INSIGHTSIAS

SIMPLIFYING IAS EXAM PREPARATION

YAYA TSO

Yaya Tso, known as a birds' paradise for its beautiful lake has been proposed as Ladakh's first biodiversity heritage site (BHS).

It has the distinction of being one of the highest breeding sites of the black-necked crane in India.

30 JANUARY - 04 FEBRUARY 2023

WEEKLY CURRENT AFFAIRS

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FACTS FOR PRELIMS

GS1

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CONTENT FOR MAINS ENRICHMENT (ETHICS/ESSAY):

GS1

Modern Indian history - personalities

GANDHI'S RELEVANCE 75 YEARS AFTER HIS ASSASSINATION

Context:
The nation paid homage to the Father of the **Nation Mahatma Gandhi on his 75th death anniversary (30th January 1948)**. The day is also observed as **Martyrs' Day**.

Gandhiji's role in Freedom Struggle:
Outside India:

- **Natal protest** - Gandhi organized Indian resistance, **fought anti-Indian legislation in the courts and led large protests against the colonial government.**
- **Satyagraha Against registration certificates**
- It was in South Africa that Mahatma Gandhi first forged the **distinctive techniques of non-violent protest known as Satyagraha.**

In India:

- **Champaran Satyagraha (1917)**
- **Ahmedabad mill strike (1918)**
- **Kheda Satyagraha (1918)**
- **Rowlatt Satyagraha**
- **Khilafat and Non-cooperation movement**
- **Civil disobedience movement**
- **Protest against the Macdonald award**
- **Quit India Movement**
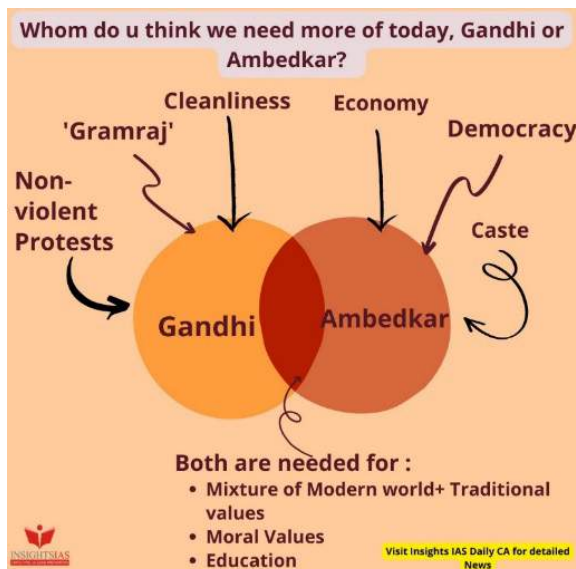
The vows of Gandhi
India's independence leader Mahatma Gandhi espoused virtues of non-violence, truth, peace and simplicity

Ahimsa Non-violence
Satya Truthfulness
Asteya No stealing
Brahmacharya Self-discipline including chastity
Aparigraha No possessions
Sharirshrama Working for daily food
Aswada Control of diet
Sarvatra Bhayavarjana Fearlessness
Sarva Dharma Samantva Equality of all religions
Swadeshi Use locally-made goods
Sparshbhavana Against idea of untouchability

Source: AFP/Gandhifoundation.net © AFP

Gandhian Ethics: Follow the link below
Gandhian Ethics and Its Relevance Now

Seven Dangers to Human Virtue
1. Wealth without work
2. Pleasure without conscience
3. Knowledge without character
4. Business without ethics
5. Science without humanity
6. Religion without sacrifice
7. Politics without principle
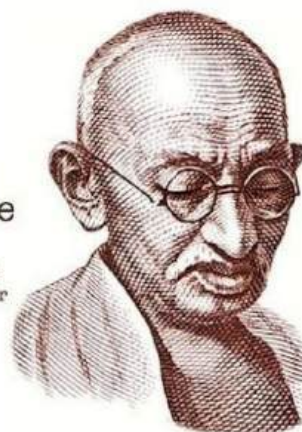
Why didn't Gandhi ever win the Nobel Prize for Peace?

Context: This year is Gandhi's 75th Death Anniversary

Mahatma Gandhi was the greatest apostle of peace and the most inspiring symbol of non-violent struggle against oppression and discrimination in the modern era.
The Mahatma was nominated several times including in 1937, 1938, 1939 and 1947, but didn't receive the prize.

Nobel Committee's argument:

- **Gandhi was different from others:** He was no real politician or proponent of international law, not primarily a humanitarian relief worker and not an organizer of international peace congresses.
- **His critique in the committee said:** Gandhi, although "a good, noble and ascetic person", was given to "sharp turns in his policies", which made him both "a freedom fighter and a dictator, an idealist and a nationalist".
- **His ideals were not universal** — his "struggle in South Africa was on behalf of the Indians only, and not of the blacks..."
- **No posthumous consideration:** Gandhi did not belong to an organisation and had not left a will, so it was unclear who would receive the prize money.

However, some experts give the reasons that up to 1960, the Nobel Peace Prize was awarded almost exclusively to Europeans and Americans. Also, the committee didn't want to be on wrong side of British Government by awarding Gandhi.

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Whom do u think we need more of today, Gandhi or Ambedkar?

Cleanliness
Economy
'Gramraj'
Democracy
Non-violent Protests
Caste

Gandhi — **Ambedkar**

Both are needed for :
- Mixture of Modern world+ Traditional values
- Moral Values
- Education

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GANDHI'S GLOBAL FOOTPRINT

The Indian independence movement may have witnessed the heyday of Gandhian non-violent action, but the ripples it left behind touched many other nations and influenced varied ideoligies. Here's a snapshot of Gandhi's global impact.

Gandhian non-violence was already invoked during his lifetime by **Khan Abdul Ghaffar Khan**, also known as the "Frontier Gandhi". Few people know about Khan Abdul Ghaffar Khan as a Muslim proponent of non-violence, who stressed the compatibility of Islam and Satyagraha

Often labelled as the "American Gandhi", **Dr. Martin Luther King, Jr.** recognized the value of Gandhi's legacy of non-violence and used it to strengthen his own campaigns ranging from racial integration to voting rights

Effective non-violent actions led by **Nelson Mandela** played a crucial role in crippling the brutal and racist apartheid regime in South Africa, helping establish a legitimate, democratically elected black majority government

The non-violent **Arab Spring** awakenings in West Asia from 2009 to 2012 demonstrated that Gandhian non-violence could help to provide the disobedient space that is needed

Conclusion:

As we celebrate the Azadi Ka Amrit Mahotsav, the need is to recall Gandhian values of non-violence, inclusiveness and communal harmony enabled India to establish a unique democracy achieving momentous economic and social transformation through the ballot box rather than through the barrel of the gun.

Insta Curious:
World Leprosy Day always takes place on the last **Sunday** of January. This date was chosen by French humanitarian, **Raoul Follereau** as a tribute to the **life of Mahatma Gandhi**, who did much work with persons affected by leprosy and died at the end of January 1948.

Insta Links: MK Gandhi

Mains Link:
Q. Throw light on the significance of the thoughts of Mahatma Gandhi in the present times. (UPSC 2018)

Q. Highlight the difference in the approach of Subhash Chandra Bose and Mahatma Gandhi in the struggle for freedom. (UPSC 2016)

GS2

Centre State Relations

COMING SOON: 16TH FINANCE COMMISSION

Context:
The government will soon kick off the process to set up the **16th Finance Commission**, with the Finance Ministry likely to notify the terms of reference (ToR) of the constitutional body.

Background:
- The **15th Finance Commission** (FFC chaired by NK Singh) was set up in (November 2017) with a mandate to make recommendations **for the five-year period from 2020-21**.
  - The Commission is usually granted about two years to deliberate on its terms of reference, consult States and frame its recommendations.
  - The government should ideally have its report by October 2025 to consider it in time for Budget 2026-27, where it will have to place its action taken report on the Commission's report.
- Despite the Constitution's mandate **to establish an FC every five years**, breaking the trend, the 15th FC's term was extended by a year, **ending in 2025–2026.**
- In late 2019, the Commission was asked to give a **standalone report for 2020-21** and **another report for an extended five-year** period till 2025-26.
- Since the FFC report **covered six years** (instead of five), the next FC must be selected this year.
- The last time an FC was granted a six-year time frame was for the **9th FC**, formed in June 1987.
- The **10th FC was still constituted in June 1992** within the five-year deadline specified by **Article 280 of the Constitution**, which has not been the case this time.

The first step towards establishing 16th FC:
- **While the ToR (Terms of Reference)** for the 16th FC will be worked out after internal government deliberations steered by the Finance Ministry, **the appointment of an Officer on Special Duty** to drive the process.

The key challenges for the 16th FC:

- **The co-existence of another permanent constitutional body** - the GST Council.
  - The Council's decisions on tax rate changes **could alter the revenue calculations made by the FC** for sharing fiscal resources.
- The government usually accepts recommendations **on States' share of tax devolution** and the trajectory for fiscal targets and **ignores most other suggestions.** For instance,
  - The government **ignored the FFC's suggestion of creating a Fiscal Council.**
  - The government has accepted the FFC's recommendation to set up a **non-lapsable fund for internal security and defence** 'in principle', but its implementation still has to be worked out.

Way ahead:

- **A recourse mechanism** can be put in place for the Commission to revisit its numbers due to the GST Council's decisions.
- The governments must rise beyond politics to deliberate and implement FC's recommendations, which are sound in terms of policy and economics.

What is the Finance Commission?

- It is a **constitutional** body constituted **every 5 years** by the **President** of India under **Article 280** of the Indian Constitution **to define the Centre-state's financial relations**.

Why is there a need for an FC?

- The Indian federal system allows for the **division of power and responsibilities between the Centre and states.**
- Correspondingly, the **taxation powers** are also broadly divided between the Centre (collects the majority of the tax revenue) and states (responsible for delivering public goods in their areas).
- Sometimes, due to this and also due to vast regional disparities, **states may incur expenditures higher than the revenue** generated by them.
- To address these **imbalances**, the FC recommends the extent of central funds to be shared with states.
- Thus, it is considered the **balancing wheel of fiscal federalism** in India.

Finance Commission

First FC (1952–57)	Second FC (1957–62)	Current/Fifteenth FC (2021–2026)
Chairman - KC Neogy	Chairman - K Santhanam	Chairman - NK Singh

Article 280 (Indian Constitution Part XII)	Constituted by	Members
Constitution of FC as a Quasi Judicial Body	President of India quinquennially (or earlier)	• Chairman + 4 members (including an HC judge) – appointed by President • Authority to decide qualifications – Parliament • Tenure – as specified by the President • Reappointment – Eligible

Makes Recommendations to President about

- Distribution of net tax proceeds between Centre and States
- Principles for grants-in-aid to the states by the Centre
- Evaluates the rise in the Consolidated Fund of a state to affix the resources of Panchayats/Municipalities
- Other financial matters referred to it by President

Powers of a Civil Court

As per Code of Civil Procedure 1908

*Recommendations of the FC are **only advisory and not binding** on the Government

HOW THE BOOTY IS DIVIDED

FORMULA THAT DECIDES A STATE'S SHARE

Weight in 15th FC: 2.5, 12.5, 15, 15, 10, 45
Weight in 14th FC: 27.5*, 15, 7.5, 50

Legend: Population, Area, Forest & ecology, Income distance, Demographic performance, Tax effort

*17.5% according to 1971 population. 10% by 2011 population

STATES' SHARE IN DIVISIBLE POOL (%)

11th FC	12th FC	13th FC	14th FC	15th FC
29.5	30.5	32	42	41*
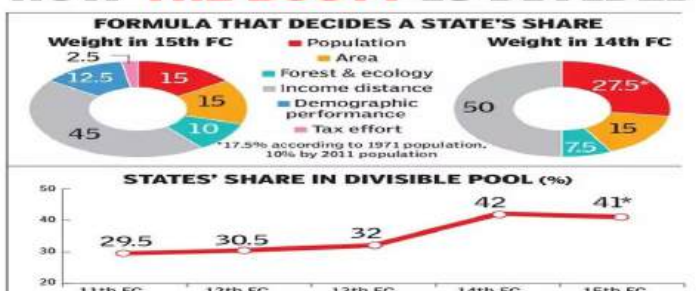
Insta Links: Navigating the storm: On the Fifteenth Finance Commission

Mains Links:

Q. How have the recommendations of the 14th France Commission of India enabled the States to improve their fiscal position? (UPSC 2021)

Prelims Links: (UPSC 2014)

Which of the following are associated with 'Planning' in India?

1. The Finance Commission
2. The National Development Council
3. The Union Ministry of Rural Development
4. The Union Ministry of Urban Development
5. The Parliament

Select the correct answer using the code given below:

1. 1, 2 and 5 only
2. 1, 3 and 4 only
3. 2 and 5 only
4. 1, 2, 3, 4 and 5

Ans: 3

PARLIAMENT IS 'NORTH STAR' OF DEMOCRACY, SAYS VICE-PRESIDENT

Context:

Stepping up the legislature versus judiciary debate, the Vice President and Rajya Sabha Chairman during the Parliament's sitting stated that **Parliament is the "north star" of democracy.**

Polaris/North Star stays in roughly the same place in the sky - directly above Earth's north pole, and therefore it's a reliable way to find the direction of the north.

Background:

- This comes days after the CJI's statement, **calling the basic structure doctrine a "north star"** that gives direction to interpreters and implementers of the Constitution.
- The VP has been **consistent in criticising the judiciary** for "overstepping its boundaries" and has also **questioned the landmark 1973 Kesavananda Bharati case** verdict on the basic structure doctrine.
- According to the VP, the **verdict had set a "bad precedent"** and if any authority questions Parliament's power to amend the Constitution, it would be difficult to say we are a democratic nation.
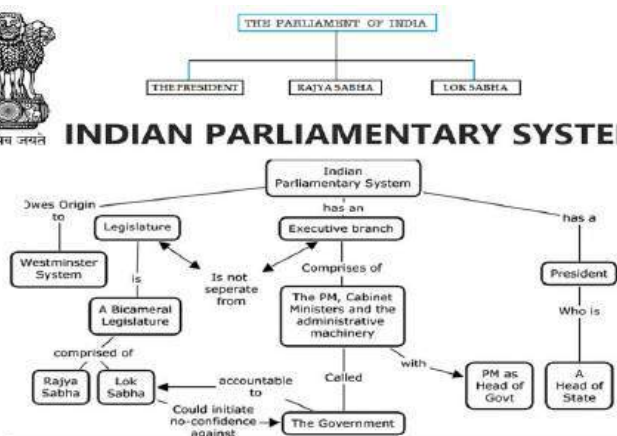
Role of the Parliament:

- Parliament is the **essence of democracy** - participation by people in the decision-making process and government by consent.
- It is a place for **debate/discussion/deliberation**

to realise the aspirations and dreams of the people.

Functions:

- To Select the National Government
- To Control, Guide and Inform the Government
- Law-Making

Issues faced by the Indian Parliament:

- While the Parliament's productivity has gone up, it faces several challenges -
    - **Frequent disruptions**
    - **Sharply dipping the number of bills being referred to parliamentary committees;**
    - **Shrinking space for the opposition;**
    - **Increasing recourse to ordinances; and**
    - **The bypassing of the Parliament on several important initiatives.**
- **Judicial activism** or the judiciary's proactive engagement in defending citizens' rights, is a practice born out of the Indian Parliament's inefficiency and inaction.
- As a result, there is debate over whether the Judiciary (SC, HCs) or Parliament should have the upper hand.

Parliament vs Judiciary		
The tussle over/Reasons	Implications	Solution
• Powers of Judicial Review (**Article 12, 32**) • Fundamental Rights vs DPSP • Decline of Parliament • Basic Structure • **Collegium System** • NJAC, etc	• Environment of distrust • Struggle for power • **Judicial overreach** • People's rights suffer due to a mismatch between expectations and realisation	• All branches should respect the doctrine of separation of powers (**Article 50**) • **Judicial Restraint** • Improving overall governance • **MoP for judicial appointments** needs to be finalised soon

Conclusion:

The Parliament is the **essence** of democracy, while the basic structure doctrine is the **bedrock** and spirit of democracy and we all are **soldiers** of democracy. Therefore, all have a **defined role to play in a Parliamentary democracy like India.**

Insta Links: [The doctrine of Separation of powers](#)

Mains Links:

Q. Resorting to [ordinances](#) has always raised concerns on violation of the spirit of the separation of powers doctrine. While noting the rationales justifying the power to promulgate ordinances, analyse whether the decisions of the Supreme Court on the issue have further facilitated resorting to this power. Should the power to promulgate ordinances be repealed? (UPSC 2015)

Prelims Links: (UPSC 2021)

We adopted [parliamentary democracy](#) based on the British model, but how does our model differ from that model?

1. As regards legislation, the British Parliament is supreme or sovereign but in India, the power of the parliament to legislate is limited.
2. In India, matters related to the constitutionality of the Amendment of an Act of Parliament are referred to the Constitution Bench by the Supreme Court.

Select the correct answer using the code given below.

1. 1 only
2. 2 only
3. Both 1 and 2
4. Neither 1 nor 2

Ans: 1

IS JUDICIAL MAJORITARIANISM JUSTIFIED?

Context:

The blind acceptance of numerical majorities in judicial decision-making and the constitutional disregard of analysis and appreciation of arguments and evidence in dissenting judgments have been in news recently **after the recent Supreme Court Judgement on demonetization.**

What is judicial majoritarianism?

- **Article 145(5)** states that **no judgment in such cases can be delivered except with the concurrence of a majority of the judge**s but that judges are free to deliver dissenting judgments or opinions.
- **Article 145(3): Constitutional Benches, consisting of five or more judges, are set up for cases** which involve a **substantial interpretation of constitutional provisions**.
- Such Benches usually consist of **five, seven, nine, 11 or even 13 judges.**

An issue with Judicial Majoritarianism:

- Issue of why numerical **majorities of judicial bodies are accepted** without any debate**, while numerical majorities in representative bodies such as the Lok Sabha are often looked at with suspicion**.

Reflect upon the concept of judicial majoritarianism:

- **The arguments of – efficiency through ease of decision-making; epistemic objectivity through majority adherence; and equality through fairness,** which are made in **defence of judicial majoritarianism cannot explain or justify our adherence to majority decisions.**
- As opposed to **representatives of the people in legislatures who may act on hunches or popular perception, judges are experts of law and are aware of the arguments for and against the impugned matter.** Hence, why is it that the **judges too have to resort to head counting in order to resolve disagreements amongst judges.**
- All judges on a particular Bench **give their rul-**

ings on the same set of facts, laws, arguments and written submissions. In light of the same, any differences **in judicial decisions can be attributed to a difference in either the methodology adopted and the logic applied by the judges in their interpretation,** or, upon their own 'judicial hunches' which may be an outcome of their subjective experiences, outlook, perceptions, prejudices and biases.

Constitutional history:

- The dissenting opinion of **Justice H.R. Khanna in A.D.M. Jabalpur v. Shivkant Shukla (1976) upholding the right to life and personal liberty even during situations of constitutional exceptionalism is a prime example**.
- Another example is the dissenting opinion of **Justice Subba Rao in the Kharak Singh v. State of U.P. (1962) case upholding the right to privacy which received the judicial stamp of approval in the K.S. Puttaswamy v. UOI (2017) case**.

Solution/Way Forward:

- **Seniority-based assessment**: Ronald Dworkin proffers a system which **may either give more weightage to the vote of senior judges** given that they have more experience or to the junior judges as they may **represent popular opinion better.**
- **Inculcate critical discourse**

Insta Links:
- Judicial Reforms
- Judicial Accountability and Judicial Reforms

Mains Link:
Q. Critically discuss why ensuring judicial reforms and accountability is imperative for India.

NO BAR ON CONTESTING TWO SEATS IN ONE POLL

Context:
The Supreme Court has **refused to set aside a provision in the election law** which allows candidates to contest polls from two constituencies simultaneously.

- Previously, a petition had sought the court to declare **Section 33(7) of the Representation of People Act** invalid and ultra vires.

Why has SC rejected the Plea?
The SC said that **this is a policy matter and an issue concerning political democracy**. It is for the Parliament to take a call (thus maintaining the Separation of Power Doctrine).

Legal Provisions:
As per Section 33(7) of the RPA (Representation of the People Act), 1951, one candidate can contest from a maximum of two constituencies.

- More than two constituencies were allowed until 1996 when the RPA was amended to set the cap at two constituencies.

Issues with contesting from two seats:

- **Conflicts in the RPA laws**: While **33(7)** allows candidates to contest from two seats, **Section 70** bars candidates from representing two constituencies in the Lok Sabha/state. Assembly.
- **The strain on public finances**: Lakhs of taxpayer rupees need to be shelled out because of a by-election that could have been easily avoided.
- **Loss of electoral interest of voters**: Repeated elections and a by-election would see fewer voters turn out to vote when compared to the first election.

Positives: It provides a "wider choice to the polity as well as candidates".

Previous Recommendations on the issues:
- **Chief Election Commissioner:** limit the seats from which a candidate can contest to just one.
- **Candidates to bear the financial burden** of conducting the subsequent by-election in one of the constituencies (if one wins in both seats)

Conclusion
It is time to modify **"One person, one vote"** and expand that principle to **"One person, one vote; one candidate, one constituency.**

Insta Links:
- Election Commission wants people to run from one seat
- To read RPA 1951: Click here
- One constituency one candidate

Prelims links:

Q. Consider the following statements: (UPSC 2020)
a) According to the Constitution of India, a person who is eligible to vote can be made a minister in a State for six months even if he/she is not a member of the Legislature of that State.
b) According to the Representation of People Act,

1951, a person convicted of a criminal offence and sentenced to imprisonment for five years is permanently disqualified from contesting an election even after his release from prison.

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

Ans: D

One can be a minister for 6 months (Article 164). However, one can become a member of the state legislature only if one must be not less than 30 years of age in the case of the legislative council and not less than 25 years of age in the case of the legislative assembly. **Hence, statement 1 is not correct.**

A person convicted of any offence and sentenced to imprisonment for **not less than two years** shall be disqualified for contesting an election from the date of such conviction and shall continue to be disqualified for a further period of **six years since his release**. Hence, statement 2 is not correct.

Government policies and interventions

CONTENT OF "NATIONAL IMPORTANCE"

Context:

The Information and Broadcasting (I&B) Ministry issued a fresh advisory for the implementation of the **Guidelines for Uplinking and Downlinking of Television Channels in India 2022.**

Background:

- **Uplink** is a term used to describe a communication line used to send electronic messages to satellites.
- D**ownlinking refers to the communication path utilised** to receive the satellite's electronic communications.
- The Union Cabinet had approved the 2022 Guidelines **to ease the issue of permissions to the companies**/ limited liability partnerships (LLPs) registered in India for -
  - **Uplinking and Downlinking of TV Channels,**
  - **Setting up of Teleports/ Teleport Hubs,**

- **Use of Digital Satellite News Gathering (DSNG)/ Satellite News Gathering (SNG)/ Electronic News Gathering (ENG) systems,**
- **Uplinking by Indian News agencies and temporary uplinking of a live event.**

The benefit of the new guidelines:

- **Ease of compliance for the permission holder**
- **Ease of Doing Business**
- **Simplification and Rationalization, etc.**

Highlights of the I&B Ministry's fresh advisory:

- It mandates '**public service broadcasting'** of **national and social importance** (with effect from March 1, 2023) for private TV channels through **voluntary compliance and self-certification.**
- It said the content could include the themes of -
  - **Education and spread of literacy,**
  - **Agriculture and rural development,**
  - **Health and family welfare,**
  - **Science and technology,**
  - **The welfare of women and the weaker sections of society,**
  - **Protection of the environment and cultural heritage and**
  - **National integration, etc., and could be extended to include similar subjects such as water conservation, disaster management, etc.**
- The content **need not** be of **30 minutes at a stretch** and shall be accounted for cumulatively on a monthly basis i.e., 15 hours per month.
- The broadcasters have the liberty to modulate their content.
- The broadcasters would be required to submit a monthly report on the **Broadcast Seva Portal** on compliance.
- The broadcasters will have to keep a record of the content telecast for 90 days.

Exemptions from the public service broadcasting obligation:

- Any content transmitted **from midnight to 6 a.m.**
- **Foreign channels**, downlinking in India [in languages other than those specified in the **8th schedule of the Indian Constitution**].

- The channels broadcasting [more than 12 hours] sports and devotional/spiritual/yoga content **shall be exempt from furnishing the monthly reports** on the Broadcast Seva Portal.

Conclusion:

According to a FICCI-EY report, with television subscriptions estimated to add another 42 million by 2025 from 178 million in 2021, public service broadcast is not a bad idea in a diverse country with myriad issues.

Insta Links: Guidelines for Uplinking and Downlinking of Television Channels in India 2022

Mains Links:
Q. Has digital illiteracy, particularly in rural areas, coupled with a lack of Information and Communication Technology (ICT) accessibility hindered socio-economic development? Examine with justification. (UPSC 2021)

THE SOCIAL SECTOR HAS BEEN SHORT-CHANGED ONCE AGAIN

Context:

The Union Budget 2023-24 reiterates the strategic vision of the government in which both economic recovery and job creation rest on increased capital expenditure (capex) while welfare segment has taken a toll.

The Budget announcements:

Increase in capex and its implications:

- **A capex of ₹10 lakh crore**, a 33% increase over last year.
- The budget estimate (BE) for effective capex is now is **4.5% of the GDP**, up from 3.9% last year.
- Government remains on its '**path of fiscal consolidation**,' with the **fiscal deficit** for FY24 projected to be **5.9% of the GDP** (**6.4%** for the current year).
- The finance minister reiterated the commitment to reach **a fiscal deficit below 4.5% by 2025-26.**
- <u>Critic</u>: essential schemes that provide a safety net and contribute to better human development outcomes have been **underfunded**.

Decreased allocations for social sector programs:

- **For subsidy:** The BE for food subsidy is ₹**1.97**

lakh crore compared to the revised estimate (RE) of ₹**2.8** lakh crore for 2022-23 (withdrawal of **Pradhan Mantri Garib Kalyan Anna Yojana**)

- For **MGNREGS** also seen a massive budget cut (BE for 2023-24 is ₹60,000 crore compared to the RE of ₹89,400 crore for 2022-23).
- **For programmes that provide nutritional support for women and children:**
    - **For Saksham Anganwadi, which includes anganwadi services, Poshan Abhiyan and a scheme for adolescent girls, allocation remains almost the same at ₹20,554 crore.**
    - **The school meals scheme, rechristened PM-POSHAN, has seen a slight decline.**
    - **Samarthya, the maternity entitlements scheme, has been allocated ₹2,582 crore compared to the previous year's allocation of ₹2,622 crore (BE).**
- For other initiatives:
    - **The allocations for old age, widow and disabled pensions under the National Social Assistance Programme have remained stagnant (around ₹9,600 crore).**
    - **The important areas in the social sector - education and health - have not seen any substantial increase.**

Implications of these decreased allocations:

Negative	Positive (As per the Accountability Initiative report)

• Less allocations on MGNREGA/food subsidy/pensions **can hinder demand revival.**
 	
• **The existing benefits under the NFSA does not compensate** for the reduced quantity of grains with the withdrawal of the PMGKAY.
 	
• Affects human development outcomes - reduces productivity, employment opportunities.
	• The budgets for anganwadi services and mid-day meals are over 30% less than in 2011.
	
	  • However, this is due to the decline in the number of beneficiaries.
	
	  • This means, the per beneficiary allocations have not changed for years.
	
	• **Funds can be diverted to capex**, which contributes to job creation, especially for wage workers.

Way ahead:

- To achieve the spending goals set by the national policies on education (6% of GDP) and health **(2.5%** of GDP), **the allocations need to be doubled.**
- **The removal of barriers** to the timely and appropriate implementation of social sector programs is necessary, along with an increase in budgetary support.
  - **For example**, the app-based attendance monitoring system to ensure timely and error-free payments under MGNREGS.

Conclusion:

- It must be acknowledged that spending on these various social sector efforts significantly contributes to both economic recovery and long-term improvements in people's lives.
- India cannot achieve the vision for **Amrit Kaal** without ensuring access to quality and affordable education, health, nutrition and social security.

Mains Links:
Q. In order to enhance the prospects of social development, sound and adequate healthcare policies are needed particularly in the fields of geriatric and maternal health care. Discuss. (UPSC 2020

Education

AISHE 2020-2021

Context:

The Union Ministry of Education released **data from the All India Survey on Higher Education (AISHE), 2020-2021.**

About ASIHE Report:

- The **AISHE was initiated in 2011**.
- The entire survey was conducted through electronic mode and a dedicated portal **was developed for this purpose.**

Key findings from the report:

For the first time, the **Higher Education Institutions (HEIs) of India have filled their data using an entirely online data collection platform** through the Web Data Capture Format (Web DCF).

Number of Institutions

- The number of universities **have increased by 70 during 2020-21, to 1,113 in 2020-21 from 1,043 in 2019-20.**
- **Uttar Pradesh, Maharashtra, Karnataka, Rajasthan, Tamil Nadu, Madhya Pradesh, Andhra Pradesh, Gujarat, Telangana, and Kerala** are the top 10 States in terms of the number of colleges.
- Among the **districts**, the maximum number of colleges is situated **in Bangalore Urban followed by Jaipur. About 32% of colleges are situated in 50 districts.**

Student Enrolment in Higher Education:

- Total **enrolment in higher education: It has increased to nearly 4.13 crore in 2020-21** from **3.85** crore in 2019-20 (an increase of **28.80** Lakh).
- Female **enrolment increased from 18.8 million in 2019-20 to 20.1 million in 2020-2021**
- **SC**: There were **2 lakhs more SC students who got enrolled in 2020-21 compared to the previous year.**
- **ST**: The year also saw about **3 lakhs more ST students and 6 lakhs more OBC students getting enrolled for higher education.**
- At the **undergraduate level, enrolment was highest in humanities (nearly 33%), followed by science (nearly 15%),** commerce, and engineering & technology. At the postgraduate level, the maximum number of students opted for social science followed by science
- **Gender Parity Index (GPI) has increased** from 1 in 2017-18 to **1.05** in 2020-21. More women enrolled themselves on science courses than men
  - **The Gender Parity Index is a socioeconomic index usually designed to measure the relative access to education of males and females. This index is released by UNESCO.**
- The top 6 States in terms of Student Enrolment are **Uttar Pradesh, Maharashtra, Tamil Nadu, Madhya Pradesh, Karnataka, and Rajasthan.**

Teaching and Non-Teaching Staff in Higher Education:

- The number of **teachers has increased by**

47,914 in 2020-21 over 2019-20.

- There are **75 female teachers per 100 male teachers.**

Out-Turn

- The total number of **pass-outs has increased** to **95.4 Lakh** in 2020-21 as against 94 Lakh in 2019-20.

Significance of Higher Education:

- **Atmanirbhar Bharat**: Self-reliant India needs a continuous supply of trained, skilled human resources
- **Demographic Dividend**
- **Better Employment opportunities**
- **Economic development**
- **Technological advancements**
- **Solving Societal Issues**
- **Plurality, Inclusivity & Diversity**: To develop the horizons of the mind.
- **Empowerment of Women**

Initiatives for Higher Education in India:

- **National Education Policy (NEP) 2020**
- **Rashtriya Ucchatar Shiksha Abhiyan (RUSA)**
- Project **Education Quality Upgradation and Inclusion Programme (EQUIP)**
- **Prime Minister's Research Fellowship (PMRF):** Attract the talent pool of PhD programmes
- **Paramarsh/Mentor-Mentee Relationship:** Under this scheme, **accredited institutions would help aspiring institutions that want to get accredited**.
- **Scheme for Promotion of Academic and Research Collaboration (SPARC):** to improve the research ecosystem
- **Global Initiative for Academic Network (GIAN):** It aims to tap the talent pool of scientists and entrepreneurs from abroad.
- **Formation of Higher Education Financing Agency (HEFA)**: It aims to **finance the creation of capital assets in premier educational institutions in India.**
- **Institutes of Eminence (IoE) Scheme**: It aims to provide opportunities for a few chosen institutions to grow in the direction of being renowned globally for their excellence.
- **SWAYAM Portal**

Way Forward:

- There is a need to shift focus from **enrolment to attendance**.
- **Multi-stakeholder approach**: Extensive consultation involving parents, local self-governments, and civil society are key.

Insta Links: Higher Education in India

Mains Link:
Q. "Commercialization of higher education in India is bound to create issues of access and exclusion". Critically comment on the statement and suggest measures to address the related issues. (15M)

EDUCATION REFORMER SONAM WANGCHUK ON LADAKH

Context:

Sonam Wangchuk claimed that the Centre's approach was alienating the youth by sowing the seeds of militancy as **the demand for the preservation of land, culture, and jobs under the 6th Schedule** of the Constitution grew in Ladakh.

Background:

- **On August 5, 2019**, the former State of J&K was bifurcated into two Union Territories (UTs) - J&K and Ladakh, the latter without a Legislative Assembly.
- After its special status (under Article 370) was removed, **several political groups in Ladakh have been demanding** protection under the 6th Schedule.
- According to the Parliamentary Standing Committee on Home Affairs report, as the tribal population in the UT is **~80%** (2,18,355) **of the total population, the special status may be granted** (under the 5th/6th Schedule) to the UT.
- However, the **Union government responded** that sufficient funds are being provided to UT and the UT had recently increased the **reservation for STs** in direct recruitment from 10% to 45%.

Concerns raised by Sonam Wangchuk and others:

- 12,000 jobs were promised but the recruitment

was completed only for 800 positions.

- Common people and journalists were **booked for raising their voices in favour of the 6th Schedule**.
- Earlier the UT had four MLAs in the State Assembly (J&K] **but now has zero representation**.
- **One man** (L-G, who is an outsider) decides everything and 90% of the ₹6,000 crores allocated to Ladakh is at the dispensation of a non-elected person.

Demands of civil society/political groups in the region:

- Restoration of full-fledged Statehood,
- Constitutional safeguards under the Sixth Schedule,
- Separate Lok Sabha seats for Leh and Kargil districts and
- Job reservation for locals

Conclusion:

The legitimate concerns raised by the UT need to be addressed soon, otherwise love for India will subside and will benefit those looking to cause trouble.

Sonam Wangchuk:

- [Sonam Wangchuk](#) is an **Indian engineer, innovator and education reformist** (born and works in Ladakh).
- He was instrumental in the launch of **Operation New Hope** (1994) - a collaboration of government, village communities and civil society to bring reforms in the government school system.
- He invented the [Ice Stupa technique](#) that creates artificial glaciers, used for storing winter water in the form of conical-shaped ice heaps.
- In recognition of all his efforts for society, he has received the **Ramon Magsaysay Award** as well as numerous other honours.

Mains Links:
Q. For effective border area management, discuss the steps required to be taken to deny local support to

militants and also suggest ways to manage favourable perceptions among locals. (UPSC 2020)

# POOR LITERACY LINKED TO WORSE MENTAL HEALTH PROBLEMS: STUDY

Context:

- According to a recent study in India, people with poor literacy face more mental health problems such as loneliness, depression and anxiety.
- It is the first such study to look at the **global picture of literacy and mental health.**

Highlights of the study:

- Despite rising literacy rates over the past 50 years, there are still an **estimated 773 million adults globally** who can't read or write.
- Literacy rates are **lower in developing countries** and those with a history of conflict, and **women,** who account for two-thirds of the world's illiterate, **are disproportionately affected**.
- **People with more literacy tend to have better social outcomes** in terms of finding employment, being paid well, and being able to afford better food and housing.
- Lower literacy is related to **poorer health, chronic diseases and shorter life expectancy.**
- Thus, little or no literacy **holds a person back** throughout their life and they often become trapped in **poverty or more likely to commit a crime**.

Significant association between [mental health](#) and [literacy](#):

- People with **lower literacy had greater mental health difficulties** such as anxiety and depression.
- Literacy may be impacted by a number of factors, **such as [poverty](#) or living in a region with a history of conflict**, which can affect mental health.
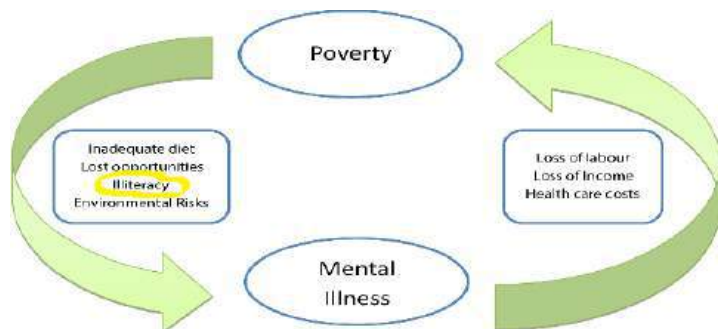
Mains Links:
Q. "Can the vicious cycle of gender inequality, poverty and malnutrition be broken through microfinancing of women SHGs? Explain with examples. (UPSC 2021)

Governance

TIRESOME RULES OUT, TRUST-BASED MODEL IN

Context:

Finance minister Nirmala Sitharaman emphasized **trust-based governance** in her budget speech

Recent steps taken by the government for TBG (including those announced in the recent Budget):

- Legislative steps:
  - **The government has introduced the Jan Vishwas Bill to amend 42 Central Acts**
  - **Ease of doing business: The government has proposed to reduce 39,000 compliances and decriminalize 3,400 legal provisions.**

- E-Government steps
  - **Paperless Governance: Third time in a row that the government presented the budget in a paperless form.**
  - **Entity Digi Locker: It will be set up for use by MSMEs, large businesses and charitable trusts, to share documents online securely, whenever needed by authorities for regulatory purposes**
  - **A permanent Account Number (PAN) will be made a common identifier for all digital systems of specified government agencies.**
  - **National Data Governance Policy will be brought out. This will enable access to anonymized data**

- **Delayering, the delegation of power and digitalisation in governance:** Initiatives –
  - **E-Office 7.0: Enables users to create and manage electronic documents that can be viewed, searched and shared.**
  - **Swachhta Special Campaign 2.0**
  - **Prashasan Gaon Ki Ore 2022: It is a nationwide campaign for the redressal of public grievances and improving service delivery which is being held in all Districts, States, and UTs of India.**

- Executive steps:
  - **Unified Filing Process: For obviating the need for separate submission of the same information to different government agencies, a system of 'Unified Filing Process' will be set-up**
  - **Simplifying the KYC process by adopting a 'risk-based' instead of a 'one size fits all' approach**
  - **Delegate powers under the SEZ Act to International Financial Services Centres Authority. It will avoid dual regulation and set up a single-window IT system for registration and approval from IFSCA, SEZ authorities, GSTN, RBI, SEBI and IRDAI.**
  - **The whole of government Approach: So that departments don't work in 'Silos' e.g. 3C (Collaboration, Congruence, Competition) approach to Aspirational District Programme.**

- Financing measures:
  - **Result-Based Financing of schemes: To better allocate scarce resources for competing for development needs, the financing of select schemes will be changed, on a pilot basis, from 'input-based' to 'result-based'.**

- **Dispute settlement:**
  - **Vivad Se Vishwas 2: The government will bring another dispute resolution scheme under Vivad Se Vishwas-2 to settle commercial disputes**
    - The Vivad Se Vishwas scheme provides **for the settlement of commercial disputes** on payment of **100 per cent of the disputed tax and 25 per cent of the disputed penalty** or interest or fee.
  - **A voluntary settlement scheme will be introduced to settle the contractual disputes between the government and**

government undertakings, under court proceedings.

Some concerns:

- The budget had **widened the tax authorities' power to withhold any refunds** to a taxpayer.
- It could result in an increased load of over-burdened constitutional courts

Trust Based Governance

Government in recent budget has emphasized on trust-based governance in her budget speech.
It has proposed to reduce 39,000 compliances and decriminalize 3,400 legal provisions, aimed to enhance ease of doing business for companies across the spectrum

What is Trust-Based Governance (TBG) ?
Trust-based governance creates an environment where government employees, people and private sectors feel free to use their specialist competence, instead of being weighed down by reporting and control systems.

The Elements of Trust

ABLE — Demonstrates Competence

BELIEVABLE — Acts with integrity

CONNECTED — Cares about Others

DEPENDABLE — Honors Commitments

Recent steps for Trust-Based Governance
- **Legislative steps:** Government has introduced the Jan Vishwas Bill to amend 42 Central Acts
- **E-Government steps:** Paperless Governance; Entity Digi Locker; National Data Governance Policy
- **Executive steps:** Unified Filing Process; Simplifying KYC process
- **Financing measures:** Result Based Financing of schemes (from 'input-based' to 'result-based')
- **Soft-Touch approach** to Regulation
- **Dispute settlement:** Vivad Se Vishwas 2

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Insta Links:
- [Governance](#)
- [Good Governance](#)
- [Good Governance Practices](#)

Mains Links:
Q. Trust-based Governance is quintessential to achieving Sabka Sath, Sabka Vikas and Sabka Vishwas. Elaborate. (10M)

International institutions

UNSC DOESN'T REFLECT TODAY'S REALITIES

Context:
UN General Assembly (UNGA) **President Csaba Korosi** has expressed concern that the UN Security Council **does not reflect today's realities**, is paralysed and is unable to discharge its basic function of maintaining international peace and security.

What has happened now?
Russia, a veto-wielding permanent member of the UN, attacked Ukraine. **Russia has vetoed UNSC resolutions on Ukraine** and voted against a resolution in the UNGA which called on countries not to recognise the four regions of Ukraine that Russia has claimed.

What is UNSC?

UN Security Council

15 Members:

Five permanent members: China, the United States, France, the United Kingdom, and the Russian Federation

Ten non-permanent members elected for two-year terms by the GA

Each member has one vote

Presidency of the Council: Each of the members in turn for one month

Primary responsibility: Maintenance of international peace and security

Source: UN official website

CGTN

What is Veto power in UNSC?
The United Nations Security Council veto power is the **power of the five permanent members** of the **UN Security Council** (China, France, Russia, the United Kingdom, and the United States) to veto any "**substantive**" **resolution**

Why the need for Reforms in UNSC?

- **Changing geopolitical realities:** Since 1945, the world has changed significantly: the Cold War strategic influences have declined; the membership of the UN has increased almost fourfold and the expectations of what the UN should do have grown.
- **Overrepresentation:** There is a huge European bias in P-5 due to the presence of the United Kingdom and France, including Russia.
- **Under-representation:** Regions like Latin America, the Caribbean Group, the Arab World, and Africa do not have a single permanent member
- Question of Veto: All five permanent members of the UNSC enjoy veto power. But the veto has been misused to put national interests ahead of global interests. Critics of the veto power say that it is the most undemocratic element of the UN and the main cause of inaction on war crimes & crimes against humanity, as it effectively prevents UN action against the perma-

nent members and their allies. For E.g. in the current Russian case

- **Non-transparent** and non-consultative manner of functioning.
- **North-South Inequality:** Only China is representative of the global south region, whereas the global north has four nations to represent them at the UNSC.
- **Growing stresses on the International System:** geopolitical conflict, climate change, food and energy insecurity, and pandemics have brought out the **inequities and inadequacies** of the way the world currently functions.

Key reforms taken in recent times:


Why India should be given a UNSC seat:

- **India's culture and worldview** resonate with the UN's vision
- India's **extensive association with the UN** since its inception
- **India's democratic values** and credibility of being the largest democracy
- **India's intrinsic strength** – Most populous country, Fifth largest economy and Responsible Nuclear power
- India as the leader of the **'Global South'**
- Contribution to **peacekeeping**
- **The active role played** on various issues of emerging importance in the UN

India's Efforts for reforms:

- India's **NORMS reform** (New orientation for a reformed multilateral system) in the changing architecture of global governance, including the UNSC
- **As an advocate of the 'Global South'**
- **G4 and L69:** G-4 (India, Brazil Germany and Japan) and L.69 (A group of like-minded countries from Asia, Africa and Latin America) have tried

to push UNSC for reforms and expansion

- The Indian strategy of **"revisionist integration"** into the Security Council consists of two components: (see below image)
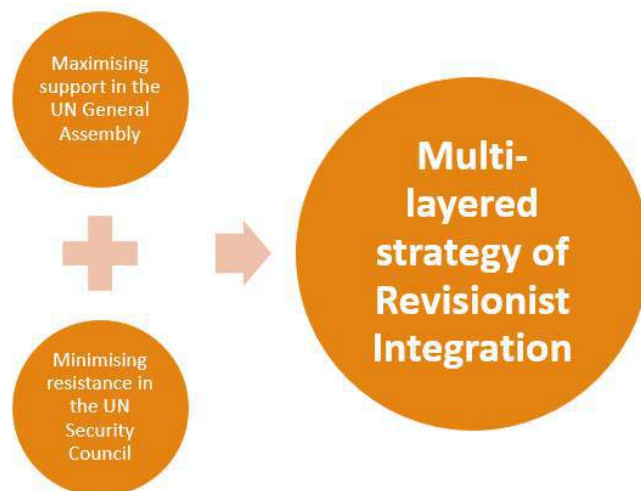
Conclusion:

India advocates for democratic reforms in multilateral fora, starting with the UN system, to better respond to the needs of its membership, especially developing countries. The implementation of the Council's decisions, and its very legitimacy, could be enhanced if the Council was reformed to be **more representative, effective, efficient, accountable and transparent.**

Quote: "It's clear that **outdated systems that were created to deal with the challenges of the past** cannot be expected to address the multitude of challenges of **today's dynamic and interdependent world**. The Security Council can deliver effective solutions only if **it gives a voice to the voiceless rather than zealously guarding the status quo of the mighty."** --Deputy Permanent Representative to the United Nations Security Council Ambassador R Ravindra

Insta Links: UNSC

Mains Links:
Q. Analyze the factors that lend credibility to India in assuming a permanent seat at the UN Security Council, amid calls for its reforms. (10M)

GS3

Indian Economy

A REAL-TIME FISCAL DATA POR-TAL

Context:

Former Economic Adviser, Arvind Subramanian, in his book mentioned that the **accounting techniques ('creative accounting')** used made it **difficult to gauge the precise extent of the fiscal deficit.**

Hence, the government should **make efforts to draft a more transparent and accessible budget for India's citizens and investors.**

Issues with present fiscal data:

- **Not Comprehensive:** Fiscal data in India is **fragmented, incomplete, and often comes with lags**.
- **Data mismatch:** The data shown in various sources as a **transfer by the higher tier (Union or state government) often does not match the amount shown as receipt by the lower tier (state or local government).**

Need for Real-time fiscal data portal:

- Clarity on funds **flowing across the three tiers of government—Centre, state, and local governments.**
- Improve the **quality of reporting, driving up the efficiency of public spending.**
- Allow **government vendors and related businesses to plan their purchases and inventories better.**
- Financial institutions would be able to **estimate the borrowing needs of different levels of government accurately.**

Committee recommendations:

- A 2018 committee on fiscal statistics appointed by the **National Statistical Commission (NSC) argued for a complete overhaul of India's fiscal database.**
- The committee found that a) **local government accounts were simply unavailable for most states, b) India's fiscal data lacks compilation,**

classification into suitable categories, and eventual publication on a website or in printed form.

- As **many parts of the financial system have been digitized**, it is possible to build a comprehensive real-time fiscal data warehouse.
- A number of Finance Commission reports **have advocated the setting up of an apex fiscal council to aggregate fiscal data**.

Conclusion:

A federal fiscal organization can help bring about more **consistent reporting standards**. A transparent fiscal data portal that provides granular real-time data can bring **about economy-wide efficiency gains, and pre-empt fiscal crises in the future.**

InstaCurious:

Off-Budget financing: It refers to expenditure that's not funded through the budget. For instance, the government may set up a special purpose vehicle (SPV) to borrow money for a particular task such as constructing a bridge. Since the loan is not taken directly by the govt, it does not reflect in the budget document.

Insta Link: Types of deficit

Mains Link: UPSC 2013
Q. What were the reasons for the introduction of the Fiscal Responsibility and Budget Management (FRBM) Act, 2003? Discuss critically its salient features and their effectiveness.

Prelims Link: UPSC 2017
Q. Consider the following statements:
1. Tax revenue as a percent of the GDP of India has steadily increased in the last decade.
2. The fiscal deficit as a percent of the GDP of India has steadily increased in the last decade.
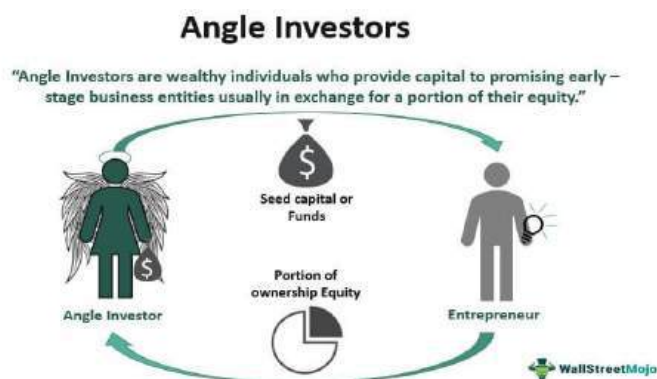Which of the statements given above is/are correct?
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither I nor 2
Solution: D

CHANGES PROPOSED IN ANGEL TAX

Context:

According to a proposal made in the Finance Bill, 2023, foreign/angel investors may be required to pay the "angel tax," which was previously only supposed to be paid for investments raised by resident Indian investors.

Angle Investors

"Angle Investors are wealthy individuals who provide capital to promising early – stage business entities usually in exchange for a portion of their equity."

Seed capital or Funds

Portion of ownership Equity

Angle Investor

Entrepreneur

WallStreetMojo

Angel Investors	
Role	**Pros/Cons**
• Angel investors **primarily provide capital for startups at early stages** in exchange or convertible debt or equity ownership. • Angel investors often choose to get an **accredited** investor status (as per the SEBI AIF Regulations - an individual with a net worth of ₹7.5 crores/ whose annual income is ₹2 crores). • However, an **accredited investor is not necessarily an angel investor.** • To be an angel investor, they require having an interest in providing **capital for startups.**	**Pros:** • **Less risk** than taking out a small business loan • Angel investors typically have **experience** in investing • **Mentorship**, guidance and valuable insights for the startup • Research shows that angel investors' supported startups are more likely to have **substantial growth and give a higher rate of return.** **Cons:** • Loss of equity, loss of control in the business • Anticipate a high rate of return on their investment

What exactly is the proposed change?

- The Finance Bill 2023, has proposed to amend Section 56(2) VII B of the **Income Tax Act.**
- According to the clause (introduced in 2012 and commonly known as the 'angel tax'), equity investments from **residents** for the issuance of shares at a price above their face value are treated as **income** for unlisted businesses like start-ups.
  - **For instance, if a start-up share has a fair market value of Rs 10 per unit and is sold to an investor for Rs 20 during a subsequent funding round, the difference of Rs 10 would be taxable as income (at 30%).**

  - **By subscribing to shares of a closely held company at a price over the shares' fair market value, it aims to prevent the creation and use of unaccounted money.**
- However, with the latest amendment, the government has proposed **to also include foreign investors in the ambit**.

Why are start-ups concerned?

- According to a PwC India report, **funding for India's start-ups dropped** by 33% to $24 billion in 2022 as compared to the previous year.
- **Foreign investors are a key source of funding** for start-ups and have played a big role in in-

creasing the valuation.

- ▪ **For instance, Tiger Global has invested in over a third of the start-ups that have turned unicorns (valuation of at least $1 billion).**
- The proposed amendment **will accelerate flipping overseas,** as foreign investors may not want to deal with additional tax liability.

Insta Links: Angel Tax

Prelims Links: (UPSC 2014)

Q. What does venture capital mean?
1. Short-term capital provided to industries
2. A long-term start-up capital provided to new entrepreneurs
3. Funds provided to industries at times of incurring losses
4. Funds provided for the replacement and renovation of industries

Ans: 2

Government Budgeting.

ECONOMIC SURVEY 2023: KEY TAKEAWAYS

Context:
The Economic Survey 2023, presented by the Finance Minister in Parliament, **painted an optimistic picture of the Indian economy's prospects**, claiming that the pandemic-induced blues are over.

What is the Economic Survey?
- It provides **a detailed report of the state of the national economy** for the current fiscal year (2022-23) with forecasts of the upcoming financial year (2023-24).
- It is prepared by the Economic Division of the **Department of Economic Affairs** (DEA), Ministry of Finance, under the guidance of the chief economic adviser (CEA).
- Once prepared, the Survey is **approved by the Finance Minister** and the comments or policy solutions contained in the Survey are **not binding** on the government.
- **The first Economic Survey** was presented for 1950-51 and until 1964, it was presented along with the Budget.

Key highlights of the Economic Survey 2023:

Key parameters	Projections/ Performance	Drivers/ Takeaways
GDP growth	India is to witness GDP growth of **6.0 - 6.8%** in 2023-24.	• The rebound of private consumption • Higher Capital Expenditure (Capex) • Near-universal vaccination Return of migrant workers to cities • strengthening the balance sheets of the Corporates, • Well-capitalized public sector banks ready to increase the credit supply to the MSME sector.

Inflation	• The RBI has projected headline inflation at **6.8%** in FY23, outside its comfort zone of 2% to 6%.	Not high enough to deter private **consumption** and not low to weaken the inducement to **invest**
Employment-Un-employment	The PLFS showed that the **urban unemployment rate for people aged 15 years and above declined** from 9.8% in the quarter ending September 2021 to 7.2% one year later.	• Despite layoffs, the **number of direct jobs created by Indian startups rose 36% in 2022.** • Improvement in the labour force participation rate. • The initial surge in exports. • A strong release of the "pent-up" demand • A swift rollout of the capex.
Health	• India's budgeted expenditure on the health sector reached 2.1% of the GDP in the financial year 2023 (Budget estimates) and **2.2%** in FY 2022 (revised estimates). • The National Health Policy 2017 as well as the 15th Finance Commission **recommended 2.5% by 2025.**	• Increase in the share of government health expenditure (in comparison to the total health expenditure) • This is due to expenditure incurred on the **national Covid-19 vaccination program**, **Aatmanirbhar Bharat Abhiyaan**, **Intensified Mission Indradhanush** (MI) program • **The decline in out-of-pocket expenditure** • Ayushman Bharat Jan Arogya Yojana (AB-JAY) falling short of the target: **Less than 50% of the originally targeted 50 crore beneficiaries** under the scheme.
Education	As a share of total GDP, the budgetary allocation for education saw only a minimal gain of 0.1 percentage points, from **2.8% to 2.9%** during the same seven-year period.	• Decline in the govt share of expenditure, while the expenditure on social services increased. • COVID worsens dropout rates at primary and upper primary school levels. • Higher education enrolment increased.
Agriculture	• The Indian agriculture sector has been growing at an average annual growth rate of **4.6% during the last six years**. • In recent years, India has also **rapidly emerged as the net exporter of agricultural products** ($50.2 billion during 2021-22)	• Strong agri growth led to a YoY **dip in monthly demand for MGNREGS.** • Interventions like the **PM Kisan, PMFBY,** and the push given to Kisan Credit Cards have been significant. • The sector needs "**re-orientation**" given challenges like adverse impacts of climate change, fragmented landholdings, and rising input costs.
Services: Source of strength	• India has been placed among the **top 10 service-exporting countries in the year 2021**. • The commercial services export has increased from 3% in 2015 to 4% in 2021.	• **Contact-intensive services** like hotel, tourism, retail trade, entertainment, and recreation, have registered a sequential **growth of 16%** at pre-pandemic levels. • **Non-contact intensive services** like ICT, financial, professional, and business services have contributed significantly to the economy.

Industry: Steady recovery	The industry not only accounts for **31% of the GDP** but also has a significant contribution in **generating employment for up to 12.1 crore people** in the financial year 2023, directly or indirectly.	• Path-breaking measures such as **PM GatiShakti, the National Logistics Policy,** and the Production-Linked Incentive schemes to boost manufacturing output**.**
Infrastructure	**Digital infra:** In 2022, over a billion people have unique digital ID documents, more than 80% have bank accounts, and over 600 crore digital payment transactions have been completed on a monthly basis.	• Digital infra can add 60-100 bps to GDP growth. • Government's vision for physical infrastructure development - Public Private Partnerships, National Infrastructure Pipeline, National Monetisation Pipeline, etc.
Climate Change and Environment: Preparing to Face the Future	• India declared the **Net Zero Pledge** to achieve a net zero emissions goal by 2070. • India achieved its target of **40% installed electric capacity** from non-fossil fuels ahead of 2030.	• **National Green Hydrogen Mission** to enable India to be energy independent by 2047. • The Survey highlights the progress on eight missions under the **NAPCC** to address climate concerns and promote sustainable development. • **E- vehicle sales** to touch 1Cr units by 2030.
Shipbuilding	• As of date, **more than 130 warships** have been constructed at Indian shipyards, and currently**, 41 of 43 ships and submarines** are being constructed at various public and private sector shipyards in India.	• Shipbuilding has one of the **highest employment multipliers** and is capable of generating mass employment in remote, coastal, and rural areas.
Startups	• Despite layoffs, the number of direct jobs created by Startups rose 36 percent to **around 2.7 lakh last year** • The number of start-ups recognized by the **Department for Promotion of Industry and Internal Trade (DPIIT)** has increased from 452 in 2016 to 84,012 in 2022	• Start-ups are being envisioned as the **spine of the 'new India'** as they encouraged youth to become job creators rather than job seekers
Electronics	• India is on the "**right trajectory**" to reach **$300 billion worth** of electronics manufacturing and **$120 billion in exports** by FY26 due to an improvement in manufacturing and export over the last five years.	• India has become the second-largest mobile phone manufacturer globally • **Domestic companies haveexpressed interest in establishing semiconductor fabrication plants** in the country.

Challenges ahead:

• **Uncertainty remains:** The Survey signals that vulnerabilities to India's growth mainly stem from external factors, while domestic drivers remain strong.

▪ **For example, there are upside risks to commodity prices from external factors such as the Russia-Ukraine conflict, China rapidly reopening its economic activity, etc.**

- **2023 = 2003:** The Survey argued that the situation in 2023 is similar to 2003, as the period between 2014 and 2022 is analogous to 1998-2002 when despite transformative reforms by the government, **the Indian economy lagged in growth returns**.
  - This was due to temporary shocks such as the US sanctions after India's nuclear test, two successive droughts, the collapse of the tech boom, etc. But once these shocks faded, the structural reforms paid growth dividends from 2003.
  - Similarly, the successive shocks in recent years, such as the ILFS collapse, the COVID-19 pandemic, etc., have led to a lag in the growth effects of sweeping reforms across multiple dimensions.

Way ahead:

- **Vigilant on inflation, and deficit:** Monetary and fiscal authorities will need to stay proactive and vigilant on inflation as well as the worsening CAD front, which is facing multiple risks due to slowing exports, rising import bills, etc.
- **The private sector should take the lead:** Though the fiscal policy has supported public investments for infrastructure projects, the time is here for the private sector to take on the baton of contributing to economic growth.

Conclusion:

Despite challenges, the Indian economy has almost "recouped" what it lost in 2022–2023 and has "renewed" and "re-energized" what had slowed down due to the pandemic.

Mains Links:
Q. Do you agree with the view that steady GDP growth and low inflation have left the Indian economy in good shape? Give reasons in support of your arguments. (UPSC 2019)

Prelims Links: UPSC 2015
With reference to the Indian economy, consider the following statements:
1. The rate of growth of the Real Gross Domestic Product has steadily increased in the last decade.
2. The Gross Domestic Product at market prices (in rupees) has steadily increased in the last de-

cade.
Which of the statements given above is/are correct?
1. 1 only
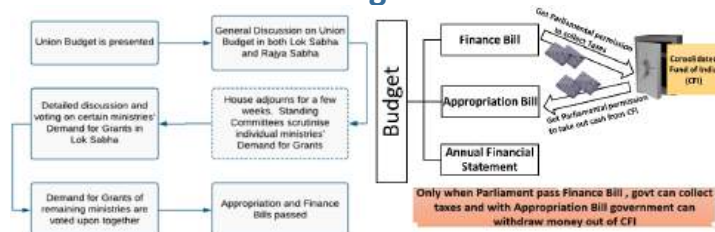2. 2 only
3. Both 1 and 2
4. Neither 1 nor 2

Ans: 1

UNION BUDGET 2023-24

Context:
While presenting the Union Budget 2023-24 in the Lok Sabha, the Union Finance Minister emphasised that the Indian economy is on the right track, and despite a time of challenges, heading towards a bright future.

What is the 'Union Budget'?

- **Article 112: T**he **annual financial statement** is a statement of the **estimated receipts and expenditures** of the government for a particular year.
- The receipts and expenditures **are shown under three parts**, namely, the Consolidated Fund of India and the Public Account of India (Article **266**), and the Contingency Fund of India (Article **267**).
- It is prepared by the **Department of Economic Affairs**, Ministry of Finance, for the fiscal year **that runs from 1st April to 31st March**.

Annual Financial Statement			
Revenue Budget		**Capital Budget**	
Revenue Receipts	**Revenue Expenditure**	**Capital Receipts**	**Capital Expenditure**
Tax receipts	Non-tax receipts		
Direct and Indirect taxes	PSU profits, interest or loans received, etc.	Subsidies, salaries, pensions, interest payments, etc.	Disinvestment proceeds, Borrowings, Recovery of past loans, etc.	Expenditure on infrastructure, asset creation, loans to states, etc.

Note: the table below has five columns (Tax receipts | Non-tax receipts | Revenue Expenditure | Capital Receipts | Capital Expenditure) in the detail row.

Types of Deficits	Description
Budget Deficit	Difference between total expenditure and total receipts.
Fiscal Deficit	Total expenditure – (Revenue receipts + Capital receipts which are non- debt imposing)
Revenue Deficit	Difference between revenue expenditure and revenue receipts.
Primary Deficit	The part of the Fiscal Deficit that excludes interest payment amount.
Effective Revenue Deficit	Revenue Deficit - Grants for the creation of capital assets

Highlights of the Union Budget 2023-24 speech:

- **Resilience amidst multiple crises:** The **economic growth is estimated at 7%**, which is the highest among all major economies.
- **G20 Presidency:** With the theme of '**Vasudhaiva Kutumbakam**', India is steering an ambitious, people-centric agenda to address global challenges and facilitate sustainable economic development.
- **Achievements since 2014 - Leaving no one behind:**
- Vision for Amrit Kaal - An empowered and inclusive economy:
    - **The term 'Amrit Kaal' comes from Vedic astrology and indicates a sort of golden era.**
    - **It signifies that the coming period in India is going to be its most prosperous, with economic growth and social justice.**
    - **'Amrit Kaal' also describes the hope for a better future, where India would be self-reliant and fulfil all of its humanitarian obligations.**
- **Future prospects:** This Budget hopes to build on the foundation laid in the previous Budget, and the blueprint drawn for India@100, which envisions a prosperous and inclusive India.

The Budget Estimates 2023-24:

- **The total receipts** other than borrowings and the **total expenditure** are estimated at Rs 27.2 lakh crore and Rs 45 lakh crore respectively.
- **The net tax receipts** are estimated at Rs 23.3 lakh crore and the **fiscal deficit** is estimated to be **5.9% of GDP**.
    - **Set to benefit the economy because it means more funds available for private players.**
    - **The government has decided to continue the path of fiscal consolidation, reaching a fiscal deficit of below 4.5% by 2025-26.**
- To finance the fiscal deficit in 2023-24, the net market borrowings from dated securities are es-

timated at Rs 11.8 lakh crore.

- ▪ **The balance financing is expected to come from small savings and other sources.**
- ▪ **The gross market borrowings are estimated at Rs 15.4 lakh crore.**

- **The capital expenditure** by the government has been raised to **Rs 10 lakh crore**. This is more than double the amount of money allocated when compared to 2020-21.

   - ▪ **Capital expenditure is the money that is spent on building productive assets such as roads and bridges and ports.**
   - ▪ **This has a greater return to the economy and every Rs 100 spent leads to a Rs 250 gain for the economy. Revenue expenditure returns less than Rs 100.**

Tax proposals in the Union Budget 2023-24:

Personal Income Tax:

- The rebate limit in the new tax regime has been **increased to ₹ 7 lakh**.
- The tax structure in the new personal tax regime has been changed by reducing the **number of slabs to five and increasing the tax exemption limit to ₹ 3 lakh.**

Indirect Tax Proposals:

- It emphasised **simplification of tax structure** with fewer tax rates so as to help in reducing compliance burden and improving tax administration.
- **The number of basic customs duty rates on goods**, other than textiles and agriculture, has been reduced from 21 to 13.

Better targeting of tax concessions: For better targeting of tax concessions and exemptions, the deduction from capital gains on investment in residential houses has been capped at ₹ 10 crores.

Proposals relating to MSMEs: Describing MSMEs as growth engines of the Indian economy, the Budget proposes enhanced limits for micro-enterprises and certain professionals for availing the benefit of presumptive taxation.

Cooperation: New cooperatives that commence manufacturing activities by 31st March next year shall get the benefit of a lower tax rate of 15%.

Start-ups: The Budget proposes to extend the date of incorporation for income tax benefits to start-ups from 31.03.2023 to 31.03.2024.

Amendments in CGST Act: The Budget provides for amending the CGST Act so as to raise the minimum threshold of tax amount for launching prosecution under GST from ₹ 1 crore to ₹ 2 crores.

Implications of tax changes: The revenue of about ₹ 38,000 crores will be foregone as a result of these proposals in the direct and indirect taxes, while revenue of about ₹3,000 crores will be additionally mobilised.
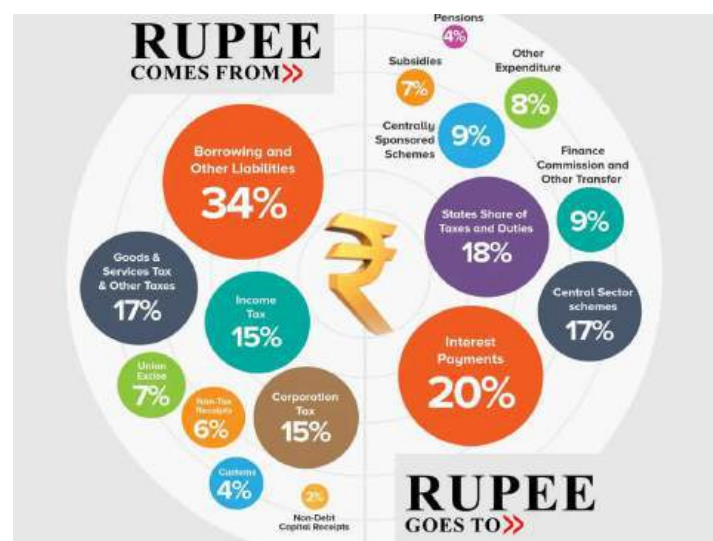
Budgetary allocation for key ministries and social sector schemes since 2021-2022

Schemes/Ministries/Departments	Note
Centrally sponsored schemes	After a dip in allocation in the last budget, FY 2024 saw an **increase** of Rs 34,000 crore
Department of Agriculture and Farmers' Welfare	After a dip in allocation in the last budget, FY 2024 saw an **increase** of over Rs 5,000 crore from the last budget
Department of Food and Public Distribution	Budgetary allocation for this department has **come down**, the proposed budgetary allocation is over Rs 90,000 crore less than the last one
Ministry of Earth Sciences	After a marginal dip in budgetary allocation last fiscal, the allocation for FY 2024 is **nearly 50% more than the last one**
Ministry of Environment, Forest and Climate Change	Remaining near constant for the last two fiscal years, the proposed budget **increases** allocation by around Rs 400 crore over the last budget
Ministry of Animal Husbandry and Dairying	The proposed budget allocated **33% more** to this ministry than the last one
Department of Health and Family Welfare	This department got **Rs 10,000 crore more** than the last budget
Department of Water Resources, River Development and Ganga Rejuvenation	Allocation **increased** over the last fiscal

BUDGET (NEW SCHEMES ANNOUNCED AND OLD SCHEMES EMPHASIZED

Context:

As per the **'Saptarishi' targets**, the schemes have been divided into **7 Key Priority Areas**

1. Inclusive Development
2. Reaching the Last Mile
3. Infrastructure and Investment
4. Unleashing the Potential
5. Green Growth
6. Youth Power
7. Financial Sector

Priority 1: Inclusive Development	Agriculture Sector	Digital public infrastructure for agriculture	• It will be built as an **open-source, open-standard and interoperable** public good • This will help to provide **farmers with information services for crop planning** and help improve access to farm inputs, credit and insurance
		Agriculture Credit	• The credit target will be increased to **20 lakh crores** with a focus on animal husbandry, dairy and fisheries.
		Atmanirbhar Horticulture Clean Plant Program	• To boost the **availability of disease-free, quality planting material** for high value horticultural crops
		Agriculture Accelerator Fund	• It will be **set up to encourage Agri start-ups** by young entrepreneurs in rural areas

		Enhance the productivity of extra-long staple cotton	• The government will adopt a **cluster-based and value chain approach** through PPP (**collaboration** between farmers, state and industry for input supplies, extension services, and market linkages)
		Global Hub for Millets: 'SHREE ANNA'	• India is the largest producer and second largest exporter of 'Shree Anna' (Millets) in the world • To make India a global hub for 'Shree Anna', the **Indian Institute of Millet Research, Hyderabad** will be supported as the Centre of Excellence for R&D in Millets
		A New sub-scheme of PM Matsya Sampada Yojana	• It will further **enable activities of fishermen, fish vendors, and micro & small enterprises**, improve value chain efficiencies and expand the market
	Health	Nursing Colleges	• **157 new nursing colleges** will be established (in co-location with the existing 157 medical colleges)
		Sickle Cell Anaemia Elimination Mission	• A Mission to **eliminate Sickle Cell Anaemia by 2047** will be launched to enable awareness, screening of 7 crore people (0-40 years age group) and counselling
		Pharma Innovation	• To promote **R&D in pharmaceuticals** through centres of excellence
	Education	Teachers' training	• **Using innovative pedagogy, curriculum transaction, continuous professional development,** dipstick surveys, and ICT implementation • **District Institutes of Education and Training** will be developed as vibrant institutes of excellence
		National Digital Library for children and adolescents	• It will be **set up for facilitating the availability** of quality books. • States/Panchayats will be encouraged to set up **physical libraries to access digital resources**
Priority 2: Reaching the Last Mile	Tribal Welfare	Aspirational Block Programme	• The government had recently launched the **Aspirational Blocks Programme covering 500 blocks** for saturation of essential government services across multiple domains
		Pradhan Mantri PVTG Development Mission	• It will provide **PVTG families and habitations with basic facilities** such as safe housing, clean drinking water and sanitation, improved access to education, health etc. • The mission will run under the **Development Action Plan for the Scheduled Tribes**
		Eklavya Model Residential Schools	• Centre will recruit **38,800 teachers and support staff** for the 740 Eklavya Model Residential Schools, serving **3.5 lakh** tribal students.
	Water	Water for the drought-prone region	• For the drought-prone central region of **Karnataka**, Central assistance will be given to **Upper Bhadra Project** to provide sustainable micro irrigation and filling up of surface tanks for drinking water.
	Housing	PM Awas Yojana	• The outlay for PM Awas Yojana is being enhanced **by 66 per cent** to over 79,000 crores

	Languages and Inscriptions	Bharat Shared Repository of Inscriptions (Bharat SHRI)	• It will be set up in a digital epigraphy museum, with the digitization of **one lakh ancient inscriptions** in the first stage
	Criminal Justice system	Support for Poor Prisoners	• **For poor prisoners who are unable to afford the penalty or the bail amount**, required financial support will be provided
		E-Courts	• **For efficient administration of justice**, Phase 3 of the E-Courts project will be launched
Priority 3: Infrastructure & Investment	Investments	Capital Investment as the driver of Growth and jobs	• Capital investment outlay has been increased steeply for the third year in a row by **33 per cent to 10 lakh crore (**3.3 per cent of GDP)—almost **three times** that of 2019-20
		Effective Capital Expenditure (through grant-in-aid to states)	• Budgeted at **13.7 lakh crore (**4.5 **per cent of GDP)**
		Support to States for capital investment	• Centre will continue the **50-year interest-free loan** to state governments for one more year
		Enhancing Opportunities for Private Investment in Infrastructure	• It will be done through the newly established **Infrastructure Finance Secretariat**
	Infrastructure	Harmonized Master List of Infrastructure	• The sectors eligible for financial assistance from IIFCL are the **Harmonized list of infrastructure** e.g., transportation, energy, water, etc. • It will be **reviewed** by an expert committee
		Lab Grown Diamonds (LGD)	• LGDs were made by humans in a lab or factory rather than by nature. It is a **technology-and innovation-driven emerging sector** with high employment potential. • To encourage **indigenous production of LGD**, and to reduce import dependency, a research and development grant will be provided to one of the IITs for five years.
	Urbanization	Sustainable Cities of Tomorrow	• States and cities will be encouraged to make **'sustainable cities of tomorrow'** meaning the efficient use of land resources, transit-oriented development, and opportunities for all.
		Urban Infrastructure Development Fund (UIDF)	• Like the RIDF, an **Urban Infrastructure Development Fund (UIDF)** will be established through the use of priority sector lending shortfall. (This will be done by the **National Housing Bank**)

		Urban Sanitation	• All cities and towns will be **enabled for 100 per cent mechanical desludging of septic tanks and sewers to transition from manhole to machine-hole mode**. • The enhanced focus will be provided for the scientific **management of dry and wet waste.**
	Logistics		• **100 critical transport infrastructure projects,** for last and first-mile connectivity for ports, coal, steel, fertilizer, and food grains sectors have been identified
	Railways		• The **highest-ever capital outlay of 2.40 lakh crore** has been provided for the Railways
	Regional Connectivity		• **50 additional airports, heliports, water aerodromes** and advanced landing grounds will be revived for improving regional air connectivity.
Priority 4: Unleashing the Potential	Artificial Intelligence	Centre of Excellence for AI: Make AI in India and Make AI work for India	• **3 centres of excellence for Artificial Intelligence** will be set up in top educational institutions
	Governance	National Data Governance Policy	• **National Data Governance Policy will** be brought out: This will enable access to anonymized data
		Simplifying KYC process	• The KYC process will be simplified by adopting **a 'risk-based' instead of a 'one size fits all'** approach
		One Stop Solution for Identity and Address Updating	• This will be done using **Digi Locker service and Aadhaar** as a foundational identity • **PAN** will be used as the common identifier for all digital systems of specified government agencies
		Unified Filing Process	• For obviating the need for separate submission of the same information to different government agencies, a system of **'Unified Filing Process' will be set-up**
		Result Based Financing of schemes	• To better allocate scarce resources for competing for development needs, the financing of select schemes will be changed, on a pilot basis, from **'input-based' to 'result-based'**.
	Digitization	Entity Digi Locker	• **An Entity Digi Locker will be set up for use by MSMEs,** large businesses and charitable trusts, to share documents online securely, whenever needed by authorities
		5G labs	• **100 labs** for developing applications using **5G services** will be set up in engineering institutions
Priority 5: Green Growth	Environment Conservation	Green Growth	• **"LiFE"**, or Lifestyle for Environment • **'Panchamrit'** and Net-zero carbon emission by 2070
		Battery Energy Storage Projects	• **Battery Energy Storage Systems** with the capacity of **4,000 MWH** will be supported with Viability Gap Funding. • A detailed framework for **Pumped Storage Projects** will also be formulated.

		Renewable Energy Evacuation	• The Inter-state transmission system for **evacuation and grid integration of 13 GW of renewable energy** from Ladakh will be constructed
		Green Credit Programme	• For encouraging behavioural change by companies, individuals and local bodies, a **Green Credit Programme** will be notified under the Environment (Protection) Act.
		Gobardhan Scheme	• **500 new 'waste to wealth' plants under GOBARdhan (Galvanizing Organic Bio-Agro Resources Dhan)** scheme will be established for promoting a circular economy
		MISHTI: 'Mangrove Initiative for Shoreline Habitats & Tangible Incomes'	• It will be taken up for mangrove plantation along the coastline and on salt pan lands using **convergence between MGNREGS, CAMPA Fund** and other sources
		Amrit Dharohar	• It will **encourage the optimal use of wetlands, and enhance bio-diversity**, carbon stock, eco-tourism opportunities and income generation for local communities for the next 3 years.
	Agriculture	PM-PRANAM	• "PM Programme for Restoration, Awareness, Nourishment and Amelioration of Mother Earth" will be launched • To incentivize States and Union Territories to promote alternative fertilizers and balanced use of chemical fertilizers
		Bhartiya Prakritik Kheti Bio-Input Resource Centres	• **10,000 Bio-Input Resource Centres** will be set up, creating a national-level distributed micro-fertilizer and pesticide manufacturing network. • It will help **facilitate 1 crore farmers** to adopt natural farming in the **next 3 years**.
Priority 6: Youth Power	Skilling	Pradhan Mantri Kaushal Vikas Yojana 4.0	• It will be launched to **skill lakhs of youth** within the next three years • It will also cover **new age courses for Industry4.0** like coding, AI, robotics, mechatronics, IOT, 3D printing, drones, and soft skills • **30 Skill India International Centres** will be set up across different States
	Tourism	Unity Mall	• States will be encouraged to set up a **Unity Mall in their state capital/important cities** or most prominent tourism centre for the promotion and sale of their own ODOPs (one district, one product), GI products and other handicraft products, and for providing space for such products of all other States
Priority 7: Financial Sector	Regulation	Financial sector Regulations	• **Time limits** to decide the applications under various regulations will also be laid down
		DATA Embassy	• The government will facilitate the setting up of Data Embassies in GIFT IFSC, Gandhinagar • **Data embassies** create a new approach to securing data by leveraging **diplomatic agreement**s bolstered by cloud technology solutions

	Banking	Improving Governance and Investor Protection in Banking Sector	• Certain amendments to the Banking Regulation Act, the Banking Companies Act and the Reserve Bank of India Act are proposed
	Securities Market	Capacity building in Securities Market	• **SEBI** will be empowered to develop, regulate, maintain and enforce norms and standards for education in the National Institute of Securities Markets and to recognize the award of degrees, diplomas and certificates
		Central Data Processing Centre	• It will be set up for faster response to companies through centralized handling of various forms filed with field offices under the Companies Ac
	Financial Schemes	Mahila Samman Savings Certificate	• It will be made available for **a two-year period up to March 2025.** This will offer a deposit facility of upto 2 lakhs in the name of women or girls for a **tenor of 2 years** at a fixed interest rate of **7.5 per cent** with a partial withdrawal option
		Senior Citizen Savings Scheme	• The maximum deposit limit for Senior Citizen Savings Scheme will be enhanced from Rs 15 lakh to Rs 30 lakh

Agriculture

CULTIVATED IDEA: URBAN FARMING

Context:
The "**Draft Citizen's Policy for Urban Agriculture in Delhi**" by Delhi-based research non-profit People's Resource Centre, was submitted to the Delhi government in 2022, to provide **a holistic framework for urban farming**.

Background:
• Produce cultivated in the city provides 60% of Delhi's demands for meat, 25% of its milk, and 15% of its vegetable requirements.
• However, the National Capital's land use and farming policies **do not take into account how food is grown and distributed in urban areas.**

Recommendations
• **Promoting residential and community farming** through rooftop and kitchen gardens,
• Allocating vacant land for agricultural use
• Creating a market
• Developing policies for animal rearing and spreading awareness.

Significance of the above recommendations:
• Rapid urbanisation, population explosion and climate change **increase the risk of food shortage.**
• The M S Swaminathan Research Foundation (2010 report) notes that **50% of women and children in urban areas are anaemic** due to a lack of adequate nutrition.
• In 2020, the UN FAO acknowledged that urban and peri-urban farming can contribute to local **food and nutritional needs, enable jobs and reduce poverty.**

Steps taken in India to promote urban agriculture:
• **Pune's city farming project** trains and encourages people to take up farming on allocated land.
• **Kerala government**'s **vegetable development programme** to encourage gardening in houses, schools, and government and private institutions.
• **Tamil Nadu government**'s **"do-it-yourself" kit** for city dwellers to grow vegetables on rooftops, houses and apartment buildings under its **Urban Horticulture Development Scheme**.
• **Bihar** has encouraged **terrace gardening** in five smart cities through subsidies for input costs.

Concerns:

- The impact of such initiatives cannot be widespread without **a strong policy for urban farming**.
- The recently released draft Master Plan of Delhi for 2041, **does not acknowledge the role of urban farming.** For example, it restricts human activity (many practise urban farming) in areas directly adjacent to the Yamuna River.
- **Rapid urbanisation is also a hindrance**.

Way ahead:

- **Integrating** all efforts to promote urban farming is the key.
- There is a need to make **urban agriculture viable**.
- **Farming in urban spaces** (water scarcity and pollution) is not easy. **Using wastewater** (directly or recycled) can address water scarcity and pollution.
- **Innovative techniques**, say, **hydroponics** (offers a cleaner approach), can be further promoted.
  - Hydroponics is a method of soilless farming that uses nutrient solutions to sustain plants.
  - Compared to commercial farming, hydroponics requires 90% less water, which can be reused. One can grow more plants in the space given.

Conclusion:

Urban farming cannot sustain the large population, but can act as a cushion to protect urban residents from inflation, vulnerabilities of weather or crises such as COVID-19. Before more villages become urban, **early interventions can result in a sustainable system.**

Insta Links: Regenerative agriculture: A step towards water conservation

Mains Links:
Q. How far is the Integrated Farming System (IFS) helpful in sustaining agricultural production? (UPSC 2019)

Prelims Links: (UPSC 2021)
In the context of India's preparation for Climate-smart Agriculture, consider the following statements:
1. The 'Climate-Smart Village' approach in India is a part of a project led by the Climate Change, Agriculture and Food Security (CCAFS), an international research programme.
2. The project of CCAFS is carried out under the Consultative Group on International Agricultural Research (CGIAR) headquartered in France.
3. The International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) in India is one of the CGIAR's research centres.
Which of the statements given above are correct?
1. 1 and 2 Only
2. 2 and 3 Only
3. 1 and 3 Only
4. 1, 2 and 3
Ans: 4

Infrastructure: Energy

COAL INDIA'S M-SAND PROJECTS

Context:

Coal India Ltd (CIL) has envisaged processing the **fragmented rock (known as Overburden Rocks (OB)** for sand production in mines.

- **OB material** contains about **60% sandstone by volume** which is harnessed through crushing and processing of Overburden.

What is M Sand?

M sand is a form of **artificial sand, manufactured by crushing large hard stones**, mainly rocks or granite, into fine particles, which are then washed and finely graded. It is widely used as a **substitute for river sand** for construction purposes, mostly in the production of concrete and mortar mix.

Need for M Sand

- **High demand**, regulated supply and a complete ban on sand mining during monsoon to protect the river ecosystem, increasing the need for an alternative.
- **The Supreme Court** banned illegal mining on riverbeds in 2017
- **Sand Mining Framework (2018)** prepared by the Ministry of Mines envisages alternative sources of sand in the form of Manufactured Sand (M-Sand) from crushed rock fines (crusher dust), and sand from Overburden (OB) of coal mines.

Why Coal India Ltd?

During **Opencast mining** of Coal India, the o**verlying soil and rocks are removed as waste to extract coal and the fragmented rock** (Overburden or OB) is heaped in dumps. Most of the waste is disposed of at the surface which occupies a considerable land area and requires extensive planning and control to minimize the environmental impact of mining.

Difference between M Sand and Natural River sand

Parameters	M Sand	River Sand
Process	Manufactured in a factory.	Naturally available on river banks.
Shape	Angular and has a rougher texture. Angular aggregates demand more water. Water demand can be compensated with cement content.	Smoother texture with better shape. Demands less water.
Moisture Content	Moisture is available only in water washed M Sand.	Moisture is trapped in between the particles which are good for concrete purposes.
Concrete Strength	Higher concrete strength compared to river sand used for concreting.	Lesser concrete compared to M Sand
Silt Content	Zero silt.	Minimum permissible silt content is 3%. Anything more than 3% is harmful to the concrete durability.
Over Sized Materials	0%. Since it is artificially manufactured.	1 – 6% of minimum oversized materials can be expected. Like pebble stones.
Marine Products	0%	1 – 2% like sea shells, tree barks etc.
Eco-Friendly	Though M Sand uses natural coarse aggregates to form, it causes less damage to the environment as compared to river sand.	Harmful to the environment. Eco imbalances, reduce groundwater level and rivers water gets dried up.

Process of extraction of M-Sand:
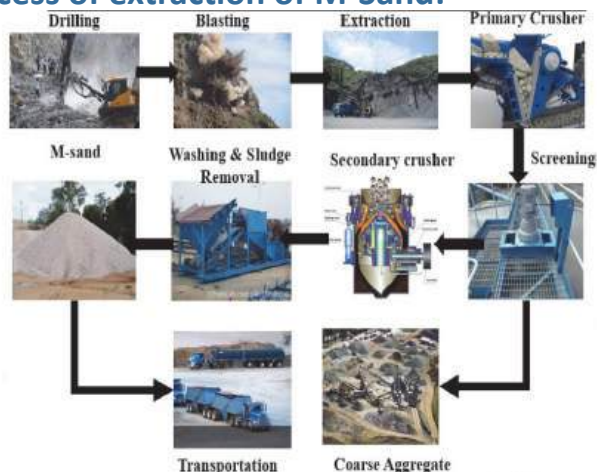
Benefits of Manufactured Sand (M-Sand):

- **Cost-effectiveness**: can be produced in large quantities at a lower cost.
- **Consistency**: in grain size and shape, which can be beneficial for construction projects.
- **Environmental benefits**: Helps reduce the need for mining natural sand, which can have negative environmental impacts.
  - **Using the overburden from coal mines can help to repurpose materials that would otherwise be considered waste.**
  - **Lesser Sand extraction from the river**
    will reduce erosion of channel beds & banks.
  - **Maintain the water table**
- **Reduced water consumption:** as it does not require washing before use.
- **Better workability**: Since it's more angular and has a rougher surface it is more workable for construction projects.

Concerns regarding M Sand:

- Smooth and angular textures: more water and cement requirements to achieve the expected workability.
- If the M Sand contains a large number of micro fine particles, it can affect the strength and workability of concrete.

About Sand:

Sand is a mixture of small grains of rock and granular materials which is mainly defined by size, being finer than **gravel** and coarser than **silt**.

- Sand is classified as a **"minor mineral",** under The Mines and Minerals (Development and Regulations) Act, 1957 (MMDR Act)
- **Administrative control** over minor minerals vests with the **State Governments**

Insta Links: M Sand

Mains Links
Q. Is sand mining illegal in India? Discuss the impacts of sand mining and suggest the way forward. (250 words)

Prelims links
Q. With reference to India, consider the following statements: (UPSC 2022)
1. Monazite is a source of rare earth.
2. Monazite contains thorium.
3. Monazite occurs naturally in the entire Indian coastal sands in India.
4. In India, Government bodies only can process or export monazite.
Which of the statements given above are correct?
(a) 1, 2 and 3 only
(b) 1, 2 and 4 only
(c) 3 and 4 only
(d) 1, 2, 3 and 4

Answer - B

Monazite is an atomic mineral that occurs naturally **in the coastal sands of three districts: Tirunelveli, Thoothukudi, and Kanyakumari**. Hence statement 3 is incorrect.

Q. With reference to the management of minor minerals in India, consider the following statements: (UPSC 2019)

1. Sand is a 'minor mineral' according to the prevailing law in the country.

2. State Governments have the power to grant mining leases of minor minerals, but the powers regarding the formation of rules related to the grant of minor minerals lie with the Central Government.

3. State Governments have the power to frame rules to prevent the illegal mining of minor minerals.

Which of the statements given above is/are correct?

(a) 1 and 3 only

(b) 2 and 3 only

(c) 3 only

(d) 1, 2 and 3

Answer: A

Under MMDR Act, the State government have framed their own mining concession rules. So, statement 2 is incorrect.

Science and Technology

NEGLECTED TROPICAL DISEASES DAY

Context:

"**Global report on neglected tropical diseases 2023**" iw published on **World NTD Day — January 30, 2023,** by World Health Organization (WHO).

About Neglected Tropical Diseases:

- NTDs are a group of **20 conditions mainly prevalent in tropical areas where people do not have access to clean water or safe ways to dispose of human waste.**
- They are caused by various **pathogens, including viruses, bacteria, parasites, fungi, and toxins.**
- NTDs are **most common among marginalized communities in the developing regions of Africa, Asia, and the Americas.**
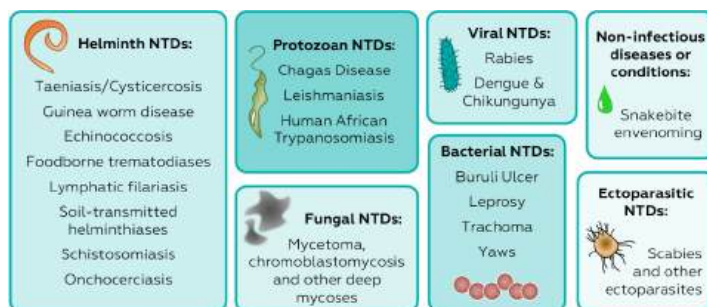
Key Findings of the report:

- **16 countries accounted for 80 per cent of the global NTD burden.**
- The document also highlighted the **tremendous effects COVID-19 had on community-based initiatives, access to healthcare facilities, and healthcare goods supply chains.**

About WHO Neglected Disease roadmap:

- The World Health Organization (WHO) works towards the ultimate goal of a **world free of the burden of neglected tropical diseases (NTDs).** This work is described in **the NTD road map 2021–2030, WHO's blueprint to drive global efforts in the fight against NTDs in the context of the United Nations Sustainable Development Goals.**

Global Initiatives:

- **London Declaration on NTDs**: It was adopted on **30th January 2012 to recognize the global burden of NTDs.**

NTDs in India:

- India carries the **largest burden of at least 11 of these diseases**, with parasitic illnesses like **kala-azar** and lymphatic **filariasis** affecting millions of people throughout the country – often the poorest and most vulnerable.

Indian Initiatives to tackle NTDs:

- A **WHO-supported** regional alliance was established by the **governments of India, Bangladesh, and Nepal in 2005 to expedite early diagnosis and treatment of the most vulnerable populations and improve disease surveillance** and control of sandfly populations (Kala-azar).
- India has already **eliminated several other NTDs, including guinea worm, trachoma, and yaws**.

Insta Links: Neglected Tropical Diseases (NTDs)

GENERATIVE AI: WHAT ARE THE POTENTIAL APPLICATIONS AND ETHICAL CONCERNS?

What is Generative AI:

- Generative Artificial Intelligence refers to the **capability of artificial intelligence-enabled machines to use existing text, audio files, or images to create new content.**
- The software uses **complex machine learning models to predict the next word based on previous word sequences, or the next image based on words describing previous images**. "**Large language model**" - LLMs began at Google Brain in 2017, where they were initially used for the translation of words while preserving context.
- Since then, **large language and text-to-image models** have proliferated at leading tech firms including **Google (BERT and LaMDA), Facebook (OPT-175B, BlenderBot), and OpenAI, a non-profit in which Microsoft is the dominant investor (GPT-3 for text, DALL-E2 for images, and Whisper for speech).**

Benefits of Generative AI:

- Automated content generation
- Improved content quality
- Increased content variety
- Personalized content

Generative Adversarial Network:

A generative adversarial network (GAN) is a **machine learning (ML) model** in which two **neural networks compete with each other** to become more accurate in their predictions. GANs typically run **unsupervised and use a cooperative zero-sum game framework to learn.**
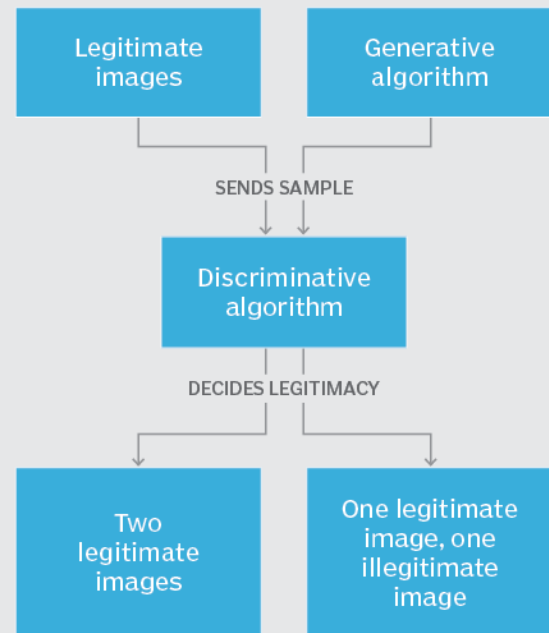
Ethical concerns associated with Generative AI:

- **Bias and Discrimination**: AI models can perpetuate and amplify biases in their training data, leading to **discriminatory outcomes and unjust decisions**.
- **Responsibility and accountability**
- **Privacy:** Generative AI models have the **potential to collect and generate vast amounts of personal data, which can raise privacy concerns.**
- **Ownership and control**
- **Fairness and transparency**: AI models can make decisions **that lack transparency and fairness**.
- **Job displacement**
- **Misuse**: AI models can be used for **malicious purposes,** such as **creating fake news or deep fakes, or spreading hate speech.**
  - Top of Form

Indian Initiatives for Generative AI:

- The Government has published the **National Strategy for Artificial Intelligence** with the objective of **developing an ecosystem for the research and adoption of Artificial Intelligence**
- Subsequently with a vision **to 'Make AI in In-**

dia and Make AI work for India', MeitY has approved the implementation of the **'National Program on Artificial Intelligence'** for the development of AI-based solutions and ensure responsible and transformational use of **#AI for All**.

- The Department of Science & Technology is implementing the **National Mission on Interdisciplinary Cyber-Physical Systems** (NM-ICPS).

Insta Links:
Generative AI
A New Global Standard for AI Ethics

Environmental Conservation

GOING GREEN: ON BUDGET

Context:
The Finance Minister's latest Union Budget 2023-24 has laid emphasis on the **government's commitment to move towards net-zero carbon emission by 2070**.

Background:
- According to the World Economic Forum (WEF), **India holds the key to hitting global climate change targets given its sizeable and growing energy needs**.
- With the country's **population set to overtake China's** sometime this year, **India's appetite for energy** to propel the economy is set to surge exponentially.
- **The transition to green alternatives** from the current reliance on fossil fuels is therefore an **urgent imperative**, as it creates **an opportunity** to launch new sectors and boost GDP.

The Union Budget 2023-24 announcements:

GREEN GROWTH

MOVING FORWARD TO ACHIEVE THE CLIMATE GOALS

UNION BUDGET 2023-24

- **Green Credit Programme** to be launched to incentivize sustainable actions
- **PM-PRANAM*** to be launched to incentivize States/UTs to promote alternative fertilizers
- 500 new 'Waste to Wealth' plants to be established under **GOBARdhan Scheme**
- **MISHTI^** to be taken up for Mangrove plantation along coastline
- **Amrit Dharohar** to be implemented over next 3 years for optimal usage of wetlands

* PRANAM: PM Programme for Restoration, Awareness, Nourishment and Amelioration of Mother Earth * MISHTI: Mangrove Initiative for Shoreline Habitats and Tangible Incomes

Green Growth:
- It is one of the **7 priorities (Saptarishi of Amrit Kaal)** the Budget. India is implementing many programmes for -
  - **Green fuel**, green energy, green farming, green mobility, **green buildings**, green equipment and policies for efficient use of energy across various economic sectors.
- These green growth efforts help in **reducing the carbon intensity of the economy and provide for large-scale green job opportunities.**

Electric vehicle (EV):
- The availability of locally produced **lithium-ion batteries** has become essential, especially to reduce the cost of EVs.
- The Budget proposes -
  - **To exempt customs duty on the import of capital goods and machinery required to manufacture lithium-ion cells.**
  - **The establishment of a viability gap funding mechanism to support the creation of battery energy storage systems with a capacity of 4,000 MWh.**

Energy storage systems:
- Battery storage systems **help to ensure that the electricity produced at peak output** by wind and solar projects is stored and then supplied to match the demand.
- The Budget set aside a vital ₹8,300 crore to-

wards a ₹20,700 crore project for building an **inter-State transmission system for the evacuation** and **grid integration** of 13 GW of renewable energy from **Ladakh**.

- The transmission line will help address hurdles in setting up solar capacity in the region, given its remoteness from India's main power grid.

India's initiatives at the international stage:

International Solar Alliance (ISA)	A treaty-based inter-governmental organisation working **to tap the benefits of solar power and promote clean energy applications.**
Coalition for Disaster Resilient Infrastructure (CRDI)	Launched by the PM of India during the UN Climate Action Summit in 2019 in New York, it is a global partnership **to promote the resilience of infrastructure to climate and disaster risks.**
Leadership Group for Industry Transition (LeadIT)	It gathers countries and companies that are committed to action to achieve the Paris Agreement. It was launched by the governments of **Sweden and India** at the UN Climate Action Summit in 2019 and is supported by the WEF.

Conclusion:

With a vision for a **Lifestyle for the Environment (LiFE),** India is committed to achieving **net-zero carbon emissions by 2070, catalyzing a green industrial and economic transformation.**

Context: The Ministry of Housing and Urban Affairs signed an MoU with Engineers India Limited (EIL) **to develop Waste to Energy and bio-methanation projects** in cities with a population of million plus as a part of furthering the **'Green Growth'** agenda.

Background: There are 59 million plus cities in India and for the management of organic/wet fraction of municipal solid waste bio methanation plants have been proposed in these million plus cities.

Biomethanation:

- It is a process by which organic material is microbiologically converted under **anaerobic** conditions to biogas.
- Three main physiological groups of microorganisms are involved: fermenting bacteria, organic acid oxidising bacteria, and methanogenic archaea.

Insta Links: Centre clears ₹19,744-crore Green Hydrogen Mission

Mains Links:

Q. Explain the purpose of the Green Grid Initiative launched at the World Leaders Summit of COP26 UN Climate Change Conference in Glasgow in November 2021. When was the idea first floated in the International Solar Alliance (ISA)? (UPSC 2021)

Prelims Links: (UPSC 2018)

The Partnership for Action on Green Economy (PAGE) a UN mechanism to assist countries transition towards greener and more inclusive economies, emerged at

1. The Earth Summit on Sustainable Development 2002, Johannesburg
2. The United Nations Conference on Sustainable Development 2012, Rio de Janeiro
3. The United Nations Framework Convention on Climate Change 2015, Paris
4. The World Sustainable Development Summit 2016, New Delhi

Ans: 2

Disaster and disaster management.

MUSSOORIE'S SPECIFIC CARRYING CAPACITY

Context:

The **National Green Tribunal (NGT)** has issued directions to the Uttarakhand Government to conduct a **study of the specific carrying capacity of the hill station**.

- Also, Last year a panel was formed to **assess the carrying capacity of eco-sensitive zones in Shimla (Himachal Pradesh)**

Key highlights:

- **A nine-member committee** has been formed to **suggest remedial measures** for preventing environmental damage to the town.
- A **study on Mussoorie's carrying capacity by the Lal Bahadur Shastri National Academy of Administration in 2001** suggested that **no further construction was viable.**
- An analysis **of the carrying capacity of eco-sensitive areas in Himalayan regions in a holistic manner** is necessary for the protection of the environment.
- **Terms of reference for the committee**:
  - **Suggest remedial measures to prevent environmental damage in the light of carrying capacity**
  - **Hydro-geology studies**
  - **Geo-morphological studies**
  - **Covering other allied and incidental issues.**

About Carrying Capacity:

The total number of **individuals of a species that can live in an ecosystem under certain conditions**.

- More recently the concept has been expanded beyond ecology by including **economic, social, and infrastructure imperatives.**
- **Urban Carrying Capacity (UCC):** It provides a theoretical foundation for dete**rmining the maximum potential population that could be supported without environmental degradation, based on the inherent limitations of a city**

Global Practices on Urban Carrying Capacity:

- **China's mega-cities** demonstrate that the UCC framework can be simplified to quantify and evaluate indicators across sectors and use them appropriately for sustainable urban land management practices.

CARRYING CAPACITY

Insta Links:

- Geology to unplanned construction: Decoding why Joshimath is sinking
- Land Subsidence

Mains Link:

Q. Define the concept of the carrying capacity of an ecosystem as relevant to an environment. Explain how understanding this concept is vital while planning for sustainable development of a region. (250 words) UPSC CSE paper GS-3 2017

Q. Land subsidence is a silent disaster that is taking hold of the Himalayan region. Examine the causes behind it, its impact and measures need to prevent this silent disaster. (10M)

GS4

Ethics and Human Interface

IN GOOD FAITH: PRANAM VS PRAMANA

Context:

The Covid-19 pandemic saw **widespread use of science**, but it also provided a **fertile ground for promoting faith and questioning science.**

Difference between Science and Religion:

- **Freedom to Question vs. Blind Acceptance:** In a science-based society, **people have the freedom to question, seek answers and then choose their way forward** based on their own understanding & assessment.
- **Acceptance of Change:** Science thrives on change. Whereas, faith and dogma are constants and don't accept questioning.
- **Constant change in Science vs. Constancy in Tradition:** What was scientifically appropriate at a given time and has become a tradition, **may change at a later stage. This constant change in scientific thinking is often pointed out as its weakness, and constancy as a strength of tradition.**

Etymology of Pranam and Pramana:

- **Pranam**: derived from Sanskrit- "pra" means "**forward, outward, in front, before**" while "ānama" means "**bending or stretching**". Together, pranama **means "bending, bowing in front**" or "prostration". It's a common **Hindu traditional custom of greeting a person.**
- **Pramana** (Sanskrit word), **means "proof" and adds "mā" which means measurement to the "pra" and alludes to the concept of objectivity and science.** It's the means that **can lead to knowledge.** Three of the many pramanas are **pratyakṣa** (eyewitness/personal experience), **anumāna** (logical inference), and śabda (expert opinion).

Examples of how faith undermines Science:

- **Taboos related to menstruation**: A lot **of semi-religious customs have been built around it, all adversely affecting a girl's health.**
- Health issues around **childbirth, breastfeeding, and contraception**. New mothers often find it difficult to navigate when caught between a **doctor's scientific advice on breastfeeding (as early as possible, giving of colostrum, exclusivity, no pre-lacteal feed) and traditional customs recommended by the elders (waiting till a family member washes breast, use of ghutti, jaggery water, discarding of colostrum).**
- Access **to safe abortions:** a fight between faith and science.
- **Heliocentric vs Geocentric theory**
- **The banned practice of Sati.**
- **Racism** – Aryan theory to be superior.

Examples of when science prevails:

- Acceptance of vaccines and modern contraceptive methods
- A scientific theory is **that all humans are the same species** – everyone has red blood and the same internal organs.

Platforms for dialogue & harmonious coexistence between the 2 critical pillars of society:

- Teachers or parents, should **encourage children to ask questions and give them access to resources to enable them to decide for themselves**.
- Health professionals **must not belittle faith**.
- There is a need to **understand the need for both for our societal well-being**. & have more **faith in science as a solver to our pressing problems.**

InstaCurious: In today's society, the 3 forms of *pramana* are under threat due to the rise of:
- **Confirmation Bias**
- **Echo Chambers & filter bubbles.**
- **Post-Truth** society

Public/Civil service values

ETHICAL VALUES FROM THE LIFE OF PUBLIC SERVANTS

Direction:

These examples can be written in ethics/essay – how civil servants should act in any given situation.

SHO ANITA CHAUHAN'S 10-MIN CALL THAT STOPPED GHAZIABAD MAN'S FACEBOOK LIVE SUICIDE

Context:

Ghaziabad's - **Vijay Nagar's first woman SHO**, had **no prior experience counselling mentally ill people — she used common sense, kindness, and empathy**.

It was under extreme pressure that she convinced a youth to not end his life and that all the problems can be solved.

Ethical Values from this incident:

- **Empathy & Compassion**: concern and understanding for the man's emotional state.
- **Responsibility**: Took **personal responsibility to prevent suicide** and tried to intervene.
- **Commitment**: The SHO demonstrated a **commitment to preventing harm and saving lives, even in challenging circumstances.**
- **Leadership:** Understanding the situation she took prompt action.
- This example highlights that whatever position you are in, **your actions can have a huge impact.**

CIVIL SERVICE COUPLE SET AN EXAMPLE WITH 'QUIET' WEDDING, SPONSOR ORPHANS' EDUCATION

Context:
Indian Postal Service officer **Shivam Tyagi** and Indian Revenue Service officer **Arya R Nair**, decided to have a quiet and simple marriage, and as a noble gesture, **they sponsored the educational expenses of 20 inmates of an orphanage.**

Ethical Values that can be learned:

- **Responsibility**: The couple took responsibility for helping to improve the lives of others, **setting an example for others to follow.**
- **Empathy**: The couple showed empathy for the **plight of the orphans and acted to help improve their lives.**
- **Community**: The couple demonstrated a **sense of community and a desire** to make a positive impact, **contributing to a better future for all.**
- **Generosity**: The couple showed **generosity by using their wedding funds to sponsor the education of orphans.**
- **Altruism**: The couple demonstrated a **selfless concern for others by choosing to give to those in need, rather than focusing solely on themselves.**

Insta Links:
- Public or Civil Service Values
- PUBLIC SERVICE ETHICS/ADMINISTRATIVE ETHICS

Mains Link: UPSC 2018 Q. (a) State the three basic values, universal in nature, in the context of civil services and bring out their importance.

FACTS FOR PRELIMS

GS1

Indian Heritage and Culture

MANIPUR'S SHUMANG LEELA

Context:
Shumang Leela is a traditional form of **theatre in Manipur** where the roles of women are all played by men, called **Nupi Shabis**.

- In the case of women's theatre groups, the roles of men are played by women.

About Shumang Leela:
- **'Shumang'** means 'open courtyard' and **'Leela'** means play and the literal meaning of Shumang Leela is "play of the open courtyard".
- **Origin**: It started as a comic genre presented before the kings and noblemen.
- **Values that the theatre form shows**: It attempts to preserve and promote humanism, brotherhood, tolerance, confidence, devotion, truth and justice through its performances.
    - **It is a powerful medium for mass education besides giving entertainment and relaxation.**
    - **It has been trying to focus on the issues of moral values, unity and integrity**

RASHTRAPATI BHAVAN'S MUGHAL GARDENS WAS RENAMED AMRIT UDYAN

Context:
The iconic Mughal Gardens at the Rashtrapati Bhavan (President's House) in Delhi have been renamed as 'Amrit Udyan'

cle of life."

Amrit Udyan

Mughal Gardens at the President's House in Delhi have been renamed as 'Amrit Udyan'

Why renaming of Mughal Garden?
- **To give a new identity to the garden:** 'Amrit Udyan' will indicate the collective identity of all the gardens at Rashtrapati Bhavan. Previously, there were just descriptive identities.
- **Shed colonial legacies:** New name sheds symbol of a colonial relic and reflects India's aspirations for the Amrit Kaal

Features added later:
- **Nutrition Garden, popularly known as Dalikhana:** It was added by C Rajagopalachari, the last Governor General of India, during a period of food shortage in the country.
- **Cactus Garden:** President R Venkatraman added a cactus garden
- **From the musical garden to the spiritual garden:** APJ Abdul Kalam added many theme-based gardens

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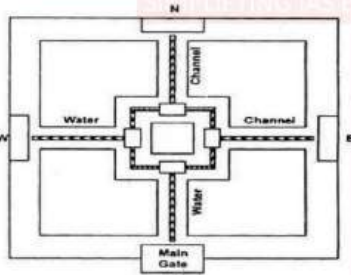
Char-Bagh (Four-Quartered Garden) Plan

History of the Garden:

At the time of the **shifting of the Indian capital from Calcutta to Delhi (in 1911),** about 4,000 acres of land were acquired to construct the Viceroy's House and a Mughal-style Garden. **Sir Edwin Lutyens** was given the task of designing the building on Raisina Hill. Lutyens' designs combined elements of classical European architecture with Indian styles.

Persian Char Bagh style

The Mughals (1526-1858) were known to appreciate gardens e.g., Babur (in Babur Nama) says that his favourite kind of garden is the **Persian char Bagh style** (literally, four gardens).

- **Charbagh is a Persian-style garden layout,** in which the main building is put at the centre of a quadrilateral garden, divided by walkways or flowing water into four smaller parts.
  - **This style was brought to India by the Mughals**
- **Humayun's tomb, Nishat Bagh (Sri Nagar) and Taj Mahal** are the most famous examples of this style.
- **The char Bagh structure** was intended to create a representation of heaven- in which humans co-exist in perfect harmony with all elements of nature
- An important feature of these gardens is the use of **waterways** to demarcate the various quadrants of the garden.
- **Fountains** were often built, symbolising the "**cy-**

Geography

MIGRATION & GENETIC DIVERSITY AMONG THE NEPALESE POPULATION

Context:

Tibeto-Burman communities were pre-historic Himalayan settlers, and their East Asian ancestry can be traced back to **Neolithic immigration**, mostly from Tibet around 8000 Years Ago, says a genetic study of the population.

Impact of this migration: The migration led to genetic drift, endogamy, admixture, isolation, and natural selection that have contributed to genetic diversity among the Nepalese population

Origin of Modern Human

Modern humans originated in Africa within the past 200,000 years and evolved from their most likely recent common ancestor, Homo erectus ('upright man').

MAPPING

India-Kenya

India has handed over to Kenya 100 nautical charts covering coastal area around the Lamu Archipelago (near Kenya's northern coast). The joint survey was carried out under the aegis of the National Hydrography Office that functions under the Indian Navy. India has been undertaking surveys for Friendly Foreign Countries in the region (at the request of the host country) to help update the hydrographic charts.

Kenya

Lamu Archipelago

Munroe Thuruthu Island

Anthropogenic interventions is the main reason for sinking of Munroe Thuruthu Island (as per the study by National Centre for Earth Science Studies (NCESS)). Almost 39% of its land area has been lost in past 2 decades. Island is in confluence of Ashtamudi Lake and Kallada River in Kerala. Its subsidence began with construction of Thenmala dam under Kallada Irrigation Project

Ashtamudi Lake
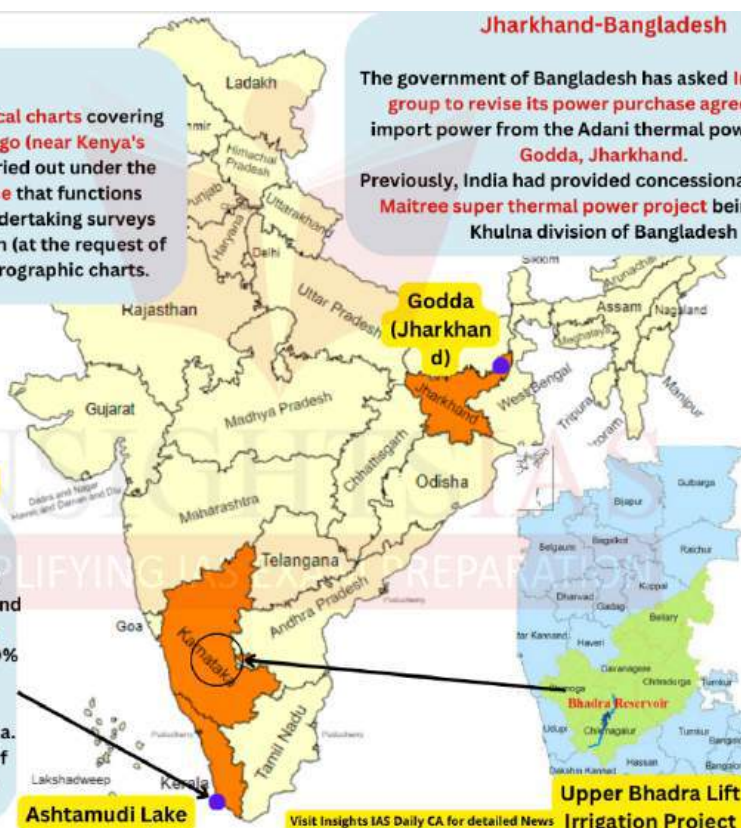
Jharkhand-Bangladesh

The government of Bangladesh has asked India's Adani group to revise its power purchase agreement to import power from the Adani thermal power plant in Godda, Jharkhand.
Previously, India had provided concessional funding to Maitree super thermal power project being built in Khulna division of Bangladesh

Godda (Jharkhand)

Upper Bhadra Lift Irrigation Project

Central government (in its recent budget) has announced that it will provide assistance to the Upper Bhadra Lift Irrigation Project (to divert water from Tunga and Bhadra to irrigate drought prone central Karnataka areas). However, this decision has created a sense of deprivation among the people of Rayalaseema region of Andhra Pradesh as it could deprive them getting their share of allocated water from the Tungabhadra Dam.
In 2021, the Union Jal Shakti Ministry granted a 'national status' tag to Upper Bhadra Project

Bhadra Reservoir

Upper Bhadra Lift Irrigation Project

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Canada

Canadian parliament has unanimously passed a non-binding proposal for the resettlement of 10,000 Uyghur Muslim refugees (Turkic ethnic group and native to the Xinjiang Uyghur Autonomous Region in Northwest China) into Canada over two years. In 2021, Canada became one of the first countries to label China's treatment of the Uyghurs genocide

Rocky Mountain Forest (US)

A recent study on the 2020 fires in the Rocky Mountain Forest shows that it pushed these ecosystems to levels of burning unprecedented for at least 2,000 years. It shows how climate change is altering the ecosystems on which lives and economies depend.
Rockies are fold mountains running for over 4800km along the west coast of North America. Its highest peak is Mount Elbert

Iran

Iran has accused Israel of carrying out a drone attack on the Isfahan city (home to many military and nuclear sites, including Natanz nuclear plant). Previously, Israel was accused of sabotage in the Natanz nuclear facility (2021) and assassination of top Iranian scientist (2020). While Iran does not recognise Israel's right to exist and supports Palestinian insurgency, Israel's justifies its attack using its Begin doctrine (even the potential of Iran having nuclear weapons justifies its preventive strikes)

Isfahan City

UAE

UAE's "Federal Personal Status Laws" came into force. These laws will apply to non-Muslim expatriates living in UAE and cover various aspects of family law like marriage, divorce, child custody, inheritance, wills, and paternity. Earlier non-Muslims residing in the UAE had to follow the Sharia law system for personal laws. Also, in 2020 that the UAE decriminalized live relationships and pregnancies out of wedlock, easing restrictions on many personal aspects.

Myanmar

The Military Junta completed two years in Myanmar. It has extended its rule by another six months – thus pushing any hope for democratic elections. In 2021, the Military toppled the democratically elected government through a coup.

China

Starting Feb. 15, 2023, there will no longer be a limit on the number of childbirths a person can register in Sichuan. Beginning in early 2016, China has allowed all families to have two children. According to projections by the World Population Review, India (1.42 bn) has surpassed China (1.41 bn) as the world's most populous nation.

Philippines

The US has secured access to four additional military bases in the Philippines. This would fill the gap in the arc of US military bases and alliances stretching from South Korea and Japan in the north to Australia in the south, to monitor the Chinese in the South China Sea and around Taiwan

Auckland City

New Zealand

City of Auckland saw unprecedented rain (1 in 100 years event). Many factors have contributed to flooding, but a warming atmosphere caused by climate change has increased the intensity and frequency of extreme rainfall in the region.

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Society and Social Justice

ALIENATION

In sociology, alienation means the **state of feeling estranged or separated from one's milieu**, work, products of work, or self.

In Economy (by Karl Marx): It is the process whereby the worker is made to feel foreign to the products of his/her own labour.

- **Marx discussed four forms of alienation:** From the Product; From the Process; From Humanity; From society.

Alienation from the product of labour:
Private control of monetary profit
(dual use-value, inverse commodity fetish)

Alienation of labour power by social violence: Coercion by isolation and social disadvantages

Alienation from the means of production
Object of labour: Human experiences come under capital's control
Instruments of labour: private ownership of platforms, social media ideologies

Karl Marx was a German philosopher, economist, historian, sociologist, political theorist, journalist, a critic of political economy, and socialist revolutionary. His **best-known titles** are the 1848 pamphlet **The Communist Manifesto** and the four-volume **Das Kapital.**

GS2

Polity

NEED FOR REFORM ON BAIL PROCESSES

Context:

Judge says that unless the government thinks **"out of the box"** and refrains from fighting every case of bail, it could take the **top court 300 to 700 years to dispose** of the current backlog

What is bail?

Bail is the temporary release of a person accused of a crime in exchange for a monetary pledge in exchange for the accused's appearance in court when the time comes.

- The person who **pays the money or undertakes a money bond** acts as the surety.

Issues with the Bail processes:

- **Almost every case of bail** is being **challenged** all the way to the Supreme Court, forming more than **one-third of the cases**.
- **A huge number of under-trials**: As per NCRB data over **77% of prisoners** are under trial in India
- **Supreme Court decided to give priority to pending bail petitions** by having every Bench of the court hear 10 bail cases every day before normal work.

In July last year (2022), a Supreme Court judgment urged the government to bring a **new Act exclusively to simplify and streamline bail**.

Legal aspects:

- The CrPC **does not define the word bail** but only categorises offences under the Indian Penal Code as 'bailable' and 'non-bailable'.
  - **It empowers magistrates to grant bail for bailable offences as a matter of right.**
- **Articles applicable:** Article 20 (Protection against indiscriminate arrest); Article 21 (Protection of Life and Personal Liberty); Article 22 (Protection Against Arrest and Detention)

Quote:

- *"In a democracy, there can never be an impression that it is a Police State"*
- **Rule of "bail, not jail"**

Q. With reference to India, consider the following statements: (UPSC 2021)
1. Judicial custody means an accused is in the custody of the concerned magistrate and such an accused is locked up in a police station, not in jail.
2. During judicial custody, the police officer in charge of the case is not allowed to interrogate the suspect without the approval of the court.
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

In Judicial custody, an accused is in the custody of the concerned Magistrate and lodged in jail. Hence, statement 1 is not correct.

VISAKHAPATNAM: ANDHRA PRADESH'S NEW CAPITAL

Context:

Andhra Pradesh government has announced that **Visakhapatnam** would become the capital of the state soon, even as the **matter of developing Amaravati** as the capital of Andhra Pradesh lies pending in the Supreme Court.

The background of the issue:

In 2019, Jagan Mohan Reddy first proposed the idea of **"decentralized development"** and advocated for the establishment of three capitals in the state- **Amaravati** (Legislative capital); **Visakhapatnam** (Executive Capital), and **Kurnool** (Judicial Capital).

- However, the state government later changed its views in 2021.
- In March 2022, Andhra Pradesh High Court directed the state government to develop the proposed capital **Amaravati**.
- Andhra Pradesh government challenged the High Court's order in the Supreme Court. The SC stayed the HC order and the matter is in SC currently.

The Andhra Pradesh Reorganisation Act of 2014 (Telangana Act, on 2nd June 2014) bifurcated the state of Andhra Pradesh into Telangana and the residuary Andhra Pradesh state, as an outcome of the Telangana movement.

Sivaramakrishnan committee was constituted by the Union Government to suggest the place to build the capital city of Andhra Pradesh.

- This committee had also opposed creating a **Single 'Super Capital' like Amaravati**

Capitals of Andhra Pradesh

Visakhapatnam
Executive capital

Amaravati
Legislative capital

Kurnool
Judicial capital

Insta curious: 13 countries in the world have more than 1 capital. Example - **South Africa**

Who is a puisne judge?

- The term puisne judge is used in common law countries to refer to judges who are ranked lower in seniority, i.e., any judge other than the Chief Justice of that court.
- Common law is the body of law that is created by judges through their written opinions, rather than through statutes or constitutions (statutory law). Common law, which is used interchangeably with 'case law', is based on judicial precedent. The United Kingdom (UK) and the Commonwealth countries, including India, are common law countries.

Puisne Judge in India:

- In India, **all judges have the same judicial powers**. As the seniormost judge of a court, **the Chief Justice has an additional administrative role**.
- In India, there is a **reference to a puisne judge only while considering the order of seniority for appointments, elevations to High Courts, etc**., but it does not have a bearing on the exercise of a judge's judicial power.

Government Initiative and Policies

E-GRAM SWARAJ PORTAL

Context:

Ministry of Panchayati Raj organized **Manthan: Charting New Paths**, an **Industry consultation on e-Gram SWARAJ 2.0**

Objectives:

- **'Minimum Government, Maximum Governance'** at the third tier of Government by the means of technology
- **Longevity of social, economic, and environmental welfare** at the grassroots level by technology leverage.
- Induce t**ransparency and strength of the e-Governance in Panchayati Raj Institutions (PRIs)**.

About e-Gram SWARAJ Portal:

As a part of **Panchayat Enterprise Suite (PES) under the e-Panchayat Mission Mode Project** (MMP), the portal aims at capacity building of its functionaries using technological interventions.

Other initiatives: The **PRIASoft** (Panchayati Raj Institutions Accounting Software) is the Online Payment Module whereby Gram Panchayats are carrying out online payments to the vendors and service providers.

International News and Organization

INAUGURAL ICET DIALOGUE

Context:

India and the US National Security Advisor are due to meet for the inaugural of the iCET dialogue (Initiative on Critical and Emerging Technologies).

More about iCET:

- It was **announced in 2021**, the iCET is spearheaded by the **National Security Councils** of both countries.
- It aims to **expand the India-US partnership for critical and emerging technologies**- that will drive global growth, bolster both countries' economic competitiveness, and protect shared national security interests.

Areas of cooperation: R&D; Quantum computing; Defence innovations; Space; 6G, Semiconductors, etc.

Significance of iCET:

- **Accelerate America's technology partnership** and strategic convergence and policy alignment with India

- Crucial for **India's role as a trusted supply chain partner**
- Important for the **next industrial revolution, space, and future defense** needs.
- Will smoothen the process for **gradual lifting of the US's export control restrictions** on India.
- Sustaining **a free, open, and secure global economy** that can ensure the future happiness of humanity

Other India-US technology partnerships:

- **NISAR (NASA-ISRO):** to be launched by September 2023, it will scan earth's land, croplands, hazard sites, ice sheets, and sea ice
- **Joint Indo-U.S. Quantum Coordination** Mechanism
- Launching a new "**Innovation Bridge**" that will connect U.S. and Indian defense startups
- **Lockheed Martin-Tata will** produce planes at Hyderabad
- **India-USA strategic clean energy partnership**

Outcomes of the meeting:

- **Establish Indo-US Quantum Coordination Mechanism** for collaboration in R&D
- **'Innovative bridge'** to connect defence startups between India and USA launched
- **Readiness Assessment Development** for building resilient **semiconductor supply chains**

Other key points:

- **STEM talent** exchanges between the two countries
- **ISRO-NASA partnership** on human space flight e.g., on NASA's Commercial Lunar Payload Services (**CLPS**) Project (apart from the NISAR project)
- **Partnership in 56/6G** and **Open RAN** using trusted sources

---

What is Open RAN?

Open RAN (open radio access network architecture) offers higher interoperability through open hardware, software, and interfaces for cellular wireless networks.

- With 5G networks being rolled out across countries, Open RAN technologies have quickly gained momentum, offering operators more flexibility, automation, and lower costs.

PARIS CLUB

Context:
The Paris Club, an informal group of creditor nations, will **provide financial assurances** to the International Monetary Fund on Sri Lanka's debt.

About the economic crisis in Sri Lanka:
The current economic crisis in Sri Lanka is a result of a combination of factors, including high levels of government debt, a large trade deficit, weak foreign exchange reserves, and declining economic growth.

What is the Paris Club?
The Paris Club (est. 1956, HQ: Paris (France)) is a group of officials from major creditor countries whose role is to find coordinated and sustainable solutions to the payment difficulties experienced by debtor countries

- **Objective**: To find sustainable debt-relief solutions for countries that are unable to repay their bilateral loans.
- **Members**: 22 permanent members (all are a member of the **OECD**)
- **India and China** are not members. India acts as an **ad-hoc participant.**

GS3
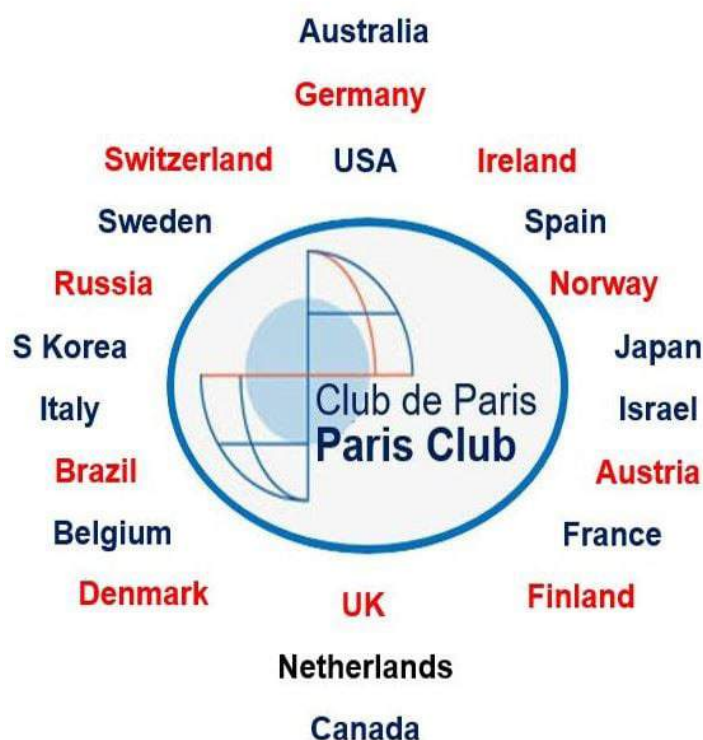
INDIA MAY USE EMERGENCY LAW TO LIFT COAL POWER OUTPUT

Context:
India plans to use an emergency law to force power plants that run on imported coal to maximise output in preparation for expected record consumption this summer.

Status of India's power demand and Coal import:
- India's power consumption logged a double-digit growth of **over 11 per cent to 121 billion** units in December 2022 compared to the year-ago period.
- **Import of coal in India consists mainly of coking coal and high-grade coal**, whose prices are normally higher than thermal coal (mainly from Indonesia and Australia)
- India is the **third-largest producer and consumer of electricity worldwide**, with an installed power capacity of 408.71 GW as of October 31, 2022.

Why are power plants based on imported coal not running at full capacity?
- In recent years these plants have found it difficult to **compete with power generated from cheap domestic coal.**

Demand by states:
- India's industrial western states **Maharashtra and Gujarat**, which have registered a steep rise in power demand in recent months, demanded invocation of the law.
- **The Electricity Act 2003** governs the activities relating to the generation, transmission, distribution, trading and use of electricity in India.

HNIS AND INSTITUTIONAL INVESTORS

Context:

Institutional investors and high net worth individuals (HNIs) salvaged the follow-on public offering (FPO) of Adani Enterprises Ltd, ensuring the issue was **subscribed 1.12 times**.

Who are Institutional Investors or Qualified Institutional Investors (QIIs)?

Commercial banks, mutual fund houses, public financial institutions, and foreign portfolio investors fall under this category. SEBI has mandated that QIIs **cannot be allocated more than 50% of shares**

Who are High Net Worth Individuals (HNIs)?

Individual investors or institutions (large trusts, big companies, and similar institutions) who are willing to invest more than ₹2 lakh are categorized as High Net Worth Individuals.

What is an FPO?

FPO (Follow on Public Offer) is a process by which a company, which is already listed on an exchange, issues new shares to the investors or the existing shareholders, usually the promoters

What is FPO oversubscription?

An FPO oversubscription is a condition when an FPO receives more applications from investors than the total number of shares offered. For example, Adani's FPO was oversubscribed **1.12 times**, meaning there were 112 interested investors for 100 shares of the company.

IMF'S LATEST WORLD ECONOMIC OUTLOOK UPDATE

Context:

In its recent update of the **World Economic Outlook (WEO) report**, the **IMF has marginally improved the forecast for global growth in 2023** — a relief, given the fears of a global recession in 2023.

The IMF releases the **WEO twice every yea**r, in April and October, **apart from updating it twice — in January and July.**

Key takeaways:

Global growth will bottom out in 2023

- IMF rules out a global recession: "**Negative growth in global GDP or global GDP per capita—which often happens when there is a global recession—is not expected**."

Global inflation has peaked but relief will be slow

- Inflation is expected to have **peaked in 2022 but the disinflation (the fall in inflation rate) will be slow and take all of 2023 and 2024.**
- **The price rise is slowing for two main reasons.** One is **monetary tightening all across the world** — higher interest rates reduce overall demand for goods and services and that, in turn, slows down inflation. Two, in the **wake of faltering demand, prices of different commodities — both fuel and non-fuel — have come down from their recent highs**.

India will stay the world's fastest-growing major economy in 2023 and 2024

- India's GDP growth rate is **expected to be significantly higher than all its comparable economies, especially China (which is set to grow at 5.4% in 2023 and 4.5% in 2024).**

INDIAN START-UPS' REVERSE FLIPPING

Context:

Indian **start-ups are exploring 'reverse flipping', or shifting their domicile back to India**, with easy access to capital from private equity and venture capital, changes in rules **regarding round-tripping, and the growing maturity of India's capital markets, observed the Economic Survey 2022-23.**

About Flipping and Reverse Flipping:

- Flipping refers to the **process of transferring the entire ownership of an Indian company to an overseas entity, accompanied by a transfer of intellectual property (IP)** and all data hitherto owned by the Indian company.
- This **effectively transforms an Indian company into a 100 per cent subsidiary of a foreign entity,** with the founders and investors retaining the same ownership via the foreign entity, having swapped all shares.
- Reverse flipping **is shifting their domicile back to India.**

Why start-ups were flipping before:

- **Challenges faced by start-ups**: **funding hurdles, revenue generation struggles, lack of easy access to supportive infrastructure, and a complex regulatory tax environment**. S**tart-ups have been headquartered overseas**, especially in destinations with **favourable legal environments and taxation policies**.

ILLUSTRATION: BINAY SINHA

BACK HOME
Total jobs created (self-reported) by DPIIT-recognised start-ups (in thousands)

43 — 2017
88 — 2018
132 — 2019
161 — 2020
198 — 2021
269 — 2022

Source: Economic Survey

INDIA AS A "PIONEER INVESTOR": ISA
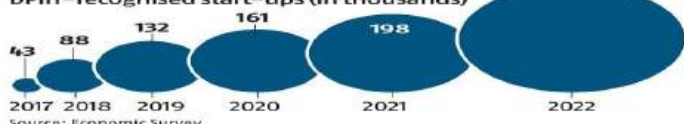
Context:

On the visit of the Secretary General of the International Seabed Authority to India, the government has said that the world today recognises **India's Blue Economy** resources and the International Seabed Authority has officially designated India as a **"Pioneer Investor"**

What is a Pioneer Investor?

An early investment made in any new sector or technology. E.g., Polymetallic nodules at the ocean bed.

India's Step for PMN and Blue Economy:

- Recently, the International Seabed Authority (ISA) and the Ministry of Earth Sciences also **exchanged PMN (Polymetallic Nodules) exploration extension contract**
- **India is framing the Blue Economy policy framework**, which aims at covering the coastal economy, tourism, marine fishery, deep-sea mining etc.
- **As a part of the Deep Ocean Mission**, India concluded the world's first locomotive trials of a deep-sea mining system in the central Indian ocean last year (2022).
  - **Deep Ocean Mission**: It would develop a manned submersible that can carry three people to a depth of 6,000 meters in the ocean for exploring and, then, extracting minerals in the deep seabed·
  - It also aims to explore marine biodiversity for the sustainable use of resources.
  - It has recently been allocated *Rs 600 Cr* (Budget 2023-24)
- O-SMART
- Sagarmala Project

Ministry of Earth Sciences has been conducting **PMN (Polymetallic Nodules) exploration program** through its nodal institute **National Institute of Ocean Technology** (NIOT) and other associated national institutes.

About International Seabed Authority:

ISA (HQ: Jamaica, est. 1994) is an intergovernmental body of 167 member states and the European Union established under the **1982 UN Convention on the Law of the Sea** and its 1994 Agreement on Implementation

- It comes under the **United Nations Convention on the Law of the Sea (UNCLOS)** for monitoring all activities related to mineral resources in the deep sea.
- **The international seabed** is the area that lies beyond the limits of **national jurisdiction and represents around 50%** of the total area of the world's oceans.

ADDITIONAL SURVEILLANCE MECHANISM

Context:
The **National Stock Exchange (NSE)** placed **A**dani Enterprises, Adani Ports, and Ambuja Cements under the **additional surveillance mechanism (ASM).**

- This means trading in their shares will **require a 100% margin**, which is aimed at **curbing speculation and short selling.**

What is an additional surveillance mechanism (ASM)?
- The ASM was **introduced in 2018** with the in-

tention to **protect investors from market volatility and unusual changes in share price.**
- ASM in the stock market functions as a **control measure for speculative trading to safeguard the interests of retail investors and keep them out of potentially dangerous trading situations.**

There are two parts of additional margins:
- Long-term ASM
- Short-term ASM

Agriculture

PRIMARY AGRICULTURAL CREDIT SOCIETIES (PACS)

Context:
A MoU was signed between the Ministry of Cooperation, Ministry of Electronics and Information Technology, NABARD and CSC e-Governance Services India Limited, for PACS to soon start providing services like the one offered by Common Service Centres (CSC).

Significance:
- **PACS are the soul of cooperative**s and will enable '**Sahkar Se Samridhi'** for rural development
- **Making PACS multipurpose** as providers of about **20 services** will increase employment opportunities in rural areas.
- **50 per cent of the country's population** is associated with cooperatives in one way or the other

What are PACS?
It is a village-level institution that works directly with rural residents. It encourages agriculturists to save, accepts deposits from them, makes loans to deserving borrowers, and collects repayments.

- There are around 63,000 Primary Agricultural Credit Societies.
- The recent Budget (2023-24) has made a provision to make **2 lakh PACS in the next 5 years** and create **a multi-purpose PACS in every Panchayat**.
- PACS are the lowest unit in a three-tier structure (see image below)
- PACS are outside the purview of the Banking Regulation Act, 1949, and therefore not regulat-

ed by RBI.

What are Common service centres (CSC)?

Common Service Centres are **physical facilities for delivering Government of India e-Services** to rural and remote locations where the availability of computers and Internet was negligible or mostly absent.

Structure of Rural Co-operative credit societies
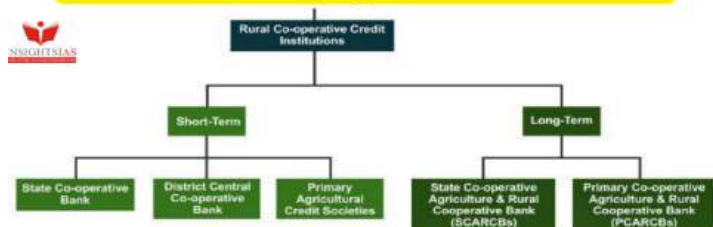
Prelims Links

Q. With reference to 'Urban Cooperative Banks' in India, consider the following statements: (UPSC CSE 2021)

1. They are supervised and regulated by local boards set up by the State Governments.

2. They can issue equity shares and preference shares.

3. They were brought under the purview of the Banking Regulation Act, 1949 through an Amendment in 1966.

Which of the statements given above is/are correct?

(a) 1 only

(b) 2 and 3 only

(c) 1 and 3 only

(d)1, 2 and 3

Answer: B

Q. Consider the following statements: (UPSC CSE 2020)

1. In terms of short-term credit delivery to the agriculture sector, District Central Cooperative Banks (DCCBs) deliver more credit in comparison to Scheduled Commercial Banks are Regional Rural Banks

2. One of the most important functions of DCCBs is to provide funds to the Primary Agricultural Credit Societies.

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

RADIOACTIVE CAPSULE: LOST AND FOUND

Context:

The **Caesium-137 capsule lost in transit** more than two weeks ago was discovered using **specialist detection equipment, which picked up the radiation**.

What are the risks that the capsule posed?

- Radioactive materials like **Caesium-137 produce beta and gamma radiation**, both of which are harmful to humans. When exposed to them, **short-term risks include that radiation poisoning (which can be deadly) whereas in the long term,** it can also be a cause of cancer and damage human DNA.

- **The 20-metre exclusion zone** has been set up **around the capsule while defence force members verify it via a serial number**.

- Experts say that the capsule, **which emits radiation equal to roughly 10 X-rays per hour, was unlikely to contaminate the area it fell in.**

Radioactive capsule missing in Australia

Authorities in Western Australia have mounted an extensive search for a radioactive capsule believed to have fallen from a truck that made a 1,400 kilometre journey. The truck travelled from Rio Tinto's Gudai-Darri mine in the northwest to a storage facility in the suburbs of Perth.
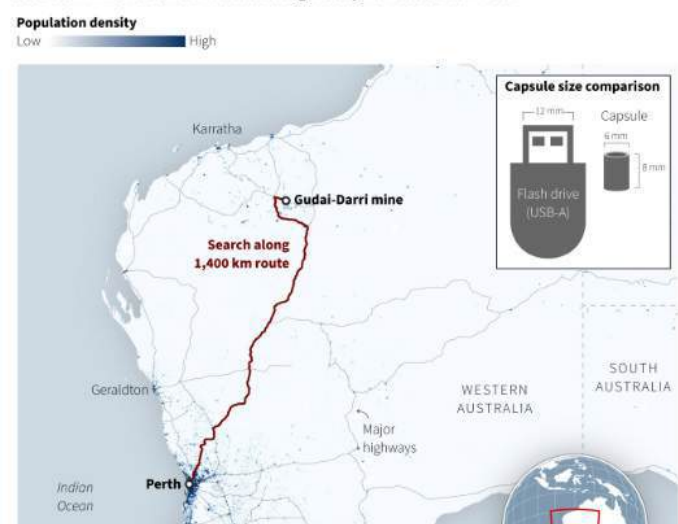
WITH FRIGID INNOVATION, SCIENTISTS MAKE A NEW FORM OF ICE

Context:

Scientists have **fashioned a previously unknown form of ice** - one that might **exist on our solar system's icy moons** - in research that **sheds light on water's behaviour under extreme conditions** using a **device that might be described as a super-duper cocktail shaker.**

How was it made:

- The researchers said they employed a **process called ball milling** to vigorously **shake ordinary ice** together **with steel balls in a container** cooled to **minus-328 degrees Fahrenheit** (minus-200 degrees Celsius).
- This yielded what they called **"medium-density amorphous ice," or MDA,** which looked like a **fine white powder.**

Its characteristics:

- Ordinary ice is crystalline in nature, with water molecules - two hydrogen atoms and one oxygen atom, or H2O - arranged in a regular pattern. **Amorphous ice's water molecules are in a disorganized form resembling a liquid.**
- Amorphous ice is **by far the most common form of water in space.** Scientists have identified 20 different forms of crystalline ice and **three forms of amorphous ice - one low density (discovered in the 1930s), one high density (discovered in the 1980s), and the new one in between**.
- Almost all ice in the **universe is amorphous and in a form called low-density amorphous ice**. This forms when water **condenses onto dust grains in space**. Comets are amorphous ice as well.

The **key significance of the discovery** of a new form of ice with a density similar to liquid water is that it could serve as an ideal model for understanding the properties of water without the complexities introduced by its fluid motion.

COBRA VENOM CYTOTOXINS

Context:

Scientists have traced the **mechanisms of the toxic action of cobra venom**, paving a path towards **developing strategies for the application of antivenom** or small molecule inhibitors, which can **help mitigate the local toxic effects of cobra venom retained at the bite site.**

About Cobras:

- **Cobras (genus Naja**) are widely distributed over

Asia and Africa, and cobra bites are responsible for large **mortality and morbidity**. Like other elapid venoms, **cobra venoms are neurotoxic in nature.** However, they also exhibit local **cytotoxic effects at the envenomed site**.

- Cytotoxins (CTXs) are an essential class of the **non-enzymatic three-finger toxin family** and are present in cobra venoms. **CTXs are also responsible for depolarizing neurons and heart muscle membranes.**

Insta Links: National Snakebite Awareness Summit

Technology

STORAGE TIME OF QUANTUM INFORMATION

Context:

An international team of scientists has made a breakthrough in **retaining the quantum coherence of quantum dot spin qubits**

- The research has improved the storage of quantum information beyond **hundreds of microseconds.**

The issues with quantum coherence:

Quantum coherence refers to the ability of a quantum state to maintain its entanglement and superposition in the face of interactions. Quantum dots are needed for the **storage of information** and for its transmission to **longer distances. Spin-photon allows** it to do so.

Significance of the breakthrough:

- It will enable **practical quantum networks and quantum computers.**
- The technologies will alter a wide range of enterprises and research initiatives, from information security to the search for novel materials and chemicals, to measurements of sensors.

What are Quantum dots?

Quantum dots **are tiny particles or nanocrystals of a semiconducting material** with diameters in the range of 2-10 nano-meters (10-50 atoms). They are used for LEDs, displays, and various other applications.
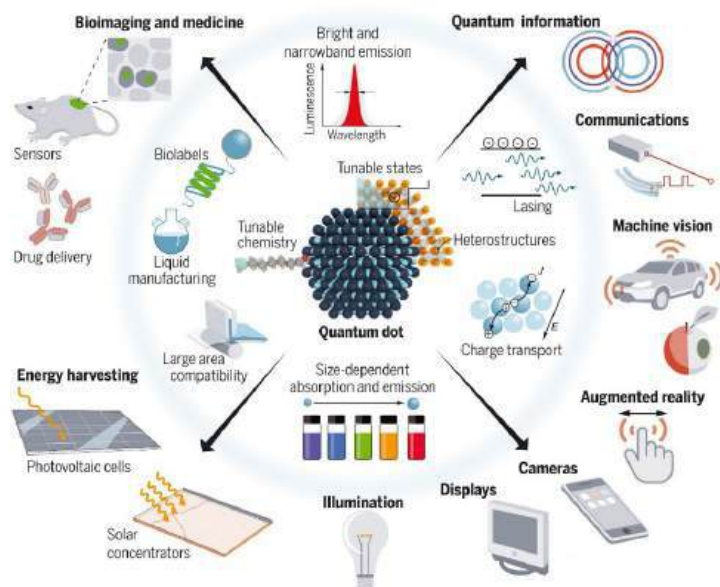
What is Quantum technology?

Until the early 20th century, it was thought that classical physics – two objects cannot occupy the same space at the same moment. However, the **principles of quantum mechanics allow** it, and quantum technologies are based on it. It is exhibited by **microscopic particles** (photons, electrons, atoms, etc).

The principles behind quantum technology:

SUPERPOSITION

Superposition describes a particle's ability to exist across many possible states at the same time. So the state of a particle is best described as a "superposition" of all those possible states.

ENTANGLEMENT

Quantum entanglement refers to a situation in which two or more particles are linked in such a way that it is impossible for them to be described independently even if separated by a large distance.

OBSERVATION

Superposition and entanglement only exist as long as quantum particles are not observed or measured. "Observing" the quantum state yields information but results in the collapse of the system.

India's effort in the field of quantum computing: National Mission on Quantum Technology (2021); the Indian army opened a quantum research facility in Madhya Pradesh.

Health

BREAST CANCER: HOW HORMONAL THERAPY WORKS

Context:

Research at **Mumbai's Tata Memorial Centre** has shed light on the molecular mechanism through which **progesterone treatment prior** to breast cancer surgery is likely to increase the survival rates of patients.

What is Breast Cancer?

Breast cancer can occur in **women and rarely in men**. Its treatment may consist of chemotherapy, radiation, hormone therapy and surgery.

What is Hormone Therapy for Cancer?

Hormone therapy is a **cancer treatment that slows or stops the growth of cancer** that uses hormones to grow. E.g., some prostate and breast cancers.

What is Progesterone?

Progesterone is an **endogenous steroid and progestogen sex hormone** involved in the menstrual cycle, pregnancy, and embryogenesis of humans and other species.
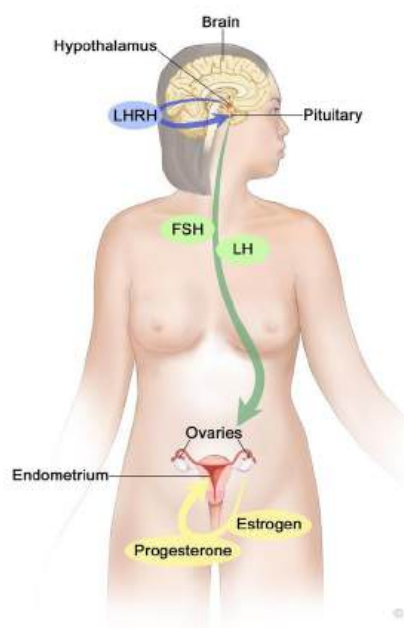
Biologicals

Context: National Summit on Quality of Biologicals inaugurated.

What are Biologicals?

Biologicals are a **diverse group of medicines** which includes vaccines, growth factors, immune modulators, monoclonal antibodies, as well as products derived from human blood and plasma.

MACROSOMIA

Context:

A mother in Brazil recently gave **birth to a two-foot-tall baby weighing 16lb (7.3kg)**.
About Macrosomia:

The term used to **describe these giant babies is macrosomia** (Greek for the large body). Any baby that **weighs more than 4kg, regardless of its gestational age, is said to have macrosomia**.

Factors that cause Macrosomia:

- **Body weight of the mother**, obese mothers are most likely sufferers of Macrosomia.
- In mothers with **gestational diabetes** (high blood sugar that arises during pregnancy), this increases to between 15 per cent and 45 per cent of births.
- **Being older when pregnant** also increases the odds of having a baby with macrosomia.
- **Previous pregnancies increase the risk of macrosomi**a because, with each successive pregnancy, birth weight increases.
- **Overdue pregnancies** - those that run past the typical 40 weeks - also increase the risk of a baby being macrosomic, **particularly at 42 weeks or more**.
- **Having a boy increases the likelihood of macrosomia**. Boys are three times more likely than girls to be born macrosomic.

Issues:

- Babies with macrosomia are more **likely to encounter difficulties moving through the birth canal because of their large size.**
- **"Shoulder dystocia"** – which may cause **permanent harm to shoulders**. While the baby is stuck, it **cannot breathe and the umbilical cord may be squeezed.**
- Mothers are also at **increased risk of vaginal tears during delivery**, which then increases the risk of postpartum **haemorrhage (bleeding)**
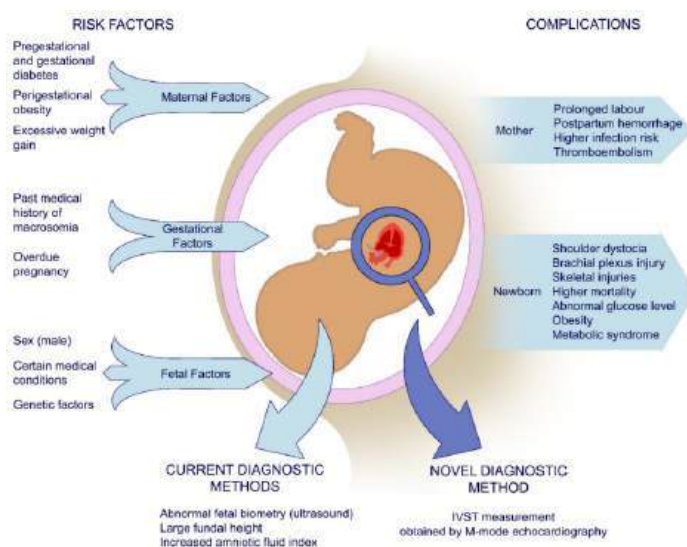
12 AFRICAN COUNTRIES COMMIT TO ENDING AIDS IN KIDS BY 2030

Context:

Ministers and representatives from **12 African countries have laid out plans to end acquired immunodeficiency syndrome (AIDS) in children by 2030** through early testing, treatment, and prevention programmes.

- Countries with high HIV burdens have joined the alliance in the first phase**: Angola, Cameroon, Ivory Coast, the Democratic Republic of the Congo (DRC), Kenya, Mozambique, Nigeria, South Africa, Tanzania, Uganda, Zambia, and Zimbabwe.**
- The **Global Alliance to end AIDS** in children will work to drive progress over the next seven years to ensure that the 2030 target is met.
- The **Dar-es-Salaam Declaration** on ending AIDS in children **was endorsed unanimously**. The commitment marks a **step up to ensure that all children with HIV have access to life-saving treatment and that mothers living with HIV have babies free from HIV.**

HIV virus infecting a T CD4 cell
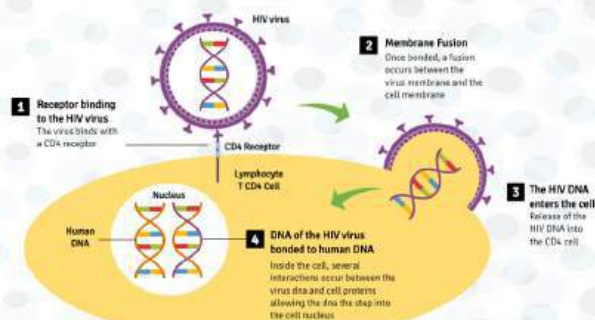
SICKLE CELL DISEASE

Context:

Recently, the government announced in the budget the Centre's plan to launch a mission to **eliminate sickle cell anaemia by 2047**

- The health ministry will now screen all tribals in the country **below 40 years** and give them identity cards based on their sickle cell anaemia status (**Unmukt Project** of the central government)
- **The colour-coded cards** can be **matched before marriage** to understand the **risk of sickle cell disease** in the child born from the union
- Prevalence: There are approximately 200 districts in the country where the disease is prevalent, mostly in Maharashtra. Madhya Pradesh, Chattisgarh, Gujarat, Rajasthan, Jharkhand and Odisha.

About Sickle cell disease:

Sickle cell disease is a genetic condition that affects haemoglobin -- responsible for carrying oxygen in the body-- in red blood cells.

- **It is inherited when a child receives two genes**— one from each parent—that code for **abnormal haemoglobin**
- It is prevalent among the **tribal population in India**
- It can lead to problems such as **Anaemia, debilitating acute and chronic pain, infection, acute chest syndrome**, stroke, and renal failure are among the problems it can lead to.
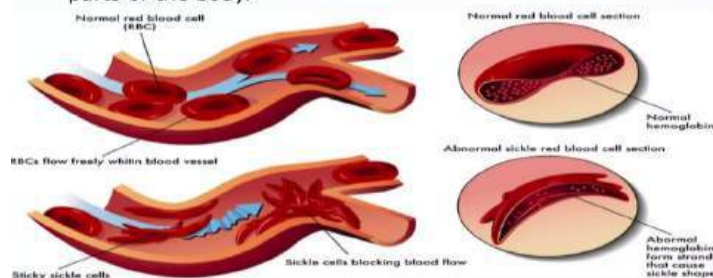
Initiatives by Tribal Ministry:

- Tribal Affairs Ministry **established the National Council on Sickle Cell Disease and Tribal Health Cell**
- The Tribal Affairs Ministry, through the development of the **Sickle Cell Support Corner**, has instituted a mechanism for creating a **Central Repository of data**

Space

AVIATION GASOLINE

Context:

Indian Oil Corporation (IOC) has started the **exports of aviation gasoline** (for the 1st time by India).

- It is used to **operate unmanned aerial vehicles (UAVs) and small planes**
- The beginning of **fuel exports marks the entry of India** into an estimated **$2.7 billion global market**
- IOC is the **sole manufacturer** of fuel in India

What is Aviation Gasoline Fuel?

Aviation gasoline is a **high-octane aviation fuel** with superior performance and quality standards compared to imported fuels.

- Usually, flying schools use this fuel for piston-engine aircraft.

Significance:

- **Saving on Importing cost**
- **Indigenous production:** The gas named **AV gas 100 LL** will **make training in domestic flying schools economical** for budding pilots,

- **Advantages in modern warfare**: Unmanned Aerial Vehicles (UAVs) are increasingly being used in modern warfare, including in Russia-Ukraine.

Aviation gasoline fuel (AVGAS) vs Aviation turbine fuel (ATF)?

Aviation gasoline is used for **piston-engine aircraft**. These types of aircraft fly through the rotation of the propellers which generate the thrust. While **Jet Fuel is used for aircraft with turbine-engine jets**. These fly with the thrust of expelled air.

GAMMA-RAY ECLIPSES FROM 'SPIDER' STAR SYSTEMS

Context:

Scientists have discovered the **first gamma-ray eclipses** from a special type of binary star system using data from **NASA's Fermi Gamma-ray Space Telescope**.

- The S**pider systems contain a pulsar** – the superdense, rapidly rotating remains of a star that exploded in a supernova – that slowly erodes its companion.

About Spider systems:

- Spider systems **develop because one star in a binary evolves more swiftly than its partner**. When the **more massive star goes supernova, it leaves behind a pulsar**. This stellar remnant emits beams of multiwavelength light, including gamma rays, that sweep in and out of the view, creating pulses so regular that they rival the precision of atomic clocks.
- Initially, a **spider pulsar "feeds" off its companion by siphoning away a stream of gas**. As the system evolves the pulsar begins to spin more rapidly, generating **particle outflows and radiation that superheat** the companion's facing side and erode it.
- One of the most important goals for studying spiders is to **try to measure the masses of the pulsars.**

Life Cycle of a Star
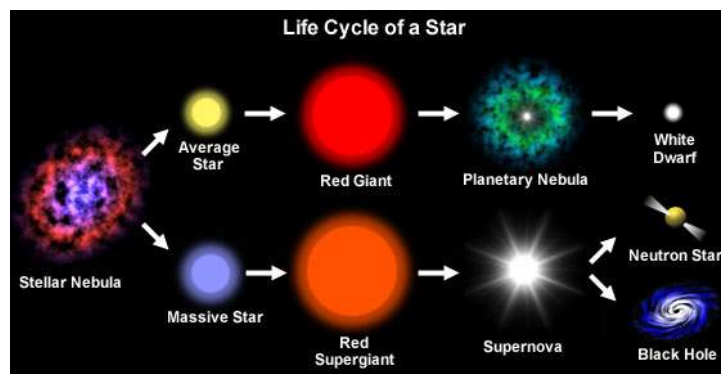
SPACE DEBRIS

Context:

A total of 111 payloads and 105 space debris identified as 'Indian objects' orbiting the Earth to date have been tracked (as per the US Space Command (USSPACECOM))

What is space debris?

Space debris is defunct human-made objects in space—principally in Earth orbit—which no longer serve a useful function

- The real amount of space debris is said to be **between 500,000 and one million pieces** as current sensor technology cannot detect smaller objects.
- They orbit at high speed in Low Earth Orbit (LEO)

The threat of **Kessler Syndrome?**

The Kessler Syndrome is a theoretical scenario in which Earth's orbit is overpopulated with objects and debris, preventing the use of satellites in certain sections of Earth's orbit.

Measures taken

Global:

- Nasa's Space Debris Sensor orbits the Earth on the International Space Station
- REMOVEdebris satellite
- Deorbit mission

India:

- Network for Space Objects Tracking and Analysis **(NETRA) project**
- **ISRO System for Safe and Sustainable Operations Management (IS4OM)** (2022): To continually monitor the objects posing collision threat

Environment

INVASIVE PLANT SPECIES & KERALA'S WILDLIFE HABITAT

Context:
The Nodal Centre for Biological Invasions (NCBI) at the Kerala Forest Research Institute (KFRI) has come out with a management plan to **eradicate Senna spectabilis**

The Plan: Landscape-level management of the tree:
Stage 1: The large trees need to be debarked

Stage 2: Once the trees start to dry up, manpower should be made available to remove the sprouting plantlets of Senna spectabilis

Stage 3: Planting of large saplings of native tree species should start

About Senna spectabilis:
- Senna spectabilis is **a deciduous tree native to tropical areas of America.**
- The thick foliage of the tree **arrests the growth of other indigenous tree a**nd grass species. Thus, it causes **food shortages** for the wildlife population, especially **herbivores**
- **IUCN: Least Concern**
- Invasion of Senna spectabilis is **most severe in Wayanad Wildlife Sanctuary** and nearby forests.

About Wayanad Wildlife Sanctuary
- It is part of the **Nilgiri Biosphere Reserve** along with Mudumalai Wildlife Sanctuary, Bandipur National Park, Nagarhole National Park, Mukurthi National Park, and Silent Valley.
- It has the **world's largest recorded population of the Asiatic elephant**
- **River**: **Kabini** and its three tributaries (Kabini is the tributary of the Kaveri rivers)

MANIPUR'S HEIMANG

Context:
Manipur is part of one of the **world's most biodiverse areas**, the Indo-Burma region, **heimang (Rhus chinensis)** a popular plant here has a long history of **culinary and medicinal use among communities in countries** where the tree grows.

About Heimang:
- It grows widely in **Manipur and other north-eastern regions**
- The spherical fruit has a **citrus-like tartness** and, it is packed with nutrients such as **polyphenols, flavonoids, and antioxidants.**
- Traditional healers of Manipur called **maibas** or **maibis**, prescribe heimang for common **gastrointestinal problems like diarrhoea and dysentery.**
- **It is also recommended to eat water-soaked fruit for indigestion and stomach ulcer.**
- Other parts of the heimang tree such as its **leaves (including the abnormal growths or galls on them), roots, stem, and bark are also found to have preventive and therapeutic effects.**
- The research found that compounds isolated from the **stem of the heimang tree can significantly suppress HIV-1 activity in vitro.**
- Local communities in the state also use hei**mang leaves to prepare a herbal shampoo called chinghi** by boiling them with rice water.

FOSSIL NESTS BELONGING TO INDIA'S LARGEST DINOSAURS UNCOVERED

Context:

Researchers have **uncovered 92 nesting sites containing a total of 256 fossil eggs** in central **India's Narmada Valley** belonging to **titanosaurs**.

About Titanosaurs:

- They were among the **largest dinosaurs to have ever lived.**
- Titanosaurs were a **diverse group of sauropod** dinosaurs, including genera **from all seven continents**.
- These were the **last surviving group of long-necked sauropods**, with taxa still thriving at the time of the **extinction event at the end of the Cretaceous.**

About the findings:

- Researchers identified s**ix different egg species, suggesting a higher diversity of titanosaurs than is represented by skeletal remains from this region.**
- **These dinosaurs buried their eggs in shallow pits like modern-day crocodiles.**
- Certain pathologies found in the eggs, such as a **rare case of "egg-in-egg"**, indicate that titanosaur sauropods had a **reproductive physiology that parallels that of birds and possibly laid their eggs in a sequential manner as seen in modern birds.**

About Narmada River:

The Narmada, **the largest west-flowing river of the Peninsula**, rises near the Amarkantak range of mountains in Madhya Pradesh. It is the fifth-largest river in the country and the largest one in Gujarat.

NEWLY-DISCOVERED ANCIENT 'MARINE CROCODILE' FOSSIL

Context:

Scientists have uncovered a **new thalattosuchian—an** ancient "cousin" of modern-day crocodiles—which could be the oldest of its kind ever discovered.

About Thalattosuchian:

- The fossils of **Turnersuchus hingleyae** represent **the only complete Thalattosuchian of its age and date back to the early Jurassic, Pliensbachian period**, which was about 185 million years ago.
- The **discovery of this new fossil helps fill a gap in the fossil record** and suggests that Thalattosuchians and other crocodile-like animals could have originated around 15 million years farther than Turnersuchus.
- Due to their **relatively long, slender snouts, they would likely have looked similar to the currently living gharial crocodiles**. Gharial crocodiles are usually found in the major river **systems of Northern India.**
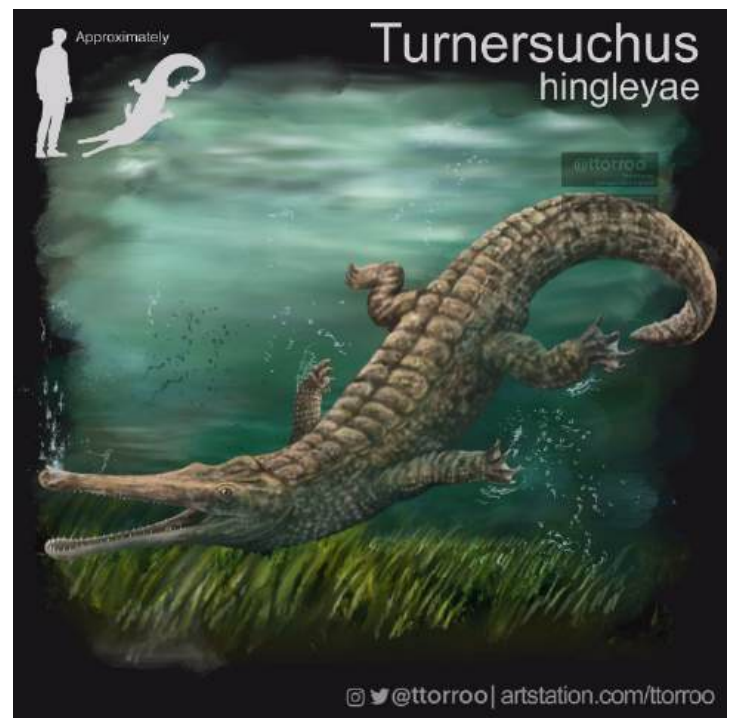
LOCALLY MADE GREEN TRAINS

Context:

The Centre unveiled **plans to locally design and manufacture semi-high-speed metro trains** and **hydrogen-fuelled trains.**

- In line with the Centre's energy transition and net zero goals, **Indian Railways plans to design and manufacture India's first hydrogen-fuelled train**. These trains will operate across heritage

and tourist circuits like the Kalka-Shimla route.

- In line with the government's green energy mission, **the railways will install ultra-mega solar power plants to cut the dependency on thermal power**.

Related News: Various initiatives in Union Budget

- In the '**Amrit Bharat Station' scheme**, the central government plans to **redevelop about 1,275 stations across the country**. The scheme **envisages the development of stations on a continuous basis with a long-term vision.**
- A **corridor-based approach** would be taken up across the country to **develop railway infrastructure**. The corridors would include **economic corridors specified for sectors like energy, cement, and ports among others**.
- A '**Sagarmala' corridor** will be set up to connect the ports in the country.
- The government would also set up a '**Janjati Gaurav Corridor' connecting tribal areas of the country by rai**l.

YAYA TSO

Context:

Yaya Tso, known as a birds' paradise for its beautiful lake has been **proposed as Ladakh's first biodiversity heritage site (BHS).**

- Yaya Tso is a **nesting habitat for a large number of birds and animals**, such as the bar-headed goose, black-necked crane, and brahminy duck, adding it also has the **distinction of being one of the highest breeding sites of the black-necked crane in India.**

About BHS:

- Biodiversity Heritage Sites are areas that are **unique, ecologically fragile ecosystems having a rich biodiversity.**
- Under Biological Diversity Act (BDA) 2002, the **State Governments** are empowered to notify BHS, in consultation with '**local bodies', of areas of biodiversity importance as Biodiversity Heritage Sites.**
- There are 36 BHS in India, **Mahendragiri hill**

(Odisha) is the last BHS added in 2022.

WORLD WETLANDS DAY: ANDHRA PRADESH'S EFFORTS

Direction: Read about Ramsar Sites

Context:

February 2 is marked as World Wetlands Day. **'Revive and restore degraded wetlands'** is the theme for this World Wetlands Day.

- In a belated but welcome move, Finance Minister **Nirmala Sitharaman announced a special scheme called 'Amrit Dharohar'** for protecting **India's wetlands in the Union Budget 2023**.
- A separate scheme for mangrove conservation, **'Mangrove Initiative for Shoreline Habitats & Tangible Incomes', (MISHTI)** was also announced as part of the **green growth priority of the Budget.**

About Wetlands:

- A broad definition of wetlands includes both **freshwater and marine and coastal ecosystems**

such as lakes and rivers, swamps and marshes, wet grasslands, peatlands, estuaries, tidal flats, mangroves, coral reefs, and all human-made sites such as fishponds, rice paddies, reservoirs, and saltpans.

Benefits of Wetlands:

- Wetlands absorb **carbon dioxide and help slow global warming and reduce pollution**, hence, they are referred to as the **'Kidneys of the Earth'.**
- Wetlands also provide a **buffer against the impacts of floods, droughts, hurricanes, and tsunamis, and build resilience to Climate Change**.

Pollution and Waste

NITRATE RADICALS

Context:

A new study has found that **parts of India and China are hotspots for the night-time production of nitrate radicals** that can increase the **amount of deadly ozone and PM2.5 particulate matter in the atmosphere.**

About Nitrate Radicals:

- Nitrate radical is an **oxide of nitrogen that consists of three oxygen atoms bound to a nitrogen atom**.
- Nitrogen oxides are **reactive gases that regulate the formation of air pollutants, including ozone and PM2.5 particles.**
- Nitrate radicals will **oxidize gas pollutants such as volatile organic compounds (VOCs), which will then generate ozone and secondary organic aerosol**.
- **Ozone** is an **air pollutant** that affects human health and crop yield.
- **Secondary organic aerosol** is an important component of **PM2.5**

Species in News

NOBLE'S HELEN

Context:

An **"extremely rare" swallowtail butterfly Noble's Helen (Papilio noblei)** disappearing from its previously known ranges from **Myanmar and southern China to Vietnam** has been recorded for the first time in India's Namdapha National Park of Arunachal Pradesh

Fig: **Noble's Helen**

Fig: **Kaiser e Hind, State bird of ArP**

About Namdapha National Park:

- **Namdapha** (named after a river originating in the park and it meets Noa-Dehing river (a tributary of the Brahmaputra)
- **Location**: It lies in close proximity to the Indo-Myanmar-China trijunction (in Arunachal Pradesh)
- It is the **fourth largest national park** in India after the Hemis National Park (Ladakh), Desert National Park (Rajasthan), and Gangotri National Park (Uttarakhand)
- It is also on the **Tentative List of UNESCO World**

Heritage Sites in India and a biodiversity hotspot

- It is the **only park in the World** to have the **four Feline species** of big cat: Tiger, Leopard, Snow Leopard, and Clouded Leopard
- **Famous for:** **Namdapha flying squirrel** (Critically Endangered species) and **Hoolock Gibbons** (the only 'ape' species found in India).

Prelims Links:

Q. Which one of the following National Parks has a climate that varies from tropical to subtropical, temperate and arctic? (UPSC 2015)

(a)   Khangchendzonga   National   Park
(b)   Nandadevi   National   Park
(c)   Neora   Valley   National   Park
(d) Namdapha National Park

Ans: (D)

RED-HEADED VULTURES AND BLACK VULTURES

Context:

For the first time since 2017, birders spotted **a red-headed vulture (Sarcogyps calvus)** in the Bhatti mines area of Delhi, the same week a **"rarest of rare" black vulture** (Coragyps atratus) was sighted in Gurugram's Chandu Budhera.

Red-headed vulture (also called Asian King vulture or Pondicherry Vulture) was extensively found in India but its numbers drastically reduced after diclofenac poisoning.

IUCN: Critically Endangered

American Black Vulture:

This is mainly found in the **USA and South America**. Black vultures typically avoid crossing large bodies of water and do not cover long distances.

IUCN: Least Concern.
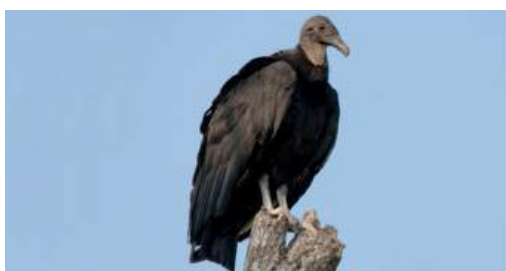
What is diclofenac poisoning?

Diclofenac, an anti-inflammatory agent and painkiller, is known to be linked to the rapid decline of vulture populations in Southeast Asia. The birds were exposed to the medicine after eating **carcasses of animals** that had **recently been treated with diclofenac** and subsequently died of **kidney failure**.

'SOLIGA ECARINATA': NEW WASP GENUS

Context:

Researchers have unearthed a **"strikingly colorful" new genus of wasp from the forests of Biligiri Rangana Hills in Karnataka** and other locations.

About Soliga ecarinata:

- The wasp has been named **'Soliga ecarinata'** after the indigenous community that resides in BR Hills and Male Mahadeshwara Hills in Chamarajanagar.
- The wasp belongs to the subfamily **Metopiinae of the Darwin wasps family Ichneumonidae.**
- **Metopiinae has 862 species across 27 genera**, most of which are seen only in the **Palaearctic, Neotropical, and Nearctic regions.**
- The species' name 'ecarinata' denotes the absence of ridges in some of its body regions.
- The entomologists described the insect as "**strikingly colorful and distinct from all its relatives".**

RED SANDERS

Context:

About **20,000 tonnes of Red Sanders were smuggled from India between 2016 and 2020** according to [The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)](#) report.

About Red Sanders:

- Red Sanders (**Pterocarpus santalinus), also called Red Sandalwood**, is a species found in the southern **tropical dry deciduous forest of Andhra Pradesh (AP).**
- [IUCN](#) - 'Endangered'
- CITES - Appendix II

- Wildlife (Protection) Act, 1972 - Schedule IV

Uses:

- The heartwood of Red Sanders is in **demand in the domestic and international markets for making furniture, handicrafts and musical instruments in China and Japan.** The red dye obtained from the wood is used as a **colouring agent in the textiles, medicine and food industries**.

Smuggling:

- With **53.3 per cent** of logs being **shipped to China**, it is the **biggest importer of these illegally harvested logs of Red Sanders**, noted the document **released by TRAFFIC and WWF-India**.
- To curb this illegal logging of the endangered species, the **AP Forest Department formed a Red Sanders Anti-Smuggling Task Force in 2014,** which has made several seizures of the wood.

Defence

HYPERSONIC TECHNOLOGY DEMONSTRATOR VEHICLE (HST-DV)

Context:

India's DRDO tested **its own hypersonic technology demonstrator vehicle (HSTDV)** powered by a scramjet engine.

- There is an **ongoing race among China, Russia and the US** to manufacture **manoeuvrable hypersonic weapons** that fly **over five times the speed of sound** and can **negate missile defence systems**

About DRDO:

The Defence Research and Development Organisation is the premier agency under the Department of Defence Research and Development in the **Ministry of Defence**, charged with the military's research and development, headquartered in Delhi, India.

VEER GUARDIAN 2023

Context:

Veer Guardian 2023 is the **inaugural edition** of the **16-day bilateral air exercise between the Indian Air Force and the Japan Air Self-Defence Force** has concluded in Japan.

Other exercises with Japan:

- Japan-India Maritime Exercise (JIMEX)
- Malabar Exercise (India – US-Japan - Australia)

Q. Consider the following in respect of the Indian Ocean Naval Symposium (IONS): (UPSC 2017)

1. The inaugural IONS was held in India in 2015 under the chairmanship of the Indian Navy.
2. IONS is a voluntary initiative that seeks to increase maritime cooperation among navies of the littoral states of the Indian Ocean Region.

Which of the above statements is/are correct?

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

Answer: B IONS is a **voluntary initiative** that seeks to increase maritime cooperation among navies of the littoral States of the Indian Ocean Region. The inaugural IONS was held in New Delhi, India in 2008.

EXERCISE TRI-SHAKTI PRAHAR

Context:

It is a joint training exercise involving - the Army, Air force and CAPFs to practice battle preparedness of security forces. It just concluded in North Bengal (near the Siliguri corridor).

Content for Mains Enrichment (Ethics/Essay):

Culture

MICROSOFT'S PROJECT ELLORA

It is an initiative to bring 'rare' Indian languages such as **Gondi, and Mundari online.** Under the project, researchers are **building digital resources** of the languages, so as to preserve them.

- Microsoft launched **Project ELLORA** or **Enabling Low Resource Languages** in 2015.
- Researchers are taking the **help of AI and the local community** in the data collection process, researchers hope to create a dataset that is both accurate and culturally relevant.

Society

RIGHT TO BE DEFENCELESS

Context:

Women are always raised to be prepared for threats but they have a right to not be prepared.

Jasmeen Patheja (43) is a women activist who designs creative methodologies and solutions to everyday issues.

Her works:

- **Blank Noise Project**: against street harassment using
  - **'Eve Teasing Food Chart':** (the terms used for women harassment) lollipop, cham cham, hari mirch
  - **'The Museum Of Street Weapons of Defence', a list of things women always carry, such as insect spray, nail files, chilli powder and umbrellas**
- **Right to be Defenceless**: Women have the right to live with trust and belonging in their bodies, in their city, and in their homes.

- **Meet To Sleep:** As a part of this movement, the volunteers sleep in public spaces across the country claiming the right to be defenceless in the body
- **'I Never Ask For It':** It is a collection of garments, which survivors of violence often remember what they were wearing when they were attacked
  - **It is aimed at busting myths about sexual harassment**

She emphasizes four words:

- Mehsoos (to feel)
- Aahsaas (to realise)
- Hamdard (empathic)
- Insaniyat (humanity)

Social Justice

USEFUL EXTRACTS FROM PM'S 97TH EDITION OF 'MANN KI BAAT'

Source: HT

- **About E-Wastes:**
  - *"Today's latest devices are also e-waste of the future":* **People have to be made aware of safe and useful methods of disposal of e-waste as it is estimated that only 15% to 17% of e-waste is recycled every year.**
  - *"Recycling waste is no less than making gold from waste":* **Almost 17 types of precious metals can be extracted from waste using different processes, including gold, silver, copper, and nickel.**
- **About Innovations:**
  - **Indian Institute of Science (IISc), Bengaluru: This institution has 145 patents, which means every five days two patents are filed. This in itself is a wonderful record**
  - **The growing scientific potential of India: For the first time in the last 11 years in India, the number of Domestic Patent Filing has been seen more than Foreign Filing.**
  - **India ranks seventh in patent filing and in the last five years there has been an increase of nearly 50% in the global innovation index**

- About Inclusive initiatives:
  - **Purple fest (Goa): It is a unique effort towards the welfare of differently-abled people.**
- About Grass-root Governance:
  - **Uthiramerur Inscriptions (920 AD): It is notable for its descriptions of rural self-governance. They indicate that Uthiramerur had two village assemblies: Sabha and Ur.**
    - The **Sabha** was an exclusively Brahmin (priestly class) assembly, while the **Ur** was made up of people belonging to all the classes.
  - **Anubhava Mantapa of Lord Basaveshwara: It is the first religious parliament in the world, whose literal meaning is "experience pavilion", and was an academy of mystics, saints and philosophers of the lingayat faith in the 12th century.**
  - **Kakatiya Tradition (founder of the dynasty: Rudradeva I; Period 12-14th Century): Kakatiya had elected committees to look after the installation and maintenance of tanks, canals, and reservoirs**
- **Book "India- The Mother of Democracy":** It illustrates how democratic principles were prevalent in ancient India
  - **"Democracy is in our veins; it is in our culture - it has been an integral part of our work for centuries. By nature, we are a 'Democratic Society,"**

EXAMPLE OF GOVERNMENT'S MISSION KARMAYOGI

Context:

Around **1 lakh railway employees** at stations — from booking and parcel clerks to TTEs and station masters — who are in customer-engagement roles and have completed the Government's Rail Karmayogi training to make "**public servants more empathetic and responsive towards citizens**"

Impact of training:

A third-party audit ("Citizen Trust Scores") has found at **least 1.5 times** increase in the citizens' satisfaction in terms of:
- Service
- Professionalism

- Solution responsiveness
- Overall experience

Usage: It can be used in governance questions as a case study for [Mission Karmayogi](#) as well as an example of responsive governance.

Technology

BAL MITRA

Context:

Delhi Commission for Protection of Child Rights (DCP-CR) launched '**Bal Mitra', a WhatsApp Chatbot** to provide communication support to children and parents in Delhi.

It will include:

- Complaint registration
- Searching for information and tracking complaint status
- Seeking information on admissions
- Providing authentic information on various matters related to children and their rights

Usage: This initiative can be used as an example for showing "**how technology can help in securing child's rights and creating awareness**". It can also be used as an example **of e-governance initiatives**.

Polity

JUDICIARY COMING TO HELP 20-YEAR STUDENT

Context:

A Bench led by Chief Justice of India D.Y. Chandrachud listed the case of a young student for medical termination of her **almost 29-week-old pregnancy**, on the very next day of filing the case (an unprecedented one in the Indian Judiciary)

The SC and two of the country's top law officers also ensured that a safe environment is provided for the student to deliver her baby and the child, as per her wishes, will be given in adoption to a deserving home.

Usage: You can use the story to show the values of **Em-

pathy for women and children, **Fast delivery of Justice** (counter-narrative to the usual tales of sluggishness in justice delivery). The examples can also be used on the themes of **reproductive rights, bodily and decisional autonomy of women**".

Ethics
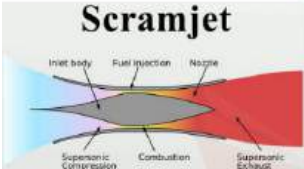
QUOTES ON LIFE

Gandhi- " **Life and death are but phases of the same thing, the reverse, and obverse of the same coin. Death is necessary for man's growth as life itself is.** "

Rabindra Nath Tagore: " Let life be beautiful like summer flowers and death be like autumn leaves

Usage: The quotes can be used to show the continuum of life and death in a philosophical essay. Death is as necessary as life is. It is said *" Live life so completely that when death comes to you like a thief in the night, there will be nothing left for him to steal*." These are various perspectives about life and **death.**

Our founder & director, Vinay Sir, with 120 toppers of UPSC CSE-2021 at the Felicitation Ceremony conducted at Bengaluru.

A LITTLE MORE LIGHT

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