in the stratosphere and would need to be released at regular time intervals in order to be effective. If the release of aerosols were suddenly stopped, global temperatures could rapidly rise again.
- **Risk of sudden fall in temperatures:** The results show that while the implementation of solar geoengineering could cause temperatures to fall fairly quickly, sudden termination could cause rapid increases as temperatures rebound.

About Geo Engineering



- Geoengineering is the large-scale manipulation of a specific process central to controlling Earth’s climate for the purpose of obtaining a specific benefit.
- **Need for Geoengineering**
 - Global climate is controlled by the amount of solar radiation received by Earth and also by the fate of this energy within the Earth system—that is, how much is absorbed by Earth’s surface and how much is reflected or reradiated back into space.
 - Geoengineering can help to influence global climate in a meaningful way, by altering the relative influence of one of these controlling mechanisms.
- **Main approaches of geo-engineering**
 - Solar Radiation Management (SRM)

- ◆ SRM strategies focus on reflecting incoming solar rays to reduce Earth’s temperature.
- ◆ This involves deploying reflective materials in space to block solar radiation, preventing it from reaching the planet’s surface.
- **Carbon Dioxide Removal (CDR) Technologies**
 - ◆ CDR aims to remove excess carbon dioxide from the atmosphere.
 - ◆ This includes technologies like:
 - ◆ Carbon Capture and Sequestration (CCS), which capture CO₂ at the source and store it underground, and
 - ◆ Carbon Capture, Utilisation, and Storage (CCUS),

where captured carbon is partially reused in industrial processes while the rest is stored.

➤ **Direct Air Capture (DAC)**

- ◆ DAC methods involve extracting carbon dioxide directly from the ambient air using large-scale “artificial trees.”
- ◆ The captured CO₂ is either stored or used, potentially addressing accumulated carbon emissions over the years.

PRELIMS SPECIAL

About Diamond Dust

- Diamond dust is usually composed of well-developed crystals (often plates), with typical diameters of about 100 µm.
- These crystals, which are visible mainly when they sparkle in the sunlight, can also produce halo phenomena. Visibility in diamond dust varies considerably, and the lower limit is greater than 1 km.
- Unlike sulfur dioxide, which is currently considered a leading candidate for atmospheric injection but risks causing acid rain and ozone depletion, diamond dust is chemically inert.
- The climate models suggest that annually injecting 5 million tons of synthetic diamond dust into the atmosphere could potentially cool the Earth by 1.6 C over 45 years.

EXPECTED QUESTIONS FOR UPSC CSE

Prelims MCQ

- Q. What is the primary goal of geo-engineering?
- (a) To develop mining engineering
 - (b) To promote renewable energy promotion
 - (c) To preserve genomes of extinct species
 - (d) To mitigate the impacts of climate change

Answer: (d)

Descriptive Question

- Q. Geo-engineering is increasingly being discussed as a solution to combat global warming. Discuss its potential benefits and associated risks. [15 marks] [250 words]

EXTENDED PRODUCER RESPONSIBILITY (EPR)

Why in News: Recently the Centre for Science and Environment released a report on Extended Producer Responsibility (EPR) for Plastic Packaging.

Key details

- A new analysis by the Centre for Science and Environment (CSE) highlights significant gaps in the implementation of the guidelines.

- These findings, say CSE researchers, combined with a set of targeted recommendations, underscore the need for robust interventions to ensure that India’s EPR framework effectively addresses plastic pollution and upholds the “polluter pays” principle.

About the Extended Producer Responsibility guidelines

- The EPR guidelines were issued by the Ministry of Environment, Forest, and Climate Change (MoEFCC) on February 16, 2022.
- It requires manufacturers, PIBOs as well as Plastic Waste Processors (PWPs) to register on a centralised portal. This framework sets specific targets for collection, recycling, end-of-life, recycled content usage and selective re-use in plastic packaging.
- CSE’s study reveals major gaps in enforcement and systemic integrity that need urgent redressal.

Share of Producers, importers and brand owners in introducing plastic packaging into the Indian market

- **83 percent** of the registered PIBOs are Importer, while responsible for only introducing **9 percent** of the plastic packaging introduced in the market
- **11 percent** are Producers but are responsible for introducing the majority of plastic packaging into the Indian market -- cumulatively accounting for **65 percent** of the total.
- Only **6 percent** are Brand Owners but are 2nd biggest contributors with **26 percent**.

Recommendations

- Using the portal to report accurate numbers for plastic waste generation.
- Undertaking baseline cost studies for plastic waste management to help establish a benchmark for fair pricing of recycling certificates and prevent undervaluation in the market.
- Product standardisation for improving the recyclability of plastic waste by ensuring that packaging materials and designs are uniform.

Way Forward

- The CSE report suggests some critical interventions that can be made to make the EPR system for plastic packaging more robust.
- The current EPR regime misses a very important set of stakeholders – the informal sector and WMAs; this needs to be recognised to increase the traceability of the value chain.

PRELIMS SPECIAL**About Centre for Science and Environment**

- Centre for Science and Environment (CSE) is a public interest research organisation based in New Delhi.
- **Task:** CSE researches and communicates the urgency of development that is sustainable and equitable.
- **Aim:** Aim is to raise these concerns, participate in seeking answers and – more importantly – in pushing for answers and transforming these into policy and so, practice.

FLASH FLOODS IN SPAIN

Why in News: Record-breaking rainfall and flash floods have hit Spain, causing many dozens of casualties and massive disruption and economic losses in the latest of a series of flooding disasters that have hit communities around the world.

Key Details

- The phenomenon is known locally as DANA (Depresion Aislada en Niveles Altos), a Spanish acronym for high-altitude isolated depression, and unlike common storms or squalls it can form independently of polar or subtropical jet streams.
- When cold air blows over warm Mediterranean waters it causes hotter air to rise quickly and form dense, water-laden clouds that can remain over the same area for many hours, raising their destructive potential. The event sometimes provokes large hail storms and tornadoes.

Role of Climate Change

- According to the Intergovernmental Panel on Climate Change, extreme weather events causing highly impactful floods and droughts have become more likely and more severe due to anthropogenic climate change. And this has been borne out by repeated events.
- As a result of rising temperatures, the hydrological cycle has accelerated. It has also become more erratic and unpredictable, and we are facing growing problems of either too much or too little water. A warmer atmosphere holds more moisture which is conducive to heavy rainfall.
- The phenomenon which hit Spain – known as Isolated Depression at High Levels, or DANA in Spanish – often occurs during the autumn season because the remaining warm surface heat from summer meets a sudden cold invasion aloft from the polar regions.
- This leads to what meteorologists used to call "a cut-off system" with low-pressure values that persist over a

few days and rotates over the concerned region. It also impacted southern France.

- The presence of warm air near the surface being fueled by excessive moisture from the still-warm Mediterranean Sea and the instability generated by the conflict with cold air in the upper atmosphere leads to large convective clouds with heavy downpours and sudden flash floods.
- Climate change is expected to make these systems more intense because of warmer sea waters and increasing moisture in the atmosphere.
- For each 1°C of warming, saturated air contains 7 percent more water vapour on an average. Every additional fraction of warming therefore increases the atmospheric moisture content which in turn increases the risk of extreme precipitation events.
- A similar "cut-off" system in September 2023 (Storm Daniel) caused massive devastation in Greece and then moved on to Libya where it triggered the collapse of dams, causing massive loss of life.

Measures that can be taken to mitigate flash floods, including:

- **Structural measures:** These involve reconstructing landscapes to reduce harm. Examples include:
 - Building floodwalls, levees, and dams
 - Constructing floodgates
 - Creating evacuation routes
- **Non-structural measures:** These involve removing people and property from areas at risk. Examples include:
 - Elevating structures
 - Buying out properties
 - Permanently relocating people
 - Zoning
 - Subdivision
 - Building codes
- **Temporary water barriers:** These can be used to protect a specific area by blocking flood waters. Examples include:
 - Sandbags
 - Rock berms
 - Dikes
 - Inflatable water dams
- **Planting vegetation:** This can help retain excess water
- **Terracing hillsides:** This can slow the flow of water downhill
- **Building floodways:** These are man-made channels that can divert floodwater
- **Constructing storage reservoirs:** These can help moderate flood peaks

CENTENARY CELEBRATIONS OF ICONIC 'BOSE-EINSTEIN' STATISTICS'

Why in News: Recently the Union Science and Technology Minister virtually inaugurated Centenary celebrations of iconic 'Bose-Einstein' Statistics'.

About Satyendra Nath Bose

- Satyendra Nath Bose was one of the founding fathers of quantum mechanics, the most successful description of the physical world.
- His pioneering work on quantum statistics has paved the way for development of modern quantum technologies including Bose-Einstein condensation, quantum superconductivity, and quantum information theory.
- In 1924, Bose authored the last of the four revolutionary publications which led to the new quantum mechanics (the others being those of Planck in 1900, Einstein in 1905, and Niels Bohr in 1913).
 - Half the fundamental particles in the Universe, **BOSONS**, are named after him.
 - He derived Planck's law in a revolutionary way which impressed Einstein, and subsequently they continued their academic interaction.
 - Their partnership resulted in new physical theories, including 'Bose-Einstein statistics' and the 'Bose-Einstein condensate'.
 - Along with developing the new quantum statistics, Bose's work also constitutes the foundation of novel technologies which also finds applications in the Second Quantum Revolution.
- In 1948, he set up **Bangiya Bijnan Parishad**, an institution for the popularization of scientific knowledge in Bengali.

S. N. Bose National Centre for Basic Sciences

- It is an Autonomous Research Institute established in 1986 under Department of Science and Technology (DST), Government of India to honour the life and work of Professor S. N. Bose.
- It plans to celebrate the centenary of Bose's colossal work in 2024 by organizing three International Conferences and several Outreach Programmes throughout the year.

About Bose-Einstein Statistics

- In quantum statistics, Bose-Einstein statistics (or B-E statistics) describe one of two possible ways in which a collection of non-interacting, indistinguishable particles may occupy a set of available discrete energy states at thermodynamic equilibrium.
- The theory of this behavior was developed (1924–25) by Satyendra Nath Bose, who recognized that a collection of identical and indistinguishable particles can be distributed. The idea was later adopted and extended by Albert Einstein in collaboration with Bose.
- The Bose-Einstein statistics apply only to those particles not limited to single occupancy of the same state—that is, particles that do not obey the Pauli Exclusion Principle restrictions.
 - Such particles have integer values of spin and are named bosons, after the statistics that correctly describe their behavior. There must also be no significant interaction between the particles.
- Bose-Einstein statistics apply when quantum effects are important and the particles are indistinguishable.

PRELIMS SPECIAL

Bose-Einstein Condensate

- A Bose-Einstein condensate (BEC) is a state of matter that occurs when a large number of bosons, such as atoms, condense into a single quantum state at ultra-low temperatures.
- This condensation leads to macroscopic quantum phenomena, such as superfluidity and superconductivity, where particles flow without any dissipation.
- The existence of quantized vortices is closely related to superfluidity, and the study of BECs provides valuable insights into the physics of these vortices.
- BECs have led to the development of advanced technologies for industry and practical applications.
 - **Environmental Monitoring:** Ultra-sensitive Detection
 - **Medical Advancements:** Enhanced Imaging
 - **Navigation Systems:** Precise Gravitational Measurements

EXPECTED QUESTIONS FOR UPSC CSE

Prelims MCQ

Q. Bose-Einstein condensates have practical applications in

1. Environmental monitoring by ultra-sensitive detection
2. Enhanced imaging in medical diagnosis
3. Precise gravitational measurements

Which of the statements given above is/are correct?

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

(d) Answer

Descriptive Question

Q. What is Bose-Einstein Condensate? Highlight its theoretical and technological applications. [10 marks] [150 words]

THERAPEUTIC RNA EDITING IN HUMANS

Why in News: Wave Life Sciences Announces First-Ever Therapeutic RNA Editing in Humans Achieved in RestorAATion-2 Trial of WVE-006 in Alpha-1 Antitrypsin Deficiency.

Key Details

- WVE-006 is a GalNAc-conjugated, subcutaneously delivered, A-to-I RNA editing oligonucleotide (AIMer) that was developed with Wave's best-in-class oligonucleotide chemistry platform.
- It is uniquely designed to address AATD-related lung disease, liver disease, or both.

RNA Editing

- The role of RNA in a function called **RNA interference**, where small RNA molecules keep a gene from being expressed, has been essential for the success of CRISPR-Cas9 gene-editing.
- The rapid development of mRNA vaccines during the COVID-19 pandemic exemplified the complex as well as vital role RNAs play beyond gene expression and regulation.
- Cells synthesise messenger RNA (mRNA) using instructions in DNA and then 'read' instructions from the mRNA to make functional proteins.
 - During this process of transcription, the cell may make mistakes in the mRNA's sequence and based

on it produce faulty proteins. Many of these proteins have been known to cause debilitating disorders.

- RNA editing allows scientists to fix mistakes in the mRNA after the cell has synthesised it but before the cell reads it to make the proteins.

Adenosine deaminases acting on RNA (ADAR)

- It is a technique used for RNA editing.
- Adenosine is one of the building blocks of RNA. ADAR works by converting some of the adenosine blocks in mRNA to another molecule called inosine.
- This is useful because inosine mimics the function of a different RNA building block called guanosine.
- Because guanosine-like function is found where adenosine is supposed to be, the cell detects a mistake and proceeds to correct it, in the process restoring the mRNA's original function. And then the cell makes normal proteins.
- Scientists took advantage of ADAR's effects to pair it with a guide RNA (or gRNA): the gRNA guides ADAR to a specific part of the mRNA, where the ADAR works its magic.
- Scientists expect a variety of serious genetic conditions that can be treated using such site-specific RNA editing.

Real World Applications of RNA Editing

- RNA Editing by Wave Life Sciences
 - Wave Life Sciences used RNA editing to treat α -1 antitrypsin deficiency (AATD), an inherited disorder.
 - In its therapy, dubbed WVE-006, the company used a gRNA to lead ADAR enzymes to specific single-point mutations in the mRNA sequence of the SERPINA1 gene, which contains the instructions for cells to make α -1 antitrypsin.
 - A single-point mutation occurs when a single building block of the mRNA is wrong.
 - Once at the target, the ADAR enzymes fix the mRNA and the cells produce α -1 antitrypsin at normal levels.
 - Wave Life Sciences is planning to extend its RNA editing technology to treat Huntington's disease, Duchenne muscular dystrophy, and obesity.
- Some other companies using ADAR enzymes to perform RNA editing
 - Korro Bio for AATD and Parkinson's disease
 - ProQr Therapeutics for heart disease and bile acid build-up in the liver
 - Shape Therapeutics for neurological conditions
 - Ascidian Therapeutic is testing its candidate to treat ABCA4 retinopathy.
- Researchers are also extending RNA editing to make changes in the exon.
 - mRNA is made up of portions called introns and exons, exons eventually code for a protein whereas the introns are non-coding parts and are removed from the RNA before it's used to make a protein.

RNA vs DNA Editing

- RNA editing has some advantages over DNA editing, especially on safety and flexibility.
- DNA editing makes permanent changes to a person's genome and sometimes this can lead to irreversible errors.
 - On the other hand, RNA editing makes temporary changes, allowing the effects of the edits to fade over time.
- CRISPR-Cas9 and other DNA editing tools require proteins acquired from certain bacteria to perform the cutting function, but these proteins can elicit undesirable immune reactions in some cases.
 - RNA editing relies on ADAR enzymes, which already occur in the human body and thus present a lower risk of allergic reactions.
 - This is useful for people who require repeated treatment and/or who have immune sensitivities.

Challenges in RNA Editing

- **Specificity of RNA Editing**
 - ADARs can perform adenosine-inosine changes in both targeted and non-targeted parts of mRNA, or skip the targeted parts altogether.
 - When ADARs don't align with the adenosine of interest, potentially serious side-effects could arise.
 - Scientists are currently trying to improve the accuracy of gRNA by incorporating mechanisms that shield non-targeted parts of the mRNA.
- **Transient nature of RNA Editing**
 - This is also its strength, but individuals will need to be treated repeatedly to sustain the therapy's effects.
- **Use of lipid nanoparticles**
 - Current methods to deliver the gRNA-ADAR complex use lipid nanoparticles.
 - Researchers used them to great success to make mRNA vaccines to treat COVID-19 and the adeno-associated virus (AAV) vectors used in gene editing.
 - But both these methods have a limited carrying capacity i.e. they can't transport large molecules very well.

Way Forward

RNA editing is in its nascent stage, yet there are many biotechnology companies worldwide developing RNA editing methods for a range of diseases.

As research and clinical trials advance in the field of RNA editing, it seems like only a matter of time before RNA editing becomes a fixture of the gene-editing toolkit in clinical practice.

PRELIMS SPECIAL

Alpha-1 antitrypsin deficiency

- Alpha-1 antitrypsin deficiency (sometimes just called "Alpha-1") is a genetic condition that can cause lung and liver damage
- It causes low levels of a protein (AAT) that protects the lungs.
- Alpha-1 increases the risk of developing certain diseases, including emphysema (damaged air sacs in your lungs), cirrhosis (liver scarring) and panniculitis (an uncommon skin condition).
- Alpha-1 antitrypsin deficiency affects people who have two copies of the SERPINA1 gene that makes an abnormal type of the Alpha-1 protein.

EXPECTED QUESTIONS FOR UPSC CSE

Prelims MCQ

Q. RNA editing applications can be utilized for:

1. Treatment of Parkinson's disease
2. Treatment of Huntington's disease
3. Treatment of obesity

Which of the statements given above is/are correct?

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

Answer: (d)

Descriptive Question

Q. Analyze the recent advancements in RNA editing technologies and discuss how RNA editing is emerging as a safer alternative to DNA editing. [10 marks] [150 words]

SUPERMASSIVE BLACK HOLE - LID-568

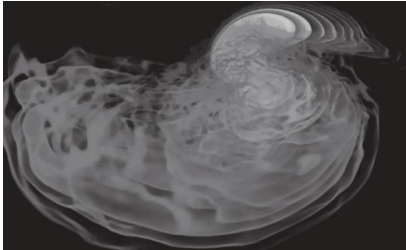
Why in News: According to a study published in the journal Nature Astronomy, LID-568 is expanding at an unprecedented rate challenging the conventional understanding of black holes.

Key Details

- A supermassive black hole, designated LID-568, recently observed approximately 1.5 billion years after the Big Bang, LID-568 is growing by devouring material at a speed 40 times higher than the theoretical Eddington limit, challenging existing theories about the evolution of supermassive black holes.
- The discovery was made by a cross-institutional team of

astronomers led by Hyewon Suh from the International Gemini Observatory/NSF NOIRLab, using the James Webb Space Telescope's (JWST) exceptional infrared observation capabilities.

- LID-568 a black hole, was previously identified by the Chandra X-ray Observatory, but observing it was challenging due to its faint appearance from Earth.



PRELIMS SPECIAL

About Black hole and related theories

- A black hole is a cosmic body of extremely intense gravity from which even light cannot escape. Black holes usually cannot be observed directly, but they can be “observed” by the effects of their enormous gravitational fields on nearby matter.
- **Formation:** A black hole can be formed by the death of a massive star. When such a star has exhausted the internal thermonuclear fuels in its core at the end of its life, the core becomes unstable and gravitationally collapses inward upon itself, and the star’s outer layers are blown away.
- **General theory of relativity.** Albert Einstein first predicted the existence of black holes in 1916, with his general theory of relativity. According to Einstein, matter and energy exist on a background of space and time. Objects distort the fabric of space-time based on their mass- more massive objects have a greater effect.
- **Quantum theory** suggests that there exist virtual particles popping in and out of existence all the time. When this happens, a particle and its companion anti-particle appear.
- **Big Bang theory:** The Big Bang Theory given by Hubble, is the leading explanation for how the universe began. Simply put, it says the universe as we know it started with an infinitely hot and dense single point that inflated and stretched — first at unimaginable speeds, and then at a more measurable rate — over the next 13.7 billion years to the still-expanding cosmos that we know today.
- **The Eddington limit** is a theoretical boundary that describes the maximum rate at which a star or black hole can consume matter or emit radiation:
 - **Explanation**
 - ◆ The Eddington limit is the point at which the outward pressure of radiation from a star or black hole balances the inward force of gravity.
 - **Significance**
 - ◆ If a star or black hole exceeds the Eddington limit, it will either blow off its outer layers or initiate a strong stellar wind.

EXPECTED QUESTIONS FOR UPSC CSE

Prelims MCQ

- Q. LID-568 recently seen in news is ...
- (a) A type of super massive black hole
 - (b) A neutron star
 - (c) Earth like planet in milky way galaxy
 - (d) None

Answer: (a)

THE WORLD’S FIRST WOODEN SATELLITE

Why in News: The world’s first wooden satellite, built by Japanese researchers, was launched into space, in an early test of using timber in lunar and Mars exploration.

Key Details

- Made by researchers at Kyoto University, Japan, the tiny satellite weighing nearly 900g recently headed for the International Space Station on a SpaceX mission. It will then be released into orbit above the Earth.
- Named **LignoSat**, after the Latin word for wood, its panels have been built from a type of magnolia tree, using a traditional technique without screws or glue.
- Along with its wood panels, LignoSat also incorporates traditional aluminium structures and electronic components.
 - It has sensors on board to monitor how its wood reacts to the extreme environment of space during the six months it will orbit the Earth.

About LignoSat

- LignoSat measures just 4 inches (10 centimeters) on each side, and weighs 900 grams.
- The satellite will test the durability of wood in the extreme environment of space where temperatures fluctuate from -100 to 100 degrees Celsius every 45 minutes, even as objects traverse through sunlight and darkness.

Testing the Durability of Wood

- The Kyoto University researchers anticipate that wood may come to replace some metals used in space exploration.
- Wood is more durable in space than on Earth because there’s no water or oxygen that would rot or inflame it.

Significance: A renewable solution for a long-term problem

- Conventional satellites, made primarily of aluminium, tend to burn up in the Earth’s atmosphere at the end of their lives and generate aluminium oxides.

- These gases can damage the planet's protective ozone layer.
- Add to this the concerns about the growing orbital population, including artificial mega-constellations like SpaceX's Starlink broadband network, which currently houses 6,500 active satellites.
- This is where LignoSat may have an advantage. By substituting magnolia for aluminium, the satellite wouldn't introduce damaging pollutants into the atmosphere when it falls back to Earth.
- This investigation demonstrates that a wooden satellite can be more sustainable and less polluting for the environment than conventional satellites.
- Common people will get the benefits of sophisticated technologies and cutting-edge genomic research.
- It will bring groundbreaking transformation in environmental, agricultural and health research.
- This initiative is coordinated by BRIC-National Institute of Biomedical Genomics (BRIC-NIBMG).

EXPECTED QUESTIONS FOR UPSC CSE

Prelims MCQ

Q. Consider the following statements regarding LongoSat:

1. It was built by Japanese researchers from Kyoto university.
2. It is world's first wooden satellite.
3. Wood can be sustainable solution for metal-based satellite.

Which of the statements given above is/are correct?

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

Answer: (d)

ONE DAY ONE GENOME INITIATIVE

Why in News: Department of Biotechnology (DBT) and Biotechnology Research and Innovation Council (BRIC) introduces the One Day One Genome initiative to showcase the enormous microbial potential of India.

About One Day One Genome Initiatives

- The initiative highlights the unique bacterial species found in our country and emphasises their critical roles in environment, agriculture and human health.
 - It aims to release a fully annotated bacteriological genome isolated in the country freely available to the public.
 - In this initiative an annotated microbial genome will be publicly released every day to make microbial genomics data more accessible to researchers and directly benefit the community.
 - The unique features of these microbes and their genomes will be highlighted.

Significance of Microorganisms

- Microorganisms are crucial for our ecosystem.
- They play an important role in all biogeochemical cycles, soil formation, mineral purification, degradation of organic wastes and toxic pollutants along with methane production.
- Cumulatively they help to maintain the homeostasis in our planet.
- In **agriculture**, they help in nutrient cycling, nitrogen fixation, maintaining soil fertility, controlling pest and weeds and stress responses.
- Microorganisms are symbiotically associated with plants and help them in nutrient and water uptake.
- They are an indispensable part of the human body. There are many more microbial cells than the number of human cells in a human body. They are essential for our digestion, immunity and even mental health.
- All infectious diseases are mainly caused by pathogenic microorganisms. On the other hand, non-pathogenic microorganisms are indispensable for our defense against infectious diseases.

Genome Sequencing

- Genome sequencing involves determining the complete DNA sequence of an organism's genome, a method that provides important insights into the genetic basis of disease, evolutionary relationships between species, and the function of genes and non-coding regions of the genome.
- Genome sequencing will allow the visualization of the hidden potential of the microbial world to the community at large.
- Sequencing data can be analyzed to identify the genome encoded capacities for various important enzymes, antimicrobial resistance, bio active compounds etc.
- Research in this field will lead to the benefit of better protection and management of our environment, development in agriculture and improvement in human health.

EXPECTED QUESTIONS FOR UPSC CSE

Prelims MCQ

Q. Consider the following statements regarding the recently launched 'One Day One Genome initiative'?

1. It was jointly launched by Department of Biotechnology (DBT) and Biotechnology Research and Innovation Council (BRIC).
2. It aims to highlight unique bacterial species found in our country and their critical roles in environment, agriculture and human health.

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)

OPERATION DRONAGIRI

Why in News: Recently, Department of Science and Technology has launched Operation Dronagiri, a pilot project under National Geospatial Policy 2022.

About Operation Dronagiri

- It demonstrates the potential applications of geospatial technologies and innovations in improving the quality of life of citizens and ease of doing business.
- Operation Dronagiri is part of the numerous efforts of DST in liberalising geospatial data, developing geospatial infrastructure, geospatial skill and knowledge as well as standards in implementing the policy.
- **Implementation**
 - In the first phase, Operation Dronagiri will be implemented in the states of Uttar Pradesh, Haryana, Assam, Andhra Pradesh & Maharashtra, where pilot projects will run and use of cases be demonstrated to showcase the potential applications of integration of geospatial data and technology in **3 sectors i.e. Agriculture, Livelihoods, Logistics and Transport.**
 - Several government departments, industry, corporate and startups will be partnered with in the first phase. This will create the base for its nationwide rollout.
 - The entire implementation process will be driven by Geospatial Innovation Cell, Department of Science and Technology.
- Operation Dronagiri gains a powerful backbone with support from Integrated Geospatial Data Sharing Interface (GDI). This will make spatial data accessible, bringing transformation similar to the process in which UPI has brought about financial inclusion.
 - It represents a crucial step within the National Geospatial Policy, designed to position India as a global leader in geospatial technology.
 - Its main focus is on turning data into actionable solutions that bring real, socioeconomic benefits on the ground.

Integrated Geospatial Data Sharing Interface (GDI)

- Integrated Geospatial Data Sharing Interface (GDI) enables seamless data sharing, access, and analysis for urban planning, environmental monitoring, disaster management, and more.
 - Built with advanced data exchange protocols

and privacy-preserving features, it empowers organisations to make data-driven decisions for the public good, fostering innovation and responsible use of geospatial data.

- GDI offers tools to unlock actionable insights and drive collaboration. It enables efficient data processing, analysis, and sharing among stakeholders.
- This collaboration ensures faster, more coordinated responses in areas like infrastructure monitoring, disaster relief, and environmental protection.
- **Implementation**
 - A nationwide rollout is envisioned under a PPP model, with a similar approach to UPI's deployment.
 - Industry and private sector engagement will be pivotal in supporting the transformation in the geospatial sector.

National Geospatial Policy, 2022

- National Geospatial Policy, 2022 is a citizen-centric policy that seeks to strengthen the Geospatial sector to support national development, economic prosperity and a thriving information economy.
- **Vision and Goals**
 - To make India a World Leader in Global Geospatial space with the best in the class ecosystem for innovation.
 - To develop a coherent national framework in the country and leverage it to move towards digital economy and improve services to citizens.
 - To enable easy availability of valuable Geospatial data collected utilizing public funds, to businesses and general public.
 - To have a thriving Geospatial industry in the country involving private enterprise.

Applications of Geospatial Technology

- Geospatial technology has applications in almost every domain of the economy ranging from agriculture to industries, development of urban or rural infrastructure, administration of land, economic activities of banking and finance, resources, mining, water, disaster management, social planning, delivery services, etc.
- Geospatial data is now widely accepted as a critical national infrastructure and information resource with proven societal, economic and environmental value that enables government systems and services, and sustainable national development initiatives, to be integrated using 'location' as a common and underpinning reference frame.

EXPECTED QUESTIONS FOR UPSC CSE

Prelims MCQ

Q. Consider the following statements regarding Operation Dronagiri:

1. It was launched by Ministry of Home Affairs.
2. It aims to liberalize geospatial data, developing geospatial infrastructure and geospatial skills etc.
3. It will ensure ease of doing business in sectors of agriculture, livelihoods, logistics and transport.

Which of the statements given above is/are correct?

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

Answer: (c)

Descriptive Question

Q. Discuss the significance of Operation Dronagiri to enhance the potential of geospatial technologies. [10 marks] [150 words]

GENETICALLY MODIFIED HUMANS

Why in News: South Africa became the first country to explicitly permit the use of genome editing to create genetically modified children.

Key Details

- In May, South Africa announced a revision to its national health research guidelines. This change has the potential to make the country the first to endorse genome editing for the creation of genetically modified children.
- This development could represent a major breakthrough in genetic modification. However, editing human genes that can be inherited has always been a controversial topic. Many people are concerned about the social implications and the risks involved.

GENETICALLY MODIFIED HUMANS

Pros:

Provides Alternate treatment options: Gene therapy can potentially cure someone of a disease, especially in instances where no other medications have worked.

Long-lasting effects: Gene editing has the potential to get rid of a person's symptoms for lifetime. Gene therapy can give many people a better quality of life.

Bring generational changes: Positive effects passed down through generations. If you remove a faulty gene from a parent, they won't transfer this gene to their kids.

Rapidly-changing technology: Gene editing is able to exist and grow because of massive advances in technology over the past few decades. Since technology continues to advance, we can expect gene editing to continue to improve.

Cons:

Expensive: Gene editing can be extremely pricey, making it inaccessible for some people.

Experimental: Gene editing is relatively new and there's still a lot about it that we don't know. Right now, there are no guarantees.

Potentially dangerous: There's some concern that if gene therapy reaches other cells in the body besides the faulty cell, it could have harmful effects. There's also concern that reproductive cells could be changed without detection, and these could be passed on to children.

Can create designer babies: There is a risk of advancing the concept of designer babies emboldening societal stereotypes.

Ethical concerns of Gene edited children

- **Safety:** Due to the possibility of off-target effects (edits in the wrong place) and mosaicism (when some cells carry the edit but others do not), safety is of primary concern.
- **Informed Consent:** Some people worry that it is impossible to obtain informed consent for germline therapy because the patients affected by the edits are the embryo and future generations.
- **Justice and Equity:** As with many new technologies, there is concern that genome editing will only be accessible to the wealthy and will increase existing disparities in access to health care and other interventions.
- **Genome-Editing Research:** Involving Embryos Many people have moral and religious objections to the use of human embryos for research.

PRELIMS SPECIAL

About Heritable Human Genome Editing

- Heritable human genome editing refers to editing of nuclear DNA in a way that may be heritable across generations.
- Heritable human genome editing is the subject of intense debate over its possible consequences for offspring and for society in general.
- They may pose greater safety and ethical issues than somatic human genome editing.

EXPECTED QUESTIONS FOR UPSC CSE

Prelims MCQ

Q. Recently, which country permitted use of genome editing to create genetically modified children?

- (a) Sweden (b) Japan
 (c) Russia (d) South Africa

Answer: (d)

Descriptive Question

Q. South Africa's move to permit heritable human genome editing has opened the door to controversial scientific possibilities. Critically discuss the benefits and risks associated with gene editing in humans. [15 marks] [250 words]

INDIA'S FIRST ANALOG SPACE MISSION

Why in News: Indian Space Research Organisation (ISRO) has started the country's first analog space mission at Leh in Ladakh, where space agency will simulate life in an interplanetary habitat.

About Analog Missions

- Analog space missions are field tests in locations on Earth that have physical similarities to the extreme space environments and play a significant role in problem solving for spaceflight research.

Key Details

- The move assumes significance as India is planning to send a human to the Moon in the near future.
- The mission includes a compact, inflatable habitat named Hab-1, which is equipped with essentials like a hydroponics farm, kitchen, and sanitation facilities.
- It provides a self-sustaining environment, offering valuable data as India is planning long-duration space missions to the Moon, Mars, and beyond.
- **Why Ladakh?**
 - Ladakh has been chosen for such a mission as the geographical features of the area – dry and cold climate, barren land, high-altitude terrain and extreme isolation – are considered to closely resemble Martian and lunar landscapes.
 - Lying at an elevation over 3,000 metres above sea level, Ladakh has oxygen levels only 40% of those at sea level. The low-pressure and low-oxygen setting allows researchers to evaluate life support systems under conditions similar to those on Mars.

Significance of Analog Missions

Analogs play a significant role in problem solving for spaceflight research.

- Not all experiments can be done in space – there is not enough time, money, equipment, and manpower.
- Countermeasures can be tested in analogs before trying them in space. Those that do not work in analogs will not be flown in space.
- Ground-based analog studies are completed more quickly and less expensively.

What hazards do Analog Missions test?

Space is a dangerous, unfriendly place. One goal of analog missions is to look for possible safeguards to the hazards of life in space. Hazards are grouped into five categories related to the stresses they place on the space traveler: Space radiation, isolation/confinement, distance from Earth, gravity fields, and hostile/closed environments.

• Space Radiation

- Earth's magnetic field and atmosphere protect us from harsh cosmic radiation, but without that protection, one is more exposed to treacherous radiation.
- **Possible Hazards:** Radiation exposure may increase cancer risk. It can damage the central nervous system, with both acute effects and later consequences, manifesting itself as altered cognitive function, reduced motor function, and behavioral changes. Radiation sickness can result in nausea, vomiting, anorexia, and fatigue.

• Isolation/Confinement

- Behavioral issues among groups of people occupying a small space over a long time, no matter how well trained they are, are inevitable.
- **Possible Hazards:** A decline in mood, cognition, morale, or interpersonal interaction, sleep disorder, depression, fatigue, boredom. The more confined and isolated humans are, the more likely they are to develop behavioral or cognitive conditions.

• Distance from Earth

- Planning and self-sufficiency are key. Mars is 140 million miles from Earth on average. With communication delays of up to twenty minutes and the possibility of equipment failures, astronauts must be able to complete the mission on their own. They must have the correct food, medicine, and supplies to sustain them for the duration.

• Gravity Fields

- There are three gravity fields you would experience on a Mars mission: weightlessness between planets, 1/3 of Earth's gravity on Mars, and normal gravity upon returning to Earth.
- **Possible Hazards:** Affects spatial orientation, head-eye and hand-eye coordination, balance, locomotion, and can cause motion sickness. Bones lose minerals causing a drop in density. Muscles lose strength and endurance. The cardiovascular system becomes deconditioned. Fluids shifts could put pressure on the eyes causing vision problems. One is apt to develop kidney stones due to dehydration.

• Environment: Hostile/Closed

- Ecosystem inside the spacecraft plays a big role in everyday astronaut life. Microbes can change characteristics in space, and microorganisms that naturally live on your body are transferred more easily from person to person in closed habitats like the space station. Every inch of living quarters must be carefully designed to ensure a comfortable temperature, lighting, noise-level, and adequate space.
- **Possible Hazards:** Elevated stress hormone levels alter the immune system leading to allergies, illnesses, and disease.

EXPECTED QUESTIONS FOR UPSC CSE

Prelims MCQ

Q. Consider the following statements:

1. Recently ISRO has started the country's first analog mission at Leh in Ladakh.
2. It will help to stimulate environment like interplanetary habitats.

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)

Descriptive Question

Q. Enumerate the key features of India's first analog space mission in Ladakh and its relevance for India's future space mission. [10 marks] [150 words]

SPACE BIOTECH

Why in News: ISRO and Department of Biotechnology to work together on space biotech which will later be integrated with Bharatiya Antariksh Station.

Key Details

- The two institutions signed a memorandum of understanding for long term collaboration on space biotechnology.

Aims

- To advance India's space and biotechnology sectors, and position the country as a leader in global space research.

Mandate

- From checking whether supplements can prevent muscle loss in microgravity to impact of microgravity on edible algae, and the growth of cyanobacteria in urea in space — these are among the potential studies that will come out of the collaboration between the Indian Space Research Organisation (ISRO) and Department of Biotechnology (DBT).
- The collaboration will focus on microgravity experiments, space biomanufacturing, and bioastronautics.

Significance

- The collaboration may result in establishing laboratories on different aspects of space biotechnology or developing instruments that can be used in space.
- **Experiments without Human intervention:** The collaboration will help in developing experiments that can be conducted without human intervention for the

first three unmanned spaceflight under Gaganyaan mission and then some where human intervention will be necessary for the first human spaceflight.

- **Space cultivation:** The experiment will help the researchers select the most robust species of microalgae for future cultivation in space.
- **Supplement use for Astronauts:** Research on supplements to prevent muscle loss in space, astronauts experience up to 20% muscle loss in 5 to 11 day long spaceflight — could also potentially help in treating sarcopenia — an age-related condition that results in loss of muscle mass and strength.
- **Long term objective:** This long term collaboration has become essential with the Indian Space Research Organisation now entering the domain of sustained human spaceflight, with the aim of setting up a space station by 2035.

Microgravity Experiments

- Microgravity is a unique environment where the effects of gravity are reduced or removed. This environment is created in freefall.
- Microgravity is very important in the study of Space Science because the processes and phenomena normally hidden by dominant gravitational effects become more easily observable.
- An example of a physical science experiment in freefall is the study of how a liquid occupies a partially filled container: on the ground, a liquid tends to pool at the bottom of its container, but in microgravity the liquid can behave strangely and may occupy both ends of its container with a void in the middle.

Space Biomanufacturing

- Over the last decade, the International Space Station National Laboratory (ISS National Lab) has supported space-based studies in the areas of tissue engineering and regenerative medicine.
- This initial research and development have provided important insights into how microgravity can be leveraged to advance biomanufacturing in space to benefit human life and commercial enterprise on Earth.
- Microgravity induces changes in bodily systems that result in effects including cardiovascular deconditioning, skeletal muscle atrophy, bone loss, and immune dysfunction, among others .
- These effects mimic the onset of health-related outcomes associated with aging and chronic human disease but at an accelerated rate. Such effects that could take years to manifest on Earth may develop in weeks in microgravity.
- While these changes are a concern for keeping astronauts safe on long-duration spaceflight, they also present an opportunity to study aging, disease progression, and test therapeutics on an accelerated timescale.

Bioastronautics

- Bioastronautics is a specialty area of biological and astronomical research which encompasses numerous aspects of biological, behavioral, and medical concern governing humans and other living organisms in outer space.
- It also includes the design of space vehicle payloads, space habitats, and life-support systems.
- In short, it spans the study and support of life in space.

EXPECTED QUESTIONS FOR UPSC CSE

Prelims MCQ

Q. Recently ISRO and Department of Biotechnology signed a Memorandum of Understanding on collaboration on space technology. The collaboration will focus on:

1. Microgravity experiments
2. Space bio-manufacturing
3. Bioastronautics

Select the correct answer using the code given below:

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

Answer: (d)

Descriptive Question

Q. Discuss the significance of space biotechnology in advancing India’s space sector. How can collaboration between ISRO and the Department of Biotechnology contribute to this field? [15 marks] [250 words]

BLACK HOLE TRIPPLE SYSTEM

Why in News: Scientists discovered the first ever Black Hole Triple System.

Key Details

- In a study appearing in *Nature journal*, physicists at MIT and Caltech report that they have observed a “Black hole triple” for the first time.



- The new system holds a central black hole in the act of consuming a small star that’s spiraling in very close to the black hole, every 6.5 days.
 - The system located around 8,000 light years away in the constellation of Cygnus.

About Black hole Triple

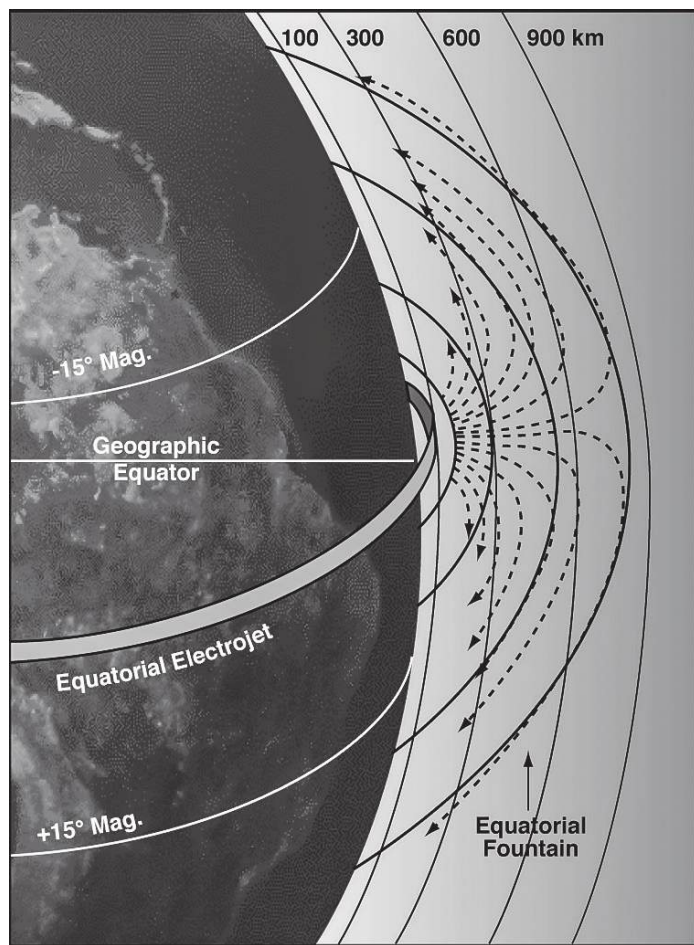
- **Configuration:** The new system holds a central black hole in the act of consuming a small star that’s spiraling in very close to the black hole, every 6.5 days — a configuration similar to most binary systems.
- But surprisingly, a second star appears to also be circling the black hole, though at a much greater distance.
- **Process of making of a Black Hole Triple system:**
 - The existence of a very far-off star suggests that the system’s black hole was born through a gentler, direct collapse.
 - **How it is different from Black holes:** Black holes are thought to form from the violent explosion of a dying star — a process known as a supernova, by which a star releases a huge amount of energy and light in a final burst before collapsing into an invisible black hole.
 - However in this system the black hole seems to have a gravitational hold on an object so far away that it is raising questions about the origins of the black hole itself.

EQUATORIAL IONOSPHERIC PROCESSES

Why in News: Model developed to understand equatorial ionospheric processes important for Global Navigation Satellite System (GNSS) based navigation.

Key Details

- Scientists have developed an empirical model to understand the equatorial electrodynamical processes that can impact satellite orbital dynamics, Global Positioning Systems and other satellite communication links as well as electrical power grids.
- Earth’s geomagnetic equator passes very close to the southern tip of India, where a unique and very strong current of the order of 100 kA known as Equatorial Electrojet (EEJ), flows at around 105-110 km height in the upper atmosphere.
- Due to this intense current, the geomagnetic field near the equator is uniquely enhanced by a few tens to a few hundreds of nanotesla (nT).
- This model, named “Indian Equatorial Electrojet (IEEJ) Model” is the first empirical model that can accurately predict the Equatorial Electrojet over the Indian sector and has been made publicly available.



About Earth's Equatorial Ionospheric process

- The equatorial and low latitude ionosphere, often referred to as tropical ionosphere, presents global maxima in plasma density and height integrated plasma content, and, during night, develops plasma instabilities leading to plasma structuring with density irregularities distributed in a wide spectral band.
- Measuring this current intensity through the geomagnetic field enhancement provides an important understanding of the variation of ionospheric electric field. Therefore,

understanding and modelling of EEJ variations would have important applications in assessing the satellite orbital dynamics, Global Positioning Systems and other satellite communication links, electrical power grids, etc.

- Indian Institute of Geomagnetism (IIG) regularly measures this EEJ current using ground-based magnetometers located at an equatorial station Tirunelveli, very close to the southern tip of India.

Importance of EEJ

- **Understand Global Electromagnetic Induction:** Changes in the EEJ influence Earth's geomagnetic field and are studied to better understand the processes of global electromagnetic induction, including the way currents are induced within the Earth and its ionosphere.
- **On Space Navigation:** During geomagnetic storms, fluctuations in the EEJ affect ionospheric conditions, which in turn impact GPS accuracy and radio signal propagation.
- **Electrodynamics Research:** It helps to understand the ionospheric electrodynamics and the behaviour of electric fields within Earth's upper atmosphere. Further, it acts as a natural laboratory for studying the influence of solar activity on Earth's near-space environment.

PRELIMS SPECIAL

About Geographic equator

An imaginary line that runs around the middle of the Earth, halfway between the north and south poles. It's equidistant from both poles and divides the Earth into the northern and southern hemispheres.

About Magnetic equator

An imaginary line that's roughly parallel to the geographic equator, but it's not fixed and slowly changes. It's a line of zero magnetic dip, where a magnetic needle has no dip or inclination. The magnetic equator is located north of the geographic equator in Africa and south of it in America.

DEFENCE & SECURITY

3RD MAHASAGAR SUMMIT

Why in News: The third edition of the Indian Navy's MAHASAGAR initiative focused on training cooperation to mitigate common maritime security challenges in the Indian Ocean Region.

Key Details

- During the third edition of the high-level virtual interaction MAHASAGAR (Maritime Heads for Active Security and Growth for All in the Region), Admiral Dinesh Kumar Tripathi, Chief of the Naval Staff interacted with Heads of Navies/ Maritime Agencies and Senior Leadership from Indian Ocean Region (IOR) littorals viz., Bangladesh, Comoros, Kenya, Madagascar, Maldives, Mauritius, Mozambique, Seychelles, Sri Lanka and Tanzania participated.
- The interaction's theme highlights the present and necessary imperatives for Training Corporation towards mitigation of common maritime challenges in the Indian Ocean Region.
- During the current edition, the focus was on the imperatives of quality training and opportunities for training collaboration between IOR littorals towards developing requisite capacities and skilled manpower to tackle Common Maritime Security Challenges in the IOR.

PRELIMS SPECIAL

About MAHASAGAR - Maritime Heads for Active Security and Growth for All in the Region

- MAHASAGAR which stands for vast ocean in Hindi, is the Indian Navy's flagship outreach for high-level virtual interaction between Maritime Heads for Active Security and Growth for All in the Region.
- The initiative, started by the Indian Navy, is conducted bi-annually and has garnered wide acceptance among the participating nations ever since its inception in 2023.

Exercises in the Indian Ocean Region (IOR)

- **Malabar Exercise**
 - **Participants:** India, United States, Japan, and Australia (Quad nations).
 - **Purpose:** Focuses on maritime security, anti-submarine warfare, and interoperability among the navies of the Quad countries.
 - **Significance:** Highlights Indo-Pacific collaboration and underscores freedom of navigation in international waters.

- **Milan Exercise**

- Hosted by India.
- **Purpose:** Promotes mutual understanding and interoperability.
- **Focus:** Combines humanitarian aid/ disaster relief (HADR), anti-piracy, and search-and-rescue (SAR) operations.

- **SIMBEX (Singapore-India Maritime Bilateral Exercise)**

- **Participants:** India and Singapore.

- **Varuna Exercise**

- **Participants:** India and France.

- **AUSINDEX**

- **Participants:** India and Australia.

- **Indo-Russia Maritime Exercises (INDRA NAVY)**

- **Participants:** India and Russia.

EXPECTED QUESTION FOR UPSC CSE**Prelims MCQ**

Q. Consider the following countries:

- | | |
|--------------|---------------|
| 1. Maldives | 2. Seychelles |
| 3. Mauritius | 4. Kenya |

How many of the above countries were the participants of 3rd edition of high level virtual interaction MAHASAGAR organised by the Indian Navy?

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

(d) Answer

EXERCISE ANTARIKSHA ABHYAS-2024

Why in News: Defence Space Agency under the Ministry of Defence has successfully conducted the Space Defence Exercise Antariksha Abhyas-2024 in New Delhi.

Key Details

- Antariksha Abhyas 2024, a three day Exercise to the growing threats from and to Space Based Assets and Services, was conducted by the Defence Space Agency of Headquarters Integrated Defence Staff.

- Exercise Antariksha Abhyas is a first of its kind exercise.

Key Components of the Exercise

- Focused discussions on:-
 - Emerging space technologies
 - Space situational awareness
 - India's space programmes
- The discussions highlighted the importance of monitoring and protecting critical assets and maintaining situational awareness in the increasingly contested space environment.

Significance of the Exercise

- ▶ The Space Exercise aims to provide enhanced understanding of space based assets and services and to gain understanding of operational dependency on space segment between stakeholders.
- ▶ It is expected to help secure national strategic objectives in space and integrate India's space capability in military operations.
- ▶ The exercise intends to identify vulnerabilities in conduct of operations in the event of denial or disruptions of space based services.

Outcome of the Exercise

- ▶ Antariksha Abhyas 2024 successfully met its objectives of improving interoperability, fostering mutual understanding and enhancing cohesion between the tri-services and Defence Space Agency.
- ▶ Key outcomes included refined strategies for operational preparedness, a robust framework for future collaboration and a clear road map for advancing India's Space doctrine and capabilities in the line with National Security objectives.
- ▶ This exercise marks a pivotal point in India's journey to secure its interests in space, reaffirming the nation's advancement and strategic focus on this critical domain.

EXPECTED QUESTIONS FOR UPSC CSE

Prelims MCQ

- Q. Consider the following statements regarding Exercise Antariksha Abhyas 2024
1. It was organized in Sriharikota by defence space agency.
 2. It aims to provide enhanced understanding of space-based assets and services.
 3. Identify vulnerabilities in the conduct of operations in the event of denial or disruptions of space-based services.

Which of the statements given above is/ are correct?

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

(b) Answer

Descriptive Question

Q. Discuss the significance of Exercise Antariksha Abhyaas-2024 in the context of national security. [10 marks] [150 words]

DRONE SEIZURES ALONG THE INTERNATIONAL BORDER IN PUNJAB

Why in News: The Border Security Force (BSF) reported that drone interceptions along the International Border in Punjab have doubled to 200 this year.

Key Details

- Border Security Force (BSF) had seized a total of 107 drones at the Punjab border in 2023.
- BSF have implemented "increasingly accurate" anti-drone drills, resulting in a significant setback for Pakistani narcotic syndicates attempting to push in drugs and weapons into the Indian territory with an objective to "destabilise" it by inducing drug addiction in the young generation and "disintegrating" social harmony.
- More than 200 drones seizure this year includes those unmanned aerial vehicles which were shot down by troops using rifles, jammed in flight with the use of anti-drone technology and those that were recovered lying on the fields on the basis of intelligence inputs or information provided by the locals.
- Almost all of these drones are Chinese-made and they carry drugs, small arms and ammunition as payload. However, drugs are the highest sent consignment.
- The drone menace, that started around 2019-20 along this front, is dominant in the border districts of Amritsar and Tarn Taran in Punjab.
- BSF officials have said all the drugs coming from across the Pakistan border into Punjab were now coming through the air route via drones as compared to the earlier land route using pipes pushed from the Pakistan border and many times by being flung from over the fence.

Counter Drone Technologies

- Counter-drone technology encompasses a wide range of solutions that allow to detect, classify, and mitigate drones and unmanned aerial vehicles.
- This includes everything from camera systems and

specialist drone detection radar to net guns and cyber takeover systems.

- There are four main types of drone monitoring equipment:
 - **Radio frequency (RF) analysers**
 - ◆ They're used to detect radio communication between a drone and its controller.
 - **Acoustic sensors (Microphones)**
 - ◆ This type of counter-UAS technology used to detect the sound made by a drone and calculate its direction.
 - ◆ Use multiple microphone arrays for rough triangulation.
 - **Optical sensors (Cameras)**
 - ◆ Optical sensors collect light at a range of wavelengths, including visible and infrared, as well as thermal radiation, to detect drones day and night.
 - ◆ Recent advances in optical sensor technology have improved resolution (and thereby range) and processing power in the form of AI-powered detection, tracking, and classification.
 - **Radar**
 - ◆ A device that uses radio energy to detect an object.
 - ◆ Most radars send their radio signal as a burst, then listen for the "echo".

Counter Drone System (D4 System)

- To address the malicious threats posed by rogue Drones, a Counter Drone System has been developed by DRDO & Productionized by BEL which has been operationally proven.
- The Counter Drone System (D4 System) is capable of performing real time search, detection, tracking and neutralization (Soft/ Hard Kill) of the flying drones (Micro/ Small UAVs) and will provide object details (Optical / Thermal) and RF spectrum display on GUI.
- Counter Drone system (D4 System) configured with the following systems
 - RADAR System – Drone detection and tracking
 - EO System – CCD, IR camera with LRF for detection and tracking of Drone target
 - DF Counter Drone System- Drone communication channel RF Detection & Jamming, GPS Jamming / Spoofing System (Soft Kill)
 - Laser Directed Energy Weapon System (Hard Kill)
 - Command & Control Centre (C3) with Power Source for complete System

EXPECTED QUESTIONS FOR UPSC CSE

Prelims MCQ

Q. Recently the term D4 system was in the news it is related to?

(a) Drones (b) DNA analysis

(c) Lagrange point (d) None of the above

(a) :Answer

Descriptive Question

Q. Critically analyze the challenges posed by drone-based smuggling along international borders and evaluate the effectiveness of counter drone technologies in addressing these threats. [15 marks] [250 words]

ADAPTIVE DEFENCE STRATEGY

Why in News: Raksha Mantri advocated to create an 'Adaptive Defence' in the country to counter the challenges posed by the fast-changing world in today's times at inaugural Delhi Defence Dialogue (DDD).

Adaptive Defence

- Adaptive Defence is a dynamic and flexible approach to security planning and execution. It involves:
 - Proactive assessment of evolving threats and challenges.
 - Innovative and real-time responses to emerging situations.
 - Integration of advanced technologies, including Artificial Intelligence, cybersecurity, and drone warfare.
 - Continuous evolution of strategies to remain ahead of adversaries.

Significance of Adaptive Defence for India

- **Dynamic Security Landscape**
 - ▶ India faces multidimensional threats, including conventional, asymmetric, and hybrid warfare.
 - ▶ The need for tailored strategies to address threats from both state and non-state actors.
- **Technological Advances**
 - ▶ The rapid evolution of technologies necessitates adaptive policies to integrate new tools and methodologies in defence.
 - ▶ Countering challenges like cyber warfare, autonomous weapons, and surveillance systems.

- **Geopolitical Pressures**
 - ▶ India's strategic location in South Asia and its borders with adversaries like China and Pakistan require a flexible defence approach.
 - ▶ Evolving regional dynamics, including China's assertive actions in the Indo-Pacific and cross-border terrorism.
- **Resource Optimization**
 - ▶ Adaptive strategies help optimize defence budgets and resources, ensuring better outcomes without wasteful expenditure.
 - ▶ Enhanced focus on indigenization and reducing dependency on foreign military imports under the "Aatmanirbhar Bharat" initiative.
- **Focus on Preparedness**
 - ▶ Adaptive Defence ensures constant readiness for any unforeseen security challenges, thereby enhancing national resilience.

Security Challenges Faced by India

- **Border Conflicts and Territorial Integrity**
 - Ongoing disputes with China over the Line of Actual Control (LAC).
 - Ceasefire violations and infiltration attempts across the Line of Control (LoC) with Pakistan.
- **Terrorism and Insurgency**
 - Cross-border terrorism in Jammu & Kashmir.
 - Insurgencies in Northeastern states and Left-Wing Extremism (LWE) regions.
- **Cybersecurity Threats**
 - Increasing cyberattacks on critical infrastructure, including defence networks.
 - Vulnerabilities posed by growing digitization and reliance on technology.
- **Maritime Security**
 - Threats to India's maritime interests in the Indian Ocean Region (IOR).
 - Concerns about piracy, smuggling, and illegal fishing activities.
- **Hybrid Warfare**
 - Use of disinformation campaigns, economic coercion, and proxy wars by adversaries.
 - Need to counter grey-zone tactics that blur the lines between war and peace.
- **Technological Advancements by Adversaries**
 - Weaponization of space, artificial intelligence, and autonomous systems by rival nations.
 - The race for dominance in strategic domains like cybersecurity and electronic warfare.

Conclusion

Adaptive Defence is not merely a strategy but a necessity for India's security in the 21st century. By proactively assessing threats and preparing for them through innovative and integrated approaches, India can safeguard its sovereignty and ensure peace and stability in the region.

EXPECTED QUESTIONS FOR UPSC CSE

Prelims MCQ

- Q. Consider the following statements regarding Adaptive Defence:
1. Proactive assessment of evolving threats and challenges.
 2. Integration of advanced technologies including Artificial intelligence, cyber security and drone warfare.
 3. Continuous evolution of strategies to remain ahead of adversaries.

Which of the statements given above is/are correct?

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

Answer: (d)

Descriptive Question

- Q. Discuss the concept of Adaptive Defence and its significance in ensuring national security. Along with it suggest measures to enhance its adaptive defence capabilities. [10 marks] [150 words]

INDIA'S FIRST LONG-RANGE HYPERSONIC MISSILE

Why in News: The Defence Research and Development Organisation (DRDO) has recently successfully test-fired India's first 'Long-range Hypersonic Missile' off Odisha coast.

Key Details



- **Capacity:** The hypersonic missile was designed to carry various payloads for ranges greater than 1,500 km for the Armed Forces.
- **Agencies involved:** This missile was indigenously developed by the laboratories of Dr. A.P.J. Abdul Kalam Missile Complex, Hyderabad, along with various other DRDO laboratories and industry partners.
- **Significance:** The flight trial is a historic achievement, which puts India in the group of select nations having capabilities of such critical and advanced military technologies.

PRELIMS SPECIAL

Classification of Missiles

- Subsonic cruise missile
- Supersonic cruise missile
- Hypersonic cruise missile

Subsonic cruise missile

- It flies at a speed lesser than that of sound.
- It travels at a speed of around 0.8 Mach. The well-known subsonic missile is the American Tomahawk cruise missile.
- Some other examples are Harpoon of USA and Exocet of France.

Supersonic cruise missiles

- Supersonic cruise missile travels at a speed of around 2-3 Mach i.e.; it travels a kilometre approximately in a second. The modular design of the missile and its capability of being launched at different orientations enable it to be integrated with a wide spectrum of platforms like warships, submarines, different types of aircraft, mobile autonomous launchers and silos.
- The combination of supersonic speed and warhead mass provides high kinetic energy ensuring tremendous lethal effect. BRAHMOS is the only known versatile supersonic cruise missile system which is in service.

Hypersonic cruise missile

- It travels at a speed of more than 5 Mach. Many countries are working to develop hypersonic cruise missiles. BrahMos Aerospace is also in the process of developing a hypersonic cruise missile, BRAHMOS-II, which would fly at a speed greater than 5 Mach.

Advantages of Hypersonic Missiles:

- High Speed and Maneuverability:
 - They can fly at speeds exceeding Mach 5, significantly faster than most other missiles, and can change course mid-flight, making them hard to track and intercept.
- Low-Altitude Flight:
 - They can fly at lower altitudes compared to ballistic missiles, making them harder to detect by radar systems.
- Rapid Response Time:
 - Due to their high speed, they can reach their target very quickly, significantly reducing response time for the enemy.

Potential for Surprise Attacks:

- Their ability to maneuver and fly at low altitudes can enable surprise attacks against heavily defended targets.

Improved Penetration Capability:

- Hypersonic missiles can potentially overcome existing missile defense systems, making them a significant threat to enemy defenses

EXPECTED QUESTIONS FOR UPSC CSE

Prelims MCQ

Q. Consider the following statements:

1. Hypersonic missile is designed to carry various payloads for ranges greater than 1500 km for the armed forces.
2. Hypersonic cruise missiles travel at speed of more than 5 mach.
3. Brahmos is hypersonic cruise missile.

Which of the statements given above is/are correct?

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

Answer: (b)

ADVISORY BY COMPUTER EMERGENCY RESPONSE TEAM OF INDIA

Why in News: Computer Emergency Response Team of India (CERT-In) shared a list that talks about more than a dozen ways in which online scams are being perpetrated by fraudsters in India.

Common Scams and their Intricacies

- **Phishing Scams**
 - Phishing remains one of the most prevalent forms of online fraud. Scammers create emails or messages that appear legitimate, often using logos and branding from trusted organizations.
 - **Techniques:** They may include urgent language, such as warnings about account suspension, to prompt immediate action. Links lead to counterfeit websites designed to capture login credentials or personal data.
 - **Targeting Methods:** These scams can target specific groups (account holders of banks) or the general public through mass emails.
- **Lottery and Prize Scams**
 - These scams often appeal to a victim’s desire for financial windfalls.
 - **Execution:** Victims receive notifications claiming they have won a lottery, often for an international lottery

they never entered. To claim their prize, they are asked to pay a processing fee or taxes.

- **Psychological Play:** Scammers exploit hope and greed, often using fake endorsements or testimonials to build credibility.
- **Emotional Manipulation Scams**
 - As online dating becomes more common, dating scams are on the rise.
 - **Process:** Scammers create fake profiles on dating apps and social media. They engage victims in lengthy conversations, gradually building emotional connections.
 - **Manipulation Techniques:** After establishing trust, they fabricate crises (like medical emergencies) to solicit money, often requesting funds to be sent via crypto currency.
- **Job Scams**
 - Job seekers, especially fresh graduates, are prime targets for these scams.
 - **Methodology:** Scammers post fake job listings on legitimate job portals or social media. Victims are asked to pay for application fees, training materials, or background checks.
 - **Red Flags:** Offers that seem too good to be true or requests for money upfront are common indicators of a scam.
- **Tech Support Scams**
 - These scams often take advantage of users' lack of technical knowledge.
 - **Approach:** Victims receive unsolicited calls from individuals claiming to be from tech companies. They may inform the victim that their computer has a virus and guide them through a series of steps to grant remote access.
 - **Consequences:** Once access is gained, scammers can steal personal information or install malware.
 - Victims may also be pressured to pay for unnecessary software or services.
- **Investment Scams**
 - Scammers promise unrealistic returns to lure individuals into fraudulent investment opportunities.
 - **Techniques:** Common schemes include Ponzi or pyramid schemes, often marketed as "high-yield investment programs." Scammers use social media and seminars to attract victims.
 - **Risk Factors:** These scams often target individuals seeking quick financial solutions, exploiting their lack of financial literacy.
- **Cash-on-Delivery (CoD) Scams**
 - In the burgeoning e-commerce landscape, CoD fraud has gained traction.
 - **Execution:** Scammers set up fake online stores,
- accepting CoD orders. When the product is delivered, it is either counterfeit or completely different from what was advertised.
- **Impact:** This not only leads to financial loss but also erodes trust in genuine e-commerce platforms.
- **Fake Charity Appeal Scams**
 - During times of crisis, scammers often pose as charitable organizations.
 - **Methods:** They create convincing websites or social media profiles, soliciting donations for fake causes, such as disaster relief or health initiatives.
 - **Emotional Manipulation:** Scammers exploit compassion, using images and stories to provoke sympathy and urgency, making it difficult for victims to discern legitimacy.
- **Mistaken Money Transfer Scams**
 - **Methods:** The scammer contacts the victim, often via email or social media, claiming that money has been mistakenly transferred to their account.
 - **Urgency and Pressure:** The scammer creates a sense of urgency, urging the victim to return the funds quickly to avoid complications or legal issues.
 - **Manipulation:** They may provide false proof of the transfer, such as fake bank statements or transaction receipts, to lend credibility to their story.
- **Digital Arrest**
 - **Methods:** Victims receive a phone call, email, or message claiming they are under investigation for illegal activities, such as identity theft or money laundering.
 - **Threats and Pressure:** The scammer threatens the victim with arrest or legal consequences unless they take immediate action. They often create a sense of panic to prevent rational thinking.
 - **Demands for Payment:** Under the guise of "clearing their name", "assisting with the investigation," or "Refundable security deposit/Escrow account" the individuals are coerced into transferring large sums of money to specified Bank Accounts or UPI IDs.
- **Phone Scams**
 - **Fake Calls or Messages:** Victims receive calls or messages claiming to be from telecom regulatory, often stating that their phone number has won a prize or that there's an issue with their telecom service.
 - **Urgency and Fear:** The scammer creates a sense of urgency, claiming the victim needs to take immediate action to claim a reward or avoid penalties.
 - **Request for Personal Information:** The scammer may ask for personal information, such as bank details or OTPs (one-time passwords), under the guise of verifying the victim's identity.

- **Parcel Scams (FedEx/DHL)**
 - **Methods:** Victims receive a phone call, email, or message claiming they are under investigation as their parcel has been seized by authorities for containing illegal items such as drugs.
 - **Threats and Demands:** The scammer threatens the victim with arrest or legal consequences unless they pay a fine.
- **Loan/Cards scam**
 - A loan scam typically involves fraudsters posing as legitimate lenders, offering loans/cards with attractive terms to trick individuals into sharing personal information or paying upfront fees. Here are some key features:
 - **Fake Offers:** Scammers often advertise loans with low interest rates and quick approval times, often through online ads or social media.
 - **Pressure Tactics:** Scammers might pressure individuals to act quickly, creating a sense of urgency.
 - **Advance Fees:** Victims may be asked to pay a fee upfront to secure the loan, which the scammer then disappears with.

Best Practices and Recommendations

- Verify the caller's identity. If someone claims to be from a Law Enforcement Agency, **do not engage over video calls or transfer money**. Government agencies do not use platforms like WhatsApp or Skype for official communication. Verify their identity by directly contacting the relevant agency.
- Do not panic, as scammers use **fear and urgency** to manipulate victims. Take a moment to assess the situation calmly before responding.
- Avoid sharing personal information. Never disclose sensitive personal or financial details over the phone or video calls, especially to unknown numbers.
- **Never install remote access software on your device for anyone:** This software gives individuals complete control over your device, creating a significant security risk.
- **Do not transfer money under pressure:** Legitimate Law Enforcement Agencies will never pressure you into sending money immediately. If someone demands money over the phone or online, it's most likely a scam.
- **Staying vigilant and informed** is crucial to protect yourself from this emerging cyber threat. By being aware of the tactics used by scammers and taking necessary precautions, you can minimize your risk of falling victim to online scams.
- **Report suspicious activity:** If you suspect you've been targeted by any online scam and you gave sensitive information, don't panic — reset your credentials on sites you've used them and then report it to the police and cybercrime authorities immediately.
- **Avoid clicking on links or attachments** from unknown

senders. Instead, enter the organization's URL directly in your browser or use bookmarks. Always verify the legitimacy of the links and emails. For example, check for spelling and grammatical errors in the URL, or whether the sender is trustworthy.

- Carefully consider before providing personal information to any person or organisation. If the website **does not use HTTPS for encryption**, please be careful and do not provide sensitive information.
- Do not install apps shared by unknown individuals. Download apps only from official app stores to avoid malware.
- **Do not share your device with strangers.**
- Verify call forwarding and mobile settings in case you accidentally share your device with strangers.
- If you experience a sudden loss of service, report it immediately to your provider, as it may indicate a SIM swap attempt.
- **Regularly monitor your bank and credit card statements** for unauthorized transactions.
- **Never pay for job offers.** Verify job postings and companies before applying or providing personal data.
- Verify requests for urgent money transfers by calling directly your relatives/friends.
- Always remember, **you don't need a UPI PIN or OTP to receive money.**
- Verify the sender's banking name before making payments using QR codes.
- **Carefully review the loan terms**, including interest rates and fees. Be wary of apps that use vague or confusing language.
- **Always use genuine and up-to-date software.**
- Stay informed about common scams and tactics used by fraudsters to better protect yourself.

Digital Arrests

- A digital arrest scam is an online scam that defrauds victims of their hard-earned money.
- The scammers intimidate the victims and falsely accuse them of illegal activities.
- They later demand money and put them under pressure for making the payment.

How digital arrest scam work?

- In digital arrest scam, perpetrators pose as law enforcement officials, such as CBI agents, income tax officers, or customs agents, and initiate contact with victims via phone calls.
- Subsequently, they request that the victims switch to video communication through platforms like WhatsApp and Skype.

- The scammers then threaten the victims with a digital arrest warrant, citing various reasons such as financial misconduct, tax evasion, or other legal violations.
- In certain instances, these fraudsters create a police station-like set-up to further convince victims that the call is legitimate.
- Under the guise of “clearing their name”, “assisting with the investigation”, or “refundable security deposit/escrow account”, individuals are coerced into transferring large sums of money to specified bank accounts or UPI IDs.
- Once the victims comply and make the payment, the scammers vanish, leaving the victims to face financial loss and potential identity theft.

PRELIMS SPECIAL

CERT-In

- CERT-In is a functional organisation of Ministry of Electronics and Information Technology, Government of India, with the objective of securing Indian cyber space. CERT-In provides Incident Prevention and Response services as well as Security Quality Management Services.
- **Vision:** Proactive Contribution in Securing India’s cyber space.
- **Mission:** To enhance the security of India’s Communications and Information Infrastructure through proactive action and effective collaboration.

EXPECTED QUESTIONS FOR UPSC CSE

Prelims MCQ

Q. Computer Emergency Response Team of India (CERT-In) is a functional organization under...

- (a) Ministry of Home Affairs
- (b) Ministry of Electronics and Information Technology
- (c) Ministry of Information and Broadcasting
- (d) Ministry of Science and Technology

Answer: (b)

Descriptive Question

Q. Discuss the various forms of online scams and challenges they pose to cybersecurity in India. [10 marks] [150 words]

NASEEM-AL-BAHR EXERCISE

Why in News: India hosted the Naseem-Al-Bahr Exercise off Goa.

Key Details

- Naseem-Al-Bahr Exercise is Indo-Oman bilateral naval exercise conducted between Indian Navy and Royal Navy of Oman.
- The exercise was conducted in two phases: with harbour phase from 13 to 15 October 24, followed by the sea phase.
 - As part of harbour activities, personnel from both Navies engaged in professional interactions, including Subject Matter Expert Exchanges and planning conferences.
- During the sea phase of the exercise conducted from 16 to 18 Oct 24, both ships (INS Trikand of Indian Navy and Al Seeb of Royal Navy of Oman) carried out various evolutions, including gun firings at surface inflatable targets, close-range anti-aircraft firings, manoeuvres, and Replenishment at Sea Approaches (RASAPS).
- **Significance**
 - The exercise was a resounding success, achieving its aims of enhancing interoperability, fostering mutual understanding, and strengthening cohesion between the Indian Navy and the Royal Navy of Oman.
 - This exercise reaffirms India’s commitment to constructive collaboration and mutual growth with like-minded nations in the Indian Ocean Region.

PRELIMS SPECIAL

India-Oman Defence Exercises

- Al Najah - Joint Military Exercise; Held Biennially
- Naseem Al Bahr - Bilateral Naval Exercise; Held Biennially
- Eastern Bridge - Bilateral Air Force Exercise

EXERCISE GARUDA SHAKTI

Why in News: The 9th edition of the India-Indonesia Joint Special Forces Exercise Garuda Shakti concluded on November 12 at Mokopassus in Cijantung, Indonesia.

Exercise GARUDA SHAKTI 24

- Garuda Shakti exercise is designed to enhance bilateral military cooperation and strengthen the bonds between the two nations’ armed forces. An Indian Army Parachute Regiment (Special Forces) of 25 personnel participated alongside 40 Indonesian personnel from the elite Kopassus Special Forces.
- **Aim of Exercise GARUDA SHAKTI 24:** To acquaint both the sides with each other’s operating procedures, enhance mutual understanding, cooperation and interoperability between the Special Forces of both armies.

- The Exercise was designed to develop bilateral military cooperation and strengthen bond between two armies through conduct of discussions and rehearsal of tactical military drills.
- Joint Exercise GARUDA SHAKTI 24 involves jointly practicing Special Forces Operations in Jungle terrain, strikes on terrorist camps and a Validation Exercise integrating basic and advance special forces skills apart from gaining an insight into the lifestyle and culture of both countries to foster military cooperation.
- It also acts as a platform to achieve shared security objectives and foster bilateral relations between two friendly nations.
- The exercise involved intensive tactical drills, including underwater training, close-range shooting, and operations in both urban and jungle terrain. These activities allowed

both armies to share best practices, furthering their interoperability in complex combat scenarios.

- The collaboration between India and Indonesia, both major regional powers, underscores the strong defence ties between the two nations.
- This exercise is particularly significant as 2024 marks the “Year of Tech Absorption” for the Indian Army, further deepening technological cooperation between the two countries.

PRELIMS SPECIAL**India-Indonesia Military Exercises**

- Exercise GARUDA Shakti (Army)
- SAMUDRA Shakti (Navy)
- Coordinated Patrols (CORPAT) (Navy)

Free Initiative by Chahal Academy

Daily quiz of 10 MCQs from
The Hindu and Indian express

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THE RIGHTS OF PERSONS WITH DISABILITIES (AMENDMENT) RULES, 2024

Why in News: Central Government has recently enforced new amendments to Rights of Persons with Disabilities rules.

Key Details

- The Ministry of Social Justice and Empowerment has notified the Rights of Persons with Disabilities (Amendment) Rules, 2024 under the Rights of Persons with Disabilities Act 2016.

Expansion of Accessibility standards

- **Police Stations:** Persons with disabilities visiting police stations will now benefit from accessibility features outlined in a Ministry of Home Affairs notification dated January 2nd, 2024.
- **Prisons:** Accessibility standards will be implemented within prisons to ensure equal access for inmates with disabilities.
- **Disaster Mitigation Centers:** These centers will be required to adhere to accessibility guidelines to guarantee inclusivity for persons with disabilities during emergencies.

Aim of Amendments

- To improve the accessibility of essential services for persons with disabilities in India.
- Police stations will be more accessible, promoting equal access to the justice system for people with disabilities.
- Accessibility features in prisons will enhance the lives of inmates with disabilities.
- Disaster mitigation centers will be better equipped to assist persons with disabilities during emergencies.

Mandate

- The Rights of Persons with Disabilities Act (RPWD) and its rules mandate accessibility standards in various public spaces. This amendment ensures these crucial facilities adhere to accessibility guidelines, fostering a more inclusive society for all.

Schemes for Empowerment of Persons with Disabilities by DEPwD

- **Assistance to Disabled Persons for Purchase/Fitting of Aids/Appliances (ADIP):**

- The Department implements the ADIP scheme operation since 1981, releasing funds to various agencies for distributing aids and assistive devices to eligible persons with disabilities, including deaf and dumb individuals.
- This scheme includes provisions for cochlear implant surgery for children with hearing impairments.
- **SAMARTH Respite Care:** A program offering temporary housing for orphans, families in crisis, and Persons with Disabilities (PwD) from BPL and LIG families with disabilities recognized under the National Trust Act.
- **Financial Assistance to Deaf Colleges:** Financial support is provided to existing colleges for the deaf across five regions of India. This initiative ensures access to education for deaf and dumb students affiliated with UGC-approved institutions.
- **Deendayal Divyangjan Rehabilitation Scheme (DDRS):** This Central Sector Scheme provides grant-in-aid to NGOs running projects like preschools, early intervention, special schools, and community-based rehabilitation for the welfare of Persons with Disabilities (PwDs), including deaf and dumb students.
- **National Divyangjan Finance and Development Corporation (NDFDC):** NDFDC channels concessional loans for the socio-economic empowerment of PwDs. It operates two flagship schemes: Divyangjan Swavalamban Yojana (DSY) and Vishesh Microfinance Yojana (VMY)
- **Scholarships for Students with Disabilities:** The Department implements an umbrella scheme for scholarships, which includes six components
- **Diploma in Teaching Indian Sign Language:** Conducted by the Indian Sign Language Research and Training Centre (ISLRTC), this program waives tuition fees for deaf students registered with the Unique Disability ID (UDID). ISLRTC has also published a sign language dictionary of 10,500 words, facilitating the teaching and communication process for deaf students.
- **PM-DAKSH-DEPwD Portal:** This portal includes two modules:
 - **Skill Training:** Provides skill training for PwDs across the country.
 - **Divyangjan Rozgar Setu:** Acts as a bridge between PwDs and employers, offering geo-tagged information on employment opportunities.

- **National Institutes and Composite Regional Centres (CRCs):** Two national institutes, namely Ali Yavar Jung National Institute for Speech & Hearing Disabilities (AYJNISHD) and Indian Sign Language Research & Training Centre (ISLRTC), focus on hearing and speech disabilities.

PRELIMS SPECIAL

Accessible India Campaign

- The Accessible India Campaign (Sugamya Bharat Abhiyan), launched on December 3, 2015, by the Department of Empowerment of Persons with Disabilities (DEPwD), aims to achieve universal accessibility for Persons with Disabilities (PwDs) across India.

Key Focus Areas

1. **Built Environment Accessibility:** Enhancing physical spaces like schools, medical facilities, and workplaces to ensure barrier-free navigation for all.
2. **Transportation Accessibility:** Improving access to various modes of transport, such as air travel, buses, taxis, and trains, to facilitate independent mobility for PwDs.
3. **Information and Communication:** Creating an accessible information ecosystem by improving website accessibility, providing audio-visual media content, and ensuring critical information is understandable for daily life.
4. **Sign Language Access:** Increasing the availability and training of sign language interpreters, along with enhancing captioning and interpretation in public television news to support the deaf and hard of hearing communities.

Rights of Persons with Disabilities (RPwD) Act

- As a signatory to the United Nations Convention on Rights of Persons with Disabilities (CRPD), India is obligated to promote accessibility as an essential right.
- Enacted in 2016, the RPwD Act draws on the CRPD and aims "to ensure that all persons with disabilities can lead their lives with dignity, without discrimination and with equal opportunities."
- The RPwD Rules of 2017, framed under the Act, were to lay down specific accessibility standards.
- So far, 17 standards and guidelines have been notified across government ministries and departments.

UPSC CSE MAINS FACTS

Convention on the Rights of Persons with Disabilities (CRPD)

- The Convention on the Rights of Persons with Disabilities and its Optional Protocol (A/RES/61/106) was adopted on 13 December 2006 at the United Nations Headquarters in New York, and was opened for signature on 30 March 2007.
- There were 82 signatories to the Convention, 44 signatories to the Optional Protocol, and 1 ratification of the Convention.
- The Convention entered into force on 3 May 2008.
- The Convention follows decades of work by the United Nations to change attitudes and approaches to persons with disabilities.

- It takes to a new height the movement from viewing persons with disabilities as "objects" of charity, medical treatment and social protection towards viewing persons with disabilities as "subjects" with rights, who are capable of claiming those rights and making decisions for their lives based on their free and informed consent as well as being active members of society.
- The Convention is intended as a human rights instrument with an explicit, social development dimension.
- It adopts a broad categorization of persons with disabilities and reaffirms that all persons with all types of disabilities must enjoy all human rights and fundamental freedoms.

Conclusion

- The evolution of disability affairs in India reflects a growing recognition of the rights and potential of persons with disabilities.
- The establishment of dedicated departments and initiatives exemplify a commitment to fostering inclusivity, creativity, and resilience within the community.
- By providing platforms for showcasing talent and facilitating economic opportunities, these efforts not only empower individuals but also contribute to a more inclusive society where everyone can thrive.

EXPECTED QUESTIONS FOR UPSC CSE

Prelims MCQ

Q. Consider the following statements:

1. India is signatory to the United Nations Convention on Rights of Persons with Disabilities.
2. India enacted Right of Persons with Disabilities Act, 2016.

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

(c) Answer

Descriptive Question

Q. Discuss the gaps in the implementation of the Rights of Persons with Disabilities (RPwD) Act, 2016 as highlighted by the Supreme Court. [10 marks] [150 words]

THE PROPOSED 'ORGANISED CRIME INVESTIGATIVE AGENCY'

Why in News: The Supreme Court has recently criticised the Union Government over its failure to establish a dedicated Organised Crime Investigative Agency (OCIA) for tackling sex trafficking.

Key Details

- The government is yet to implement a “comprehensive legislation” against sex trafficking even nine years after a Supreme Court direction in December 2015.
- The Supreme court had flagged how important the issues of preventing and detecting trafficking and rescuing the victims were.
- Supreme Court had also directed the constitution of a committee under the chairmanship of the Secretary, Ministry of Women and Child Development to prepare a law that would cover prevention, pre- and post- rescue of victims and their rehabilitation.

Organised Crime Investigation Agency (OCIA) is a proposed body with the objective to investigate, collect intelligence of the cases of human trafficking and other organized crimes, train the law enforcement officers and coordinate in rescue and rehabilitation of the victims.

Constitutional & Legislative provisions related to Trafficking in India

- Trafficking in Human Beings or Persons is prohibited under the Constitution of India under Article 23 (1).
- **The Immoral Traffic (Prevention) Act, 1956 (ITPA)** is the premier legislation for prevention of trafficking for commercial sexual exploitation.
- **Criminal Law (amendment) Act 2013** has come into force wherein Section 370 of the Indian Penal Code has been substituted with Section 370 and 370A IPC which provide for comprehensive measures to counter the menace of human trafficking including trafficking of children for exploitation in any form including physical exploitation or any form of sexual exploitation, slavery, servitude, or the forced removal of organs.
- **Protection of Children from Sexual offences (POCSO) Act, 2012**, which has come into effect from 14th November, 2012 is a special law to protect children from sexual abuse and exploitation. It provides precise definitions for different forms of sexual abuse, including penetrative and non-penetrative sexual assault, sexual harassment.
- There are other specific legislations enacted relating to trafficking in women and children Prohibition of Child Marriage Act, 2006, Bonded Labour System (Abolition) Act, 1976, Child Labour (Prohibition and Regulation) Act, 1986, Transplantation of Human Organs Act, 1994, apart from specific Sections in the IPC, e.g. Sections 372 and 373 deal with selling and buying of girls for the purpose of prostitution.
- State Governments have also enacted specific legislations to deal with the issue. (e.g. The Punjab Prevention of Human Smuggling Act, 2012)

Measures taken by Government of India to Prevent and Combat Trafficking

- **Administrative measures and interventions**
 - **Anti Trafficking Cell (ATC):** Anti-Trafficking Nodal Cell was set up in the Ministry of Home Affairs (MHA) (CS Division in 2006 to act as a focal point for communicating various decisions and follow up on action taken by the State Governments to combat the crime of Human Trafficking.
 - **Advisories:** To improve the effectiveness in tackling the crime of human trafficking and to increase the responsiveness of the law enforcement machinery, MHA has issued following comprehensive advisories to all States/UTs:
 - ◆ Advisory for preventing crime of human trafficking date 9.9.2009.
 - ◆ Advisory on crime against children dated 14th July, 2010.
 - ◆ Advisory on missing children dated 31st January, 2012.
 - ◆ Advisory on Preventing and Combating cybercrime against children dated 4.1.2012.
 - ◆ Advisory on Human Trafficking as Organised Crime dated 30th April, 2012.
 - ◆ Advisory on Preventing and combating human trafficking in India-dealing with foreign nationals dated 1.5.2012.
 - ◆ SOP to handle trafficking of children for child labour dated 12.8.2013.
 - ◆ Advisory on MHA Web Portal on Anti Human Trafficking dated 5.5.2014.
 - ◆ Advisory dated 23.7.2015 for associating SSB and BSF in crime meetings.
- **Ministry of Home Affairs' scheme:** Ministry of Home Affairs under a Comprehensive Scheme Strengthening law enforcement response in India against Trafficking in Persons through Training and Capacity Building, has released fund for establishment of Anti Human Trafficking Units for 270 districts of the country.
- **Strengthening the capacity building:** To enhance the capacity building of law enforcement agencies and generate awareness among them, various Training of Trainers (TOT) workshops on Combating Trafficking in Human Beings for Police officers and for Prosecutors at Regional level, State level and District level were held throughout the country.
- **Judicial Colloquium:** In order to train and sensitize the trial court judicial officers, Judicial Colloquium on human trafficking are held at the High court level. The aim is to sensitize the judicial officers about the various issues concerning human trafficking and to ensure speedy court process.

International Conventions

- **UN Convention:** India has ratified the United Nations Convention on Transnational Organised Crime (UNCTOC) which has one of its protocol as Prevention, Suppression and Punishment of Trafficking in Persons, particularly Women and Children.
- **SAARC Convention:** India has ratified the SAARC Convention on Preventing and Combating Trafficking in Women and Children for Prostitution.

EXPECTED QUESTIONS FOR UPSC CSE

Prelims MCQ

- Q. Consider the following statements regarding human trafficking in India:
1. Prohibition of trafficking in human beings is a fundamental right under Indian constitution.
 2. Indian government created Organised Crime Investigation Agency to deal with cases of human trafficking.
 3. India is also signatory to United Nations Convention on Transnational Organised Crime.

How many of the above statements are correct?

- (a) One only (b) Two only
(c) All three (d) None

Answer: (b)

Descriptive Question

Q. Discuss the various constitutional and legislative safeguards against human trafficking in India. Also, propose reforms to enhance their impact. [10 marks] [150 words]

DECLINING FERTILITY RATES

Why in News: Southern India has witnessed a significant demographic shift as its total fertility rate (TFR) falls below the replacement level.

TFR in South India

- According to data from the National Family Health Survey (NFHS-5), several southern states now have TFRs significantly below the replacement level. Only three states—Bihar, Uttar Pradesh, and Jharkhand—still record TFRs above the 2.1 threshold, while the southern states are experiencing the opposite demographic trend.
- Kerala now has a TFR of 1.8, Tamil Nadu followed in 1993, and Andhra Pradesh and Karnataka joined the ranks in 2001 and 2005, respectively. Presently, all these states report a TFR of 1.8 or below, with Andhra Pradesh and Karnataka recording even lower rates at 1.7.

About Total fertility Rate

- The total fertility rate (TFR) is a measure used to estimate the average number of children a woman will have during her reproductive years, assuming current age-specific fertility patterns remain consistent throughout her life.
- A TFR of 2.1 is considered the replacement level, meaning a population can maintain its size across generations. Anything below this figure suggests a declining population in the long run, unless supplemented by immigration.

Global projections

- Globally, fertility rates have been steadily declining since the 1960s. According to World Bank data, in 1950, women had an average of five children.
- By 2021, that figure dropped to 2.2, and in 2022, the global TFR stood at 2.3. Projections suggest that this rate will fall to 1.8 by 2050 and could further decrease to 1.6 by 2100.

Indian Projections

- India’s TFR in 2022 was recorded at 2.01, dipping just below the replacement level, according to the World Bank’s latest data.
- This marks a steady drop from 2.2 in 2015-16, in line with global trends.

Concerns of Southern States

- **Ageing population:** A smaller working-age population means fewer people contributing to the economy through work, taxes, and social security. Meanwhile, the proportion of elderly people who require pensions and healthcare will rise, potentially placing a financial strain on both families and state resources.

Factors Behind Declining Fertility Rates

- **Enhancements in Maternal and Child Health**
Improvements in maternal and child health services have also contributed to **declining fertility rates**. Better access to prenatal medical care, skilled birth attendants, and postnatal care has reduced infant and maternal mortality rates, which has encouraged couples to have fewer children.
▶ Government initiatives like the **Janani Suraksha Yojana (JSY)** and the **Pradhan Mantri Surakshit Matritva Abhiyan (PMSMA)** have significantly improved maternal health outcomes and promoted institutional deliveries.
- **Shifts in Behavioural Patterns**
As education levels have risen, particularly among women, there has been a growing awareness of the benefits of smaller families, including **improved quality of life, better educational opportunities for children, and financial stability**.
- **Changes in Intergenerational Wealth Transfer**
Traditionally, in many parts of India, children were seen as a source of **economic support and security** for their parents in old age.
- **Empowerment of Women**
Women’s empowerment through education, employment opportunities, and **greater decision-making power** within households has played a significant role in lowering fertility rates.
- **Adoption as a Family Planning Option**
The availability of **legal adoption services** and the growing awareness of adoption as a viable alternative to childbearing have provided couples with an additional family planning choice.

- **Delimitation of Lok Sabha seats:** The delimitation of Lok Sabha seats, scheduled to take place after the 2031 Census, will be based on population figures. States with slower or declining population growth, such as those in southern India, may see their representation in Parliament reduced, potentially diminishing their political influence in national decision-making.

EXPECTED QUESTIONS FOR UPSC CSE

Prelims MCQ

Q. Consider the following statements regarding Total Fertility Rate (TFR):

1. It is total number of children a women will have during her reproductive years.
2. The TFR of 2.2 is considered as replacement level.
3. Anything below TFR of 2.2 is considered as sign of declining population.

How many of the above statements are correct?

- (a) One only (b) Two only
(c) All three (d) None

Answer: (a)

Descriptive Question

Q. Analyze the various challenges posed by below replacement fertility levels and suggest policy measures to address these challenges. [10 marks] [150 words]

URBANISATION AND DECLINE IN GROUNDWATER RESERVES

Why in News: A new hydrology model-based study has proven a clear correlation between urbanisation and a decline in groundwater reserves in five Indian states.

Key Details

- **Title of paper:** The paper, titled Detection and Socio-economic Attribution of Groundwater Depletion in India, was published in the journal Hydrogeology Journal.
- **Study Sample:** In this study, trends in groundwater storage were examined by leveraging the largest in situ dataset ever collated in India from ~27,000 groundwater wells, satellite-based terrestrial-water-storage estimates, and hydrological model simulations.
- **Major Hotspots:**
 - Five major hotspots of groundwater depletion across India were identified **using in situ measurements and previously untapped socioeconomic datasets** to attribute these trends. Punjab and Haryana (Hotspot

I), Uttar Pradesh (Hotspot II), West Bengal (Hotspot III), Chhattisgarh (Hotspot IV) and Kerala (Hotspot V).

- **Approximately 16%** of Indian groundwater monitoring stations exhibited systematically decreasing trends in groundwater levels. These hotspots are primarily concentrated in the northern and northwestern parts of India as well as in the states of Chhattisgarh, West Bengal, and Kerala.
- According to the journal **the northern and northwestern hotspots** have suffered a staggering loss of **approximately 64.6 billion cubic metres** of water over the past two decades.

Factors behind depletion of Groundwater: Factors contributing to this depletion include population growth, rapid urbanization, proliferation of factories and the expansion of agriculture.

- **Population growth:** Rapid growth in human population across these hotspots has created unprecedented pressure on groundwater resources in this region.
- **Rapid urbanization and industrialisation :** The level of urbanisation between 2001 and 2011 increased by 10 per cent, from 10 to 20 per cent, and that during the same period, there was a significant growth in the number of factories, the study highlighted. A drop in net annual groundwater availability between 2004-05 and 2018-19 by 4 per cent coincides with increased industrialisation in these two states.
- **Expansion of Agriculture:**
 - Chhattisgarh (Hotspot IV) showed increased irrigation, domestic, and industrial use as the cause of reduced groundwater availability.
 - Further increased Irrigation demands in Punjab and Haryana Led to reduction in groundwater levels.
- **Energy Subsidies and Groundwater Extraction**
 - The practice of granting power subsidies to agriculture has significantly contributed to the decline in India's water levels.
 - About 89% of extracted groundwater was utilized for irrigation in 2009, driven by the availability of cheap or subsidized power.
- **Climate change and rainfall:** The areas of North / Northwestern hotspots have suffered various temporal and sectoral variability in rainfall leading to Agricultural droughts.

Implications of Decline in Groundwater Reserves

- **Social and Ecological Impact of Groundwater Depletion:** Groundwater depletion in India has profound social implications, encompassing a spectrum of challenges that impact livelihoods, poverty, and food security.
- **High death rate:** India ranks 120 among 122 countries in

the water quality index, as a result 2,00,000 people die each year due to polluted water.

- **Increased droughts:** Droughts are becoming more frequent, creating severe problems.
- **Increased pressure on surface water resources** such as more requirements of dams, Interconnecting rivers, Lift irrigation projects etc.

Solutions to Groundwater Depletion in India

- **Usage of rights to tackle groundwater depletion**
 - The lack of well-defined groundwater rights exacerbates the unsustainable usage patterns, as the absence of institutional frameworks and discrepancies in financial capacities among landowners perpetuate erratic extraction behaviors.
 - The notion of instituting formalized groundwater rights detached from land ownership has emerged as a promising avenue to address this challenge.
- **Water as Common resource:** Granting community rights over groundwater emerges as a pivotal solution to address the escalating challenges of depletion in India.
- **Artificial Groundwater Recharge in India**
 - Artificial groundwater recharge projects play a pivotal role in addressing water scarcity and sustaining aquifer systems in India, particularly in arid and semi-arid regions where normal rainfall is insufficient to generate moisture surplus through natural infiltration.
 - For example, in Gujarat, artificial recharge has been conducted in both the Central Mehsana area and coastal Saurashtra, utilizing methods such as injection wells, connector wells, infiltration channels, and recharge basins.

Government Initiatives to Control Groundwater Depletion in India

- **Jal Shakti Abhiyan**
 - The Jal Shakti Abhiyan (JSA) was launched in the year 2019 in 1592 blocks out of 2836 blocks in 256 water stressed districts of the country and was expanded as “Jal Shakti Abhiyan: Catch the Rain”.
 - The focused interventions of the campaign include:
 1. water conservation and rainwater harvesting;
 2. enumerating, geo-tagging & making inventory of all water bodies; preparation of scientific plans for water conservation based on it;
 3. setting up of Jal Shakti Kendras in all districts;
 4. intensive afforestation and
 5. awareness generation.
- **Model Building Bye Laws (MBBL), 2016** circulated to all States/UTs by Ministry of Housing & Urban Affairs include provisions for Rainwater Harvesting and barring a few, all the States/UTs have adopted the provisions of rainwater harvesting of MBBL-2016.

- **Central Ground Water Authority (CGWA)** has advised States/UTs to take measures to promote/adopt artificial recharge to ground water/ rain water harvesting. CGWA also issues notifications and directions to State Governments and the Administrators of the UTs to adopt Roof Top Rain Water Harvesting (RTRWH) in all the ‘Critical’ and ‘Over-exploited’ assessment units.
- **Master Plan for Artificial Recharge to Groundwater-2020** has been prepared by Central Ground Water Board (CGWB) in consultation with States/UTs which is a macro level plan indicating various structures for the different terrain conditions of the country including estimated cost.

Way Forward

- A comprehensive approach is imperative in addressing the escalating global crisis of groundwater depletion, with institutionalisation emerging as the foundational step.
- The discourse surrounding groundwater management, as evident in both global and Indian contexts, underscores the imperative need to institutionalise sustainable practices.

EXPECTED QUESTIONS FOR UPSC CSE

Prelims MCQ

Q. Consider the following states

- | | |
|------------------|-----------------|
| 1. Uttar Pradesh | 2. West Bengal |
| 3. Kerala | 4. Chhattisgarh |

How many of the above states are considered among the top five hotspots of groundwater depletion?

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

(d) Answer:

Descriptive Question

Q. Critically analyze the major factors contributing to groundwater depletion in India and enlist government initiatives to control the same. [10 marks] [150 words]

THE GLOBAL HEALTH EMERGENCY CORPS

Why in News: WHO and partners, in collaboration with Member States, activated the Global Health Emergency Corps (GHEC) for the first time to provide support to countries facing mpox (Monkeypox) outbreaks.

Key Details

- WHO and partners are supporting the government of the Democratic Republic of the Congo and other countries to implement an integrated approach to case detection, contact tracing, targeted vaccination, clinical and home

care, infection prevention and control, community engagement and mobilization.

- The GHEC enhances the ability of the many effective responders at national and regional levels to collaborate and ensure the success on the ground in interrupting transmission and reducing suffering.
- The first activation of this new support mechanism follows the declaration of mpox as a public health emergency of international concern.
- Eighteen African countries have reported mpox cases this year, and the rapid spread of clade 1b mpox to at least two other regions has raised concerns about further spread.
- In collaboration with the International Association of National Public Health Institutes, GHEC is assessing the emergency workforce capacities in 8 countries affected by the mpox outbreak, including the Democratic Republic of the Congo and Burundi, the two most affected countries.
- **The Global Outbreak Alert and Response Network (GOARN)** is leading the efforts to map the support provided by partners on a bilateral basis to affected countries and the regional coordination structure.
 - This includes the provision of experts, supplies, financial support, capacity strengthening and other activities.

PRELIMS SPECIAL

About Global Health Emergency Corps (GHEC)

- GHEC is a grouping of professionals with the objective of strengthening the response to health emergencies, and a collaboration platform for countries and health emergency networks. It supports countries on their health emergency workforce, the surge deployment of experts and the networking of technical leaders.
- Many initiatives are already vital pillars of the GHEC as they bring together partners and countries, and contribute to the common vision:
 - Emergency Medical Teams initiative (EMT)
 - Global Outbreak Alert and Response Network (GOARN)
 - International Association of National Public Health Institutes (IANPHI)
 - Public Health Emergency Operations Center Network (EOC-NET)
 - Training Programs in Epidemiology and Public Health Interventions Network (TEPHINET)
 - Standby Partnership network (SBP)
 - Global Health Cluster
- GHEC was established by WHO in 2023 in response to the gaps and challenges identified during the COVID-19 response. It supports countries experiencing public health emergencies through three key pillars:
 - **Emergency workforce assessment:** GHEC conducts assessments of emergency workforce capacities in affected

countries to identify gaps and challenges hindering an effective response.

- **Rapid deployment of surge capacities:** Countries can request support from various pools of experts with specific skill sets tailored to the identified needs. These experts can be rapidly deployed to affected countries to support the emergency response.
- **Leadership network:** Countries nominate representatives to connect with other leaders to share best practices and coordinate the response. Leaders include representatives from national public health agencies, national emergency operation centres or other disease experts.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

Q. Consider the following statements regarding Global Health Emergency Corps:

1. It was established by WHO in 2020 by in response to the gaps and challenges identified during the Covid-19 response.
2. It works as a collaborative platform for strengthening response to health emergencies.
3. It conducts assessment of emergency workforce capacities.

Which of the statements given above is/are correct?

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

(b) Answer

CASE STUDY: CARE RESPONSIBILITIES

Why in News: Care responsibilities present the main barrier to women entering and staying in the labour force - The International Labour Organization (ILO).

Key Details

- The International Labour Organization (ILO) in its latest report 'The impact of care responsibilities of women's labour participation'said that India has 53 percent of women outside the labour force due to care responsibilities and needs further investment in the care economy.
 - The report further says that India would need further investment in the care economy, particularly in the early childhood care and education (ECCE) to support labour force participation of unpaid carers and gender equality in the workforce.
 - In comparison, just around 1.1 per cent of men stay

outside the labour force due to care responsibilities in India.

- The report also showed that 97.8 per cent women and 91.4 percent men in India are outside the labour force due to personal or family reasons.
- According to the new ILO global estimates, nearly 708 million women are outside the labour force because of unpaid care responsibilities.
- It has been studied that care responsibilities present the main barrier to women entering and staying in the labour force, while men are more likely to cite other personal reasons for being outside the labour force, such as education and health issues.
- This shows the disproportionate role of women in child-rearing and care along with housekeeping and other care responsibilities. Women with lower education and those in rural areas face a higher barrier to workforce participation.

Cause of Such Barriers

- Women shoulder a disproportionate share of care responsibilities, preventing their participation in the labour force due to factors such as low education levels, limited job opportunities, poor infrastructure, rural residence, and inadequate care and support systems.
- Additionally, societal expectations and norms around caregiving further restrict women’s labour market inclusion, and deepen gender inequalities.

UPSC CSE MAINS FACTS

- India is presently experiencing wide gender gaps in unpaid domestic and care work. As per data from the Time Use Survey conducted by the National Statistical Organization (NSO) between January and December 2019, women of working age (15 – 59 years) spend most of their waking hours on unpaid work, whereas men spend the majority of their day in paid employment.
- Women engaged in the workforce experience the double burden of balancing paid work and unpaid care work responsibilities, performing up to 5.9X more unpaid care work than employed men.
- Women’s unpaid care and domestic work in India represents an economic value of almost 15%-17% of the GDP.
- India’s 2.5 million Anganwadi Workers (AWWs), Auxiliary Nurse-Midwives (ANMs), and Accredited Social Health Activists (ASHAs), alongside domestic workers, form the backbone of care services across India.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

- Q. The report ‘The impact of care responsibilities on women’s labour participation’ was published by?
- (a) World Economic Forum (WEF)

- (b) International Labour Organization (ILO)
- (c) World Bank (WB)
- (d) None of The Above

(b) Answer

U-WIN PORTAL

Why in News: Prime Minister of India has recently launched the U-WIN (Universal Immunization Win) portal digital platform for streamlining immunisation services.

Key Details

- The U-WIN (Universal Immunization Win) platform aims to improve efficiency of the immunization campaign and reduce the number of children who are left out.
- The U-Win Portal is currently implemented on the lines of the Co-WIN platform in 64 districts, which is the COVID-19 vaccine management system in India.
- During the interim budget for the year 2024-2025, Finance Minister Nirmala Sitharaman had emphasized on the early rollout of the U-WIN platform to manage vaccination and support Mission Indradhanush.

About U-WIN Portal

- U-WIN is a name-based registry that facilitates “*anywhere access, anytime vaccination.*” Designed with a people-centric approach, the platform offers multiple features to simplify the vaccination process.
- Under the UIP, each child receives 27 vaccine doses from birth till 16 years of age against 12 vaccine-preventable diseases and each pregnant woman receives 2 doses of Td (Tetanus and Adult Diphtheria) vaccine.
- UIP targets 2.9 crore pregnant women and 2.7 crore new-borns annually.

Benefits of U-WIN:

- U-WIN has streamlined the entire process of vaccination services, benefiting both citizens and program managers/vaccinators.
- **Empowered Citizens:** Through ‘Anytime Access’ and ‘Anywhere’ vaccination services for eligible beneficiaries, it enables the facilitation of vaccination services in any part of the country.
- **Self-Registration Module:** It allows citizens to self-register for vaccination services using the U-WIN web-portal or the U-WIN citizen mobile application available on Google Play Store.
- **SMS services:** The portal enables automated alerts such as registration confirmations, acknowledgments

of vaccine doses administered, and reminder SMS for upcoming doses (3 days prior to the due date).

- **Universal e-Vaccination Certificate:** The portal generates a QR-based, digitally verifiable vaccination certificate based on the vaccine doses administered to the beneficiary.
- **Unique Health ID:** Beneficiaries may choose to create their Ayushman Bharat Health Account (ABHA) ID for themselves and Child ABHA ID based on the Aadhaar number of a parent/guardian for children up to age of 6 years. This allows for a comprehensive health record maintenance of each beneficiary.
- **Vaccinator Module:** Front line workers can digitally record all vaccination events for children and pregnant women for complete, accurate and easy record maintenance.
- **Name-based recording of each beneficiary:** This feature helps to identify beneficiaries with missed or due dose(s) ensuring timely vaccination.

Programme Manager and Vaccinator Components

Vaccinator Module

Front line workers can digitally record all vaccination events for children and pregnant women for complete, accurate and easy record maintenance.

Name-based recording of each beneficiary

This feature helps to identify beneficiaries with missed or due dose(s) ensuring timely vaccination.

Offline Mode

The data feed in this mode allows for digital recording of vaccination services even in areas with no internet connectivity so no-one is left out. These records auto-sync in the online digital portal once internet connectivity is accessed.

Efficient monitoring

The MIS reports generated allow for analytical monitoring of the UIP through its dashboard.

THE GOTTI KOYA TRIBALS

Why in News: The National Commission for Scheduled Tribes has asked the Union Home Ministry and Chhattisgarh, Maharashtra, Andhra Pradesh, and Odisha to submit a detailed report on the status of the Gotti Koya tribals.

Key Details

- Gotti Koya tribals, who were displaced from Chhattisgarh due to Maoist violence are now reportedly living in neighbouring States in difficult conditions, excluded from social security benefits.

- An estimated 50,000 tribals were displaced from Chhattisgarh due to Left-Wing Extremism. They now live in 248 settlements in the forests of Odisha, Andhra Pradesh, Telangana, and Maharashtra.

PRELIMS SPECIAL

About Gotti Koya Tribe

- Koya are an Indian tribal community found in the states of Andhra Pradesh, Telangana, Chhattisgarh, and Odisha.
- Gotti Koya is a member of Koya group of tribes.
- The Gotti Koya are an indigenous Adivasi tribe in India who are known for their multi-racial and multi-lingual heritage.
- **Location and Spread:** The Gotti Koya are found in the states of Andhra Pradesh, Chhattisgarh, Odisha, and Telangana. They live in the forests, valleys, and plains on either side of the Godavari River.
- **Language:** The Gotti Koya speak the Koya language, which is a Dravidian language related to Gondi and influenced by Telugu.
- **Social structure:** The Gotti Koya are organized into five sub-divisions called gotrams. Every Gotti Koya is born into a clan and remains a member for life. They have a patrilineal and patrilocal family structure, with monogamy being the prevalent form of marriage.
- **Festival:** The most important festival for the Gotti Koya is the Sammakka Saralamma Jatra, which is celebrated every two years in Medaram village, Telangana.
- **Occupation:** The Gotti Koya practice shifting cultivation, animal husbandry, and minor forest produce.
- **Political Status:** The Gotti Koya have Scheduled Tribe (ST) status in Chhattisgarh, but not in other states where they have migrated.

THE GLOBAL FAMILY FARMING FORUM

Why in News: The Food and Agriculture Organization of the United Nations (FAO) and the International Fund for Agricultural Development (IFAD) launched the Global Family Farming Forum.

About Global Family Farming Forum

- Celebrating the essential role of family farmers in building sustainable agrifood systems and tackling the impacts of the climate crisis, while identifying ways to better support them.
- Marking the halfway point of the United Nations Decade of Family Farming (UNDF) 2019-2028, the event being held at FAO's headquarters on the sidelines of the World Food Forum 2024, showcased policy innovations and successful experiences from around the world.

Significance of Family Farming

- Family farming, with over 550 million farms worldwide, is the backbone of food production, accounting for over 90% of all farms.
- Family farmers, especially in low-and middle-income countries, grow diverse, nutritious food, support crop biodiversity and manage natural resources responsibly.
- Beyond ensuring global food security, they also preserve rural communities, cultural heritage and natural resources.
- Thanks to highly adaptable agricultural practices rooted in local knowledge and without heavy reliance on major external inputs, family farmers help to enhance soil health, boost productivity, and increase resilience to climate impacts.

Challenges of Family Farming

- Despite the significant role of family farmers in producing food for a large proportion of the global population, their livelihoods remain precarious.
- A majority live in rural areas where nearly 80% of the world's poor and food insecure live.
- They face many difficulties in accessing productive resources, market opportunities, and essential services.
- For women, these obstacles are even greater, hampering their productivity and affecting the broader agrifood system, perpetuating poverty and hunger.
- Besides farming, family farmers take on multiple, often informal, economic activities to contribute towards their small incomes.

PRELIMS SPECIAL

Food and Agriculture Organization (FAO)

- The Food and Agriculture Organization (FAO) is a specialized agency of the United Nations that leads international efforts to defeat hunger.
- **Goal:** To achieve food security for all and make sure that people have regular access to enough high-quality food to lead active, healthy lives.
- **Members:** With 195 members - 194 countries and the European Union, FAO works in over 130 countries worldwide.

International Fund for Agricultural Development (IFAD)

- It is the world's fund for transforming agriculture, rural economies and food systems.
- IFAD was established in the 1970s in response to a global food crises.
- It invests in rural people, who are often the world's poorest and most vulnerable.
 - With these investments, rural people can take charge of their own future and produce enough nutritious food for their communities.
- IFAD uses the contribution from Member States to generate and assemble additional finance for rural people.

EXPECTED QUESTIONS FOR UPSC CSE

Prelims MCQ

Q. The Global Family Farming Forum was recently in news, it was launched by?

1. Food and Agriculture Organization (FAO)

2. International Fund for Agricultural Development (IFAD)
3. World Trade Organization

Select the correct answer using the code given below:

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

(a) Answer

Descriptive Question

Q. Discuss the role of family farming in ensuring global food security and biodiversity conservation. Highlight the challenges faced by family farmers in achieving sustainable livelihoods. [15 marks] [250 words].

ELIMINATING KALA-AZAR AS A PUBLIC HEALTH PROBLEM

Why in News: Kala-azar: India to seek WHO certification for eliminating disease.

Key Details

- India could be at the threshold of eliminating Kala-azar as a public health problem with the country having managed to keep the number of cases under one in 10,000 as per the World Health Organization (WHO) parameters for elimination certification for two consecutive years now.
 - As per figures released by the Union Health Ministry, India registered 595 cases and four deaths in 2023 and this year, it has recorded 339 cases and one death so far.
 - If it can maintain the figures for another year India will become eligible to seek the elimination certificate from WHO.
- In October 2024, Bangladesh became the only country to have eliminated Kala-azar as a public health problem.
 - WHO validated this status after Bangladesh reported fewer than one case per 10,000 people in each of its subdistricts for three consecutive years.
- India's National Health Policy (2002) initially set a target of eliminating Kala-azar by 2010, but this was later revised to 2015, 2017, and then 2020.
- WHO's Neglected Tropical Disease roadmap set a goal of eliminating Kala-azar by 2020, but the target was not achieved. The WHO is now accelerating work to achieve the target by 2030.

PRELIMS SPECIAL**About Kala-Azar**

- Visceral leishmaniasis is commonly known as kala-azar (KA), a word coined in the late nineteenth century in India, which means "black disease", referring to the greyish or blackish discoloration of the skin during infection, from the Hindi word for black (kala) and the Persian word for disease (azar).
- Kala-azar is a slow progressing indigenous disease caused by a protozoan parasite of genus Leishmania.
- In India Leishmania donovani is the only parasite causing this disease.
- The parasite primarily infects reticuloendothelial system and may be found in abundance in bone marrow, spleen and liver.

- Post Kala-azar Dermal Leishmaniasis (PKDL) is a condition when Leishmania donovani invades skin cells, resides and develops there and manifests as dermal lesions.
 - Some of the kala-azar cases manifests PKDL after a few years of treatment. Recently it is believed that PKDL may appear without passing through visceral stage. However, adequate data is yet to be generated on course of PKDL manifestation.

EXPECTED QUESTION FOR UPSC CSE**Prelims MCQ**

- Q. Kala-Azar also known as Visceral leishmaniasis is caused by..
- (a) Bacteria (b) Virus
(c) Fungi (d) Protozoa

Answer: (d)



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THE FIRST ASIAN BUDDHIST SUMMIT

Why in News: Ministry of Culture and International Buddhist Confederation has recently organised First Asian Buddhist Summit in New Delhi.

Key Details

- The Summit, was themed 'Role of Buddha Dhamma in strengthening Asia'. It saw a participation from 32 countries with over 160 international participants.
- This summit aligns with India's Act East Policy and Neighborhood First Policy, focusing on collective, inclusive, and spiritual development in Asia.
- The arrangements of these forums allowed for a rich convergence of ideas, with one focusing on the foundational teachings of the Buddha and their modern-day applications, while the other explored the ways in which Buddhist principles can contribute to sustainable development, social harmony, and international cooperation.
- This Summit threw up many innovative ideas emanating from the ancient philosophy and science of Dhamma.

Themes of First Asian Buddhist Summit 2024

	Buddhist Art, Architecture and Heritage: Buddhist art, architecture, and heritage hold immense significance, reflecting the deep cultural and spiritual connections within the tradition.
	Buddha Cārikā and Dissemination of Buddha Dhamma: Buddha Cārikā or the sublime wandering of the Buddha played an important role in the dissemination of the Buddha Dhamma. After attaining enlightenment, the Buddha travelled across India spreading his teachings among commoners.
	Role of Holy Buddhist Relics and its Relevance in Society: Buddhist relics are vital in society as they serve as sacred symbols of the Buddha's teachings, inspiring devotion and mindfulness among practitioners.
	Significance of Buddha Dhamma in Scientific Research and Well-Being: The significance of Buddha Dhamma in scientific research and well-being lies in its emphasis on mindfulness, compassion, and the interconnectedness of all beings.
	Role of Buddhist Literature and Philosophy in 21st Century: Buddhist literature and philosophy delves into the human condition, the nature of reality, and the path to enlightenment. The wisdom of the Buddha, as expressed in these texts, has captivated minds for centuries. Through these writings, the philosophy of Buddhism remains a timeless source of insight and understanding.

PRELIMS SPECIAL

Origin and Spread of Buddhism

- The journey of Buddha Dhamma began in the 6th century BCE when Siddhartha Gautama attained enlightenment and began sharing his profound insights.
- Following the Buddha's Mahaparinirvana, his teachings were preserved and disseminated by his followers, leading to the emergence of the three major Buddhist traditions: Theravada, Mahayana, and Vajrayana.
- The Mauryan Emperor Ashoka (268-232 BCE) played a crucial role in propagating Buddha Dhamma, demonstrating how its teachings could transform society by fostering peace, happiness, and harmony.
 - His governance was rooted in Dhamma principles, and his rock and pillar edicts stand as enduring symbols of the widespread dissemination of Buddhism across Asia.
- As Buddhism grew, various monastic schools emerged, resulting in a significant split by the first century CE, which led to the development of Mahayana and Nikaya Buddhism, with Theravada as the only surviving Nikaya school.
- Buddhism's influence extended beyond India, adapting to local cultures as it spread north through Central Asia into East Asia, forming the Northern branch, and east to Southeast Asia, creating the Southern branch.
- The adaptability of Buddhist teachings and the emergence of diverse interpretations have allowed the religion to meet the spiritual needs of various cultures throughout history.

Initiatives undertaken by India to promote and preserve the rich Buddhist Cultural Legacy

- **Buddhist Tourism Circuit in India**
 - Buddhist Circuit is one of the fifteen thematic circuits identified for development under the Swadesh Darshan—Integrated Development of Theme-Based Tourism Circuits Scheme of the Ministry of Tourism. The Buddhist Circuit covers all sites related to Buddhism in the country, including Kapilvastu.
- **First Global Buddhist Summit**
 - The two-day Global Buddhist Summit 2023, inaugurated by Prime Minister Shri Narendra Modi on April 20, 2023 focused on exploring methods for disseminating and internalizing universal values.
 - The summit addressed pressing global challenges and presented sustainable models for the future.

- **First International Conference on Shared Buddhist Heritage**
 - The conference aimed to re-establish trans-cultural links and explore commonalities in Buddhist art, archaeological sites, and museum collections among the SCO member states, fostering collaboration and understanding of their shared heritage.
- **One Day International Symposium on the Significance of Vipassana Meditation for Wellbeing & Global Peace**
 - The event featured monks, academicians, and Vipassana practitioners, who actively participated in discussions and a question-and-answer session.
- **Classical Status to Pali Language**
 - Recently, Pali was granted classical status, a recognition that underscores its historical significance in the region's spiritual and cultural heritage.
 - Lord Buddha used Pali to deliver his sermons, establishing it as a vital medium for conveying his teachings. This designation further affirms the importance of Pali in preserving the rich traditions of Buddhism and the teachings of Buddha Dhamma.
- **International Abhidhamma Diwas**
 - Vigyan Bhavan recently in New Delhi hosted the International Abhidhamma Divas, organized by the Ministry of Culture in collaboration with the International Buddhist Confederation.

Buddhism and India's Soft Power

- Despite a relatively small population of Buddhists in terms of proportion, India is in a position to claim legitimacy in its promotion of Buddhist diplomacy for a number of reasons.
 - First, the Buddhist faith originated in India, therefore granting it singular historical legitimacy.
 - Second, India has numerous sites of importance to the Buddhist faith, such as Bodh Gaya, Sarnath, and Nalanda.
 - Third, India has nurtured an image of being a protector of the persecuted because of the presence of the Dalai Lama and the Tibetan parliament-in-exile in the city of Dharamshala following their failed insurrection against China.
- In addition to ties with Tibetan Buddhism, historical links to Theravada Buddhism means that India is in a good position to further relations with other Buddhist countries and create conversation between multiple streams of this faith.
- Successfully leveraging the associations with other Buddhist countries could have an impact beyond the realm of cultural diplomacy, and aid in other areas of foreign policy as well.
- Interestingly, the relationship between Buddhism and state diplomacy is not a new one, and dates back to the days of Emperor Ashoka, who following his adoption of the religion began the practice of dharmavijaya or conquest through Dharma. Deepening ties with Asian nations on the basis of Buddhism could potentially feed into larger policy objectives of the government, namely, the 'Neighbourhood First' policy, and the 'Act East' policy.

EXPECTED QUESTIONS FOR UPSC CSE

Prelims MCQ

- Q. Consider the following statements:
1. The first Asian Buddhist summit was held in Gaya, Bihar.
 2. It was organized by Ministry of Culture and International Buddhist Confederation.
 3. The summit aligns with India's Act East Policy.

How many of the above statements are correct?

- (a) One only (b) Two only
(c) All three (d) None

Answer: (b)

Descriptive Question

- Q. The 1st Asian Buddhist summit 2024 emphasized on strengthening Buddhism in Asia. Discuss its significance as a tool for India's cultural diplomacy. [10 marks] [150 words]

MYSURU SANGEETHA SUGANDHA FESTIVAL

Why in News: The Sangeetha Sugandha Festival was inaugurated in Mysuru with distinguished guests celebrating Karnataka's rich heritage in Carnatic music, Kannada culture, and the Dasa tradition.

Key Details

- Recently, the Mysuru Sangeetha Sugandha festival, organized by the Ministry of Tourism, Government of India, has positioned Mysuru as a center for cultural tourism, highlighting Karnataka's unique contributions to India's musical and cultural legacy.
 - The event's theme focuses on celebrating the deep-rooted Carnatic music traditions of Mysuru, emphasising the Dasa heritage.
- **Cultural and Artistic Highlights**
 - Showcasing GI Products and Artisanal Crafts: Visitors will have the opportunity to explore Karnataka's celebrated Geographical Indication (GI) products through exclusive stalls featuring the works of artisans and weavers.

PRELIMS SPECIAL

Dasa Heritage and Haridasa Movement

- **The Haridasa Bhakti Sahitya devotional movement (sampradaya)** originated in Karnataka, India, after Madhvacharya, and spread to eastern states such as Bengal and Assam of medieval India.

- The Jharkhand government has taken several initiatives to promote and preserve the ancient tribal art of Sohrai painting, for example,
 - **Painting government housing:** The Jharkhand government has painted the walls of houses built under the Pradhan Mantri Shahri Awas Yojana (PMSAY) with Sohrai paintings.

About Sohrai Painting

- Sohrai Painting is a folk/tribal painting tradition that is mostly practised in the villages of Jharkhand's Hazaribagh area.
- Traditionally, women of the household paint on the mud walls of their homes during the holiday of Sohrai, which falls just a day after the Hindu celebration of Diwali.
- The paintings depict a matriarchal tradition in which the art form is passed down as a legacy to daughters by their mothers; likewise, one of the key topics of these paintings is the mother-child bond.
- The colours used in this picture (red, black, yellow, and white) are natural earth colours foraged from the wild or purchased from local merchants.
 - Chewing twigs are used as paint brushes, while cloth rags are used to apply the base coat.

About Warli painting

- Warli painting is tribal art mostly created by the tribal people from the North Sahyadri Range in Maharashtra, India.
- These rudimentary wall paintings use a set of basic geometric shapes: a circle, a triangle, and a square and also a set of colours usually consisting of brown and white. These shapes are symbolic of different elements of nature.
- The walls are made of a mixture of branches, earth and red brick that make a red ochre background for the paintings.
- The Warli only paints with a white pigment made from a mixture of rice flour and water, with gum as a binder.

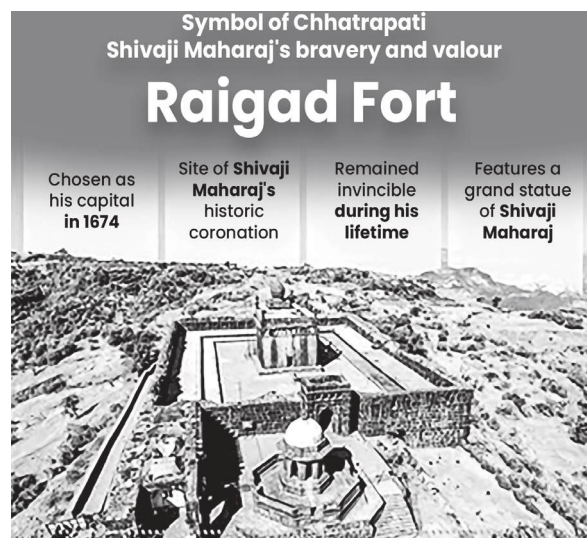


RAIGAD FORT

Why in News: Rashtriya Ekta Diwas theme celebrates the heritage of Raigad Fort.

Key Details

- A Replica of Raigad Fort has been made as backdrop at the venue of Rashtriya Ekta Diwas parade in Kevadiya to showcase the stories of incredible valour, heroic deeds and innovative warfare techniques of Chhatrapati Shivaji Maharaj.



About Durgraj Raigad Fort

Historical Significance

- Towering above the valleys of Maharashtra, Raigad Fort carries the echoes of Chhatrapati Shivaji Maharaj's reign.
- Each stone of Raigad echoes the remarkable courage and visionary tactics of Shivaji Maharaj, whose leadership transformed this fort into a symbol of strength. Today, it continues to inspire, reminding generations of the extraordinary deeds that shaped the history of an empire.
- The "Sabhasad Bakhar" (Ancient letter) reflects how Chhatrapati Shivaji Maharaj selected the Raigad fort as the capital of the Maratha Empire. It mentions, "Chhatrapati Shivaji Maharaj observed the potential of the hill or Rairi, which has steep escarpment and is the tallest of all mountains and hills in the region. The seamless and unbroken nature of the rock was a great potential.
- Grant Duff, a British historian of the Maratha period has drawn parallels between Raigad and the Rock of Gibraltar. He has gone to the extent of labelling Raigad as the Gibraltar of the east.

Geographical location

- Raigad is surrounded by valleys shaped by the Kal and Gandhari rivers and stands as an isolated massif without connections to neighbouring hills.
- Its impregnable nature, attributed to physiographic

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

Q. With reference to the 'Sohrai Art', consider the following statements:

- Sohrai is an indigenous mural art.
- It is popular among tribes in Meghalaya, Manipur and Mizoram.
- It uses materials like charcoal, clay and soil.

Which of the statements given above is/are correct?

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

Answer: (c)

features like steep cliffs and 1500-foot escarpments, is underscored by innovative military defence tactics.

Architecture and Features

- **Entrance Gates:** The fort is accessible via a steep climb, with the main entrance being the Ganesh Darwaza, adorned with intricate carvings and flanked by massive walls.
- **The Raj Bhavan:** Once the royal residence, the Raj Bhavan is a significant highlight of the fort. It is a sprawling complex with remnants of old structures, providing insight into the luxurious lifestyle of the Maratha rulers.
- **The Jagadishwar Temple:** Dedicated to Lord Shiva, this temple is a sacred spot within the fort.

Heritage site

- The fort of Raigad is part of the 12 forts nominated for UNESCO World Heritage under the title "Maratha Military Landscapes of India".
- Among the 12 nominated forts, Raigad is the classic example of Maratha architecture and best representation of the capital fort on a hill, well integrated with the physiography of the hill with the most developed typologies of structures within the fort.

THADOU CONVENTION

Why in News Thadou Convention in Guwahati released a 10-point declaration to protect Thadou tribe's distinct culture in Manipur.

Key Details

- The Convention's declaration emphasised on the tribe's distinct ethnic identity having its own language, culture, traditions, and history.
- The leaders and delegates at the Convention have agreed to place a demand for recognition of the Thadou tribe as a separate and distinct Scheduled Tribe in Assam, Mizoram, and Nagaland.
- The convention calls upon all, including government authorities, media, civil societies, academics, all other communities and international organisations, to correctly and respectfully identify Thadou as Thadou, with no prefix or suffix to it, to stop imposition of Kuki or referring to Thadous as Kuki, and to make the needed rectifications.
- Moreover, the Thadou Convention supported for the proposed National Register of Citizens (NRC) exercise in Manipur, should it be initiated by the Government of India.

- The Thadou Inpi Manipur (TIM) was formed as a full-fledged body for a tenure of 3 years with immediate effect, at the two-day Thadou Convention 2024.
 - TIM will function as the legitimate peak body of Thadou tribe for Manipur, providing strategic leadership, coordination and advocacy.
 - TIM will also spearhead, be responsible for, and coordinate movements and representation and all affairs relating to Thadous of Manipur and beyond as needed

About Thadou Tribe

- Thadou people, also called Thadou Kukis, are the Thadou language-speaking Kuki people inhabiting Northeast India, Burma, Bangladesh.
- According to the 2011 census of India, there are 229,340 Thadou language-speakers in the country. The vast majority of them (97.6%) are in the state of Manipur.
- Within Manipur, they make up the largest single tribe, forming about 19% of all its Scheduled Tribes. There are also significant numbers of Thadou-speakers in Meghalaya and Assam.
- According to Thadou tribe Thadou is one of the original 29 native/indigenous tribes of Manipur, India, that were all simultaneously and duly recognised as independent Scheduled Tribes of Manipur under the 1956 Presidential Order, Government of India.
- The Thadou tribe's economy is based on subsistence activities such as hunting, fishing, cultivation, and animal domestication. Their primary economic activity is jhum, or slash-and-burn, agriculture.
- **Religious Beliefs:** The God Pathen is believed by the Thadou to have created everything.
- The Hun-Thadou cultural festival is an annual celebration of the Thadou community in Manipur.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

- Q. Thadou tribe, recently seen in the news is dominantly residing in?
- (a) Manipur (b) Ladakh
(c) Jharkhand (d) Chhattisgarh

(a) Answer

GOVERNMENT SCHEMES

'TULIP' (TRADITIONAL ARTISANS' UPLIFTMENT LIVELIHOOD PROGRAMME)

Why in News: Ministry of Social Justice and Empowerment has inaugurated "TULIP" (Traditional Artisans' Upliftment Livelihood Programme) brand - A Digital Platform for Craft and Community Empowerment at the opening of the Shilp Samagam Mela 2024.

Key Details

- The platform was launched under the guidance of the National Backward Classes Finance and Development Corporation (NBCFDC) and the Ministry of Social Justice and Empowerment.
- **Aim:** The goal of TULIP is to empower marginalized artisans by providing them with a platform for global exposure and sales of their products through e-marketing.
- **Target Group:** Under the TULIP brand, artisans from Scheduled Castes (SC), Other Backward Classes (OBC), sanitation workers, and persons with disabilities will have an e-platform to market their products.

About Platform

- The TULIP Digital Platform for e-commerce will provide a platform for economic self-reliance and global exposure to artisans via an e-marketplace.
- It offers visitors a vibrant display of traditional handicrafts, skill demonstrations and an opportunity to support artisan communities directly.
- It seeks to connect India's skilled artisans with both domestic and global markets, promoting financial independence and empowering traditional craft workers.
- Tulip is designed to address key challenges faced by artisans, particularly the involvement of intermediaries, by facilitating direct sales and ensuring fair compensation for their work.

About Shilp Samagam Mela 2024

- The Shilp Samagam Mela 2024 celebrated India's rich heritage of traditional crafts and brings together artisans from all over the country to showcase their skills.
- At Dilli Haat, New Delhi, the fair will continue till the 15th Nov 2024 with the participants - 110 marginalised people from 16 states belonging to the National Scheduled Caste Finance and Development Corporation, National Safai

Karmacharis Finance and Development Corporation, and National Backward Class Finance and Development Corporation.

Government initiatives for artisans

- **Ambedkar Hastshilp Vikas Yojna:** Under Dastkar Shashktikaran Yojna subsection of this scheme, the programme enables community empowerment to mobilise artisans into self-help groups. Post this, the implementing agency will prepare a diagnostic study report (DSR) for proposing further interventions in the cluster.
- **Mega cluster scheme:** The programme follows a mega cluster-based approach in scaling up infrastructural and production chains at handicraft centres that have remained unorganised and have not kept up with modernisation and other developments.
- **Marketing support and services scheme:** This part of the programme provides interventions for domestic marketing events to artisans, such as providing financial assistance for organising or participating in marketing events in India. Assistance is also provided for hiring built-up space for events organised by other institutions.
- **Research and development scheme:** The schemes formulated are based on evaluation and research conducted from time to time by a governmental in-house research and development team.

EXPECTED QUESTIONS FOR UPSC CSE**Prelims MCQ**

- Q. TULIP brand - A Digital Platform for Craft and Community Empowerment is set up under the
- Ministry of Labour and Employment
 - NITI Aayog
 - Ministry of Social Justice and Empowerment
 - None

Answer: (c)

Descriptive Question

- Q. Discuss the role of TULIP (Traditional Artisans' Upliftment Livelihood Programme) in empowering artisan communities in India. [10 marks] [150 words].

PRADHAN MANTRI-VIDYALAXMI SCHEME

Why in News: The Union Cabinet recently approved PM-Vidyalaxmi Central Sector scheme to provide financial support to meritorious students so that financial constraints do not prevent any youth of India from pursuing quality higher education.

Key Details: Features of the Scheme

- The scheme is key initiative stemming from the National Education Policy, 2020, which had recommended that financial assistance should be made available to meritorious students through various measures in both public and private Higher Education Institutions.
 - Under the PM Vidyalaxmi scheme, any student who gets admission in a quality Higher Education Institution (QHEIs) will be eligible to get collateral free, guarantor free loan from banks and financial institutions to cover the full amount of tuition fees and other expenses related to the course.
 - The scheme will be administered through a simple, transparent and student-friendly system that will be inter-operable and entirely digital.
 - The scheme will be applicable to the top quality higher educational institutions of the nation, as determined by the
 - National Institutional Ranking Framework (NIRF) rankings - including all HEIs, government and private, that are ranked within the top 100 in NIRF in overall, category-specific and domain specific rankings; state government HEIs ranked in 101-200 in NIRF and all central government governed institutions.
 - This list will be updated every year using the latest NIRF ranking, and to begin with 860 qualifying QHEIs, covering more than 22 lakh students to be able to potentially avail benefits of PM-Vidyalaxmi; if they so desire.
- The Department of Higher Education will have a **unified portal** "PM-Vidyalaxmi" on which students will be able to apply for the education loan as well as interest subvention, through a simplified application process to be used by all banks. Payment of interest subvention will be made through E-voucher and Central Bank Digital Currency (CBDC) wallets.

Significance of the Scheme

- PM Vidyalaxmi will build on and further enhance the scope and reach of the range of initiatives undertaken by the Government of India over the past decade in the domains of education and financial inclusion, for maximizing access to quality higher education for the youth of India.
- This will supplement the Central Sector Interest Subsidy (CSIS) and Credit Guarantee Fund Scheme for Education

Loans (CGFSEL), the two component schemes of PM-USP, being implemented by the Department of Higher Education.

- Under the PM-USP CSIS, students with annual family income up to ₹ 4.5 lakhs and pursuing technical/ professional courses from approved institutions get full interest subvention during moratorium period for education loans up to ₹ 10 lakhs.
- Thus, PM Vidyalaxmi and PM-USP will together provide holistic support to all deserving students to pursue higher education in quality HEIs and technical/ professional education in approved HEIs.

EXPECTED QUESTIONS FOR UPSC CSE

Prelims MCQ

- Q. Pradhan Mantri Vidyalaxmi portal is set up under the
- (a) Ministry of Education
 - (b) Ministry of Finance
 - (c) Ministry of Social Justice and Empowerment
 - (d) None

(a) :Answer

Descriptive Question

- Q. Discuss the role of PM-Vidyalaxmi Portal in ensuring accessibility to quality higher education in India. [10 marks] [150 words]

PRADHAN MANTRI VANBANDHU KALYAN YOJANA (PMVKY)

Why in News: The Pradhan Mantri Vanbandhu Kalyan Yojana (PMVKY) aims to empower tribal communities in India, recognizing their historical neglect recently completed 10 years.

About the Scheme

- The Pradhan Mantri Vanbandhu Kalyan Yojana (PMVKY) that was launched on October 28, 2014.
- PMVKY aims at holistic development of tribal communities and tribal areas across the country focussing on integrated development of villages and capacity building through interventions in education and livelihood in convergence.
- It covers all tribal people and all areas with tribal populations across the country.

Objectives of scheme

- Qualitative and sustainable employment.
- Accelerated economic development.
- Healthcare, Housing, Quality education, Safe drinking water for all.
- All weather roads connectivity.
- Promotion of Tribal Cultural Heritage and Sports.

Components of the Scheme

- **Pradhan Mantri Adi Adarsh Gram Yojana**
 - ▷ It revamps the existing Special Central Assistance to Tribal Sub-Plan, which focuses on integrated village development with significant tribal populations.
 - ▷ This initiative targets critical sectors such as road and telecom connectivity, education, health services, and sanitation, all of which aim to raise the living standards of tribal communities.
 - ▷ As of July 2024, schemes for approximately 16,000 villages have been approved.
- **Development of Particularly Vulnerable Tribal Groups (PVTGs)**
 - ▷ The PVTG development scheme is designed to ensure the socio-economic upliftment of the most marginalized tribal communities (PVTG families) while preserving their cultural heritage.
 - ▷ The initiative will ensure that every unreached PVTGs household benefits from various government schemes, utilizing local Villages having at least 50% tribal population and 500 STs across States centers like Haat Bazar, CSCs, and Gram Panchayats to facilitate access and services at their doorstep.
- **Support to Tribal Research Institutes (TRI)**
 - ▷ This component facilitates research and documentation efforts related to tribal communities.
 - ▷ Financial assistance is allocated to state governments and UTs based on their proposals to strengthen the knowledge base concerning tribal cultures and challenges.
- **Pre-Matric Scholarships**
 - ▷ These centrally sponsored schemes aim to support tribal students in their educational pursuits.
 - ▷ The Pre-Matric Scholarship caters to students in grades IX and X, the scholarship is available for students with a parental income of up to ₹2.50 lakhs, ensuring that financial constraints do not hinder educational advancement.
- **Post-Matric Scholarships**
 - ▷ The Post-Matric Scholarship follows similar terms and conditions as the Pre-Matric scheme but caters to Scheduled Tribe students studying beyond class 10.
 - ▷ This scholarship aims to further support their educational journey by alleviating financial burdens and encouraging continued academic advancement.
- **Administrative Assistance for Project Management Units**
 - ▷ The PMVKY also allocates funds to establish project management units within state governments, ensuring that schemes related to the welfare of Scheduled Tribes are effectively monitored and implemented.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

Q. With reference to the PM Vanbandhu Kalyan Yojana, consider the following statements:

1. Recently (in 2024) PM Vanbandhu Kalyan Yojana completed 10 years.
2. It covers all tribal people areas with tribal populations across the country.

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

(c) Answer:

NAMO DRONE DIDI SCHEME

Why in News: Recently, the Department of Agriculture & Farmers Welfare (DoA&FW) the Government of India, released the operational guideline of Namu Drone Didi scheme.

About Namu Drone Didi Scheme

- Namu Drone Didi is a **central sector scheme** aiming to empower women-led Self-Help Groups (SHGs) by equipping them with drone technology to provide agricultural services.
- The scheme **aims** to provide drones to 15000 selected Women SHGs during the period from 2024-25 to 2025-2026 for providing rental services to farmers for agriculture purpose (application of liquid fertilizers and pesticides for the present).
- This initiative is expected to generate an additional income of at least Rs. 1 lakh per year for each SHG, contributing to economic empowerment and sustainable livelihood generation.

Key Features of the Scheme

- Subsidy to Women DAY NRL-SHG for Purchase of Drone.
- 80% of Drone Cost as Subsidy upto 8 lakhs.
- Loan facility from Agriculture Infrastructure Financing Facility (AIF) for remaining cost of Drone.
- Easy Loan @ 3% interest rate.
- Drone Pilot training as a part of Drone Package.

- Chance to earn additional 1 lakh PA through Drone.
- Renting of Drone Spray Service to Farmers through Women SHGs.

Benefits of the Nam0 Drone Didi Scheme

- **Empowerment of Women**
 - The scheme provides specialized training in drone technology, equipping women with advanced skills that are increasingly valuable in modern agriculture.
 - This knowledge enables them to perform tasks like crop monitoring, soil analysis, and precision farming more efficiently.
- **Enhancement of Agricultural Efficiency**
 - Drone technology significantly enhances the precise application of pesticides and fertilizers, transforming traditional agricultural practices.
 - Equipped with advanced GPS and sensor technology, drones can be programmed to follow precise flight paths over fields, ensuring even and targeted application.
 - This precision reduces the overuse of chemicals, minimizing environmental impact and lowering costs for farmers.
- **Skill Development and Knowledge Expansion**
 - The scheme provides specialized training in drone technology, enabling women to acquire advanced skills in modern agricultural practices such as applying fertilizers, pesticides, and herbicides accurately, ensuring even distribution and optimal usage.
 - Soil and field analysis is streamlined with drones, enabling detailed surveys and fertility assessments.
 - Women can also enhance irrigation management by identifying areas needing more or less water, detecting leaks, and managing water resources efficiently.
- **Community and Networking Opportunities**
 - Women can connect with a supportive network of fellow participants, fostering a sense of community and collaboration.

- They have the chance to join forums and workshops where they can share experiences, challenges, and best practices, enhancing their collective knowledge and skills.
- The scheme also provides access to industry experts, mentors, and agricultural professionals, creating avenues for mentorship and professional growth.

Operational Guidelines and Monitoring

- The scheme's operational framework is supported by robust governance mechanisms.
- The scheme will be overseen by an Empowered Committee of Secretaries from key departments like Agriculture, Rural Development, Fertilizers, Civil Aviation, and Women and Child Development, ensuring comprehensive governance.
- An Implementation and Monitoring Committee, led by the Additional Secretary of the Department of Rural Development, will guide and supervise the technical and operational rollout.
- The scheme provides SHGs with a fully equipped drone package, which includes spray assembly, a carrying box, batteries, a fast charger, and accessories such as a pH meter and anemometer, all covered by a one-year warranty, two years of annual maintenance, and comprehensive insurance.
- Additionally, a 15-day training program will equip two SHG members with essential skills: one will undergo drone pilot training, while the other will receive training in maintenance, ensuring sustainability.
- State Departments will strategically select SHGs based on agricultural demand, with each SHG expected to manage around 2,000–2,500 acres annually, supported by close monitoring and guidance.
- Furthermore, the Drone Portal, an IT-based MIS, will provide real-time monitoring, managing service delivery, fund disbursement, and drone operation tracking to ensure the scheme's smooth execution and effectiveness.

THE GUESSS INDIA 2023 REPORT

Why in News: The GUESSS India 2023 report, reveals that 14% of Indian students aim to become entrepreneurs right after graduation, closely aligning with the global average of 15.7%.

Key Details

- The GUESSS India 2023 report, the first survey of its kind in India, reveals that 14% of Indian students aim to become entrepreneurs right after graduation, closely aligning with the global average of 15.7%.
- This landmark survey was conducted by the Indian chapter of the Global University Entrepreneurial Spirit Students' Survey (GUESSS), which is the largest global research initiative on student entrepreneurship, covering 57 countries.
- The survey was led by Dr. Puran Singh, Associate Professor at the School of Management, IIT Mandi, who also serves as the Country Delegate for GUESSS India.

Highlights of the Report

- The GUESSS India 2023 report highlights a variety of trends in student entrepreneurship.
- A key finding is the shift in career aspirations: while 69.7% of students initially aim for employment post-graduation, this figure drops to 52.2% over the next five years, with 31% planning to venture into entrepreneurship, compared to only 14% at the time of graduation.
- Indian students also display the highest entrepreneurial intent globally, scoring 4.6 out of 7 on average—significantly above the global average of 3.7.
- 38% of students are already involved in business ventures, with 33% in the nascent stages of development. However, only 4.8% have progressed to the revenue-generating phase, highlighting the potential for further growth.
- Indian universities are playing a key role in fostering entrepreneurship, with 63% of student entrepreneurs currently accessing university support.
- Additionally, 26% of student-led ventures are being incubated within their universities. Indian institutions are leading globally in creating a favorable entrepreneurial climate, with a rating of 4.7 out of 7—the highest amongst leading startup ecosystems worldwide.

India Special Highlight

- The International Monetary Fund kept its growth forecasts for India unchanged at 7 per cent and 6.5 per cent for FY25 and FY26.
- The outlook is for GDP growth to moderate from 8.2 per cent in FY24 to 7 per cent in FY25 and 6.5 per cent in FY26.

Global University Entrepreneurial Spirit Students' Survey (GUESSS)

- GUESSS is one of the largest entrepreneurship research projects in the world. The main research focus is students' entrepreneurial intentions and activities, including the topic of family firm succession.
- GUESSS (formerly labeled ISCE, until 2006) has been established in 2003 at the University of St.Gallen (Switzerland).
- Every 2–3 years, a global data collection effort takes place. For every participating country, there is one responsible country team which coordinates data collection in that country.
- **Goal:** The main goal of GUESSS is to generate unique and novel insights into student entrepreneurship in the form of academic and practitioner-oriented output.

GUESSS India

- GUESSS India is the India Chapter of the Global University Entrepreneurial Spirit Students' Survey (GUESSS).
- Professor Puran Singh at the School of Management, Indian Institute of Technology Mandi, is leading the GUESSS India Chapter.
- GUESSS India 2023 marks the maiden effort to survey Indian students' entrepreneurial spirit.
 - GUESSS report presents the findings of the survey, revealing the entrepreneurial mindset of Indian students for the first time.
 - This web-based survey was conducted during November 2023-February 2024 and received 13,896 responses.
 - It covers a broad range of variables, including students' career choices, entrepreneurial intentions, entrepreneurial attitude, entrepreneurial behaviour, university climate, and sociodemographic profiles of the students.
 - These variables enable insights into both global and national trends of student entrepreneurship.

Key initiatives taken up by the Ministry of Skill Development and Entrepreneurship (MSDE) for creating a more inclusive Entrepreneurship ecosystem

- Pradhan Mantri Janjati Adivasi Nyaya Maha Abhiyan (PM-JANMAN)
- Capacity Building Programme for Fair Price Shop Owners.
- Strengthening Entrepreneurial Climate through Capacity Building, Incubation Support, Mentoring and Handholding under SANKALP Scheme.
- Entrepreneurial Climate through Training of Trainers (ToTs) and Entrepreneurship Development Programme (EDP) in Jan Shikshan Sansthan (JSSs).
- Rashtriya Udyamita Vikas Pariyojana on Pilot Basis for PM Svanidhi Beneficiaries.
- Entrepreneurship Development among jail inmates.
- Skill Strengthening for Industrial Value Enhancement (STRIVE) Project

Initiatives taken up by Government of India for promoting Entrepreneurship

- Startup India Action Plan
- Startup India: The Way Ahead
- Startup India Seed Fund Scheme (SISFS)
- Fund of Funds for Startups (FFS) Scheme
- Credit Guarantee Scheme for Startups (CGSS)
- National Startup Advisory Council
- National Startup Awards (NSA)
- States' Startup Ranking Framework (SRF)
- Startup Champions on Doordarshan
- Startup India Innovation Week

EXPECTED QUESTIONS FOR UPSC CSE

Prelims MCQ

- Q. The GUESSS India 2023 Report highlights a variety of trends in?
- (a) Student entrepreneurship
 - (b) Health status of tribals
 - (c) Women in formal economy
 - (d) None of the above

Answer: (a)

Descriptive Question

- Q. The GUESSS India 2023 report highlights the growing entrepreneurial intent among Indian students. Discuss its potential impact on India's. [10 marks] [150 words]

THE 2024 ANNUAL REPORT: ECONOMIC FREEDOM OF THE WORLD

Why in News: Fraser Institute released the 2024 Annual Report: Economic Freedom of the World.

Key Details: About the Report

- The index published in Economic Freedom of the World (EFW) measures the degree to which the policies and institutions of countries permit people to make their own economic choices.
- The report is based on 45 Data Points organised into five broad areas:
 - Size of Government
 - Legal System and Property Rights
 - Sound Money
 - Freedom to Trade Internationally
 - Regulation
- **Rankings**
 - **Top Ranked Country:** Singapore
 - **Bottom Ranked Country:** Venezuela
 - **India's Rank:** 84

Key Highlights of the Report

- The annual index published in Economic Freedom of the World measures the degree to which people in 165 jurisdictions around the globe are allowed to make their own economic choices.
- In the year with the most recent data (2022), the most-economically free jurisdictions were Hong Kong (1st), Singapore (2nd), Switzerland (3rd), New Zealand (4th), the United States (5th), Denmark and Ireland (tied for 6th), Canada (8th), and Australia and Luxembourg (tied for 9th).
- Averaging across all countries, global economic freedom increased from 2000 to 2019, but declined in each of the three years since then, erasing more than a decade of gains.
- Compared with the 25% least-economically free places, in the freest places:
 - GDP per person is 7.6 times greater;
 - the poorest 10% earn eight times as much;
 - the average person lives 16 years longer and is 40% more satisfied with his or her life;
 - youth literacy is nearly universal and there is no gap between boys and girls;
 - environments are cleaner; and
 - people are more tolerant of other genders, minorities, and immigrants.

- Conversely, compared with the top 25%, in the 25% least economically-free countries:
 - the infant mortality rate is nine times greater;
 - extreme poverty is 30 times as common;
 - two-and-a-half times as many children work;
 - corruption is higher; and
 - only 78% of girls aged 15 to 24 are literate.

WORLD ECONOMIC OUTLOOK REPORT

Why in News: International Monetary Fund (IMF) releases World Economic Outlook (October 2024) Report.

Key Details

- **Stable growth:** Global growth is expected to remain stable yet underwhelming. At 3.2 percent in 2024 and 2025, the growth projection is virtually unchanged from those in both the July 2024 World Economic Outlook Update and the April 2024 World Economic Outlook.
- **In emerging markets and developing economies,** disruptions to production and shipping of commodities—especially oil—conflicts, civil unrest, and extreme weather events have led to downward revisions to the outlook for the Middle East and Central Asia and that for sub-Saharan Africa.
- **Compensated by Emerging Asia:** These have been compensated for by upgrades to the forecast for emerging Asia, where surging demand for semiconductors and electronics, driven by significant investments in artificial intelligence, has bolstered growth.
- **Headline Inflation:** Global headline inflation is expected to fall from an annual average of 6.7 percent in 2023 to 5.8 percent in 2024 and 4.3 percent in 2025, with advanced economies returning to their inflation targets sooner than emerging market and developing economies.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

Q. Economic Freedom of the World report was published by:

- (a) World Economic Forum
- (b) World Trade organization
- (c) World Bank
- (d) Fraser Institute

Answer: (d)

	Projections		
	2023	2024	2025
World Output	3.3	3.2	3.2
Advanced Economies	1.7	1.8	1.8
United States	2.9	2.8	2.2
Euro Area	0.4	0.8	1.2
• Germany	-0.3	0.0	0.8
• France	1.1	1.1	1.1
• Italy	0.7	0.7	0.8
• Spain	2.7	2.9	2.1
Japan	1.7	0.3	1.1
United Kingdom	0.3	1.1	1.5
Canada	1.2	1.3	2.4
Other Advanced Economies	1.8	2.1	2.2
Emerging Market and Developing Economies	4.4	4.2	4.2
Emerging and Developing Asia	5.7	5.3	5.0
• China	5.2	4.8	4.5
• India	8.2	7.0	6.5
Emerging and Developing Europe	3.3	3.2	2.2
• Russia	3.6	3.6	1.3

Latin America and the Caribbean	2.2	2.1	2.5
• Brazil	2.9	3.0	2.2
• Mexico	3.2	1.5	1.3
Middle East and Central Asia	2.1	2.4	3.9
• Saudi Arabia	-0.8	1.5	4.6
Sub-Saharan Africa	3.6	3.6	4.2
• Nigeria	2.9	2.9	3.2
• South Africa	0.7	1.1	1.5
Memorandum			
World Growth Based on Market Exchange Rates	2.8	2.7	2.8
European Union	0.6	1.1	1.6
ASEAN-54	4.0	4.5	4.5
Middle East and North Africa	1.9	2.1	4.0
Emerging Market and Middle-Income Economies	4.4	4.2	4.2
Low-Income Developing Countries	4.1	4.0	4.7

Way Forward

- **Fiscal policy management:** In many countries, shifting gears on fiscal policy is urgently needed to ensure that public debt is on a sustainable path and to rebuild fiscal buffers.
- **Need for country specific Structural reforms:** The pace of adjustment should be tailored to country-specific circumstances. Structural reforms are necessary to lift medium-term growth prospects, but support for the most vulnerable should be maintained.
- **Multilateral Cooperation:** Multilateral cooperation is needed more than ever to accelerate the green transition and to support debt-restructuring efforts.
- **Consolidate Rules based Order:** Mitigating the risks of geoeconomic fragmentation and strengthening rules-based multilateral frameworks are essential to ensure that all economies can reap the benefits of future growth.

About IMF

- The IMF is a global organization that works to achieve sustainable growth and prosperity for all of its 191 member countries.
- It does so by supporting economic policies that promote financial stability and monetary cooperation, which are essential to increase productivity, job creation, and economic well-being.
- The IMF is governed by and accountable to its member countries.
- The IMF was established in 1944 in the aftermath of the Great Depression of the 1930s.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

Q. The World Economic Outlook Report is published by:

(a) International Monetary Fund

(b) United Nations Conference Trade and Development

(c) World Economic Forum

(d) World Bank

(a) Answer

Descriptive Question

Q. Discuss the key findings highlighted in the IMF’s World Economic Outlook, 2024 report. How are challenges of emerging economies different from Developed countries? [10 marks] [150 words]

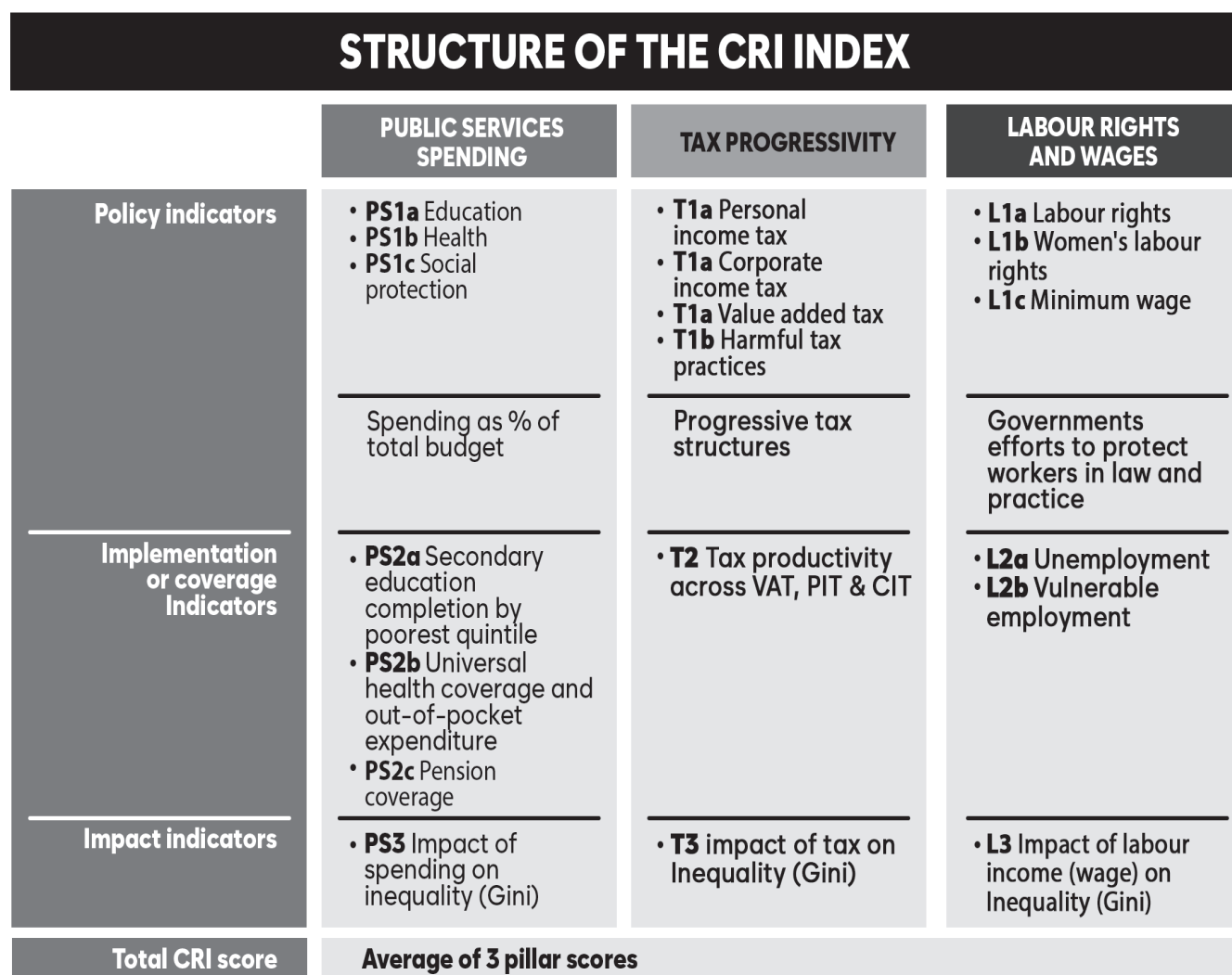
REDUCING INEQUALITY

Why in News: “Commitment to Reducing Inequality” an index was released by Oxfam and Development Finance International.

- Key Details**
- After gradually closing for decades, the gap between the Global South and the Global North has suddenly grown more rapidly than at any time since World War II.

- Billions of people face the terrible hardship of high and rising food prices and hunger, while the number of billionaires has doubled in the last decade. Inequality at the national level is either high or rising in 60% of the countries in which the IMF and World Bank are operating.
- The Commitment to Reducing Inequality (CRI) Index 2024 offers powerful new, up-to-date evidence of this deeply concerning trend. Reviewing the actions of 164 governments across three areas critical to reducing inequality – social services, taxation and work – for the first time since the CRI began in 2017, we identify strongly negative trends for the overwhelming majority of countries.
- Combining data from these three pillars, at least nine out of ten countries are implementing policies and actions likely to increase economic inequality.

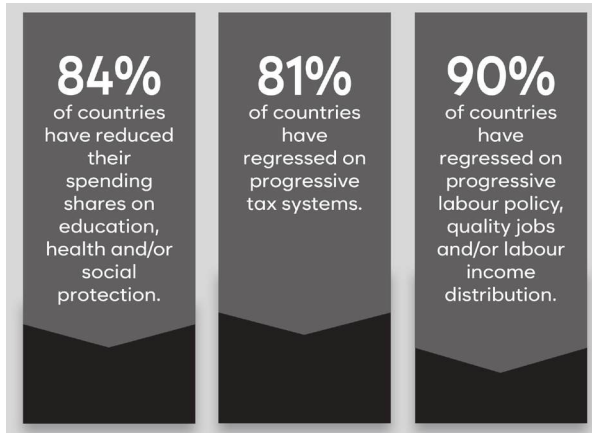
Structure of the CRI Index



Note: VAT-value added tax, PIT-personal income tax and CIT-corporate income tax.

Top and bottom ten countries in the CRI 2024 Index			
Top ten		Bottom ten	
Rank	Country	Rank	Country
1	Norway	164	South Sudan
2	Canada	163	Nigeria
3	Australia	162	Vanuatu
4	Germany	161	Haiti

5	Finland	160	Zimbabwe
6	Denmark	159	Uganda
7	Austria	158	Central African Republic
8	Japan	157	Liberia
9	Slovenia	156	Sierra Leone
10	France	155	Burundi



Top Performing Countries

- The top performers in this CRI are all high-income OECD countries led by Norway.
- Due to their labour policies, these countries start from much lower wage inequality.
- They have high social spending and collect more tax revenue, allowing widespread coverage of public services and the greatest impact on inequality.

Bottom Performers

- The bottom performers are low- and lower middle-income countries, all in sub-Saharan Africa, except Haiti and Vanuatu.
- They have very low social spending due to low tax revenues, which results in poor service coverage and limited impact on inequality.
- They also have extremely high levels of catastrophic out-of-pocket health spending. As a result, millions of children are out of school, and tens of thousands of women are dying from preventable deaths as they cannot access basic healthcare.

Policy Recommendations

- **Develop clear national timebound plans to reduce inequality.** All countries should put in place realistic and timebound National Inequality Reduction Plans (NIRPs) to reduce inequality, with regular monitoring to check their progress.
- **Prioritize public spending on essential public services** such as education, healthcare and social protection. All countries, particularly low- and lower middle-income countries, should ensure that their health budget is at least 15% of total public expenditure and education 20%.
- **Increase progressive taxation** by taxing the income of the richest 1%, for example to a minimum of 60% of their income from both labour and capital, with higher rates for multi-millionaires and billionaires.
- **Intervene in the labour market to protect all workers.** All countries need to place even more emphasis on reducing the inequality produced by the labour markets by ratifying and enforcing all ILO standards to minimize violations.

- **Develop gender-responsive policies** to recognize, reduce and redistribute unpaid care work and ensure that paid care workers are represented and rewarded justly.
- **Reach and implement global agreements to tax super-rich individuals and corporations.** The G20 and UN need to work further on developing better international standards to tax super-rich individuals and multinationals more effectively, through minimum effective tax rates on their income and wealth, and with a fair share of the resulting revenues coming to lower-income countries

Concept of Inequality

Inequality is the state of not being equal, especially in status, rights, and opportunities.

- Economic inequality refers to how economic variables are distributed—among individuals in a group, among groups in a population, or among countries.

EXPECTED QUESTIONS FOR UPSC CSE

Prelims MCQ

- Q. Commitment to Reducing Inequality Index is prepared by the
- (a) European Central Bank
 - (b) International Monetary Fund
 - (c) Oxfam & Development Finance International
 - (d) Organization for Economic Cooperation and Development

Answer: (c)

Descriptive Question

- Q. Discuss the significance of the Commitment to Reducing Inequality index in understanding global inequality trends. [10 marks] [150 words]

GREENHOUSE GAS BULLETIN (GGB)

Why in News: Greenhouse Gas Bulletin (GGB) was released by the World Meteorological Organisation (WMO).

Key details

- This Bulletin represents the latest analysis of observations from the WMO Global Atmosphere Watch Programme.
- It shows globally averaged surface mole fractions for carbon dioxide (CO₂), methane (CH₄) and nitrous oxide (N₂O) and compares them with the mole fractions during the previous year and with the preindustrial levels.
- It also provides insights on the change in radiative forcing by long-lived GHGs (LLGHGs) and contribution of individual gases to this increase.

Highlights from the bulletin

- **Rising concentration of major gases:** The latest analysis of observations from the WMO Global Atmosphere Watch (GAW) in situ observational network shows that the globally averaged surface concentrations for carbon dioxide (CO₂), methane (CH₄) and nitrous oxide (N₂O) reached new highs in 2023, with CO₂ at 420.0±0.1 ppm, CH₄ at 1934±2 ppb(3) and N₂O at 336.9±0.1 ppb.
- **Gains from pre-industrial levels** These values constitute, respectively, increases of 151%, 265% and 125% relative to pre-industrial (before 1750) levels.
- **Continued rise in CO₂ emissions:** The increase in CO₂ from 2022 to 2023 was slightly higher than the increase observed from 2021 to 2022 and slightly lower than the average annual growth rate over the last decade, and was most likely partly caused by natural variability, as fossil fuel CO₂ emissions have continued to increase.
- **Rise in CH₄ emissions:** For CH₄, the increase from 2022 to 2023 was lower than that observed from 2021 to 2022 but still slightly higher than the average annual growth rate over the last decade.
- **Rise in N₂O emissions:** For N₂O, the increase from 2022 to 2023 was lower than that observed from 2021 to 2022, which was the highest increase observed in our modern time record.
- **Rise in Radiative forcing:** The National Oceanic and Atmospheric Administration (NOAA) Annual Greenhouse Gas Index (AGGI) shows that from 1990 to 2023, radiative forcing by long-lived greenhouse gases increased by 51.5%, with CO₂ accounting for about 81% of this increase.

PRELIMS SPECIAL

About Radiative forcing

- Radiative forcing is a concept that enables the climatic effects of various changes to the planet to be approximately compared.
- A large radiative forcing should equate to a large and proportionate change in global mean temperature.
- The definition of radiative forcing has evolved as our understanding of climate processes has improved and also with the need to intercompare model results on a consistent basis, especially as part of the IPCC assessment reports.
- It has also evolved to ensure that the link between radiative forcing and climate response caused by different forcing agents is as quantitatively useful as possible.

World Meteorological Organization (WMO)

- It is a specialized agency of the United Nations responsible for promoting international cooperation on atmospheric science, climatology, hydrology and geophysics.
- The WMO originated from the International Meteorological Organization, a nongovernmental organization founded in 1873 as a forum for exchanging weather data and research.
- Proposals to reform the status and structure of the IMO

culminated in the World Meteorological Convention of 1947, which formally established the World Meteorological Organization.

- Headquartered in Geneva, Switzerland, the WMO is governed by the World Meteorological Congress, composed of member states, which meets every four years to set policies and priorities.
- **Some of the reports that the WMO publishes are given below:**
 - Status of World Climate
 - Greenhouse Gas Bulletin

Greenhouse Gases

They are chemical compounds in the Earth's atmosphere that trap heat and cause global warming and climate change.

What they are

Greenhouse gases absorb infrared radiation and trap heat in the atmosphere. They act like the glass walls of a greenhouse.

What they do

Greenhouse gases alter the balance between energy received from the sun and emitted from Earth, which changes climate and weather patterns.

Examples

Some examples of greenhouse gases include carbon dioxide, methane, nitrous oxide, water vapor, and ozone.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

- Q. Recently, the Greenhouse Gas Bulletin was in news, it was released by:
- United Nations Framework Convention on Climate Change
 - World Economic Forum
 - World Meteorological Organisation
 - None of The Above

Answer: (c)

Descriptive Question

- Q. In line of recent Greenhouse Gas Bulletin by the World Meteorological Organization (WMO), discuss the implications of the increasing greenhouse gas emissions on climate change. [10 marks] [150 words].

GLOBAL TUBERCULOSIS REPORT 2024

Why in News: WHO released the Global Tuberculosis Report 2024.

Key Details: Overview of the Report

- The WHO Global tuberculosis report 2024 provides a comprehensive and up-to-date assessment of the TB epidemic, and of progress in prevention, diagnosis and treatment of the disease, at global, regional and country levels.
- This is done in the context of global TB commitments, strategies and targets.
- The 2024 edition of the report is based primarily on data gathered by WHO from national ministries of health in annual rounds of data collection.
- In 2024, 193 countries and areas (out of 215) with more than 99% of the world’s population and TB cases reported data.
 - The five countries that account for the largest portion of the world’s tuberculosis (TB) burden are India, Indonesia, China, the Philippines, and Pakistan.
 - ◆ In total, these five countries account for 56% of the world’s TB burden. 87% of the world’s TB burden is carried by 30 low- and middle-income countries (LMICs).
 - India has seen a significant decline in tuberculosis cases, with reports indicating a 17.7% decrease in TB incidence from 2015 to 2023, which is more than double the global average decline rate; this decline is attributed to the National TB Elimination Programme (NTEP) implemented by the government.
- WHO has published a global TB report every year since 1997. Its main purpose is to provide a comprehensive and up-to-date assessment of the status of the TB epidemic and progress in the response at global, regional and national levels, in the context of global TB commitments, strategies and targets.
- 2024 edition covers six major topics: the burden of TB

disease; TB diagnosis and treatment; TB prevention and screening; funding for the TB response; UHC and TB determinants; and TB research.

Main Findings from the Report

- The global rise in the number of people falling ill with TB each year has slowed and started to stabilize.
- The global number of people dying from TB each year continues to fall.
- The WHO African and European regions have made good progress towards the 2025 milestones for reductions in the TB incidence rate and the number of deaths caused by TB.
- The globally reported number of people newly diagnosed with TB reached a new high in 2023.
- The treatment success rate for people with drug-susceptible TB has been sustained at a high level and continues to improve for people with drug-resistant TB.
- The coverage of TB preventive treatment has been sustained for people living with HIV and continues to improve for household contacts of people diagnosed with TB.

About Tuberculosis

- Tuberculosis (TB) is a preventable and usually curable disease.
- TB is caused by the bacillus *Mycobacterium tuberculosis*, which is spread when people who are sick with TB expel bacteria into the air (e.g. by coughing).
- About a quarter of the global population is estimated to have been infected with TB.
- Without treatment, the death rate from TB disease is high (close to 50%).
- With treatments currently recommended by WHO (a course of anti-TB drugs for 4–6 months), about 85% of people with TB can be cured. Regimens of 1–6 months are available to treat TB infection.

Global targets set in 2023 at the second UN high-level meeting on TB

Indicator	Global Target
TB treatment coverage (percentage of the estimated number of people who develop TB disease each year who are provided with quality-assured diagnosis and treatment)	90% by 2027 (equivalent to up to 45 million people globally in the 5-year period 2023–2027, including up to 4.5 million children and up to 1.5 million people with drug-resistant TB)
Coverage of TB preventive treatment (percentage of people at high risk of developing TB disease who are provided with TB preventive treatment)	90% by 2027 (equivalent to up to 45 million people globally in the 5-year period 2023–2027, including 30 million household contacts of people with TB and 15 million people living with HIV)
Coverage of rapid diagnostic testing for TB (percentage of those diagnosed with TB who were initially tested with a WHO-recommended rapid molecular test)	100% by 2027
Coverage of health and social benefits package for people with TB	100% by 2027

Availability of new TB vaccines that are safe and effective	Rollout initiated, preferably within 5 years
Annual funding for universal access to quality prevention, diagnosis, treatment and care for TB	US\$ 22 billion by 2027, US\$ 35 billion by 2030
Annual funding for TB research	US\$ 5 billion by 2027

End TB Strategy at a glance

Principles

- Government stewardship and accountability, with monitoring and evaluation.
- Strong coalition with civil society organizations and communities.
- Protection and promotion of human rights, ethics and equity.
- Adaptation of the strategy and targets at country level, with global collaboration.

Pillars and Components

- Integrated, Patient-Centred Care and Prevention
 - Early diagnosis of TB including universal drug-susceptibility testing, and systematic screening of contacts and high-risk groups.
 - Treatment of all people with TB including drug-resistant TB, and patient support.
 - Collaborative TB/HIV activities, and management of comorbidities.
 - Preventive treatment of persons at high risk, and vaccination against TB.
- Bold Policies and Supportive Systems
 - Political commitment with adequate resources for TB care and prevention.
 - Engagement of communities, civil society organizations, and public and private care providers.
 - Universal health coverage policy, and regulatory frameworks for case notification, vital registration, quality and rational use of medicines, and infection control.
 - Social protection, poverty alleviation and actions on other determinants of TB.
- Intensified Research and Innovation
 - Discovery, development and rapid uptake of new tools, interventions and strategies.
 - Research to optimize implementation and impact, and promote innovations.

ASIA-PACIFIC (APAC) CLIMATE REPORT 2024

Why in News: The Asia-Pacific (APAC) Climate Report 2024, warns of accelerating climate-related GDP losses, particularly

between 2050 and 2070, driven by rising sea levels and declining labour productivity in the Asia-Pacific Region.

Key Highlights in the Report

- **Released by:** Asian Development Bank
- **Evolving climate risks in Asia and the Pacific**
 - Developing Asia both suffers from and contributes to the climate crisis.
 - Many impacts in the Asia and Pacific region will be greater than indicated by global trends.
 - Climate change reduces gross domestic product (GDP) in the region by 17% in 2070 under a high-end emissions scenario.
- **Accelerating climate change adaptation**
 - Adaptation is key to addressing large impacts.
 - ◆ In the near term, only adaptation can alter climate losses.
 - ◆ Effective adaptation policy must address both slow onset changes and a greater frequency and/or intensity of fast onset extreme events, while at the same time considering other development needs.
 - Early and coordinated investments are needed to avoid damage and enable transformational responses.
 - Both public and private sources are key to closing the adaptation financing gap.
 - ◆ Annual financing needs for adaptation in the region are estimated to be between \$102 billion and \$431 billion.
 - ◆ Nearly half of modeled needs are for coastal and river flood protection.
 - Continuous reassessment of climate change impacts and adaptation actions is essential.
 - ◆ Net Zero is international scientific consensus that, in order to prevent the worst climate damages, global net human-caused emissions of carbon dioxide (CO₂) need to fall by about 45 percent from 2010 levels by 2030, reaching net zero around 2050.
- **Scaling up private climate capital**
 - Private capital is increasingly becoming a source of climate finance, but more needs to be done.
 - ◆ Climate-related risks and regulatory changes are pushing more private capital into climate-aligned investments.

- ◆ Greater policy certainty and financial sector reform can attract private climate capital.
- ◆ Policymakers can develop climate-oriented financial systems through the adoption of sustainability disclosure standards to reduce transaction costs and compliance risks for investors.
- The public sector can help overcome barriers to private climate investment
 - ◆ Solutions like blended finance can facilitate the use of de-risking instruments, such as first-loss guarantees, insurance, and credit enhancements, to attract private investors.
 - ◆ The public sector can strengthen the investment environment by liberalizing markets, reducing entry barriers, and overcoming market rigidities such as long-term power purchase agreements.
 - ◆ Multilateral development banks can support these efforts with their capital and their menu of instruments.
- **Carbon pricing for more cost-effective mitigation**
 - Carbon pricing instruments are gaining momentum in the region.
 - Carbon taxation can be a powerful mechanism to reduce emissions cost-effectively.
 - There are several important lessons on Emission Trading System (ETS) for the region.
 - ◆ Efficiency-based targets balance emission reduction and production expansion goals but may not reduce emissions sufficiently.
 - Developing economies can leverage international carbon markets to meet climate goals.
 - ◆ Purchasing credits can help meet NDCs, especially when domestic abatement costs are high.
 - ◆ However, developing national carbon market strategies is essential for effective engagement with international markets, effective NDC accounting frameworks, and voluntary market participation.

EXPECTED QUESTIONS FOR UPSC CSE

Prelims MCQ

- Q. The Asia-Pacific (APAC) Climate Report, 2024 is published by?
- (a) International Monetary Fund
 - (b) Asian Development Bank
 - (c) World Bank
 - (d) World Economic Forum

(b) Answer

Descriptive Question

Q. Discuss the climate change risks highlighted in the Asia-Pacific Climate Report 2024 and their implications for the region. [10 marks] [150 words].

WORLD CITIES REPORT 2024

Why in News: World Cities Report 2024: Cities and Climate Action was published by UN-Habitat.

Key Facts and Findings

- Nearly 2 billion people currently living in cities could be exposed to an additional temperature increase of at least 0.5 degrees Celsius by 2040.
- As much as 36% of the global population in cities could experience mean annual temperatures of 29 degrees Celsius or above.
- By 2040, more than 2,000 cities will be located in low elevated coastal zones of less than 5 metres above sea level, rising to 2,620 cities for less than 10 metres above sea level. The current population in these exposed cities is already 1.4 billion and expected to increase further by 2040.
- By 2030, at least 517 million people living in cities will be exposed to riverine flooding with a 100-year return period, which is 14% of the global population living in cities.
- Since 1975, exposure to flooding in cities has grown 3.5 times more than exposure to flooding in rural areas.
- 136 of the largest coastal cities could incur annual losses exceeding \$1 trillion by 2050 assuming moderate levels of sea-rise, without additional investment in adaptation and risk management.
- On average, the share of green spaces in urban areas globally decreased from 19.5% in 1990 to 13.9% in 2020.
- Cities and other urban areas require an estimated US\$4.5-5.4 trillion annually up until 2030 to invest in new or retrofitted climate-resilient infrastructure across transport, energy, water and waste, and telecom projects. In 2021-2022, cities only secured US\$831 billion per year for climate action.
- In 2021-22, only US\$10 billion or just over 1% of the tracked US\$831 billion - for urban climate action went towards adaptation.

Key Messages from the Report

- **Cities must be at the centre of global climate action as they are under critical threat.** Cities urgently need to progress on net-zero targets, while building resilience against extreme weather events and shocks associated with climate change simultaneously.

- External factors including social, cultural, governance conditions are looked at to see how they impact on effective leadership, as well as the policy levers that can be used to develop leadership skills in different contexts.
- 211 Profiles Enhancing Education Reviews (PEER) on school leadership country profiles containing laws and policies related to the selection, preparation and development of school leaders helped to inform the report.
- According to the UNESCO Global Education Monitoring Report 2024, 251 million children and youth are out of school globally.
- The out-of-school population has only reduced by 1% in nearly 10 years.
- The number of out-of-school children in sub-Saharan Africa has increased by 12 million since 2015.
- Lack of funding is a key obstacle to broadening access to quality education.
- In 2022, low- and middle-income countries spent only \$55 per learner, compared to \$8,543 for high-income countries.
- 4 in 10 countries spend less than 15% of their total public expenditure and less than 4% of GDP on education.

Key Findings on Progress Towards SDG 4

- Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.
- More children are in school and progressing through education today than ever before.
- But those left behind are the hardest to reach, leading to stagnation and, in cases of conflict, a reversal of education development.
- Standards for teachers are often too low or not met.
- Learning outcome levels were declining even before COVID-19 but the pandemic coincides with an acceleration of that trend.
- Technology helps learners access education who previously could not but brings new issues.
- Climate change poses challenges to infrastructure and curricula.
- National and international investment in education is declining.

Recommendations

- **Trust and Empower:** Create the enabling conditions for school principals to improve education.
- **Select, Develop and Recognise:** Invest in the professionalization of school principals.
 - **Select** talented school principals through inclusive recruitment.
 - **Prepare,** train and support school principals to focus on the core dimensions of their role.

- Set and implement school leadership standards and **recognize their achievement.**
- **Share:** Promote shared leadership and collaborative school cultures.
- **Invest in System Leaders:** Develop education officials' capacity to serve as system leaders.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

Q. Consider the following statements regarding Global Education Monitoring Report:

1. It is published by UNESCO.
2. The report revolves around the Theme 'Leadership in Education: Lead for Learning'.
3. The report publishes key findings on progress towards Sustainable Development Goal (SDG) 3 on education.

How many of the above statements are correct?

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

Answer: (b)

WORLD INTELLECTUAL PROPERTY INDICATORS REPORT 2024

Why in News: The World Intellectual Property Organization (WIPO) has published the World Intellectual Property Indicators (WIPI) 2024, underscoring global trends in intellectual property (IP) filings.

About the Report

- The report explores the need for innovation policies to focus on developing innovation capabilities.
- It offers a new methodological framework, complemented by three industry case studies – agriculture technology, motorcycle and video games – in Brazil, Finland, India, Italy, Japan, Kenya, Poland and the United States.
- The report reveals significant growth in patent, trademark, and industrial design applications across top economies.
- The report highlights continued growth in global intellectual property (IP) filings, reflecting innovation resilience despite economic challenges.
- Key findings show a record of 3.55 million patent applications filed worldwide in 2023, up 2.7% from 2022 with notable contributions from leading economies in

Asia. This increase was largely driven by residents in China, the United States, Japan, South Korea, and India.

- This growth trend, especially in resident filings, emphasises a shift towards local innovation, with many countries aiming to strengthen their domestic IP landscapes.

India and Intellectual Property Indicators

- India has secured a spot in the global top 10 for all three major intellectual property (IP) rights—patents, trademarks, and industrial designs. India continues to solidify its place as a global leader in the intellectual property (IP) landscape by showing substantial progress and marking new milestones in IP activity.
- India recorded the fastest growth in patent (+15.7%) applications in 2023 among the top 20 origins, marking the fifth consecutive year of double-digit growth.
- India ranks sixth globally for patents with 64,480 applications, with resident filings accounting for over half of all submissions (55.2%)—a first for the country.
- The patent office also granted 149.4% more patents in 2023 compared to the previous year, underlining the country's fast-evolving IP ecosystem.
- The report indicates a steady rise (36.4%) in India's industrial design applications, which aligns with increasing emphasis on product design, manufacturing, and creative industries within India.
- The top three sectors—Textiles and Accessories, Tools and Machines, and Health and Cosmetics—made up almost half of all design filings.
- Between 2018 and 2023, patent and industrial design applications more than doubled, while trademark filings increased by 60%, reflecting the country's growing emphasis on IP and innovation.
- India's patent-to-GDP ratio also saw significant growth, rising from 144 to 381 in the past decade, indicating that IP activity is scaling alongside economic expansion.
- India ranked fourth globally in trademark filings, with a 6.1% increase in 2023. Nearly 90% of these filings were by residents, with key sectors including Health (21.9%), Agriculture (15.3%), and Clothing (12.8%) leading the way.
- India's trademark office holds the second-largest number of active registrations worldwide, with over 3.2 million trademarks in force, reflecting the country's strong position in global brand protection.

Way Forward

The findings from WIPO's World Intellectual Property Indicators 2024 showcase India's advancements in innovation and IP. The steady increase in resident filings demonstrates the impact of government initiatives, which aim to make India a global innovation leader.

PRELIMS SPECIAL

Reports by World Intellectual Property Organisation (WIPO)

- World Intellectual Property Report:
 - It is a biennial report that provides insights into the role of innovation in market economies and focuses on specific trends in IP.
 - The latest edition, published in 2024, introduces a new data-driven methodology to help policymakers make informed decisions.
- World Intellectual Property Indicators:
 - It is an annual report that provides statistical data on IP filings around the world, including patents, trademarks, and industrial designs.
 - The 2024 edition highlights India's rapid growth in patent and industrial design applications.
- Global Innovation Index:
 - It is an annual report that ranks countries based on their innovation capabilities.
 - WIPO is a partner in the Global Innovation Index, which is published by Cornell University, INSEAD, and WIPO.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

Q. Consider the following reports:

1. World Intellectual Property Report
2. World Intellectual Property Indicators Report
3. Global Innovation Index

How many of the above reports are published by the World Intellectual Property Organisation (WIPO)?

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

Answer: (c)

STATE OF FOOD AND AGRICULTURE 2024

Why in News: Food and Agriculture Organisation (FAO) has recently released State of Food and Agriculture 2024.

About the Report

- Uncovering the true cost of food is the first step in making agrifood systems more inclusive, resilient and sustainable.
- As The State of Food and Agriculture 2023 revealed, agrifood systems activities generate significant benefits for society, but also have negative impacts on economic, social and environmental sustainability.

- The State of Food and Agriculture 2024 builds on the findings of the 2023 edition, delving deeper into the use of true cost accounting assessments of agrifood systems and identifying policy interventions aimed at transformation.

Key Messages from the Report

- Using true cost accounting (TCA), The State of Food and Agriculture 2023 presented preliminary estimates of the global hidden costs of agrifood systems and stressed the urgent need to address them.
- Unhealthy dietary patterns related to non-communicable diseases account for 70% of all quantified hidden costs.
- No single transformational strategy exists, given the diversity of possible policy interventions and investments. While there is scope for improving efficiency and safety, care must be taken to avoid exacerbating power imbalances, environmental and social hidden costs, and unhealthy dietary transitions.
- Environmental hidden costs are largest in diversifying agrifood systems (720 billion 2020 PPP dollars), followed by formalizing and industrial. However, countries in protracted crisis are the most burdened by environmental hidden costs, when considered as a share of their gross domestic product (GDP) (20%).
- Social hidden costs are prevalent in traditional and protracted crisis agrifood systems, accounting for 8 and 18% of GDP, respectively. These costs – driven by undernourishment and poverty – emphasize the importance of raising livelihoods and bridging the humanitarian–development–peace nexus.
- Transforming agrifood systems to reduce hidden costs will improve well-being. However, the distribution of benefits and costs will be uneven across different stakeholders, countries and time frames.
- In increasingly global food supply chains, power imbalances often shift the burden of change onto vulnerable parties such as producers, who end up facing higher regulatory costs and downward price pressures.

State of Agriculture in India

- The agriculture sector employs nearly half of the workforce in the country. However, it contributes to 17.5% of the GDP (at current prices in 2015-16).
- Over the past few decades, the manufacturing and services sectors have increasingly contributed to the growth of the economy, while the agriculture sector’s contribution has decreased from more than 50% of GDP in the 1950s to 15.4% in 2015-16 (at constant prices).
- **State of Food Production**
 - India’s production of food grains has been increasing every year, and India is among the top producers of several crops such as wheat, rice, pulses, sugarcane and cotton.
 - It is the highest producer of milk and second highest producer of fruits and vegetables.

- In 2013, India contributed 25% to the world’s pulses production, the highest for any one country, 22% to the rice production and 13% to the wheat production.
- It also accounted for about 25% of the total quantity of cotton produced, besides being the second highest exporter of cotton for the past several years.
- Although India ranks third in the production of rice, its yield is lower than Brazil, China and the United States. The same trend is observed for pulses, where it is the second highest producer.
- However, the agricultural yield (quantity of a crop produced per unit of land) is found to be lower in the case of most crops, as compared to other top producing countries such as China, Brazil and the United States.

Issues and Recommendations

- Key issues affecting agricultural productivity include the decreasing sizes of agricultural land holdings, continued dependence on the monsoon, inadequate access to irrigation, imbalanced use of soil nutrients resulting in loss of fertility of soil, uneven access to modern technology in different parts of the country, lack of access to formal agricultural credit, limited procurement of food grains by government agencies, and failure to provide remunerative prices to farmers.
- Some of the recommendations made by committees and expert bodies over the years include bringing in agricultural land leasing laws, shifting to micro-irrigation techniques to improve efficiency of water use, improving access to quality seeds by engaging with the private sector, and introducing a national agricultural market to allow the trading of agricultural produce online.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

- Q. Recently, the report State of Food and Agriculture, 2024 was in the news it was published by?
- (a) Food and Agriculture Organisation
 - (b) World Food Programme
 - (c) World Economic Forum
 - (d) None

(a) Answer

Descriptive Question

- Q. Discuss the environmental and social hidden costs associated with agriculture as highlighted in State of Food and Agriculture Report, 2024. Suggest measures to mitigate the same. [15 marks] [250 words]

PROTECTED PLANET REPORT 2024

Why in News: UN Environment Programme World Conservation Monitoring Centre (UNEP-WCMC) and the International Union for Conservation of Nature (IUCN) have come out with the Protected Planet Report 2024.

Background

- Protected and conserved areas are vital places for both nature and people.
 - They play a critical role in halting and reversing biodiversity loss.
 - They also provide important cultural, spiritual and economic benefits, supplying ecosystem services that help to safeguard the planet for the future of humanity.
- In December 2022, Parties to the Convention on Biodiversity (CBD) agreed to conserve 30% of Earth's land and seas by 2030.
 - This commitment is referred to as Target 3 and is one of 4 goals and 23 targets to tackle the global nature crisis under the Kunming-Montreal Global Biodiversity Framework.
- The Protected Planet Report 2024 is the first official evaluation of global progress on all elements of Target 3 since the Framework was adopted in 2022.

Findings of the Report

- Protected and conserved areas must almost double in area on land and more than triple in the ocean for the 30% target to be reached by 2030.
- Strongest progress since 2020 has been in the ocean, but most of this has been in national waters. In areas beyond national jurisdiction, coverage remains very low, accounting for less than 11% of the total area covered by marine and coastal protected areas. This is despite the fact that the high seas cover 61% of the ocean.
- Data is insufficient to fully measure and understand the effectiveness of protected and conserved areas. Less than 5% of the world's land is covered by protected areas where management effectiveness has been assessed. The figure is 1.3% for the marine realm.
- Protected and conserved areas are not always established in the places that most need conserving. Only one-fifth of areas identified as the most important for biodiversity are fully protected. A further one-third of these important areas fall outside of protected and conserved areas entirely.
- Biodiversity is not fully represented within protected and conserved areas. Although one-quarter of ecological regions already have 30% coverage, some still have none, meaning species and ecosystems are unevenly conserved.
- Only 8.5% of the world's land is well-connected as well as protected.

- There is little evidence that protected and conserved areas are equitably governed. Governance assessments have been reported for only 0.2% of coverage on land and less than 0.01% at sea. Less than 4% of coverage is governed by Indigenous Peoples and local communities.
- Beyond protected and conserved areas, Indigenous and traditional territories cover at least an additional 13.6% of global terrestrial areas.

What Needs to be Done?

- There is significant reason for optimism. In 2022, Parties to the Convention on Biological Diversity agreed to develop a consistent approach to tracking progress that may help focus attention on all elements of Target 3.
- They also enshrined clear safeguards for human rights within the Global Biodiversity Framework. These shifts in approach could be revolutionary, allowing for systems of protected and conserved areas that truly work for both people and nature.
- The Protected Planet Report 2024's findings have a number of implications that may guide countries in making the urgent changes needed to achieve Target 3.
 - First, accelerated progress on increasing the coverage of protected and conserved areas must be accompanied by equivalent efforts to ensure these areas are well-connected and in the right places.
 - Secondly, there is a clear need to give appropriate recognition and support to Indigenous and traditional territories.
 - Third, commitments must be met to provide international financing to developing countries, to fund the expansion of protected and conserved areas.
 - Finally, data must be made available promptly at the global level, including on aspects of the Target 3 that cannot yet be fully assessed.

PRELIMS SPECIAL

About the Protected Planet Initiative

- Protected Planet is the authoritative source of data on protected areas and other effective area-based conservation measures (OECMs).
- It exists due to the extensive efforts of governments and other stakeholders to map, monitor and report data on protected areas and OECMs.
- Protected Planet provides the basis for monitoring and reporting on progress towards international environmental targets such as Target 3 of the Kunming-Montreal Global Biodiversity Framework (GBF) and the 2030 Sustainable Development Goals.
- Approximately every two years, UNEP-WCMC releases the Protected Planet Report on the status of the world's protected areas and implications for meeting international goals and targets.

About UNEP-WCMC

- The UN Environment Programme World Conservation Monitoring Centre (UNEP-WCMC) is a global centre of excellence on biodiversity and nature’s contribution to society and the economy.
- UNEP-WCMC works at the interface of science, policy and practice to tackle the global crisis facing nature and support the transition to a sustainable future for people and the planet.

About the International Union for Conservation of Nature (IUCN)

- IUCN is a membership Union composed of both government and civil society organisations.
- It harnesses the experience, resources and reach of its more than 1,400 Member organisations and the input of more than 16,000 experts.
- IUCN is the global authority on the status of the natural world and the measures needed to safeguard it.

About the IUCN World Commission on Protected Areas (WCPA)

- IUCN’s World Commission on Protected Areas (WCPA) is the premier network of protected and conserved area expertise, with over 3,000 members in 140 countries.
- Through these experts, WCPA provides scientific, technical and policy advice, and advocates for systems of marine, freshwater and terrestrial protected areas and other effective area-based conservation measures (OECMs) that result in positive outcomes for biodiversity conservation.
- WCPA helps governments, Indigenous Peoples and local community networks and other agencies to plan protected

and conserved areas and integrate them into all sectors by strengthening capacity and investment; and by convening diverse stakeholders to address challenging issues.

- For over 60 years, IUCN and WCPA have been driving global action on protected and conserved areas.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

Q. Consider the following statements regarding World Commission on Protected Areas (WCPA)

1. WCPA is an initiative of International Union for Conservation of Nature (IUCN).
2. WCPA provides scientific, technical and policy advice for systems of protected areas.
3. It also helps indigenous peoples to plan protected and conserved areas.

Which of the above given statements is/are correct?

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

(p) Answer

Descriptive Question

Q. Critically analyze the findings of the Protected Planet Report, 2024 regarding the present status of protected areas. What measures can be taken to ensure effective conservation? [10 marks] [150 words]

PERSONALITIES IN NEWS

CV RAMAN

Why in News: Recently on November 7, the birth anniversary of CV Raman was celebrated.

Key Details

- Indian Physicist Sir CV Raman was born on November 7, 1888. His full name is Chandrashekhara Venkata Raman.
- In 1930, Professor CV Raman was awarded the Nobel Prize in Physics for the Raman Effect. He became the first person of Asia descent to win this prestigious award.
- The Nobel Prize was awarded to the professor for his research on the scattering of light and the discovery of the Raman effect.
- Raman's early fascination with acoustics became the basis of his later insights into the nature of the light quantum.
 - His work on light scattering played an important role in the experimental verification of quantum mechanics.



About Raman Effect

- Raman scattering or the Raman effect is the inelastic scattering of photons by matter, meaning that there is both an exchange of energy and a change in the light's direction.
- Typically this effect involves vibrational energy being gained by a molecule as incident photons from a visible laser are shifted to lower energy. This is called *normal Stokes-Raman scattering*.
- The effect is exploited by chemists and physicists to gain information about materials for a variety of purposes by performing various forms of Raman spectroscopy.

Applications of Raman Scattering

- **Analyzing carbon materials:** Raman spectroscopy has become the mainstream technique for analyzing carbon containing materials like graphene, CVD diamonds, and carbon nanotubes. Raman spectroscopy can check for defects or precisely characterize the materials by determining the exact kind of chemical bonding.
- **Materials science and researching new materials:** Raman is a powerful tool for studying materials, whether that involves quality checking, failure analysis, or research.

Raman spectroscopy can be used to identify unknown materials, quantify the polymer fillers and additives during the manufacturing process, or characterize bio materials to better understand their properties.

- **Pharmaceuticals:** Raman spectroscopy is a great tool for the pharmaceutical industry for any stage in drug production - from development to final product verification. Before drug development research really begins, it can be used to identify components in already existing formulations for reverse engineering.
- **Forensics:** Raman spectroscopy has some big advantages that make it a useful technique in the field of forensics. Since Raman can analyze materials inside packaging, it is very useful for investigating counterfeit or illicit drugs that are inside containers.
- **Energy Technology:** When researching materials for new technologies like improved batteries and solar cells, chemical analysis plays a vital role. Raman spectroscopy is a useful tool for producing solar cells, since its capable of probing the structure of silicon.

Timeline

1904	Graduated at the age of 16. Earned a degree in BA from the University of Madras.
1917	Allotted a professorship at the University of Calcutta. <ul style="list-style-type: none"> • In 1917, he was appointed the first Palit Professor of Physics by Ashutosh Mukherjee at the Rajabazar Science College.
1924	Elected as a part of the Royal Society and later in the year 1930 was knighted by the British.
1933	Became first director of the Indian Institute of Science.
1948	Founded the Raman Research Institute.

EXPECTED QUESTIONS FOR UPSC CSE

Prelims MCQ

Q. The principle of Raman spectroscopy can be applied in:

1. Carbon containing materials like graphene, nanotubes
2. Drugs development

3. Producing solar cells

Which of the above given statements is/are correct?

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

(d) :Answer

Descriptive Question

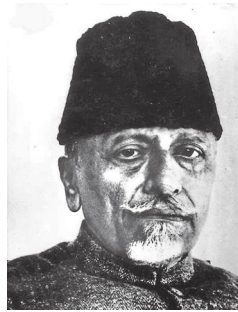
Q. Discuss the key features of the Raman Effect and its various applications in modern science. [10 marks] [150 words].

MAULANA ABUL KALAM AZAD

Why in News: National Education Day honoring the birth anniversary of Maulana Abul Kalam Azad was celebrated on November 11.

Key Details

- National Education Day is celebrated on November 11 every year in honor of Maulana Abul Kalam Azad, the first Education Minister of independent India and a prominent educationist. This day highlights the importance of education in shaping India's future.
- **Relevance of the day:** This day serves as a reminder of his work promoting scientific knowledge and basic and secondary education in India.
- It also provides a chance to reflect on how important education is in shaping the nation's future, fostering creativity and innovation.



About Abul Kalam Azad

- Born on November 11th 1888 Azad was an Indian independence activist, writer and a senior leader of the Indian National Congress.
- Following India's independence, he became the First Minister of Education in the Indian government.

As Independence Activist

- He published works critical of the British Raj and espousing the causes of Indian nationalism.
- Azad became the leader of the Khilafat Movement, during which he came into close contact with the Indian leader Mahatma Gandhi.
- Azad became an enthusiastic supporter of Gandhi's ideas of non-violent civil disobedience, and worked to organise the non-co-operation movement in protest of the 1919 Rowlatt Acts.
- In 1923, at an age of 35, he became the youngest person to serve as the President of the Indian National Congress.
- Azad was one of the main organizers of the Dharasana Satyagraha in 1931, and emerged as one of the most

important national leaders of the time, prominently leading the causes of Hindu-Muslim unity as well as espousing secularism and socialism.

- He served as Congress president from 1940 to 1945, during which the *Quit India* rebellion was launched.

As a Writer

- As a young man, Azad composed poetry in Urdu, as well as treatises on religion and philosophy.
- He rose to prominence through his work as a journalist, publishing works critical of the British Raj.
- He also worked for Hindu-Muslim unity through the *Al-Hilal* newspaper.

As Educationist

- In October 1920, Azad was elected as a member of foundation committee to establish Jamia Millia Islamia at Aligarh in U. P.
- He founded prestigious educational institutions such as the University Grants Commission (UGC) and the All India Council for Technical Education (AICTE).
- Under his direction, a number of educational establishments were founded, including the Council of Scientific and Industrial Research (CSIR), Sahitya Academy, Lalit Kala Academy, Sangeet Natak Academy, and the Indian Council for Cultural Relations (ICCR).
 - He also founded the first Indian Institute of Technology, IIT Kharagpur.

EXPECTED QUESTIONS FOR UPSC CSE

Prelims MCQ

Q. Al-Hilal newspaper during pre-independence times was published by?

- (a) Muhammad Ali Jinnah (b) Abdul Ghaffar Khan
 (c) Syed Ahmad Khan (d) None of The Above

(d) :Answer

Descriptive Question

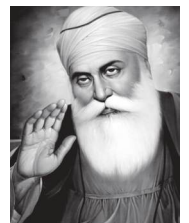
Q. Discuss the contributions made by Maulana Abul Kalam Azad to the field of India's freedom struggle and education. [10 marks] [150 words]

GURU NANAK DEV JI

Why in News: 555th birth anniversary of Guru Nanak Dev Ji was celebrated as Guru Nanak's Prakash Utsav, or Guru Parab on 15 November 2024.

Key Details: About Guru Nanak Dev Jayanti

- **Date:** On Kartik Purnima, ie., the full moon day of the Kartik month as per the



Hindu calendar, which falls in the month of November (as per the Gregorian calendar).

- Guru Nanak Jayanti is one of the holiest festivals of the Sikh community. Also known as Gurburab, this festival marks the birth anniversary of the first guru and founder of Sikhism, Guru Nanak Dev.
- **Celebrations**
 - Almost a fortnight before the festival, Sikhs perform Prabhat Pheris (early morning processions) to mark the celebration.
 - On the day of the festival, several rituals are performed in honour of the guru. These include the Asaa-ki-Vaar (morning hymns), Kirtan (hymns from the Sikh scriptures) and Katha (exposition of the scripture).
 - The special Langars (free community lunch) of the gurudwaras form a big attraction of this day and attract people from far and wide.

Guru Nanak Dev Ji

- Guru Nanak Dev Ji was the founder of Sikhism and the first Sikh guru. He is popularly known as Baba Nanak. There are ten Sikh Gurus. His birthday is celebrated as Guru Nanak Jayanti or Gurburab.
- Guru Nanak Dev Ji was born in a village in Lahore which is now in Pakistan.
- From a very early age, he started visiting all religious places. It is said that he went to places to spread his ideas on religion.
- He mixed the message of humanity from every religion. He was greatly influenced by Sufi teachings.
- The teachings of Guru Nanak Ji are written in 'Guru Granth Sahib'. It is written in Gurumukhi language. It is a holy book for Sikhs who worship it as a Guru.
- **Teachings of Guru Nanak Dev Ji**
 - There are three main teachings.
 - ◆ **Naam Japo:** Meditate on the name of God.
 - ◆ **Keerat Karo:** Work hard and live an honest life with high moral
 - ◆ **Vand Chhako:** Share your food, possessions, and wealth with the needy.
 - Sharing and helping those who are poor, earning money without cheating anyone and to repeat the name of god to control one's weaknesses.
 - Weaknesses like anger, greed, pride, the ego can be controlled if one remembers god every day.
- **Idea on God**
 - Guru Nanak Ji believed that there is only one god and he is inside everyone.
 - He said that God is the only truth in the world.
 - He spread the idea of equality, love, truth and goodness.
 - He was against rituals and priests and said that everyone should pray to God directly.

- Guru Nanak Ji stands for humanity.
- He spread love through Sikhism.
- Sikh people follow him and try to help everyone. In all Gurudwaras, food is served to everyone for free.

PRELIMS SPECIAL

List of Sikh Gurus

1. Guru Nanak
2. Guru Angad
3. Guru Amar Das
4. Guru Ram Das
5. Guru Arjan
6. Guru Hargobind
7. Guru Har Rai
8. Guru Har Krishan
9. Guru Tegh Bahadur
10. Guru Gobind Singh
11. Guru Granth Sahib - Holy Book - Eternal Guru

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

Q. Consider the following religious personalities

- | | |
|-----------------|---------------------|
| 1. Guru Nanak | 2. Guru Ram Das |
| 3. Guru Har Rai | 4. Guru Har Krishan |

How many of the above religious personalities are among the list of Prominent Gurus of Sikhism?

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

Answer: (d)

LALA LAJPAT RAI

Why in News: Lala Lajpat Rai was remembered on his 96th Death Anniversary.

Key Details

- **Introduction**
 - Lala Lajpat Rai (28 January 1865 — 17 November 1928) was an Indian revolutionary, politician, and author, popularly known as Punjab Kesari. (Lion of Punjab).



- He was one of the three members of the Lal Bal Pal trio.
- He died of severe head trauma injuries during a baton charge by police in Lahore, when he led a peaceful protest march against the British Simon Commission recommended Indian constitutional reforms.
- **As an Indian Revolutionary**
 - After joining the Indian National Congress and taking part in political agitation in Punjab, Lala Lajpat Rai Wadwal was deported to Mandalay.
 - He was elected President of the Indian National Congress in the Calcutta Special Session of 1920.
 - In 1921, he founded Servants of the People Society, a non-profit welfare organisation, in Lahore, which shifted its base to Delhi after partition, and has branches in many parts of India.
 - When the Commission visited Lahore on 30 October 1928, Lajpat Rai led a non-violent march in protest against it and gave the slogan "Simon Go Back!".
 - After being severely injured, Rai subsequently addressed the crowd and said "I declare that the blows struck at me today will be the last nails in the coffin of British rule in India."
 - In the United States he had founded the Indian Home Rule League in New York City.
- **As an Author**
 - While in the United States he started a monthly journal and the Young India and Hindustan Information Services Association.
 - To shape the political policy of India to gain independence, he also practised journalism, and was a regular contributor to several newspapers including The Tribune.

EXPECTED QUESTIONS FOR UPSC CSE

Prelims MCQ

Q. Consider the following statements regarding Lala Lajpat Rai:

1. He was popularly known as Punjab Kesari.
2. He was elected president of Indian National Congress in the Calcutta Special Session of 1920.
3. He was regular contribute to the several newspapers including The Tribune.

Which of the given statements is/are correct?

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

Answer: (d)

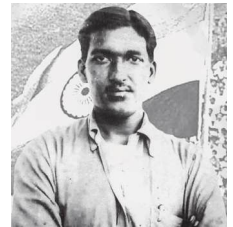
Descriptive Question

Q. Analyze the significance of Lala Lajpat Rai in the context of India's freedom struggle. [10 marks] [150 words]

ASHFAQULLA KHAN

Why in News: Nation pays tribute to freedom fighter Ashfaqulla Khan on his 124th birth anniversary.

Key Details



- Ashfaqulla Khan was born in 1900 at Shahjahanpur, Uttar Pradesh and was a freedom fighter who actively fought against the British forces.
- After the 'Chauri Chaura' incident in 1922 when Mahatma Gandhi decided to withdraw the movement, Ashfaqulla was dissatisfied. Along with his friends, he decided to form an organization named Hindustan Republican Association (HRA) in 1924 to organize an armed revolution to achieve freedom.
- He was later arrested for his involvement in 'Kakori Train Robbery' and sentenced to death. He was hanged on 19th December, 1927 at the Faizabad Jail.
- In his short but eventful revolutionary career, Ashfaqullah wrote several poems and couplets under the pen name of 'harsat' and 'warsi', some of which became the battle cry for future revolutionaries.

Kakori Train Robbery

- The train robbery at Kakori was the HRA's first major action, in August 1925. The Number 8 Down Train ran between Shahjahanpur and Lucknow.
- On a fateful day, it carried treasury bags meant to be deposited in the British treasury in Lucknow.
- The revolutionaries planned to rob this money, which they believed legitimately belonged to Indians anyway. Their objective was both to fund the HRA and garner public attention for their work and mission.
- On August 9, 1925, as the train was passing the Kakori station, about 15 km from Lucknow, Rajendranath Lahiri, a member of the HRA who was already seated inside, pulled the chain and stopped the train.
- Subsequently, around ten revolutionaries, including Ram Prasad Bismil and Ashfaqullah Khan, entered the train and overpowered the guard. They looted the treasury bags (containing approx Rs 4,600) and escaped to Lucknow.
- Due to a misfiring Mauser gun, one passenger (a lawyer named Ahmad Ali) was killed during the robbery, harming the revolutionaries' intentions to elicit a positive public reaction.

- Aftermath
 - The British authorities were enraged, undertaking a violent crackdown and soon arresting many members of the HRA.
 - Bismil was arrested in October, supposedly after two members of the HRA betrayed him.
 - Ashfaqullah escaped to Nepal and then Daltonganj (in present-day Jharkhand). He would be arrested a year later.
 - Out of the forty men arrested by the British, four were handed death sentences, while others received lengthy prison terms.
 - The only major leader of HRA at this time who evaded arrest was Chandrashekhar Azad.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

Q. Consider the following revolutionaries of Indian freedom struggle:

1. Rajendranath Lahiri
2. Ram Prasad Bismil
3. Ashfaqulla Khan

How many of the above revolutionaries were involved in Kakori train robbery?

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

Answer: (c)

DESHBANDHU CHITTARANJAN DAS

Why in News: Parliamentarians paid tributes to Deshbandhu Chittaranjan Das on his birth anniversary.

Key Details: About C R Das

- Chittaranjan Das, a prominent freedom fighter from Bengal, affectionately known as 'Deshbandhu' (friend of the nation) was born in Kolkata, he was the founder of Swaraj Party.
- He was the President of Indian National Congress in 1922 when the Congress session was held in Gaya (Bihar).
- Graduating from Presidency College, Calcutta Chittaranjan Das went to England, where he joined the Inner Temple and was called to the Bar in 1894. On return to Calcutta, he enrolled as a Barrister of the Calcutta High Court.
- His early political ideas were influenced by the great nationalists of Bengal, particularly Bankim Chandra and 'Rashtraguru' Surendernath Banerjee.



- The turning-point in his career came when he was called upon to appear on behalf of Aurobindo Ghose in the Alipore Bomb Case (1908). It was due to his brilliant handling of the case that Aurobindo was acquitted.
- Chittaranjan was the defence counsel in the Dacca Conspiracy Case (1910-11). He earned fame for his handling of both civil and criminal law.
- His advent into politics in 1917 took place at a crucial moment. He supported the election of Mrs. Annie Besant as the first woman President of the INC (1917-18) and also took part in the agitation against the government policy on internment and deportation under the Defence of India Act.
- In 1918, both at the Congress special session in Bombay and at the Annual Session in Delhi, Das opposed the scheme of Montagu-Chelmsford Reforms as wholly inadequate and disappointing.
- In 1919, Das went to the Punjab as a member of the non-official Jallianwala Bagh Enquiry Committee. The other members of the committee were Mahatma Gandhi and Motilal Nehru.
- With the suspension of the Non-Cooperative Movement, Deshbandhu endeavoured to give a new orientation to Indian politics through his Council-Entry programme, i.e. 'Non-Cooperation from within the Councils'.
 - He however met with vehement opposition from Gandhi and the 'No-changers'.
 - At the Gaya Congress, C. Rajagopalachari led the Council-Entry opposition. His motion being lost, Deshbandhu resigned the presidentship.
- Thereafter, he organised the Swarajya Party within the Congress in collaboration with Pt. Motilal Nehru, the Ali brothers, Ajmal Khan, Vittihalbhai Patel (Sardar Patel's elder brother) and others.
 - It was initially known as the Congress-Swaraj-Khilafat Party. In spite of the bitter criticism launched by the 'No-changers', Jalpaiguri Conference was organised by the Swarajists in 1923.
- Through the effort of the Swarajists, Maulana Azad was elected President of the Congress Special Session at Delhi, where the programme of Council-Entry was approved. The programme was later confirmed at the Cocanada Session 1923 presided over by Maulana Mohammad Ali.
- Chittaranjan Das died too early when he was only 55 years old.

EXPECTED QUESTIONS FOR UPSC CSE

Prelims MCQ

Q. Consider the following statements regarding Chittaranjan Das:

1. CR Das was founder of Swaraj party.

- 2. He is affectionately known as 'Deshbandhu'.
- 3. He was president of Gaya session of congress in 1922.

How many of the above statements are correct?

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

(d) :Answer

Descriptive Question

Q. Discuss the contribution of Chittaranjan Das in India's freedom struggle. [10 marks] [150 words]

RANI CHANNAMMA

Why in News: Department of Posts issues a Commemorative Stamp to mark 200 Years of Kittur Vijayotsava.

Key Details

- On the 200th anniversary of Kittur Vijayotsava a commemorative Postage stamp was released at the historic Kittur Rani Channamma Stage, Kittur Fort Premises on 23rd October, 2024. This grand event commemorated Rani Channamma's glorious victory on 23rd October, 1824 against British rule.
- The commemorative stamp designed by Shri Brahm Prakash features a striking portrait of Rani Channamma, on her horse drawing a sword, fighting against the British, embodying her strength and bravery. Surrounding her image are forts symbolizing the rich heritage of Kittur and the historic battle of Kittur.
- Accompanying the artwork is the inscription "Kittur Vijayotsava - 200 Years" to honor this historic milestone, making it a poignant tribute to her enduring legacy in India's freedom fight.



About Rani Channamma

- Chenamma was born on October 23, 1778, in Kagati, a small village in present-day Belagavi district in Karnataka.
- At the age of 15, she married Raja Mallasarja of Kittur, who ruled the province until 1816. After Mallasarja's death in 1816, his eldest son, Shivalingarudra Sarja, ascended the throne. But it wasn't long before Shivalingarudra's health

- started deteriorating 200 Years after Kittur Vijayotsava CAA Kittur needed an heir apparent to survive.
- However, Shivalingarudra had no natural heir and Chennamma too had lost her son. Before his death in 1824, Shivalingarudra adopted a child, Shivalingappa, as the successor.
- However, the British East India Company refused to recognise Shivalingappa as the successor of the kingdom under the 'doctrine of lapse'.
- Under the doctrine, any princely state without a natural heir would collapse and would be annexed by the Company, and John Thackeray, the British official at Dharwad, launched an attack on Kittur in October 1824. Thackeray ordered two guns of horse artillery and a company of infantry to enter the fort (Book Ranis and the Raj by historian Queeny Pradhan).
- The Kittur army, under the leadership of Rani Chennamma, retaliated and opened tremendous fire. Thackeray was killed and Rani Chennamma emerged victorious. However, this victory was short-lived.
- On December 3, 1824, the British army attacked the Kittur Fort and captured it. Rani Chennamma and her family were imprisoned and jailed at the fort in Bailhongal, where she died on February 21, 1829.

EXPECTED QUESTIONS FOR UPSC CSE

Prelims MCQ

- Q. With reference to Rani Channamma, consider the following statements:
1. Rani Channamma fought against Mughals invasion to protect fort of Kittur.
 2. Recently Department of Post released commemorative postage stamp to honor 200 years of Kittur Vijayotsava.

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

(b) :Answer

Descriptive Question

Q. Discuss the role of Rani Channamma of Kittur in challenging British East India Company's Doctrine of Lapse. [10 marks] [150 words].

ARTICLES FROM YOJANA

NOVEMBER - 2024

75 YEARS OF THE INDIAN CONSTITUTION: A JOURNEY TOWARDS ABSOLUTE GLORY

Introduction

The **Indian Constitution**, the world's **longest written constitution**, came into effect on **January 26, 1950**, amidst complex socio-political conditions. Despite facing challenges, it has remained the **cornerstone of the nation**, upholding **justice, liberty, and equality** for all citizens. Through the years, the Constitution has evolved to meet changing societal needs, guided by the ideals of India's **freedom struggle** and the **vision of its framers**. Each amendment and judicial interpretation have helped adapt the Constitution to contemporary issues, ensuring it remains relevant and robust.

Foundational Principles and Vision

Adoption and Core Values

- **Date of Adoption:** November 26, 1949 (celebrated as Constitution Day); formally implemented on January 26, 1950 (Republic Day).
- **Democratic Spirit:** The Constitution enshrines **justice, liberty, equality, and fraternity**, establishing a framework for governance that respects **individual rights** and embraces **diversity**.
- **Born from Struggle:** Emerging from the shadows of colonial rule and the freedom movement, it stands as a pledge for democratic governance and protection of **individual freedoms**.

Role of Civil Society

- **Guardians of Constitutional Values:** Civil society organizations have been vital in promoting **human rights, environmental sustainability, and social justice**.
- **Championing Marginalized Voices:** They play an essential role in representing those whose voices might otherwise go unheard, reinforcing a vibrant democratic spirit and ensuring collective action to fulfill constitutional promises.

Key Milestones in Constitutional Development

- **Government of India Act, 1935:**
 - Established the **federal structure** that influenced later constitutional discussions.

- **Cabinet Mission Plan, 1946:**
 - Led to the formation of the **Constituent Assembly**, with representatives from various regions and backgrounds.
- **Objective Resolution (13 December 1946):**
 - Outlined the Constitution's guiding principles of **justice, liberty, equality, and fraternity**, which became the foundation for drafting the document.
- **Drafting Committee (1947):**
 - Chaired by **Dr. B. R. Ambedkar**, the committee meticulously crafted the Constitution, balancing the **aspirations of a diverse population** with the need to address the **historical injustices of colonialism**.
- **Constitution's Adoption (26 November 1949):**
 - Marked a significant milestone in India's history, celebrated annually as **Constitution Day**.
- **Enactment on Republic Day (26 January 1950):**
 - Signified India's transition to **self-governance**; the Constitution became a symbol of sovereignty, establishing a nation built on democratic values.
- **Core Features:**
 - **Fundamental Rights:** Provided individual freedoms and protections against social discrimination.
 - **Directive Principles of State Policy:** Set social and economic objectives for the state, emphasizing not only **political democracy** but also **social equity**.

Evolution of Constitutional Values and Amendments

Need for Constitutional Adaptability

- According to legal scholar **Harvey Walker**, a constitution must evolve from the **aspirations of its people** to remain relevant. The Indian Constitution reflects this adaptability, balancing **foundational values** with changing societal needs.
- Debates in the Constituent Assembly often referenced **A. V. Dicey**, who argued that inflexibility could lead to **violent upheaval**.

Amendments as Reflection of Changing Needs

- **High Amendment Rate:** The Indian Constitution, amended over 100 times, demonstrates its adaptability, especially in contrast with the less frequently amended American and Australian constitutions.

- **Basic Structure Doctrine (Kesavananda Bharati Case, 1973):**
 - The **Kesavananda Bharati v. State of Kerala** ruling asserted that while Parliament could amend the Constitution, it could not alter its **fundamental framework**.
 - Core elements like **democracy, federalism, and separation of powers** were identified as integral to the **basic structure**.
- **Minerva Mills Case (1980):**
 - Reaffirmed the **balance between fundamental rights and directive principles**, ruling that amendments violating this balance were unconstitutional and emphasizing the role of **judicial review**.

Landmark Cases Enhancing Fundamental Rights

- **Maneka Gandhi v. Union of India (1978):**
 - Expanded the scope of **Article 21**, interpreting the **right to life and personal liberty** to encompass dignity and broadened protections, including rights to **privacy, fair trial, legal aid, and environmental safeguards**.
- **Golden Triangle (Articles 14, 19, and 21):**
 - Often invoked by the judiciary to protect **fundamental rights** and ensure that justice prevails across various social dimensions.

Landmark Judicial Rulings in the Constitutional Journey

- **Visakha v. State of Rajasthan (1997):**
 - Established guidelines to prevent **sexual harassment at the workplace**, reinforcing women's fundamental rights under **Articles 14, 19, and 21**.
- **Shaira Bano v. Union of India (2017):**
 - Declared **instant triple talaq** unconstitutional, upholding gender justice for Muslim women.
- **Navtej Singh Johar v. Union of India (2018):**
 - Decriminalized consensual homosexuality, ensuring equality and dignity for the LGBTQ+ community under **Article 14**.
- **Joseph Shine v. Union of India (2018):**
 - Struck down the **adultery law** as unconstitutional, advancing gender equality by recognizing women's **right to dignity**.
- **Justice K.S. Puttaswamy v. Union of India (2017):**
 - Recognized the **right to privacy** as a fundamental right under Article 21, with significant implications for **data protection and individual freedom** in the digital age.
- **Abrogation of Article 370 (2019):**
 - Removed **special status of Jammu and Kashmir**, marking a significant shift by integrating it fully into the Union of India. The Supreme Court ruled that Article 370 was a provisional measure and did not confer sovereignty.

Judiciary's Role in Expanding Constitutional Protections

- The judiciary has played a pivotal role in **interpreting and expanding the Constitution's reach**, especially in matters related to **gender equality, environmental protection, and marginalized communities**.
- **A Living Document:** Through dynamic interpretation, the Constitution has evolved to meet modern-day needs, reaffirming its **core values** while addressing contemporary challenges.

Conclusion

The **Indian Constitution**, after 75 years, continues to inspire and guide the nation, symbolizing the spirit of democracy and resilience. This milestone serves as a reminder of the work still needed to address **inequities** and promote **constitutional rights** for all citizens. Education and awareness about constitutional entitlements are essential for empowering individuals and fostering a society that respects **justice, equality, and liberty**.

ROLE OF INDIAN CONSTITUTION IN PROMOTING SOCIAL JUSTICE

Introduction

- The **concept of transformative constitutionalism** necessitates **state intervention** to achieve **social justice**.
- Throughout the **nationalist movement**, debates underscored the **importance of ideas in history**.
- **Fundamental rights** were established to promote **social revolution**, aiming for a society where **all citizens enjoy freedom** from compulsion or constraint imposed by the **state or society**.
- A key purpose of the **Indian Constitution** is to enable the **creation of a just society**, with **social justice** as a central goal.

DR. B. R. AMBEDKAR: ARCHITECT OF INDIAN DEMOCRACY, AND ADVOCATE FOR SOCIAL EQUALITY

Born on 14 April 1891 in Mhow, Madhya Pradesh

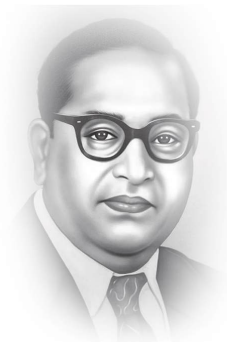
Was an ardent patriot and the saviour of the oppressed, women and poor

Set up the Bahishkrit Hitkarini Sabha (Outcastes Welfare Association), for spreading education and culture amongst the downtrodden

Attended all the three Round Table Confererices in London

Was elected as Chairman of the Drafting Committee of the Constitution of Independent India and known as the architect of Constitution of India

Became the first Law Minister of Independent India. Advocated democracy in every field: Social, Economic and Political



2. Role of the Constitution as a Social Revolution Instrument

- **Scholars' View on Indian Constitutionalism:**
 - Scholars like **Granville Austin** view the Indian Constitution as an **instrument of social revolution**.
 - The **Constituent Assembly** recognized the **Constitution's power** to reshape society.
- **Distinction from Liberal Constitutionalism:**
 - **Indian Constitutionalism** (20th century) differs from **American Constitutionalism** (18th century), as highlighted by **Uday Mehta**.
 - American Constitutionalism focused on **mistrust and restriction of political power**.
 - **Indian Constitutionalism** represents a **revolutionary rupture** from historical norms, targeting **caste and religion** transformation through political power.
- **Rajiv Bhargava's Perspective:**
 - Bhargava notes the **Indian Constitution's intent** to free society from **social hierarchies**.
 - It represents a **milestone in constitutional theory**, empowering historically marginalized groups.

3. Contrasting Approaches to Social Justice

- **Transformative Constitutionalism:**
 - Advocates **state intervention** in society to foster social justice.

4. Gandhian Approach:

- **Gandhi** believed in **moral transformation** starting from individuals, extending to society.
- Emphasis on **limited government intervention** and **personal responsibility**.
- **S.N. Agrawal** supported a **minimal state** with high **individual responsibility**.
- **European and American Influences:**

- The **Constituent Assembly** debated over adopting a **traditional or non-traditional** approach for facilitating social change.
- **K.M. Pannikar** stressed the **Constitution's commitment** to reform society based on new principles.

4. Fundamental Rights as Tools of Social Revolution

- **Articles Promoting Social Justice:**
 - **Article 17:** Abolishes **untouchability**.
 - **Article 15(2):** Ensures **non-discrimination** in public spaces (based on religion, race, caste, sex, place of birth).
 - **Article 23:** Prohibits practices like **bonded labor** and **human trafficking**.
- **Scope of Rights:**
 - **Fundamental Rights** extend beyond state actions to **civil society**.
 - **Baxi** highlights how the Constitution empowers the state to **intervene** against cruelty in civil society.
- **Empowerment of Marginalized Groups:**
 - The Constitution mandates **legislative reservations** and **quotas in education and employment** for **Scheduled Castes, Scheduled Tribes, and disadvantaged classes**.

5. Key Provisions of the Constitution Supporting Social Justice

- **We the People:**
 - **Preamble** highlights **collective identity**, equality, and status irrespective of caste, religion, or ethnicity.
 - Symbolizes a **break from colonial control** and emphasizes **independence**.
- **Universal Adult Franchise:**
 - **One person, one vote** policy symbolizes **equality** in a hierarchical society.
 - **Categorical Principle of Inclusion** grants **full citizenship** based solely on **adulthood**.
- **Abolition of Untouchability:**
 - **Article 17** **outlaws untouchability**, eliminating **historical caste-based discrimination**.
- **Right to Equality:**
 - Recognizes **substantive equality**, going beyond **formal equality**.
 - **Special protective laws** for marginalized groups.
- **Directive Principles of State Policy:**
 - Aim to **free Indian masses** from social and natural constraints, promoting **social revolution**.

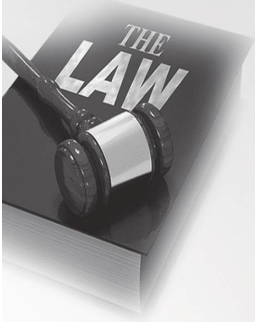
UNDER THE TRANSGENDER PERSONS (PROTECTION OF RIGHTS) ACT, 2019, THE FOLLOWING PENALTIES ARE OUTLINED FOR VIOLATIONS OF THE RIGHTS OF TRANSGENDER PERSONS

- **Discrimination:** Any person or establishment discriminating against transgender persons in matters such as employment, education, healthcare, and access to public spaces is punishable under the Act.
- **Physical, Sexual, Verbal, Emotional, or Economic Abuse:** The Act criminalizes any kind of abuse towards transgender persons and provides for punishment, which can include:
- **Imprisonment:** Imprisonment for a term of six months to two years.
- **Fine:** The convicted person may also be liable to a fine, the amount of which is determined by the court.



New Criminal Laws

SAFEGUARDING RIGHTS
& STRENGTHENING JUSTICE



- Police cannot detain without explanation for more than 24 hours.
- An arrested person can be produced before any magistrate, regardless of jurisdiction.
- Section 170 of BNSS provides that detention should not exceed 24 hours when police makes an arrest to prevent commission of a cognizable offense.



6. Conclusion

- Achievement of Transformation by Indian Constitutionalism:
 - Liberal Modernist Model: Argues that traditional identities persist, indicating limited success in achieving social transformation.
 - Liberal Communitarian Model: Sees group rights as fostering unity under a democratic framework; caste and religion have become more institutionalized and democratic.
 - Transformative Constitutionalism vs. Liberal Constitutionalism: The Indian state actively intervenes to empower oppressed groups, unlike non-interventionist liberal models, enabling egalitarian social change.



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ARTICLES FROM KURUKSHETRA

NOVEMBER 2024

SOCIAL SECURITY - VITAL FOR DEVELOPMENT AND PROSPERITY

1. Introduction to Social Security in India

- India's social security system is extensive, encompassing social insurance, social assistance, right to education, and right to food.
- These schemes primarily originate at the central government level, with state governments supplementing in some areas.
- Social security ensures dignified and proud living by covering essential aspects of life for individuals.

2. Definition and Scope of Social Protection

- **The International Labour Organization (ILO)** defines social protection as a set of policies to reduce poverty, vulnerability, and social exclusion across the life cycle.
- Components of Social Protection:
 - i. Child and Family Benefits
 - ii. Maternity Protection
 - iii. Unemployment Support
 - iv. Employment Injury Benefits
 - v. Sickness Benefits
 - vi. Health Protection
 - vii. Old-age Benefits
 - viii. Invalidity/Disability Benefits
 - ix. Survivor's Benefits

3. Global Perspectives on Social Security

- **World Bank Perspective:**
 - Views well-designed social protection programs as high-return investments.
 - A dollar invested in poor families yields a multiplier effect of \$2.49 in the local economy.
 - Recognizes social security as a powerful tool for meeting human rights, basic needs, and supporting active societal engagement.
- **Sustainable Development Goals (SDGs):**
 - SDG Goal 1 emphasizes "ending poverty in all its forms" and advocates for robust social protection systems globally.

• Universal Declaration of Human Rights:

- Article 22 affirms the right to social security for dignity and personal development.
- Reaffirmed by the 2012 International Labour Conference commitment to universal social protection floors.

4. Need for Universal Social Protection

• UN's 56th Commission on Social Development:

- Highlights that 71% of the global population lacks adequate protection, with over 750 million in extreme poverty.
- Only 29% of the global workforce has comprehensive social protection.

• World Social Protection Report 2024-26 (ILO):

- Coverage has grown to 52.4%, but significant gaps persist, especially for children and women.
- Social protection enhances economic growth, social inclusion, and political stability by reducing inequalities and fostering social cohesion.

5. Social Security Measures in India

A. Right to Education

- Education is a fundamental right (Article 21A).
- **Right to Education (RTE) Act, 2009:** Ensures free and compulsory education for children aged 6-14.
- **Key Initiatives:**
 - **Sarva Shiksha Abhiyan:** Targets education for 192 million children in 1.1 million habitations.
 - **Samagra Shiksha Scheme:** Covers education from pre-school to class XII, ensuring quality and inclusive education.
 - **State-level Initiatives:** States like Karnataka, Uttar Pradesh, and Maharashtra have extended free education to girls.

B. Right to Food

- **National Food Security Act (NFSA), 2013:** Entitles up to 75% of rural and 50% of urban populations to subsidized food.
- **Key Programs:**
 - **PM Gareeb Kalyan Ann Yojana:** Provided additional food grains during COVID-19.
 - **Antyodaya Anna Yojana:** Focuses on food security for the most vulnerable sections.

- **Mid-Day Meal Scheme (PM POSHAN):** Ensures nutrition for children, impacting 11.8 crore students in 11.2 lakh schools.
- **State Initiatives:** States like Tamil Nadu, Rajasthan, and Karnataka provide subsidized cooked meals.

C. Health Insurance for the Poor

- **Ayushman Bharat Pradhan Mantri Jan Aarogya Yojana (AB-PMJAY):**
 - World's largest health insurance scheme covering 12 crore families, providing benefits of up to Rs 5 lakh per family annually.
 - Recently expanded to cover all senior citizens aged 70 and above.

D. Right to Work and Employment

- **Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA):**
 - Provides 100 days of wage employment per year to rural households.
- **Code on Social Security 2020:**
 - Introduces protection for unorganized, gig, and platform workers, covering healthcare, income security, maternity benefits, and other social security measures.

6. Social Security for Senior Citizens

- **Global Aging Trend (WHO):**
 - The population aged 60+ is projected to reach 1.4 billion by 2030.
- **Pensions:**
 - 79.6% of the global elderly population receives pensions.
 - India's central and state governments allocate substantial budgets for pensions, with numerous schemes supporting non-government workers.
- **Senior Citizen Schemes in India:**
 - **Atal Vayo Abhyudaya Yojana (AVYAY):** Covers healthcare, nutrition, and welfare.
 - **Indira Gandhi National Old Age Pension Scheme:** Provides Rs. 200 per month, with additional state top-ups for beneficiaries.

7. Protection for Workers in the Unorganized Sector

- **Economic Survey 2023-24:** India's workforce is around 565 million, with 45% in agriculture.
- **Key Schemes:**
 - **Employees State Insurance (ESI):** Covers health protection, unemployment, and sickness benefits.
 - **Employees Provident Fund Organization (EPFO):** Provides old-age income security.
 - **Unorganized Workers Social Security Act, 2008:** Offers benefits like life and disability cover, health, and old-age protection.

- **Pradhan Mantri Jeevan Jyoti Bhima Yojana (PM JJBY):** Provides Rs. 2 lakh risk coverage for people aged 18-50 at an annual premium of Rs. 436.

8. Future Directions and Challenges

- **Global Comparisons:**
 - Some countries, like Uruguay, have achieved comprehensive social protection, leading to high per capita income and low poverty.
- **ILO's 2024-26 Report:**
 - An additional \$1.4 trillion per annum is needed for low- and middle-income countries to ensure basic social protection.
- **Key Insight:**
 - Social protection schemes are vital for sustainable economic growth, as noted by former French President Nicolas Sarkozy, highlighting their role in worker productivity and balanced development.

Conclusion

- Social security systems are essential not only for poverty alleviation but also for fostering social inclusion, stability, and economic growth.
- India's expansive social protection programs, while impactful, require ongoing development and adaptation to demographic and socio-economic changes.
- Global examples underscore the importance of robust social security frameworks for building prosperous, resilient societies.

GOVERNMENT SCHEMES FOR DIVYANG JAN

1. Inspiring Icons of Divyang Jan

- **Global Figures:**
 - **Albert Einstein:** Scientist with dyslexia, one of history's greatest minds.
 - **Stephen Hawking:** Renowned theoretical physicist with ALS, author of "A Brief History of Time."
 - **Helen Keller:** Deaf-blind author and activist, pioneered disability awareness.
 - **Tom Cruise:** Actor with dyslexia, an advocate for learning disabilities.
 - **Frida Kahlo:** Mexican artist, used her work to express resilience amid physical challenges.
- **Indian Icons:**
 - **Sudha Chandran:** Renowned classical dancer, continued performing with a prosthetic leg.
 - **Ravindra Jain:** Noted music composer and lyricist, visually impaired, famous in Indian cinema.
 - **Ajit Jogi:** First Chief Minister of Chhattisgarh, overcame physical challenges.

- **Arunima Sinha:** First female amputee to scale Mount Everest.
- **Shekhar Naik:** Blind cricketer, captain of India's visually impaired cricket team.
- **Ira Singhal:** UPSC topper with scoliosis, a civil services officer advocating for inclusivity.
- **Impact:** These role models inspire millions, showing that disabilities don't limit potential, encouraging Divyang Jans to pursue ambitious goals.

2. Current Situation and Challenges

- **WHO Data:**
 - **Global Issue:** 400 million disabled persons in developing nations face barriers to resources.
 - **Access Disparity:** Lack of inclusion in economic, social, and political systems.
- **India's Census 2011 Statistics:**
 - **Total Divyang Population:** 2.1% of 1.23 billion, translating to roughly 26 million individuals.
 - **State Leaders in Disability Rates:** Uttar Pradesh (15.76%), Bihar, West Bengal, Tamil Nadu, Maharashtra.
 - **Literacy:** 1.5 crore (out of 2.7 crore) Divyang Jans were literate, with further progress in recent years.
- **Urban vs. Rural Divide:**
 - **Rural Challenges:** Limited access to government benefits and schemes.
 - **Urban Access:** Greater availability of services but still faces bureaucratic barriers.
- **Employment Challenges:**
 - **Skill Development Council and NDFDC:** Provides skill training, loans, and entrepreneurship aid for economic empowerment.
 - **Unemployment Issues:** High unemployment rates persist despite skill development efforts.

3. Divyangjan Empowerment Schemes

3.1 Individual Empowerment Schemes

- **Focus Areas:** Ensuring access to education, healthcare, social security, and fostering self-esteem.
- **Disability Certification:**
 - **Importance:** Mandatory for accessing most government schemes.
 - **Availability:** Obtainable at CMO offices or government hospitals, streamlining access.
- **Unique Disability ID (UDID):**
 - **Benefits:** Concessions in fees, scholarships, loans, unemployment benefits, transport discounts.
 - **Travel Benefits:** Discounts for trains, buses, and some domestic flights (Air India based on disability type and percentage).

3.2 Assistance in Assistive Devices (ADIP Scheme)

- **Objective:** Financial aid for purchasing aids to improve functionality and independence.
- **Eligibility:** Available to Divyang Jans needing durable, scientifically-designed equipment.
- **Devices Provided:** Includes wheelchairs, hearing aids, Braille kits, and prosthetics.

3.3 Social Respect Initiatives

- **Recognition Programs:**
 - **National Awards:** Presented on **World Disability Day (3rd December)**.
 - **State Awards:** Some states, like Haryana and Uttar Pradesh, recognize exceptional contributions.
- **Media Representation:** Encouraging inclusive representation to change societal attitudes.

3.4 Economic Empowerment Programs

- **Financial Aid for Entrepreneurship:**
 - **Loan Limits:** Up to ₹50 lakh with reduced interest rates for self-employment projects.
 - **Support Institutions:** **National Divyangjan Finance and Development Corporation (NDFDC)** provides funds for business ventures.
- **Skill Development Initiatives:**
 - **Training Programs:** Training centers in various states for vocational skills.
 - **Self-Employment:** Training for sustainable self-employment opportunities.

4. Schemes by the National Trust

4.1 Disha – Early Intervention

- **Target Age:** For children up to 10 years with developmental delays.
- **Disha Centers:** Provide day-care services, therapy, and training to enhance skills.
- **Family Support:** Guidance for family members on effective care practices.

4.2 Daycare Centers

- **Primary Goal:** Vocational and interpersonal skills training for children and adults.
- **Operating Hours:** 6 hours a day, allowing family members to manage other responsibilities.
- **Skill Development:** Focus on social skills, pre-vocational training.

4.3 Samarth (Respite Homes)

- **Beneficiaries:** Supports families from **Below Poverty Line (BPL)** and **Low Income Group (LIG)**.
- **Services Provided:** Group homes with necessary care, including medical support.

4.4 Gharaunda (Group Home for Adults)

- **Objective:** Lifetime care homes offering vocational training and skill-building.
- **Medical Assistance:** Access to essential medical and therapeutic services.

4.5 Nirmaya (Health Insurance Scheme)

- **Coverage:** Health insurance up to ₹5 lakh per year.
- **Premium Waivers:** Subsidized premiums for eligible Divyang Jans.
- **Comprehensive Benefits:** Includes in-patient care, surgeries, and therapies.

4.6 Sahayogi (Caregiver Training)

- **Goal:** Training caregivers to support Divyang Jans at home.
- **Types of Courses:** Family-level and advanced caregiver courses to ensure comprehensive support.

4.7 Gyanprabha (Educational Support)

- **Objective:** Provides scholarships and financial aid for education and vocational training.
- **Benefits:** Covers educational expenses, including tuition, books, and travel costs.

4.8 Purna (Marketing Support)

- **Purpose:** Promotes goods produced by Divyang Jans through fairs and exhibitions.
- **Incentives:** Financial support for participation in events and rewards based on sales.

4.9 Sambhav (Assistive Devices Resource Centers)

- **Establishment of Centers:** Cities across India have resource centers with disability aids.
- **Resource Access:** Information on available aids and hands-on access for Divyang Jans.

4.10 Bhadte Kadam (Awareness and Sensitization)

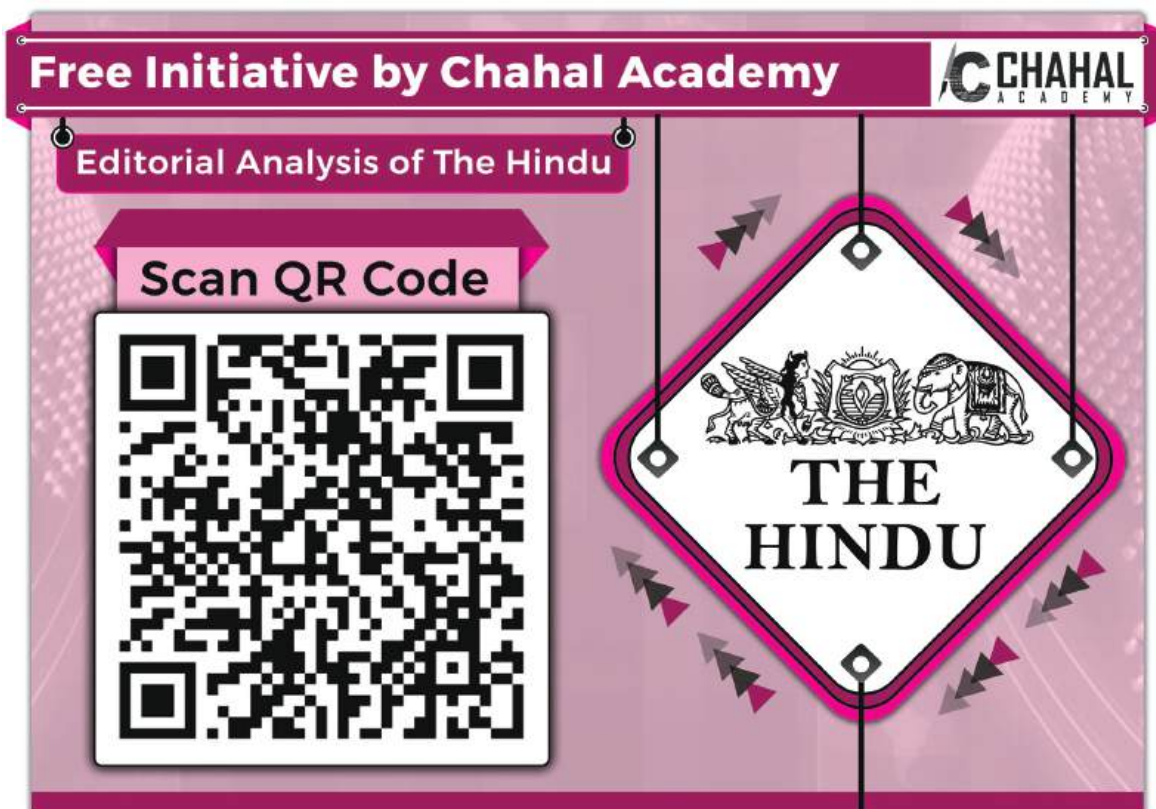
- **Goal:** Improve social attitudes and promote social inclusion.
- **Community Outreach:** Collaborations with local institutions for disability awareness events.
- **Education Programs:** Hosts programs to educate families, schools, and workplaces about inclusivity.

Way Forward

Improved access, streamlined application processes, and increased social awareness are essential for reducing barriers, enabling Divyang Jans to access their rights and live with dignity.

Conclusion

- **Impact of Government Initiatives:** Multiple schemes actively support the empowerment of Divyang Jans in India through financial, educational, and social support.
- **Remaining Challenges:**
 - **Information Barriers:** Many eligible individuals remain unaware of available benefits.
 - **Administrative Hurdles:** Obtaining necessary documentation like the UDID remains complex.



ARTICLES FROM DOWN TO EARTH

NOVEMBER 2024

GLOBAL PLASTIC POLLUTION

Marine Plastic Pollution

- It encompasses single-use plastics, microplastics, and macroplastics, which accumulate in terrestrial and aquatic ecosystems.
- This pollution stems from various sources, including land-based activities, ocean-based operations, and everyday consumer products.
- **Impact:** These pollutants degrade natural environments and impose significant economic burdens, including cleanup and waste management costs, while disrupting various industries and degrading marine ecosystems.
 - Therefore, addressing existing plastic pollution becomes critical priority due to its widespread presence and profound impacts on ecosystems, economies, and societies.

Responding to Plastic Pollution

- Stakeholders are engaging in negotiations to develop comprehensive strategies to combat plastic pollution.
- **Preventive Measures**
 - Reducing single-use plastics
 - Adopting sustainable alternatives
 - Promoting responsible waste management
- **Cleanup efforts** are aimed at removing plastic debris from natural environments, with a particular focus on pollution hotspots and accumulation zones.
- **Effective waste management systems**, including recycling and environmentally responsible disposal methods, are being emphasized to minimise the environmental impacts of plastic waste.
- **Public awareness campaigns** play a crucial role in educating communities about the dangers of plastic pollution and encouraging behaviors that prevent further contamination.
- Mitigation measures, such as clean-up activities and restoration projects, are being discussed, with an emphasis on engaging local populations to ensure safe and environmentally sound practices.
- Sharing information on common pollution types and sources is also critical to raise awareness and prevent further damage, particularly coastal and freshwater ecosystems.

International Cooperation and Collaboration

- International cooperation is essential in addressing plastic pollution effectively.
- Negotiators are advocating for coordinated efforts to identify and prioritise accumulation zones, particularly in marine environments.
- Several countries and groups have brought forward specific proposals during treaty discussions.
- **European Union:** The EU has proposed a comprehensive approach to identifying the main transfer channels of plastics into the environment, pinpointing pollution hotspots, and targeting sectors most affected by existing plastic pollution.
- **Alliance of Small Island States (AOSIS):** Samoa, on behalf of the Alliance of Small Island States (AOSIS), has called for legally binding commitments to address legacy plastic pollution, particularly for Small Island Developing States (SIDS).
- **India:** India has advocated for thorough assessments of existing plastic pollution, mobilisation of financial resources, and technology transfer to support developing countries in meeting their commitments.
- **Thailand:** Thailand has emphasised multi-stakeholder cooperation, alongside monitoring, research, and investigation to better understand and address pollution.
- **Chile:** Chile has stressed the importance of international collaboration, adherence to international law, and sustainable practices to combat pollution effectively.
- **Vietnam:** Vietnam has highlighted the need for tailored solutions for geographically disadvantaged and vulnerable states.
- **Iran:** Iran has emphasised the responsibility of developed countries to take the lead in addressing legacy pollution.
- Some nations have proposed changes to the existing provisions.
 - **Kazakhstan** has deleted references to accumulation zones and hotspots.
 - **Russia** has opposed including mentions of chemicals and polymers in trade-related contexts. It has supported remediation efforts for existing pollution.
 - **Kuwait** has suggested removing clauses addressing emissions regulation during the production phase.

Conclusion and Way Forward

- Addressing existing plastic pollution requires a multifaceted approach, combining preventive measures, cleanup activities, waste management improvements, public awareness campaigns, and international collaboration.
- These efforts aim to mitigate the adverse effects of plastic pollution, promote sustainable practices, and provide tailored solutions for vulnerable regions.
- By engaging all stakeholders and adopting a coordinated global response, the treaty negotiations seek to build a framework that effectively tackles the challenges posed by legacy plastic pollution while fostering long-term environmental and societal resilience.

ANTIBIOTICS IN MILK AND DAIRY PRODUCTS

Antimicrobial Resistance (AMR)

- Antimicrobial Resistance (AMR) occurs when bacteria, viruses, fungi and parasites no longer respond to antimicrobial agents.
- As a result of drug resistance, antibiotics and other antimicrobial agents become ineffective and infections become difficult or impossible to treat, increasing the risk of disease spread, severe illness and death.

World AMR Awareness Week (WAAW)

- The World AMR Awareness Week (WAAW) is a global campaign to raise awareness and understanding of AMR and promote best practices among One Health stakeholders to reduce the emergence and spread of drug-resistant infections.
- WAAW is celebrated from 18-24 November every year.
- The theme for the World AMR Awareness Week (WAAW) 2024 is "Educate. Advocate. Act now." This theme was chosen based on feedback from an online survey among stakeholders from the human, animal, plant, and environmental health sectors, which collected nearly 200 responses globally.

Antibiotics in Dairy

- Antibiotic residues in milk often result from mastitis treatments, injections or contaminated feed.
- **Causes:** Improper drug use, especially for mastitis control, has been identified as a major source of such residues, leading to antimicrobial resistance, intestinal flora disorders and allergic reactions in humans.
- **Implications:** Beyond health concerns, antibiotic residues cause significant issues in dairy processing, including:
 - poor curdling in dahi and yogurt
 - inadequate cheese ripening
 - reduced flavour in fermented products
 - diminished activity of starter cultures
- The effects compromise product quality and also lead to economic losses for the industry and threaten human health.

List of Veterinary Antibiotics

- The antibiotics used in veterinary medicines belong to six major groups
 - Beta-lactams (eg: penicillin)
 - aminoglycosides (eg: gentamycin)
 - tetracycline (eg: oxytetracycline)
 - macrolides (eg: erythromycin)
 - quinolones (eg: fluroquinolone)
 - sulphonamides (eg: trimithropin)

Driving Factors

- There may be three reasons for lack of regular antibiotic testing of raw milk and finished goods:
 - Minimal surveillance and enforcement for contaminant's residues in milk;
 - The perception that this is not a major problem in processed milk sold by commercial dairies in our country
 - The cost of testing of these contaminants particularly antibiotics residue is very high due to highly fragmented milk production and collection in India.
- There are several other reasons for presence of antibiotics in milk.
 - Unregulated use of antibiotics by veterinary doctors as well as quacks, including prophylactic use of antibiotics to prevent diseases.
 - Lack of awareness at the farmers level about usage of antibiotics and their after effects in human beings.
 - Supply chain issues related to mixing of contaminated milk with clean milk during collection at the aggregator level.
 - Farmer's losses due to discarded milk of treated animals. No buyer is ready to compensate the farmers for the milk produced from under-treatment animals.
 - Limited and costlier methodologies for confirmatory tests of complete spectrum of antibiotics across the country.

Steps to be taken

- Certain proactive steps like doing California Mastitis Test and catching animals at pre-clinical stage have been very helpful in avoiding use of antibiotics for mastitis.
- The government should promote new-age startups as well as research institutions to develop technologies for low-cost rapid testing of antibiotics in milk and feed. This will simplify decision-making at farmers' level.
- There must be stricter regulation of veterinary medicines. Prophylactic use of antibiotics to prevent diseases by doctors must be made illegal and all practicing veterinarians must be asked to keep records of Aadhar cards of cattle on which the antibiotics were used.
- Establishing regulatory standards and management practices to minimise antibiotic residues is crucial for food safety.

- All stakeholders should come together to solve this problem in an inclusive manner, by safeguarding public health at one hand and farmer's sustainability at the other hand.

Way Forward

- India's regulations for testing antibiotics in milk and dairy products are among the most stringent globally. In some instances, these standards are even more rigorous than those in developed countries.
- Despite the stringent regulations, the issue of antibiotic

residues in Indian milk necessitates a paradigm shift through capacity building, access to quality infrastructure, grassroots interventions and alternative treatment strategies for animals.

- FSSAI has recently taken steps to register all milk producers. This initiative could serve as a starting point for enrolling them in capacity building programs and raising initial awareness about good farming practices.
- These practices aim to produce antibiotic-free milk and promote alternative treatments for cattle, such as ethno-veterinary methods or homoeopathy.

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 Chahal Academy, 22-B, Upper Ground Floor, Near Karol Bagh, Metro Pillar No. 112, Old Rajinder Nagar, New Delhi- 110060

For more details contact us  **9313218122, 9625993995**

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ARTICLES FROM EPW

NOVEMBER 2024

MEASURING INFORMAL ECONOMY

Context: The informal economy in India plays a crucial role in shaping economic dynamics, providing livelihoods and contributing to overall economic growth, characterised by unique challenges in measurement and analysis within traditional statistical frameworks.

About Informal Economy

- The informal sector encompasses a diverse range of economic activities, including street vending, small scale manufacturing, agriculture, and services, among others.
- However, accurately measuring the gross value added (GVA) of the informal economy in India poses significant challenges due to its informal nature, heterogeneity, and lack of reliable data.

Relevance of Informal Economy

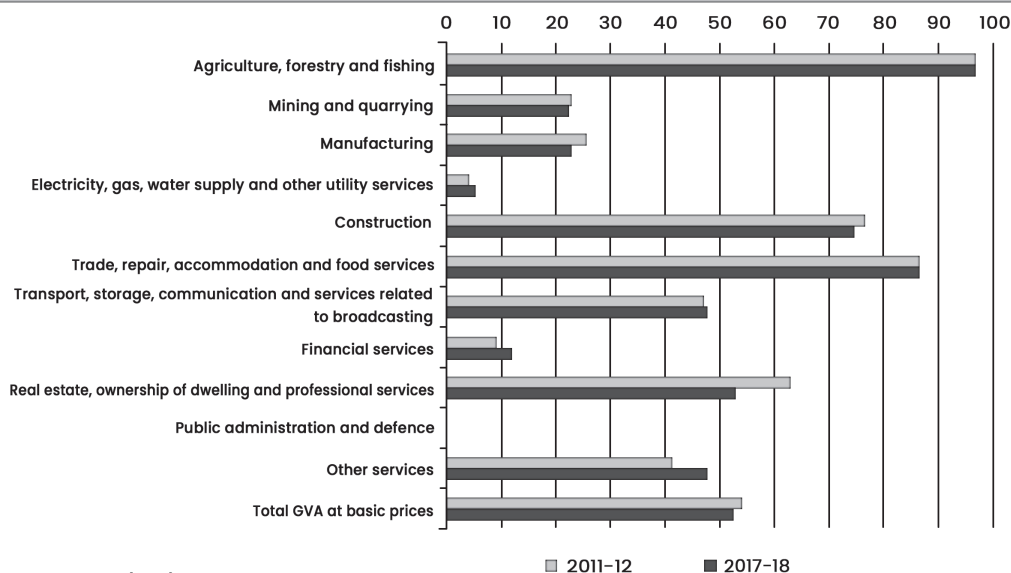
- **Increasing relevance in developing economies:** The informal economy continues to be the focal point, particularly in emerging economies, due to its significance in output contribution and employment generation.
- **New economic activities are rising in the informal economy**

- Moreover, new economic activities are emerging that are not completely formal, thereby increasing the significance of the informal sector. For eg: Food delivery services.
- These informal production activities play a crucial role in providing employment and income to many individuals who might otherwise be unemployed.

Informal economy in India

- **Components:** The major components of the Indian unorganised or informal sector consists of household own-account enterprises operated by own-account workers, and unincorporated enterprises (essentially proprietary and partnership enterprises) employing hired workers.
- **Exceptions:** However, unincorporated enterprises maintaining partial or full accounts are treated as quasicorporates and included as part of the organised or formal sector in the Indian official statistics.
- **Labour intensive:** The unorganised sector, in general, is highly labour-intensive and can be viewed as a close proxy to the household institutional sector plus the non-profit institutions serving households (NPISH) institutional sector.
- **Contribution to economy** In India, the unorganised sector plays an important role by contributing about 52% of the GVA from the unorganised or informal sector.

Share of Unorganised Sector GVA in Total GVA



Source: Murthy (2019) and author's visualisations.

- **Employs majority of masses** : The dominant unorganised or informal sector can be witnessed in agriculture. The other sectors, such as trade, repairs, and construction, wherein the unorganised sector dominates, are labour-intensive, absorbing the majority of the unskilled labour.

Data Sources of informal economy

- **Periodic Labour Force Survey**
 - The PLFS plays a significant role in informing the compilation and analysis of national accounts by providing crucial data on employment, unemployment, and other labour-related indicators.
 - The integration of PLFS data into national accounts enhanced the accuracy of informal sector GVA and its impact on the overall economy.
 - The PLFS provides insights into informal employment, selfemployment, and informal sector participation, which play an important role in understanding the dynamics of the informal economy.
- **Estimating Gross Value Added (GVA) for Informal Sector**
 - Estimating the GVA of the informal sector is challenging because of its unstructured nature and lack of formal reporting mechanisms.
 - However, one common method to estimate informal sector GVA is through the labour input method. Output in this method is estimated as a product of output per worker and number of workers employed.

Conclusion

- The issues with the informal economy are more pronounced in developing countries, where output and employment generation from the informal economy are significant.
- The challenge is to capture the dynamic nature of the informal sector—incorporating new emerging activities of an informal nature into the official statistics.

MANXIETY

Context: As Men migrate to cities in search of jobs, the city’s unknown terrain does not allow the rules of patriarchy to work quite as well here leaving men in a state of deep anxiety leaving them to demonstrate their masculinity.

About Manxiety

- The term Manxiety refers to the increase in anxiety in men.
- There’s an unwritten rule that men must be strong and in control at all times. This makes anxiety difficult to identify in men, even at high levels. This is troublesome as depression and anxiety in men are more likely to manifest in substance abuse and suicidal behavior.

Impact of Urbanisation on Manxiety

- **New exposure:** The pressures of modern life expose the fragility of men which was never quite upfront in the stable patriarchal system of before.

- **Rise in “precarious manhood”** : The more threatened a man feels about his manhood the greater attention he pays, not just to muscularity but to exaggerating his strength as well.
- **Challenge of the working class:** While bourgeois class depends on social connections, it is difficult for the working class whose masculinity comprises work and loyalty to family and friends.
- **Gendered Migration**
 - **Men dominate Urban Migration:** Men outnumber women by far when they migrate in search of work, both in rural-to-rural migration and in rural-to-urban migration. This has led to the characterisation that women have stayed rural while the men are turning urban.

Outcomes of Manxiety

- **High intra-competition for jobs among men:** Because of the skewed gender employment and migration picture in contemporary India, their masculinity is in question if they fail in their competition with other men to make a better life for themselves and their families.
- **Increasing Suicides among men:** To live up to the strong and silent image, that masculinity imposes it has pathological consequences thus manifest most notably in the increase in suicides among men. Even increase in Education levels do not lower the risk of suicides.

Way Forward

- To meet the anguishes that manxiety brings upon men and make headway in this new urban surrounding, masculinity has to be objectively undermine, without displacing, patriarchy to get ahead.
- Today a family’s sustenance is not solely dependent on men alone. Women are pulling their weight too. This eases manxiety and its attendant pressures and this trend is making an entry in India, as well.

Difference Between Masculinity and Patriarchy

Masculinity	Patriarchy
<ul style="list-style-type: none"> • Masculinity, strictly speaking, is an emergent property that coils out from within the patriarchal system but has features distinctive enough to be understood in its own right. • Masculinity’s principle concerns are not centred around dominating the feminine in the way it is for patriarchy. Rather the attention is recursively within, like a constant, self-judgmental, and internal panopticon. 	<ul style="list-style-type: none"> • In patriarchy, positions are laid out in advance, and men and women abide by the pre-existing format of behaviour. • Under patriarchy roles are “played” by rote but with masculinity, acts are often novel, test-and-tell, and in constant need of self-correction.

AWARDS AND PRIZES

	Award	Winner	Details
1.	Rohini Nayar Prize	Anil Pradhan	<ul style="list-style-type: none"> Anil Pradhan has been awarded the prestigious Rohini Nayar Prize for 2024, recognizing his impactful contributions to rural development in India. Rohini Nayar Prize honours young leaders under 40 making notable contributions to rural development in India.
2.	Satyajit Ray Lifetime Achievement Award	Phillip Noyce	<ul style="list-style-type: none"> Veteran Australian filmmaker Phillip Noyce, renowned for his acclaimed works such as <i>Clear and Present Danger</i>, <i>Salt</i>, and <i>Rabbit-Proof Fence</i>, was honoured with the prestigious Satyajit Ray Lifetime Achievement Award at the 55th International Film Festival of India (IFFI).
3.	Booker Prize	Samantha Harvey	<ul style="list-style-type: none"> <i>Orbital</i> by Samantha Harvey has been named the winner of the Booker Prize 2024. Harvey's novel takes place over a single day in the life of six astronauts and cosmonauts aboard the International Space Station.
4.	Indira Gandhi Prize for Peace, Disarmament, and Development for 2023	Daniel Barenboim & Ali Abu Awwad	<ul style="list-style-type: none"> Daniel Barenboim was honoured for using music to bring people together. Ali Abu Awwad was recognised for his peace work through his organisation, <i>Roots</i>, which encourages dialogue between Palestinians and Israelis.
5.	Grand Commander of the Order of Niger	Narendra Modi	<ul style="list-style-type: none"> Prime Minister Narendra Modi was conferred the prestigious national award, "Grand Commander of the Order of Niger", by the President of the Federal Republic of Nigeria, H.E. Mr. Bola Ahmed Tinubu. PM Modi became the second foreign leader after Queen Elizabeth (1969) to receive this honour.
6.	The Order of Excellence Award	Narendra Modi	<ul style="list-style-type: none"> PM Modi was awarded 'The Order of Excellence,' Guyana's highest honour, by President Irfaan Ali. The award acknowledges his exceptional contributions during the COVID-19 pandemic and his global leadership.
7.	Award of Honour	Narendra Modi	<ul style="list-style-type: none"> PM Modi was conferred the 'Dominica Award of Honour' by President Sylvanie Burton of Dominica. The award recognizes Modi's leadership and India's support during the COVID-19 pandemic, including the provision of 70,000 AstraZeneca vaccines to Dominica.
8.	Dr. Martin Luther King Jr. Global Peace Award for Minority Upliftment	Narendra Modi	<ul style="list-style-type: none"> During the launch event of Association of Indian American Minorities (AIAM), PM Modi was honoured in absentia with the 'Dr. Martin Luther King Jr. Global Peace Award for Minority Upliftment', recognizing his efforts in inclusive development and minority welfare.

9.	International Film Festival of India 2024	-	<ul style="list-style-type: none"> The prestigious Golden Peacock Award for Best Feature Film was awarded to the Lithuanian film Toxic, directed by Saulė Bliuvaitė. Silver Peacock Awards <ul style="list-style-type: none"> ➤ Best Director: Bogdan Muresanu for The New Year That Never Came (Romania). ➤ Best Actor (Male): Clément Faveau for Holy Cow (France). ➤ Best Actor (Female): Jointly awarded to Vesta Matulytė and Ieva Rupeikaitė for Toxic (Lithuania).
10.	2024 OPCW-The Hague Award	Indian Chemical Council	<ul style="list-style-type: none"> Indian Chemical Council (ICC) was awarded the prestigious 2024 OPCW-The Hague Award at the 29th Session of the Conference of the States Parties (CSP) of the Organisation for the Prohibition of Chemical Weapons (OPCW) held in The Hague.

OBITUARIES IN NOVEMBER 2024

	Date	Person	Important Information
1.	1 November 2024	Bibek Debroy	<ul style="list-style-type: none"> Bibek Debroy, a prominent economist and chairman of the Prime Minister's Economic Advisory Council (EAC-PM), has passed away at the age of 69.
2.	5 November 2024	Sharda Sinha	<ul style="list-style-type: none"> Legendary folk singer, Sharda Sinha, known fondly as the Bihar Kokila (Nightingale of Bihar) has passed away at age 72. She predominantly sang in Maithili and Bhojpuri languages.
3.	9 November 2024	Pandit Ram Narayan	<ul style="list-style-type: none"> He was an Indian musician who popularised the bowed instrument sarangi as a solo concert instrument in Hindustani classical music and became the first internationally successful sarangi player.
4.	10 November 2024	Madan Mohan Somtiya	<ul style="list-style-type: none"> He was a dedicated freedom fighter and prominent member of the Mewar Praja Mandal.
5.	11 November 2024	Varadarao Kamalakara Rao	<ul style="list-style-type: none"> He received the Central Sangeet Natak Akademi Award. Kamalakra Rao became a Mridanga Vidwan at an early age. A disciple of Palgat Mani Ayer, he received the President Medal from the Sarvepalli Radhakrishnan during his college days.
6.	29 November 2024	Amiya Kumar Bagchi	<ul style="list-style-type: none"> Professor Amiya Kumar Bagchi was a prominent economic historian and macroeconomist. His work sheds light on India's colonial economic history.

IMPORTANT DAYS IN NOVEMBER

	Date	Day	Significance / Remark / Detail
1.	2 November	International Day to End Impunity for Crimes against Journalists	<ul style="list-style-type: none"> This year, the global commemoration of the International Day to End Impunity for Crimes against Journalists will take place on 6-7 November 2024 at the African Union Headquarters in Addis Ababa, Ethiopia under the theme of Safety of Journalists in Crises and Emergencies.
2.	5 November	World Tsunami Awareness Day	<ul style="list-style-type: none"> In December 2015, the UN General Assembly designated 5 November as World Tsunami Awareness Day, calling on countries, international bodies and civil society to raise tsunami awareness and share innovative approaches to risk reduction.

4.	6 November	International Day for Preventing the Exploitation of the Environment in War and Armed Conflict	<ul style="list-style-type: none"> On 5 November 2001, the UN General Assembly declared 6 November of each year as the International Day for Preventing the Exploitation of the Environment in War and Armed Conflict.
5.	9 November - 15 November	International Week of Science and Peace	<ul style="list-style-type: none"> The International Week of Science and Peace was first observed during 1986 as part of the observance of the International Year of Peace.
6.	9 November	National Legal Services Day	<ul style="list-style-type: none"> National Legal Services Day is observed every year on 9th November to commemorate the commencement of Legal Services Authorities Act, 1987 which came into force on 9th November, 1995.
7.	10 November	World Science Day for Peace and Development	<ul style="list-style-type: none"> Celebrated every 10 November, World Science Day for Peace and Development highlights the significant role of science in society and the need to engage the wider public in debates on emerging scientific issues. 2024 Theme: Youth at the forefront This year's World Science Day for Peace and Development will be held under the aegis of the International Decade of Sciences for Sustainable Development (2024-2033).
8.	14 November	World Diabetes Day	<ul style="list-style-type: none"> In 2007 General Assembly adopted resolution 61/225 designating 14 November as World Diabetes Day.
9.	14 November	National Children's Day	<ul style="list-style-type: none"> Jawaharlal Nehru birthday Children's Day is celebrated as a tribute to Nehru. Nehru, fondly called 'Chacha Nehru' was born on November 14, 1889. He was known for his affection for kids. He also established Children's Film Society India in 1955 to create indigenous cinema exclusively for kids.
10.	15 November	International Day for the Prevention of and Fight against All Forms of Transnational Organized Crime	<ul style="list-style-type: none"> In March 2024, the General Assembly declared 15 November the International Day for the Prevention of and Fight against All Forms of Transnational Organized Crime, in order to raise awareness of the threats posed by all forms of transnational organized crime and to enhance international cooperation in this regard.
11.	15 November	Guru Nanak Jayanti	<ul style="list-style-type: none"> Guru Nanak Jayanti is one of the holiest festivals of the Sikh community. Also known as Gurburab, this festival marks the birth anniversary of the first guru and founder of Sikhism, Guru Nanak Dev. It is observed on Kartik Purnima, ie., the full moon day of the Kartik month as per the Hindu calendar, which falls in the month of November (as per the Gregorian calendar)
12.	15 November - 21 November	National Cooperative Week	<ul style="list-style-type: none"> National Cooperative Week is an annual event celebrated from 14 to 20 November to highlight the contribution of cooperatives to the economy of the nation.
13.	16 November	International Day for Tolerance	<ul style="list-style-type: none"> In 1996, the UN General Assembly adopted Resolution 51/95 proclaiming 16 November as International Day for Tolerance.
14.	17 November	World Day of Remembrance for Road Traffic Victims	<ul style="list-style-type: none"> Since the adoption of the World Day of Remembrance for Road Traffic Victims, pursuant to General Assembly resolution 60/5, the observance has spread to a growing number of countries on every continent.

15.	18 November - 24 November	World Antimicrobial Resistance Awareness Week	<ul style="list-style-type: none"> World AMR Awareness Week (WAAW) is a global campaign that is celebrated annually to improve awareness and understanding of AMR and encourage best practices among the public, One Health stakeholders and policymakers, who all play a critical role in reducing the further emergence and spread of AMR.
16.	18 November	World Day for the Prevention of and Healing from Child Sexual Exploitation, Abuse and Violence	<ul style="list-style-type: none"> On 7 November 2022, the General Assembly adopted resolution A/RES/77/8, proclaiming 18 November of each year as the World Day for the Prevention of and Healing from Child Sexual Exploitation, Abuse and Violence.
17.	19 November	World Toilet Day	<ul style="list-style-type: none"> World Toilet Day, celebrated on 19 November every year, is about inspiring action to tackle the global sanitation crisis and reach the 3.5 billion people still living without safely managed sanitation. Established by the World Toilet Organization in 2001, World Toilet Day was made an official United Nations Observance in 2013.
18.	20 November	Africa Industrialization Day	<ul style="list-style-type: none"> In July 1989, the Organization of African Unity (O.A.U.) conducted its 25th Ordinary Session of the Assembly of Heads of State and Government in Addis Ababa, Ethiopia. Africa Industrialization Day was announced on November 20 during this session. United Nations General Assembly, in December 1989, proclaimed 20 November Africa Industrialization Day.
19.	20 November	World Children's Day	<ul style="list-style-type: none"> World Children's Day was first established in 1954 as Universal Children's Day and is celebrated on 20 November each year to promote international togetherness, awareness among children worldwide, and improving children's welfare.
20.	21 November	World Television Day	<ul style="list-style-type: none"> United Nations General Assembly proclaimed 21 November as World Television Day (through resolution 51/205 of 17 December 1996).
21.	21 November	World Philosophy Day	<ul style="list-style-type: none"> By celebrating World Philosophy Day each year, on the third Thursday of November, UNESCO underlines the enduring value of philosophy for the development of human thought, for each culture and for each individual.
22.	24 November	World Conjoined Twins Day	<ul style="list-style-type: none"> Recognizing that the case of conjoined twins is a rare condition where the estimated incidence can be 1 in 50,000 births, the General Assembly decided to proclaim 24 November as World Conjoined Twins Day.
23.	25 November	International Day for the Elimination of Violence against Women	<ul style="list-style-type: none"> The International Day for the Elimination of Violence Against Women will mark the launch of the UNiTE campaign (Nov 25- Dec 10) — an initiative of 16 days of activism concluding on the day that commemorates the International Human Rights Day (10 December).
24.	26 November	World Sustainable Transport Day	<ul style="list-style-type: none"> Recognizing the important role of safe, affordable, accessible and sustainable transport systems for all in supporting sustainable economic growth, improving the social welfare of people and enhancing international cooperation and trade among countries, the General Assembly decided to declare 26 November as World Sustainable Transport Day.
25.	26 November	Constitution Day	<ul style="list-style-type: none"> Constitution Day also known as 'Samvidhan Divas', is celebrated in our country on 26th November every year to commemorate the adoption of the Constitution of India. On 26th November 1949, the Constituent Assembly of India adopted the Constitution of India, which came into effect from 26th January 1950.

26.	29 November	International Day of Solidarity with the Palestinian People	<ul style="list-style-type: none"> In 1977, the General Assembly called for the annual observance of 29 November as the International Day of Solidarity with the Palestinian People (resolution 32/40 B). On that day, in 1947, the Assembly adopted the resolution on the partition of Palestine (resolution 181 (II)).
27.	30 November	Day of Remembrance for all Victims of Chemical Warfare	<ul style="list-style-type: none"> The Conference of the States Parties to the Chemical Weapons Convention, at its 20th Session, decided that a memorial Day of Remembrance for all Victims of Chemical Warfare would be observed on 30 November each year or, when appropriate, on the first day of the regular session of the Conference.

IMPORTANT SUMMIT/CONFERENCE IN NEWS

	Summit/Conference	Details
1.	ILO's 352nd Governing Body Meeting	<ul style="list-style-type: none"> Place: Geneva It brings together representatives from member countries to discuss key labour issues and strategies for improving working conditions globally.
2.	International Solar Alliance (ISA) Assembly	<ul style="list-style-type: none"> India and France have been re-elected as the president and co-president of the International Solar Alliance (ISA), respectively, at the seventh ISA assembly held in New Delhi. Armenia has become the 104th full member of the International Solar Alliance (ISA).
3.	Asian Buddhist Summit	<ul style="list-style-type: none"> India hosted the first-ever Asian Buddhist Summit (ABS) in New Delhi from November 5 to 6, 2024, under the theme, Role of Buddha Dhamma in Strengthening Asia.
4.	Mahasagar Summit on Maritime Security	<ul style="list-style-type: none"> Indian Navy successfully conducted the third edition of the Mahasagar summit, continuing its flagship outreach initiative for maritime security in the Indian Ocean Region (IOR).
5.	COP29 of UNFCCC	<ul style="list-style-type: none"> 29th UN Climate Summit, COP29, was held in Baku, Azerbaijan. COP29 has been dubbed the Finance COP due to its central focus on financial strategies, including a push for greater funding commitments and the role of the private sector in driving climate action. At COP29 in Baku, developed nations pledged \$300 billion annually in climate finance for developing countries by 2035, far below the \$1.3 trillion requested by 2030.
6.	Energy Efficiency Alliance	<ul style="list-style-type: none"> The UAE has announced the establishment of the Global Energy Efficiency Alliance at COP29 in Baku, Azerbaijan. This initiative aims to double annual global energy efficiency rates by 2030, aligning with the UAE's commitment to reducing carbon emissions and promoting sustainable resource use.
7.	G20 Rio Summit 2024	<ul style="list-style-type: none"> The 19th G20 Summit in Rio de Janeiro concluded with the adoption of the Rio Declaration, addressing critical global issues such as climate change, the Ukraine war, conflicts in West Asia, and economic inequality. The declaration reaffirmed the G20's commitment to the Paris Agreement and progress under the UN Framework Convention on Climate Change (UNFCCC).
8.	Sagarmanthan 2024	<ul style="list-style-type: none"> The Sagarmanthan Dialogue 2024 held by Observer Research Foundation (ORF) and Ministry of Ports, Shipping and Waterways, reinforced India's commitment to becoming a global maritime leader by fostering discussions on sustainability, innovation, and connectivity.

9.	Global Cooperative Conference	<ul style="list-style-type: none"> India hosted the International Cooperative Alliance (ICA) Global Cooperative Conference in New Delhi from November 25 to 30, 2024. This marks the first time in the 130-year history of the ICA that the global cooperative movement's premier event was held in India.
10.	National Seed Congress	<ul style="list-style-type: none"> The 13th National Seed Congress (NSC) 2024, organized by the Ministry of Agriculture & Farmers' Welfare, was inaugurated on November 28, 2024, by Union Minister Shri Shivraj Singh Chouhan via virtual address. The three-day event was hosted at the International Rice Research Institute South Asia.
11.	International Tourism Mart (ITM)	<ul style="list-style-type: none"> The 12th Edition of the International Tourism Mart (ITM) was held in Kaziranga, Assam, with the aim of showcasing the immense tourism potential of Northeast India. It is organized annually by the Ministry of Tourism.

TERMS IN NOVEMBER 2024

	Term	Meaning and Details
1.	Digital Arrest	<ul style="list-style-type: none"> A Digital Arrest scam involves fraudsters impersonating law enforcement via video calls, threatening fake arrests to extort money.
2.	Salt Typhoon	<ul style="list-style-type: none"> Salt Typhoon is the name Microsoft cybersecurity experts have given to a Chinese group suspected of using sophisticated techniques to hack into major systems.
3.	3zero Club	<ul style="list-style-type: none"> Bangladesh Chief Adviser Muhammad Yunus and Pope Francis jointly launched a 'Pope Francis Yunus 3Zero Club' in Rome in an effort to usher in a transformative and inclusive future for humanity. The three Zs stand for zero poverty, zero unemployment, and zero net carbon emissions.
4.	Peak oil	<ul style="list-style-type: none"> The term peak oil used to mean the point when global production would top out, before entirely running out.

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Editorial Analysis of Indian Express

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NOVEMBER - DAILY MCQs FROM THE HINDU & INDIAN EXPRESS

DAILY MCQs PRACTICE

21st October

Q1. Consider the following with reference to 'The UNFCCC (United Nations Framework Convention on Climate Change):

1. The primary objective of the UNFCCC is to regulate the industrial pollution globally.
2. Conference of Parties (COP) meetings take place under the UNFCCC every 2 years.
3. Mandatory emissions cuts for developing countries are a key principle of the UNFCCC.
4. Green Climate Fund (GCF) operates under the UNFCCC to help developing countries address climate change.

How many of the above is/are correct?

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

Q2. Which of the following initiatives have been launched by QUAD countries to counter China's Belt and Road Initiative (BRI)?

- (a) Build Back Better World (B3W)
(b) Trans-Pacific Partnership (TPP)
(c) Indo-Pacific Economic Corridor (IPEC)
(d) Global Connectivity Initiative

Q3. The primary function of Amylase enzyme in the human body is to ...

- (a) Digest dietary fibres
(b) Break down proteins into amino acids
(c) Break down starch into simple sugars
(d) Convert fats into fatty acid

Q4. Consider the following Statements regarding Council of Ministers (CoM) in State/UTs:

1. Council of Ministers is appointed by the Governor of a State or Lt. Governor in case of UT with legislature.
2. The Governor/Lt. Governor allocates the portfolio to the ministers.

Which of the statements above is/are correct?

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

22nd October

Q5. Consider the following statements regarding *Caenorhabditis elegans* (C. elegans):

1. It is a non-parasitic, free-living nematode commonly found in soil environments.
2. It is not pathogenic and is used frequently in biological research as a model organism.

Which of the statements above is/are correct?

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

Q6. Arrange the following places from North to South:

1. Galwan
2. Daulet Beg Oldie
3. Hot Springs
4. Demchok
5. Depsang Plains

Select the correct code:

- (a) 1, 2, 3, 4 and 5 (b) 2, 3, 1, 5 and 4
(c) 3, 5, 1, 4 and 2 (d) 2, 5, 1, 3 and 4

Q7. Consider the following with reference to 'The 74th Constitutional Amendment Act, 1992':

1. The act deals with the Panchayati Raj Institutions.

2. This act led to the establishment of the Gram Panchayats.
3. Part IX-A of the Indian Constitution was introduced by the 74th Constitutional Amendment Act.
4. Reservation of seats for Scheduled Castes (SCs) and Scheduled Tribes (STs) in urban local bodies is a key aspect of the Act.

How many of the above is/are correct?

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

Q8. Consider the following with reference to 'The National Register of Citizens (NRC)':

1. The (NRC) first prepared in 1971 after Assam Accords were signed.
2. The primary reason for updating the NRC in Assam is to ensure economic reforms and electoral functioning.
3. Aadhaar card is required to prove citizenship for inclusion in the NRC.

How many of the above is/are correct?

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

23rd October

Q9. Consider the following with reference to 'The Act East Policy':

1. The Act East Policy primarily focuses on military alliances.
2. Defence, Development, Diplomacy, Disaster management are the four pillars of the Act East Policy.
3. A major challenge in the implementation of the Act East Policy is the lack of cultural exchange programs.
4. Golden Quadrilateral initiative aims to enhance connectivity between India and Southeast Asia through this policy.

How many of the above is/are correct?

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

Q10. Which of the following is *not* a valid reason for holding a by-election?

- (a) Resignation of an elected representative
(b) A candidate narrowly losing an election
(c) Death of an elected representative
(d) Disqualification of an elected representative

Q11. The 30x30 (30 by 30) target is associated with ...

- (a) Vienna Convention for the Protection of the Ozone Layer
(b) Convention on Biological Diversity
(c) United Nations Convention to Combat Desertification
(d) United Nations Framework Convention on Climate Change

Q12. Consider the following cities in News:

	City	Located in
1.	Kazan	Russia
2.	Cali	Israel
3.	Beirut	Lebanon

How many of the above pairs are correctly matched?

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

24th October

Q13. Consider the following with reference to the entries included in the Union List in the Seventh Schedule of the Constitution:

1. Defence
2. Public Health
3. Inter-State Trade and Commerce

How many of the above is/are correct?

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

Q14. Which of the following conditions are favourable for the formation of a tropical cyclone?

- (a) High atmospheric pressure
- (b) Cold water temperatures
- (c) Strong trade winds
- (d) Warm ocean water and low vertical wind shear

Q15. United Nations Security Council Resolution 1701 was adopted in 2006. The objective of the resolution is to ...

- (a) To support the disarmament of all nuclear weapons in West Asia.
- (b) To deploy international forces to Syria to monitor a peace agreement.
- (c) To establish a ceasefire and withdraw Israeli forces from southern Lebanon.
- (d) To impose sanctions on Lebanon for failing to disarm Hezbollah

Q16. Consider the following methods:

1. Solar Radiation Management
2. Direct Air Capture
3. Carbon Dioxide Removal

How many of the above Geoengineering methods can be used to counter the global warming?

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

25th October

Q17. Consider the following statements regarding Great Indian Bustard:

1. It is a large flightless bird listed as critically endangered by the IUCN.
2. It is primarily found in semi-arid regions of the Western Ghats.
3. Its population can be revived using methods like artificial insemination.

How many of the above statements are correct?

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

Q18. Arrange the following places from East to West:

- 1. Galwan
- 2. Leh
- 3. Hot Springs
- 4. Demchok

Select the correct code:

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

Q19. Consider the following with reference to the National Commission for Protection of Child Rights (NCPCR):

1. The objective of the NCPCR is to protect and promote the rights of children in India.
2. It was established under the Commission for Protection of Child Rights Act, 2005.
3. The President of India appoints the members of the NCPCR.

How many of the above is/are correct?

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

Q20. Consider the following with reference to the International Court of Justice (ICJ):

1. Its prime role is to settle legal disputes between states and provide advisory opinions.
2. Its headquarters are located in Geneva, Switzerland.
3. The ICJ's decisions are binding only on the parties involved in the case.
4. The ICJ can give advisory opinions to only the Security Council.

How many of the above is/are correct?

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

26th October

Q21. Consider the following with reference to 'The Depsang Plains':

1. The Depsang Plains are strategically significant because they are located near Nathu La pass.

2. Indo-Tibetan Border Police (ITBP) often conducts patrols in the Depsang Plains due to its strategic importance.
3. The Depsang Plains are located near Kargil that serves as India's highest landing ground.

How many of the above is/are correct?

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

Q22. Which of the following statements are correct in respect of MGNREGA:

1. The role of Gram Sabha's in MGNREGA is to distribute the wages to workers.
2. Ministry of Rural Development oversees the implementation of MGNREGA.
3. 100 days of guaranteed wage employment is ensured to every rural household per year.

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

Q23. The primary aim of the popular drug Ozempic is ...

- (a) Weight Loss
- (b) Improve blood sugar
- (c) Treat Alzheimer's disease
- (d) Balancing Blood Pressure

Q24. Consider the following statements regarding Semaglutide:

1. It is the active ingredient in popular blood sugar control and weight loss drugs.
2. It can reduce the risk of Alzheimer's disease in people with type 2 diabetes.

Which of the statements above is/are is correct?

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

28th October

Q25. Consider the following statements regarding Livestock Census in India:

1. It is conducted every 10 years to headcount the number of domesticated animals, poultry and stray animals in the country.
2. The first ever livestock census was conducted in 1919.

3. Till now 20 livestock censuses have been carried out.

How many of the above statements are correct?

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

Q26. Consider the following statements regarding UNESCO Global Geoparks:

1. UNESCO Global Geoparks are areas with significant geological heritage recognized for their exceptional natural features, geological processes, and educational value.
2. India does not have a single site designated as UNESCO Global Geopark.

Which of the statements above is/are is correct?

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

Q27. Consider the following statements regarding Assembly Elections in India:

1. The maximum number of seats reserved for Scheduled Tribes (ST) in any State Legislative Assembly in India is 33% of the total seats.
2. The minimum age required to contest in a State Assembly election in India is 35 years.
3. The Parliament of India is responsible for the delimitation of constituencies for the State Assembly elections in India.
4. In case of a tie in the voting process in a State Legislative Assembly, Speaker of the Assembly has the casting vote.

How many of the above is/are correct?

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

Q28. Consider the following with reference to Direct Taxes in India:

1. Value Added Tax (VAT)
2. Wealth Tax
3. Securities Transaction Tax (STT)
4. Minimum Alternate Tax (MAT)
5. Central Excise Tax

How many of the above is/are correct?

- (a) Only three (b) Only four
(c) All five (d) None

29th October

Q29. Consider the following statements regarding Census in India:

1. Since 1881, it is conducted every 10 years but was not done in 2021.
2. It is conducted by Registrar General and Census Commissioner of India under Ministry of Statistics and Program Implementation.

Which of the statements above is/are correct?

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

Q30. Consider the following statements regarding delimitation in India:

1. Delimitation is a constitutionally mandatory exercise to be done after every census.
2. It is carried out by the Delimitation Commission, established by the Parliament.

Which of the statements above is/are correct?

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

Q31. Which of the following is an indicator of a cyclical slowdown?

- (a) Rising inflation rates
- (b) Increased exports
- (c) Declining GDP growth rates
- (d) Rising stock market indices

Q32. Consider the following with reference to 'Similipal Tiger Reserve':

1. The Similipal Tiger Reserve is located in the state of Odhisa.
2. It was declared a tiger reserve in 2012 by the state government.
3. The river Budhabalanga originates within the reserve.
4. Only the Gond tribes are indigenous to the Similipal Tiger Reserve area.

How many of the above is/are correct?

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

30th October

Q33. What is the primary purpose of the United Nations Relief and Works Agency (UNRWA)?

- (a) To provide financial aid to all countries affected by war
- (b) To offer military support to refugees in conflict zones
- (c) To establish permanent settlements for displaced populations around the world
- (d) To assist Palestinian refugees with education, health care, and social services

Q34. Consider the following statements regarding Ayurveda Day:

1. Ayurveda day is observed on 29th October every year.
2. Government of India has been observing Ayurveda Day every year on Dhanawantari Jayanti since 2016.

Which of the statements above is/are correct?

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

Q35. Consider the following with reference to 'The Economic Advisory Council to the Prime Minister (EAC-PM)':

1. The Governor of the Reserve Bank of India heads the EAC-PM.
2. The key focus area of EAC-PM is economic growth and policy recommendations.
3. The primary role of EAC-PM is to provide independent advice on economic matters to the Prime Minister.
4. The EAC-PM often works in coordination with the NITI Aayog.

How many of the above is/are correct?

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

Q36. Consider the following with reference to the primary sources of funding for the private investments in India:

1. Government grants
2. Public debt
3. Bank loans and private equity

How many of the above is/are correct?

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

4th November

Q37. Consider the following statements regarding gold reserves in India:

1. The share of gold in total foreign exchange reserves decreased in the first half of financial year 2024-25.
2. Majority of India's gold reserves are in the safe custody of Bank of England.

Which of the statements above is/are correct?

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

Q38. Consider the following statements regarding Oral Rehydration Therapy (ORT):

1. ORT primarily involves the administration of a mixture of clean water, salt, and sugar to treat dehydration.
2. ORT is recommended by the World Health Organization (WHO) as a first-line treatment for severe dehydration due to cholera and other diarrheal diseases.
3. ORT requires the use of specialized, pharmaceutical-grade solutions to be effective.

How many of the above statements are correct?

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

Q39. Which of the following countries are the founding members of the INSTC?

- (a) India, Russia, and China
(b) India, Iran, and Pakistan
(c) India, Iran, and Russia
(d) Iran, Russia, and Afghanistan

Q40. Which of the following is the primary ideology that is followed under Naxalism?

- (a) Liberalism (b) Social Democracy
(c) Conservatism (d) Marxism-Leninism

5th November

Q41. Consider the following statements regarding National Clean Air Programme (NCAP)

1. It is an initiative of National Green Tribunal (NGT) to improve air quality in all the cities in the country.
2. It envisages to achieve reductions up to 40% or achievement of National Ambient Air Quality Standards for Particulate Matter₁₀ (PM₁₀) concentrations by 2025-26.

Which of the statements above is/are correct?

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

Q42. Consider the following places in news:

	Place in News	Country / Region
1.	Bir Billing	Russia
2.	Ramallah	Iran
3.	Beit Lahia	Lebanon

How many of the above pairs are correctly matched?

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

Q43. Which of the following statements are correct in respect of 'The Official Languages of India':

1. According to the Indian Constitution, Hindi in Devanagari script is the official language of the Union.
2. Article 343 of the Indian Constitution, declared Hindi as the official language of the Union.
3. Hindi Diwas is celebrated every year on October 31st to mark the adoption of Hindi as the official language.

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

Q44. What does the term "organizational stretch" primarily refer to?

- (a) The process of expanding an organization's geographical reach.
(b) The adaptation of an organization to new technologies.

- (c) The ability of an organization to achieve ambitious goals by maximizing its resources.
- (d) The flexibility of an organization's employees.

6th November

Q45. Consider the following statements regarding Kharif Crops output in India:

1. Rice production during kharif seasons has declined in last 3 years because of errant monsoon.
2. Total oilseeds production during kharif season has declined consistently in the last 3 years leading to increased imports.

Which of the statements above is/are correct?

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

Q46. Cia-Cia tribe is found in?

- (a) Arunachal Pradesh (b) Nagaland
- (c) Ladakh (d) None of the above

Q47. Consider the following with reference to 'The Asian Buddhist Summit (ABS)':

1. The ABS align with the Act East Policy to strengthen India's diplomatic ties in Asia.
2. The ABS emphasizes the role of promotion of Buddhism in western countries.
3. The theme of 2024 ABS Summit is "Role of Buddha Dhamma in Strengthening Asia."

How many of the above is/are correct?

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

Q48. Consider the following with reference to the focus area of the Anusandhan National Research Foundation (ANRF):

1. Cultural preservation
2. Agricultural practices
3. Advanced scientific research
4. Sports management

How many of the above is/are correct?

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

7th November

Q49. Consider the following with reference to the eligibility for PM-Vidyalaxmi scheme for higher education:

1. Only Government schools
2. All loans are collateral based
3. Guarantor-free on some loans

How many of the above is/are correct?

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

Q50. Which of the following countries are the key partners in the Middle East-Europe Economic Corridor initiative?

- (a) Japan, South Korea, Bahrain, Iran and Qatar
- (b) Egypt, Turkey, Japan, China and Italy
- (c) China, Russia, and the United Arab Emirates
- (d) India, U.S, E.U, Saudi Arabia, and the United Arab Emirates

Q51. Consider the following statements regarding National Investigation Agency (NIA):

1. It is a statutory body that functions as the Central Counter Terrorism Law Enforcement Agency in India.
2. Unlike CBI, the NIA does not need a state government's approval to investigate and prosecute offenses under the state laws.

Which of the statements above is/are correct?

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

Q52. Consider the following statements regarding Graded Response Action Plan (GRAP):

1. GRAP is a set of emergency measures implemented in response to various levels of air pollution in the National Capital Region (NCR).
2. It can be activated at any time of the year based on real-time air quality levels.

Which of the statements above is/are correct?

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

8th November

Q53. Which of the following is the central principle of the 'Chevron Doctrine'?

- (a) Courts have the ultimate authority to interpret the law, regardless of agency decisions.
- (b) The executive branch can override judicial rulings on administrative issues.
- (c) Courts must defer to agencies' interpretations of law when Congress has not provided clear direction.
- (d) Agencies can make binding legislative rules without judicial review.

Q54. What does the term 'waqf' primarily mean?

- (a) A type of income tax
- (b) A government-imposed property restriction
- (c) A charitable endowment under Islamic law, where property is dedicated for religious or charitable purposes
- (d) A tax imposed on religious institutions

Q55. 'Zo Community' is not found in which one of the following states of India?

- (a) Assam (b) Sikkim
- (c) Nagaland (d) Manipur

Q56. Which of the following statements about business liquidation is not correct?

- (a) Liquidation typically involves the sale of a business's assets to pay off creditors before formally closing the business.
- (b) In voluntary liquidation, business owners initiate the process, often due to insolvency or shareholder agreement.
- (c) In compulsory liquidation, creditors petition a court to liquidate a company to recover owed amounts.
- (d) After liquidation, any remaining assets are distributed among creditors before shareholders, who are guaranteed to receive compensation.

9th November

Q57. Which of the following statements are correct in respect of National Socialist Council of Nagaland (NSCN):

1. The NSCN was initially formed to achieve the unification of all Naga-inhabited areas to form a sovereign state.

2. The NSCN split into two main factions in 1988, namely NSCN-K and NSCN-IM.

3. In 2015, the Government of India signed a peace accord with NSCN – K.

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

Q58. Which of the following agreement aims to phase out the use of hydrochlorofluorocarbons (HCFCs)?

- (a) The Montreal Protocol (b) The Rio Declaration
- (c) The Kyoto Protocol (d) The Paris Agreement

Q59. How do Federal Reserve (Fed) rate cuts typically impact Indian markets?

- (a) They only affect India's stock market indices with no impact on other sectors.
- (b) They lead to capital outflows from India and rupee depreciation due to narrowing interest rate differentials.
- (c) They lead to increased Foreign Portfolio Investment (FPI) inflows into India, appreciation of rupee, and potential easing of domestic interest rates.
- (d) They have no impact on Indian markets as India's economy is completely insulated from US monetary policy.

Q60. Which of the following best describes the term "furlough"?

- (a) A temporary leave of absence from work, often unpaid, typically due to economic conditions.
- (b) A permanent job termination due to company restructuring.
- (c) A paid vacation provided by the employer for annual leave.
- (d) A mandatory work assignment that requires employees to work overtime.

11th November

Q61. Which of the following statements are correct in respect of 'The Net Borrowing Ceiling (NBC):

1. The objective of enforcing a Net Borrowing Ceiling (NBC) is to maintain fiscal discipline and control inflation.
2. The Net Borrowing Ceiling (NBC) is usually reviewed every two years.

3. A higher credit rating from international agencies can lead to an increase in the Net Borrowing Ceiling (NBC).

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

Q62. Which of the following best reflects the meaning of the term 'digital strike'?

- (a) A strike conducted in physical spaces with digital tools.
(b) A coordinated action where workers or groups protest by halting their online activities.
(c) A type of cyber-attack aimed at disrupting government services.
(d) A protest involving physical demonstrations in digital platforms.

Q63. Under the Digital Personal Data Protection Act (DPDPA), which of the following is not protected as personal data?

- (a) Data made publicly available by an individual or third parties
(b) Data collected and stored by companies providing services in India
(c) Personal information like name, address, and location history
(d) Information processed by data processors such as cloud providers or credit rating agencies

Q64. What is the primary goal of the "China-plus-one" trade strategy?

- (a) To exclusively increase investments in Chinese markets
(b) To reduce dependency on China by diversifying production to other countries
(c) To restrict trade between China and neighbouring countries
(d) To encourage multinational companies to relocate entirely out of China

12th November

Q65. Under the Convention on the Prevention and Punishment of the Crime of Genocide (1948), which of the following is not considered an act of genocide?

- (a) Killing members of a particular national, ethnic, racial, or religious group.

- (b) Imposing measures intended to prevent births within a group.

- (c) Deliberately inflicting conditions of life calculated to bring about a group's physical destruction.

- (d) Restricting the movement of individuals within a group's territory.

Q66. Consider the following statements regarding Foreigners Contribution Regulation Act (FCRA) regulations for NGOs in India:

1. It is mandatory for all NGOs to register themselves under the FCRA.
2. Under the Act, foreign contribution cannot be transferred to any other person unless such person is also registered for that purpose.
3. Single FCRA account opened by NGOs to receive foreign funds can also receive funds from domestic donors.

Which of the statement(s) given above is/are correct?

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

Q67. Which of the following statements are correct in respect of the appointment of the Chief Justice of India (CJI):

1. The Article 124 deals with the appointment of the Chief Justice of India.
2. The outgoing Chief Justice of India is consulted by the President for the appointment of the CJI.
3. The Chief Justice of India can be removed from the office by the Supreme Court judges via voting for removal.

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

Q68. What does the Article 16(4) of the Indian Constitution deal with?

- (a) Special provisions for minorities in political representation
(b) Reservation in educational institutions for backward classes
(c) Protection of the rights of children
(d) Reservation in government jobs for backward classes

- (c) To enable voluntary international cooperation on emissions reduction through carbon markets and other mechanisms.
- (d) To mandate countries to submit Nationally Determined Contributions (NDCs) every five years.

15th November

Q77. Consider the following statements regarding 'The Armed Forces (Special Powers) Act, 1958 (AFSPA):

1. Governor of that State or the Administrator of that Union territory or the Central Government can declare the whole or such part of such State or Union territory to be a disturbed area.
2. Even assembly of 5 or more persons can attract action under AFSPA act.
3. Army soldiers operating under the AFSPA are shielded from all legal actions in every circumstances.

Which of the statements given above are correct?

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

Q78. Consider the following statements:

1. The National Disaster Management Act, 2005 has executive or legal provisions, to declare a natural calamity as a national calamity.
2. When a calamity is declared to be of "rare severity" or "severe nature", support to the state government is provided at the national level.

Which of the statements given above is/are correct?

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

Q79. Consider the following statements:

1. At COP29, countries are expected to report on their progress toward the Nationally Determined Contributions (NDCs).
2. The primary purpose of Nationally Determined Contributions (NDCs), which are discussed at COP29 is to define each country's voluntary climate goals under the Paris Agreement.

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

Q80. Which of the following statements are correct in respect of 'The Commission for Air Quality Management (CAQM)':

1. The purpose of the CAQM is to improve and manage air quality in the National Capital Region (NCR) and surrounding areas.
2. The CAQM operates under the Ministry of Environment, Forest and Climate Change (MoEFCC).
3. The CAQM can impose fines and can shut down non-compliant industries.

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

16th November

Q81. Which of the following statements are correct in respect of 'The New Collective Quantified Goal (NCQG)':

1. The purpose of the NCQG is to address climate change adaptation and mitigation of financing needs.
2. The NCQG is part of the Paris Agreement.
3. The NCQG needs to be reviewed and updated every year.

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. Which of the following voting system aims to ensure that the percentage of seats won by a party is closely equivalent to the percentage of the votes it receives?

- (a) Proportional representation
(b) First-past-the-post
(c) Plurality voting
(d) Ranked-choice voting

Q83. What does it mean when a brokerage firm gives a country an "overweight" rating in Foreign Institutional Investment (FII)?

- (a) The country's economy is expected to decline, and investors should reduce their holdings.
(b) The brokerage firm advises allocating more investment to that country compared to its benchmark weight.

- (c) The country's stock market is deemed too risky for additional investment.
- (d) The brokerage firm recommends divesting entirely from that country's market.

Q84. Consider the following statements about the European Union's Carbon Border Adjustment Mechanism (CBAM):

1. CBAM applies to all imports into the EU, including agricultural and technological goods, regardless of their carbon footprint.
2. Revenues generated through CBAM are earmarked to fund climate adaptation and mitigation projects globally.
3. The mechanism will initially cover sectors such as steel, cement, aluminium, fertilizers, and electricity.

How many of the above statements are correct?

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

18th November

Q85. Consider the following with reference to the 'Graded Response Action Plan (GRAP)':

1. GRAP categorizes air pollution into five categories.
2. GRAP is overseen by Commission for Air Quality Management (CAQM).
3. GRAP operates based on only seasonal temperature variations.
4. The AQI range for the 'Severe' category under GRAP is between 151-250.

How many of the above is/are correct?

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

Q86. The indigenous tribes of the Andaman and Nicobar Islands are known for being one of the most isolated groups in the world. Which of the following tribes is found in the Andaman Islands?

- (a) Jarwa Tribe (b) Garo Tribe
- (c) Khasi Tribe (d) Santhal Tribe

Q87. Lake Chad is located in which one of the following group of countries?

- (a) Chad, Central African Republic, Sudan, Cameroon

- (b) Chad, Nigeria, Central African Republic, Sudan
- (c) Chad, Niger, Central African Republic, Libya
- (d) Chad, Niger, Nigeria, Cameroon

Q88. Consider the following statements regarding India-Bangladesh extradition treaty:

1. India and Bangladesh signed an extradition treaty in 2010.
2. For an offence to be considered extraditable, the principle of dual criminality must apply, meaning the offence must be punishable in both countries.
3. Extraditions which are political in nature are exempted for all cases.

Which of the statements given above is/are correct?

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

19th November

Q89. Consider the following statements in the context of forest cover defined by the India State of Forest Report (ISFR):

1. All lands measuring more than one hectare with a tree canopy of more than 10%, irrespective of ownership and legal status.
2. Includes tree patches of less than one hectare located outside designated forest areas.
3. Excludes orchards, bamboo, and palm plantations from the definition of forest cover.
4. Considers only legally designated forest areas.

Which of the statements given above are correct?

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

Q90. Recently, 'CAT-III' was seen in the news. Which of the following best describes it?

- (a) A category of air pollution levels used to classify severe smog conditions.
- (b) A type of Instrument Landing System (ILS) that enables aircraft to land in extremely poor visibility conditions.
- (c) A classification of cyclones based on wind speed and intensity.
- (d) A new technological standard for automated air traffic control systems.

- Q91. Which of the following was a major theme of the "Voice of the Global South" conference?
- Global education policies
 - Regional cultural exchange
 - Global financial systems and their impact on the Global South
 - National security challenges in the Global South

Q92. Consider the following with reference to The African union:

- The headquarters of the African Union is located in Addis Ababa, Ethiopia.
- One of the main objectives of the African Union is to foster economic and political integration among African states.
- The Organization of African Unity (OAU) replaced by the African Union in 2002.

How many of the above is/are correct?

- Only one
- Only two
- All three
- None

20th November

Q93. Consider the following statements regarding the 'Central Consumer Protection Authority (CCPA)':

- It is a statutory body established in 2020 based on the provisions of the Consumer Protection Act, 2019.
- It has one Chief Commissioner and three other commissioners as members.
- It has no power to recall any faulty order/product, only courts have such powers.

Which of the statements given above is/are correct?

- 1 only
- 2 only
- 3 only
- 1 and 3 only

Q94. Consider the following statements about the ATACMS (Army Tactical Missile System) missile:

- ATACMS is a short-range surface-to-surface missile developed by the United States.
- It has a range of up to 300 kilometres and is capable of carrying conventional or nuclear warheads.
- ATACMS is primarily launched from Navy destroyers and submarines.

Which of the statements given above is/are not correct?

- 2 only
- 3 only
- 1 and 2 only
- 2 and 3 only

Q95. Consider the following with reference to 'The Nationally Determined Contributions (NDCs)':

- The NDCs are climate action plans outlined by countries to reduce greenhouse gas emissions.
- NDC's are submitted under the Paris Agreements.
- The countries are required to submit updated NDC's every year.
- The target year for India to achieve net-zero emissions as announced in COP26 is 2025.

How many of the above is/are correct?

- Only one
- Only two
- Only three
- All four

Q96. Which of the following is a common physical symptom associated with Post traumatic Stress Disorder (PTSD)?

- Increased appetite
- Decreased heart rate
- Decreased sensitivity to pain
- Fatigue

ANSWER KEY							
1.	a (4 only)	2.	a	3.	c	4.	d
5.	c	6.	d	7.	b	8.	d
9.	d	10.	b	11.	b	12.	b (1 and 3 only)
13.	b (1 and 3 only)	14.	d	15.	c	16.	c
17.	a (3 only)	18.	d	19.	c	20.	a (1 and 3 only)
21.	a (2 only)	22.	b	23.	b	24.	c
25.	b (2 and 3 only)	26.	c	27.	a (4 only)	28.	a (2, 3 and 4 only)
29.	a	30.	c	31.	c	32.	b (1 and 3 only)

33.	d	34.	b	35.	c (2, 3 and 4 only)	36.	a (3 only)
37.	d	38.	b (1 and 2 only)	39.	c	40.	d
41.	b	42.	d	43.	a	44.	c
45.	d	46.	d	47.	b (1 and 3 only)	48.	a (3 only)
49.	a (3 only)	50.	d	51.	a	52.	c
53.	c	54.	c	55.	b	56.	d
57.	a	58.	a	59.	c	60.	a
61.	c	62.	b	63.	a	64.	b
65.	d	66.	b	67.	a	68.	d
69.	b (1 and 3 only)	70.	a	71.	c	72.	a (2 only)
73.	a (2 only)	74.	d	75.	b	76.	c
77.	a	78.	b	79.	c	80.	d
81.	a	82.	a	83.	b	84.	a (3 only)
85.	b (1 and 2 only)	86.	a	87.	d	88.	a
89.	a	90.	b	91.	c	92.	c
93.	a	94.	b	95.	b (1 and 2 only)	96.	d

For Detailed Explanation

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DAILY ANSWER WRITING PRACTICE

- Q1. The world is witnessing rapid rise in sea levels. Discuss the causes of rising sea levels and the ways to respond to the rising sea levels around the world. (GS 1 and 3; 15 Marks; 250 Words)
- Q2. Elections are fundamental components of a working democracy. Discuss the various electoral reforms in India since independence. (GS 2; 10 Marks; 150 Words)
- Q3. Discuss the implications of Marine Heat Waves on marine ecosystems, climate patterns, and global weather phenomena. Suggest some potential measures to mitigate the impact of marine heat waves. (GS1 and 3; 15 Marks; 250 Words)
- Q4. What is BRICS? Discuss the reasons for BRICS collaboration. What are the basic challenges for BRICS as a grouping? (GS 2; 15 Marks; 250 Words)
- Q5. What is Section 6A of the Citizenship Act, 1955? How was it introduced and discuss the grounds on which it was challenged in the Supreme Court? (GS 2; 15 Marks; 250 Words)

- Q6. The current structure of United Nations Security Council (UNSC) reflects outdated power dynamics. Comment. Discuss the potential reforms in UNSC that can make it more equitable and relevant. (GS 2; 15 Marks; 250 Words)
- Q7. What are the differences between a tropical and extra-tropical cyclone? Describe the conditions needed and process of formation of a tropical cyclone. (GS 1; 15 Marks; 250 Words)
- Q8. What is geoengineering? Discuss the different geoengineering techniques along with advantages and disadvantages of geoengineering. (GS 1 and 3; 15 Marks; 250 Words)
- Q9. With cyclones increasing in frequency and intensity, examine the ecological and socio-economic importance of mangroves in coastal areas in the context of disaster resilience. (GS 1; 10 Marks; 150 Words)
- Q10. What are digital arrest scams? Discuss the implications of rising cyber scams in India, and the government's initiatives to enhance digital security. (GS 3; 15 Marks; 250 Words)
- Q11. Sardar Vallabhbhai Patel was a towering personality in modern Indian history. Discuss the significant contributions of Sardar Vallabhbhai Patel in pre- and post-independent India. (GS 1; 15 Marks; 250 Words)
- Q12. Discuss the status of multi-dimensional poverty in India. What are the determinants of rural poverty in India? Comment on the urbanisation of poverty in India. (GS 3; 15 Marks; 250 Words)
- Q13. What is National Air Quality Index (NAQI)? In light of rising air pollution in Northern India, discuss the components of the NAQI and impact of particulate pollutant particles. (GS 3; 10 Marks; 150 Words)

- Q14. The seizure of radioactive materials from India puts a question mark on India's nuclear non-proliferation credentials. Discuss its potential implications on National Security and ways to mitigate these challenges. (10 Marks, 150 words)
- Q15. Climate finance lately has emerged not only a hurdle in fight against climate change but also a new flash point on Global North vs. Global South Debate. Comment. (150 words, 10 marks)
- Q16. Indian railways need a complete overhaul in its system to cater the demand of developing Indian economy. Mention various challenges and committee recommendations to tackle those challenges. (250 words, 15 marks)
- Q17. Despite various warning from CAG, RBI, and other regulatory bodies on rising of debt of governments, the sops specially during elections are not stopping. What could be the impact of these sops on debt sustainability of governments in India? Suggest some steps to maintain debt sustainability in India. (250 words, 15 marks)
- Q18. Foreign funded NGOs can act as double-edged sword; it can either enhance nations' strength or it can hamper nations' growth. Discuss in the context of recent action of Government of India on foreign funded NGOs under Foreign Contribution (Regulation) Act (FCRA), 2010. (250 words, 15 marks)
- Q19. Afghanistan has been the strategic underbelly of India since ages. In this context, discuss the strategic concern of Taliban regime in Afghanistan for India. Also comments on the steps taken by India to gain its lost space in Afghanistan. (150 words, 10 marks)
- Q20. Mobilisation of fund in an informal economy like India is always a challenge. In this context cites the reasons for low tax-GDP ratio in India. Suggest some measures to increase tax collection in India. (150 words, 10 marks)
- Q21. The Armed Forces Special Power Act (AFSPA) is a necessary evil for the National Security of India. Do you agree? Suggest some measures to improve the execution of this act. (250 words, 15 marks)
- Q22. As India is going to age in the middle of the century, the welfare schemes for elder populations must not only address the economic vulnerability but also the social isolation. Discuss. (150 words, 10 marks)
- Q23. "An Indian century is not possible without a developed Africa, and an African century is not possible without a developed India." In this context, discuss the complementarities in the geostrategic, geopolitical, and geoeconomics fields between India and Africa. Suggest some measures to further enhance the relationship. (250 words, 15 marks)
- Q24. The neighbourhood first policy exemplifies India's values of 'Vasudhaiva Kutumbakam'. Despite its initial successes, lately India's neighbourhood relations have come under stress. Discuss the reasons for that. Suggest some measures to improve India's relations with its neighbours. (150 words, 10 marks)

For Detailed Explanation

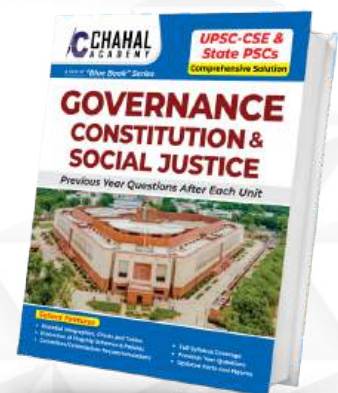
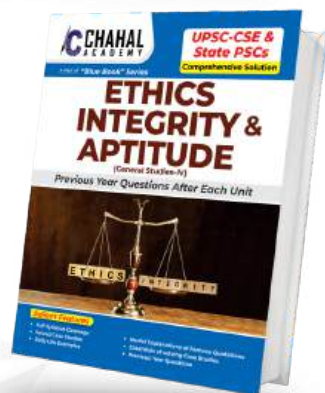
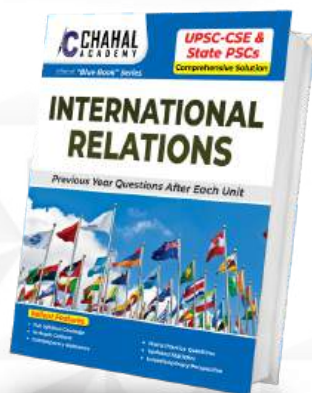
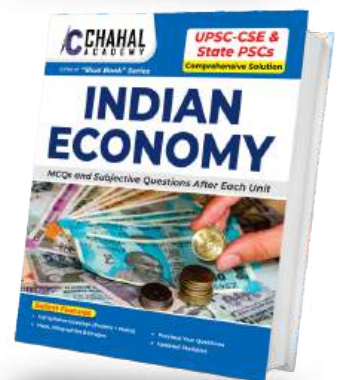
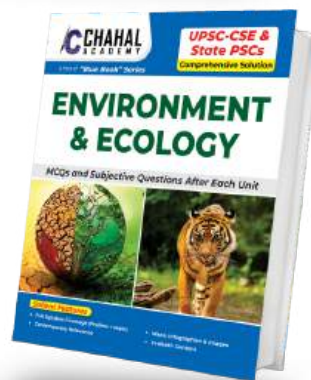
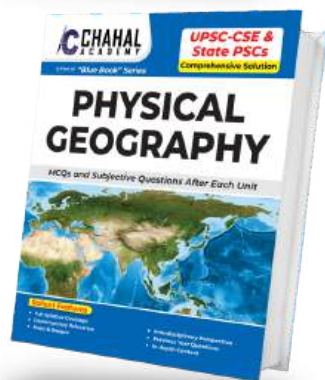
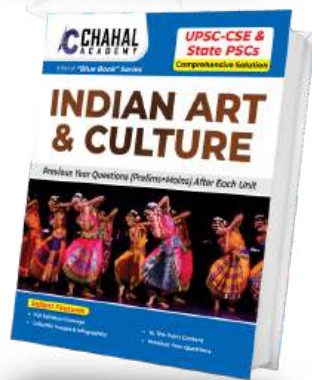
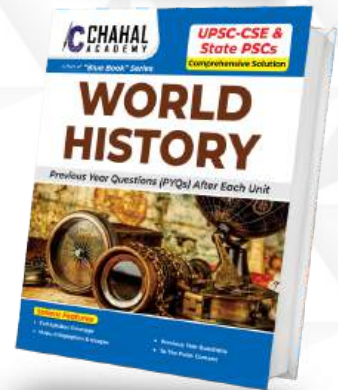
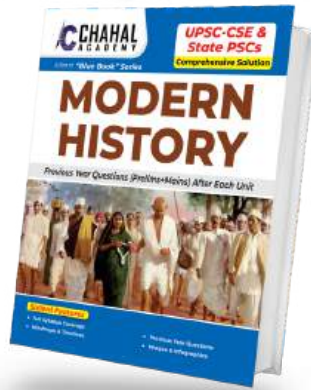
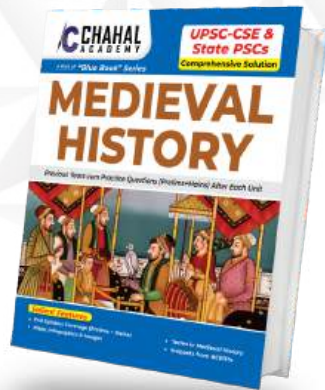
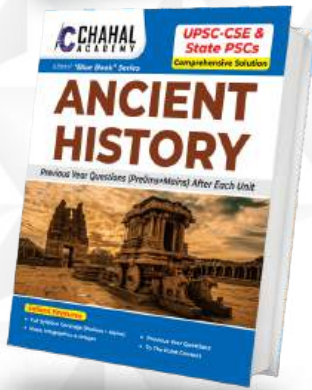
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