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PREFACE

Current Affairs MARCH, 2026

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MONTHLY MAGAZINE

MARCH 2026

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POLITY & GOVERNANCE

Space for Notes

1. Right to Die with Dignity: Supreme Court Brings India's Passive Euthanasia Law to Life

Context:

In a landmark step, the Supreme Court of India permitted passive euthanasia for a 32-year-old man, who has been in a permanent vegetative state since a 2013 accident. This marks the **first real implementation** of India's judicial framework on passive euthanasia, moving the concept from legal theory to practical application.

What is Euthanasia?

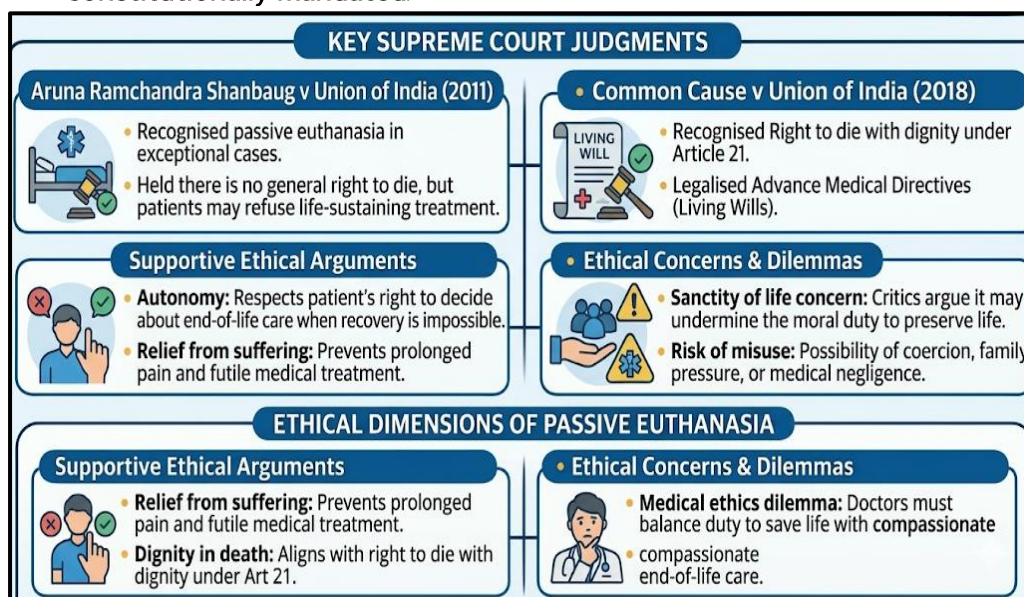
- Euthanasia refers to the **intentional ending of life** of a person suffering from an incurable illness or irreversible condition, primarily to relieve pain and suffering. It is generally carried out by medical professionals and is classified into two types:

Active Euthanasia	Passive Euthanasia
- Involves direct intervention to cause death (e.g., lethal injection). - Illegal in India. - Punishable under criminal law (e.g., culpable homicide or abetment of suicide under the Bharatiya Nyaya Sanhita).	- Involves withdrawing or withholding life-sustaining treatment, such as: - Ventilators - Artificial nutrition - Dialysis - Death occurs naturally due to the underlying illness. - Legally permitted in India, subject to strict safeguards.

Constitutional Basis: Article 21 and Human Dignity

The legal foundation of passive euthanasia lies in Article 21 of the Constitution, which guarantees the Right to Life and Personal Liberty.

- The Supreme Court has interpreted this right to include:
 - Right to live with dignity
 - Right to die with dignity (in limited circumstances)
- This interpretation ensures that **prolonged suffering without dignity is not constitutionally mandated**.



Significance of the Judgment:

This case marks a critical shift in India's healthcare and legal landscape:

- **Operationalization of Law:** Moves passive euthanasia from legal doctrine to real-world application.
- **Recognition of Human Dignity:** Reinforces that dignity must be preserved even at the end of life.
- **Strengthening Patient Autonomy:** Empowers individuals to make decisions about their own bodies and treatment.
- **Clarity in End-of-Life Care:** Provides guidance to doctors and families in ethically complex situations.
- **Highlighting Legislative Gaps:** Underscores the absence of a comprehensive statutory law on euthanasia in India.

The Supreme Court's decision represents a **defining moment in India's constitutional and medical jurisprudence**. By allowing passive euthanasia in practice, it bridges the gap between **legal recognition and humane implementation**, reaffirming that the **Right to Life under Article 21 includes the right to die with dignity** under carefully regulated conditions.

Mains Practice Question:

- Q.** *The Right to Life under Article 21 has evolved to include the 'Right to Die with Dignity'.* In the light of recent developments regarding passive euthanasia, critically examine the constitutional, ethical, and legal dimensions of this shift in India. (15 Marks, 250 words)

2. Transgender Persons (Protection of Rights) Amendment Bill, 2026**Context:**

Transgender Persons (Protection of Rights) Amendment Bill, 2026, proposing to amend the Transgender Persons (Protection of Rights) Act, 2019 passed in both the houses of parliament and awaiting President's assent and it received intense criticism.

Major Highlights of the Bill:

- It seeks to **narrow the definition of "transgender person"** and clarifies that persons with different sexual orientations or self-perceived sexual identities will not fall within the definition of transgender persons under the Act.
- **Changes to Recognition of Gender Identity:** The District Magistrate will issue a certificate of identity after examining the recommendation of a designated medical board headed by a Chief Medical Officer or Deputy Chief Medical Officer.
- **The Bill also omits Section 4(2) of the 2019 Act**, which presently recognises the right of a transgender person to self-perceived gender identity.
- **Changes To Procedure After Gender Reassignment Surgery:** A medical institution where a person undergoes gender reassignment surgery will be required to furnish details of the person to the District Magistrate and the designated authority.

Space for Notes

- **New Penal Provisions relating Forced Conversion and Exploitation:** Offences may attract rigorous imprisonment ranging from ten years to life and a minimum fine of ₹2 lakh. It also introduces offences for forcing persons or children to present themselves as transgender and engaging them in begging.

Need for the Amendments:

- The amendment seeks to address difficulties that have arisen in implementing the 2019 Act due to vague and broad definitions of transgender persons.
- A precise definition is necessary to ensure that the protections under the Act reach those who face extreme social discrimination and to address serious offences involving abduction, bodily harm and forced assumption of transgender identities.
- However, the proposed 2026 Amendment goes against **NALSA v. Union of India (2014)**, which recognised the right to self-identify gender and transgender as the “third gender” upholding their fundamental rights.

Hence, there is a need for the law to ensure dignity and autonomy, not medical gatekeeping, while balancing prevention of misuse with protection of fundamental constitutional rights of transgender persons.

Mains Practice Question:

- Q.** Discuss the key features of the Transgender Persons (Protection of Rights) Amendment Bill, 2026. Do these changes strengthen or dilute the rights and dignity of transgender persons in India? Substantiate your answer.

(15M, 250 words)

3. SC Judgement on OBC Creamy Layer Criteria

Context:

The Supreme Court clarified how the “creamy layer” within Other Backward Classes (OBCs) should be determined.

Key Findings of the Supreme Court:

- The current creamy layer income limit fixed by the Central Government is ₹8 lakh per year, calculated based on parental income.
- The 2004 DoPT clarification required that salary income of parents working in PSUs and private sector jobs be counted while applying the parental income limit as decided by Central Government.
- However, similar treatment was not applied in the same way to government employees, because creamy layer status for government servants was determined mainly based on service category rather than parental income alone.

How Government Service Categories Were Treated:

- **Group A / Class I officers (such as IAS, IPS and senior central/state officers):** children automatically treated as creamy layer, irrespective of parental income.

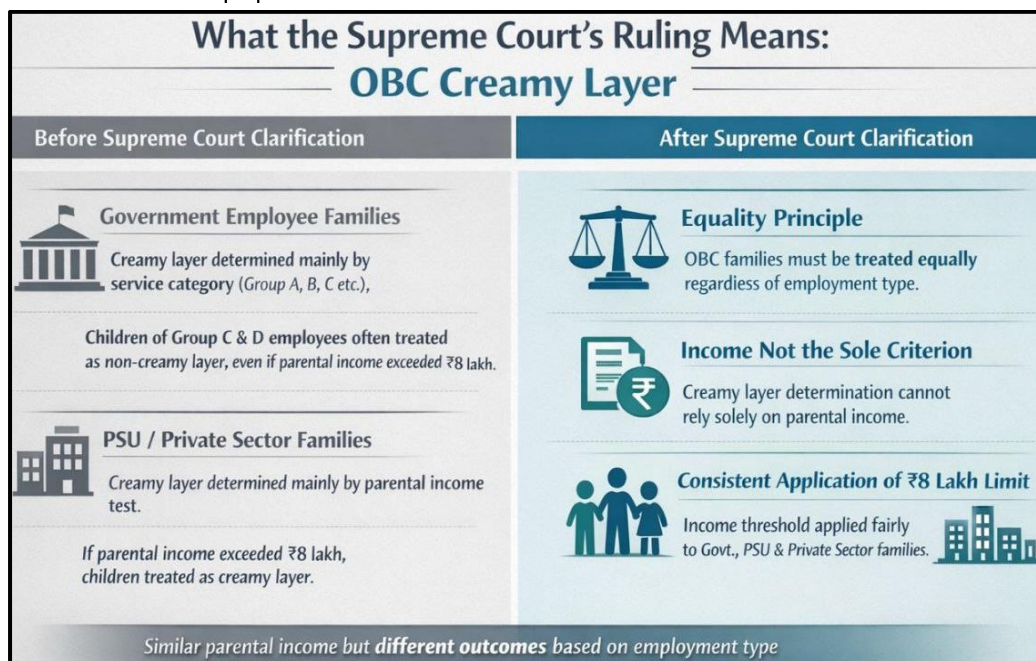
- **Group B / Class II officers:** children may fall under creamy layer depending on service conditions such as promotion stage and length of service.
- **Group C and Group D government employees:** children were generally treated as non-creamy layer because of the parent's lower service status, even if the parental income from salary exceeded the ₹8 lakh threshold.

Resulting Inequality:

- For PSU and private sector employees, creamy layer status depended largely on parental income exceeding ₹8 lakh.
- For government employees, creamy layer status depended largely on service category (Group A, B, C etc.) rather than strictly on parental income.
- As a result, two OBC families with similar parental income could be treated differently depending only on whether the parent worked in government service or in the PSU/private sector.
- Such unequal treatment violates constitutional guarantees of Article, 14, 15 & 16.

Background of the Creamy Layer Principle:

- The concept was introduced in the 1992 Supreme Court judgment in *Indra Sawhney v. Union of India* (Mandal case).
- The Court upheld 27% reservation for OBCs in central government employment.
- It also directed that socially and economically advanced members within OBC communities (called the creamy layer) must be excluded from reservation benefits, so that the policy benefits reach the genuinely disadvantaged sections of the OBC population.



Mains Practice Question:

- Q. Discuss the evolution of the 'creamy layer' principle from the *Indra Sawhney* judgment to recent Supreme Court clarifications. How does exclusion of the creamy layer ensure the constitutional objectives of reservation under Articles 15 and 16? (15 marks, 250 Words)

4. Social Media Ban for Minors

Space for Notes

Context:

The governments of **Karnataka** and **Andhra Pradesh** are planning to impose restrictions on social media usage by minors to reduce the negative effects of excessive mobile phone use among children.

India's initiative to protect children on Online Platforms:

- **Digital Personal Data Protection Act, 2023:** Requires data fiduciaries to collect "verifiable parental consent" for processing personal data of children under 18.
- **Section 67B of Information Technology (IT) Act, 2000:** Provides stringent punishment for publishing, transmitting, or viewing Child sexual abuse material online.
- **Protection of Children from Sexual Offences (POCSO) Act, 2012:** Protect children below 18 years of age from exploitation and safeguarding their interests at every stage of judicial process.
- **National Commission of Protection of Child Rights (NCPCR):** Established an online complaint management system.

Key Details of the Proposed Ban:

- **Age Restrictions:**
 - **Karnataka:** Proposed ban on social media for children under 16 years.
 - **Andhra Pradesh:** Proposed ban on social media for children under 13 years.
- **Consultations and Stakeholder Opinions:** The proposal was discussed during a meeting with Vice-Chancellors of State public universities, where opinions from various stakeholders were sought.
- **Public Debate:** The announcement has sparked a public debate, with experts divided on the impact and feasibility of a blanket ban.
- **International Context:** A similar law was enacted in **Australia** in **December 2025**, which restricts access to social media for children under 16, with severe penalties for violations.

THE SOCIAL MEDIA DEBATE FOR CHILDREN: TO BAN OR NOT TO BAN?

NEED FOR BANNING SOCIAL MEDIA FOR CHILDREN		CONCERNS ASSOCIATED WITH BANNING OF SOCIAL MEDIA FOR CHILDREN	
COGNITIVE & MENTAL HEALTH  • Hampers processes; Weakens concentration, learning & retention. • Increased anxiety, depression, low self-esteem, emotional self-efficacy, and ADHD cases.	PHYSICAL HEALTH & HABITS  • Promotes sedentary behavior, eating disorders & unattainable ideals. • Leads to disrupted sleep patterns, obesity.	PRIVACY & VERIFICATION  • Age verification methods lack transparency; loopholes (VPNs). • Government IDs/biometrics may compromise user privacy.	OVER-REGULATION & PLATFORMS  • Gaming & communication platforms fear restrictive measures that affect legitimate users.
SOCIAL & SAFETY RISKS  • Reduces face-to-face interactions; Social isolation, strained family relations. • Cyber-bullying, dangerous trends (challenges), and predators.	PARENTAL GAPS & ALGORITHMS  • Urban 'iPad kid' phenomenon; limited supervision. • Algorithms personalize content to maximize screen time, increasing overuse.	UNSAFE SPACES  • Hard to enforce; may push children to unsafe, less regulated internet spaces like the Dark Web.	RIGHTS & SKILL LOSS  • Restricts freedom of expression & info access; excludes vulnerable groups (e.g., LGBTQIA+). • Limits creative expression, learning, and digital skills.

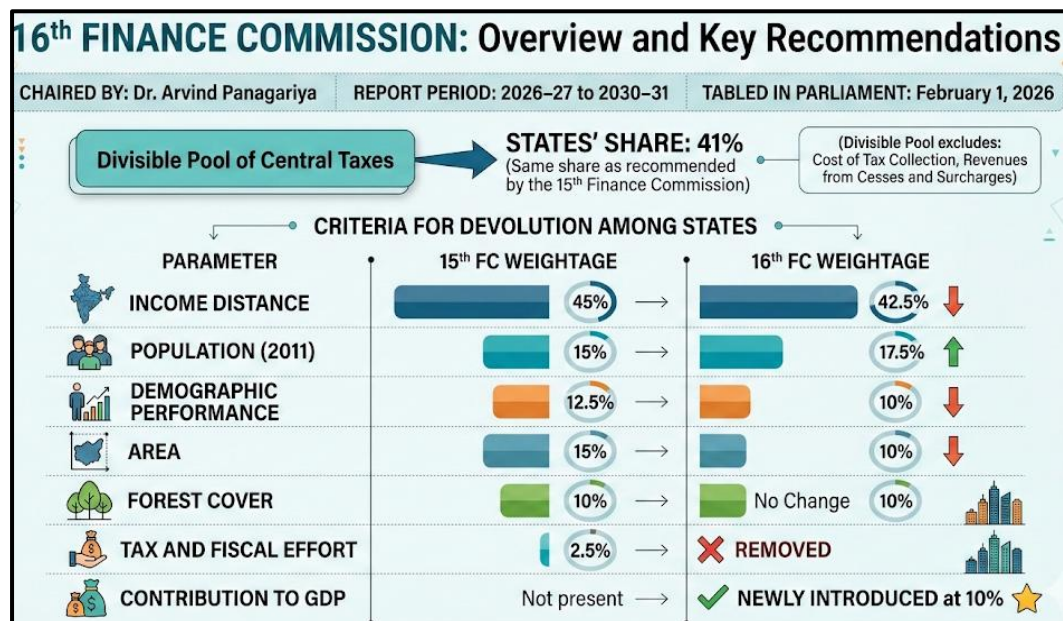
The proposed restrictions by Karnataka and Andhra Pradesh reflect growing concern about the **impact of social media on children's mental health and development**. While the initiative aims to protect young users from digital risks, its success will depend on **clear implementation mechanisms and balanced regulations** that address both safety and the practical benefits of digital technology.

Mains Practice Question:

- Q. Discuss the evolution of the 'creamy layer' principle from the Indra Sawhney judgment to recent Supreme Court clarifications. How does exclusion of the creamy layer ensure the constitutional objectives of reservation under Articles 15 and 16? (15 marks, 250 words)

5. Bridging the Urban Gap: 16th FC's Strategic Financial Push
Context:

The latest report of the 16th Finance Commission, tabled in Parliament on February 1, highlights renewed support and strengthened financial backing for urban local governments


Key Findings:
Grant Allocation Increase:

- **16th FC:** 45% of grants to urban local bodies (up from 36% in 15th FC and 26% in 13th FC)
- Absolute amount: Rs 3.56 lakh crore (over 2x the 15th FC's Rs 1.55 lakh crore; 15-fold rise from 13th FC)
- **Data Challenges:**
 - Lack of credible urbanization data hampers policy initiatives
 - Estimates vary substantially across sources
 - Rapid annual migration patterns not captured in Census data

Rising Urbanisation and the Need for Greater Urban Funding:

- The 16th Finance Commission's higher allocation to urban local bodies acknowledges India's projected urbanisation level of 41% by 2031.
- With each decade, a larger share of India's population is moving to cities, increasing the demand for stronger urban governance.

Data Gaps and Policy Challenges:

- **Urbanization Context**
 - **2011 Census:** 31% of India's population in urban areas
 - **Global comparison:** China (45%), Indonesia (54%), Brazil (87%)
 - **World Bank 2015 estimate:** 54% in cities + 24% in urban clusters = 78% total
- Inconsistent data hampers effective policy planning and resource allocation. Urban local bodies are particularly affected **due to uncertain funding projections.**

16th FC's Financial Cushion:

- The increased 45% share for urban bodies is seen as a buffer against future demographic revisions.
- If **Census 2027 data show higher urbanization - say 48%:** the enhanced allocation would prevent urban governments from being financially underprepared, unlike earlier cycles when allocations were lower (36% or 26%).

The 16th Finance Commission's recommendations reflect India's accelerating urban transition, though variations in state-level allocations highlight ongoing complexities in balancing demographic trends and fiscal federalism.

Mains Practice Question:

- Q.** Examine how the 16th FC's increased financial support for urban local bodies serves as a buffer against rapid urbanization and migration uncertainties. Suggest measures to resolve inconsistencies in urbanization data, drawing comparisons with global benchmarks like China and Brazil.

(15M, 250 words)

6. Beyond Maternity: Supreme Court Pushes India Towards Gender-Neutral Parental Leave
Context:

Recent observations by the Supreme Court of India have emphasized the need to **expand parental leave beyond a mother-centric framework**. This shift reflects evolving societal norms around **family structures, caregiving roles, and gender justice**, and highlights the importance of recognizing both parents as equal contributors to child-rearing.

Space for Notes

Existing Parental Leave Framework in India:

India's parental leave system remains **uneven and gender-skewed**, with a stronger emphasis on maternity benefits:

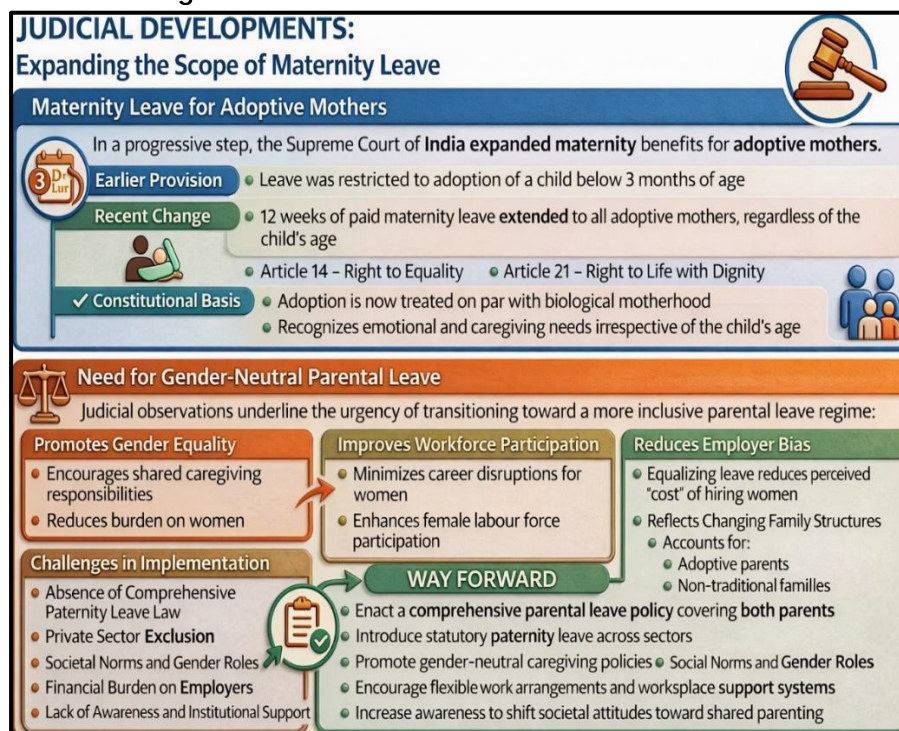
- **Maternity Leave:**
 - Governed initially by the **Maternity Benefit Act, 1961** (amended in 2017), now subsumed under the **Code on Social Security, 2020**
 - Provisions include:
 - **26 weeks of paid leave** for biological mothers (for the first two children)
 - **12 weeks for the third child onwards**
 - Applicable to establishments with **10 or more employees**
- **Paternity Leave:**
 - Limited to **15 days**
 - Available only to **certain government employees**
 - No uniform statutory provision for the **private sector**
- **Additional Provisions:**
 - **Creche facility** mandatory for establishments with **50+ employees**
 - Protection against **dismissal during maternity leave**

This asymmetry reinforces the notion that **caregiving is primarily a woman's responsibility**, limiting shared parenting.

Background Issues and Structural Concerns:

The current framework has deeper socio-economic implications:

- **Disproportionate Burden on Women:**
 - Women perform the majority of **unpaid care work**
 - Leads to: Career interruptions and Reduced workforce participation
- **Workplace Discrimination:**
 - Employers may exhibit **hiring bias against women** due to anticipated maternity costs
- **Limited Recognition of Fathers:**



Related News:

The Supreme Court allowed 12 weeks paid maternity leave to all adoptive mothers, removing the age restriction on the child.

Key Facts:

- Earlier: Leave limited to mothers adopting a child below 3 months only
- Change: Extended to all adoptive mothers (regardless of the child age)
- Basis: Ensures equality (Article 14) and dignity (Article 21)
- Recognition: Adoption treated at par with biological motherhood

Legal Framework:

- Code on Social Security, 2020 (replaced Maternity Benefit Act, 1961):
 - Biological mothers: 26 weeks leave (first 2 children); 12 weeks (3rd child onwards)
 - Adoptive mothers: 12 weeks
 - Applies to establishments with 10+ employees
 - Crèche facility mandatory (50+ employees)
 - No dismissal during maternity leave

Conclusion:

Expanding parental leave to include fathers is essential for achieving substantive gender equality and fostering a more equitable distribution of care responsibilities.

Mains Practice Question:

- Q. Examine how the existing maternity and limited paternity leave provisions perpetuate gender biases in workforce participation. In light of judicial interventions, discuss the path to substantive gender equality through shared parental leave in India. (10M, 250 Words)

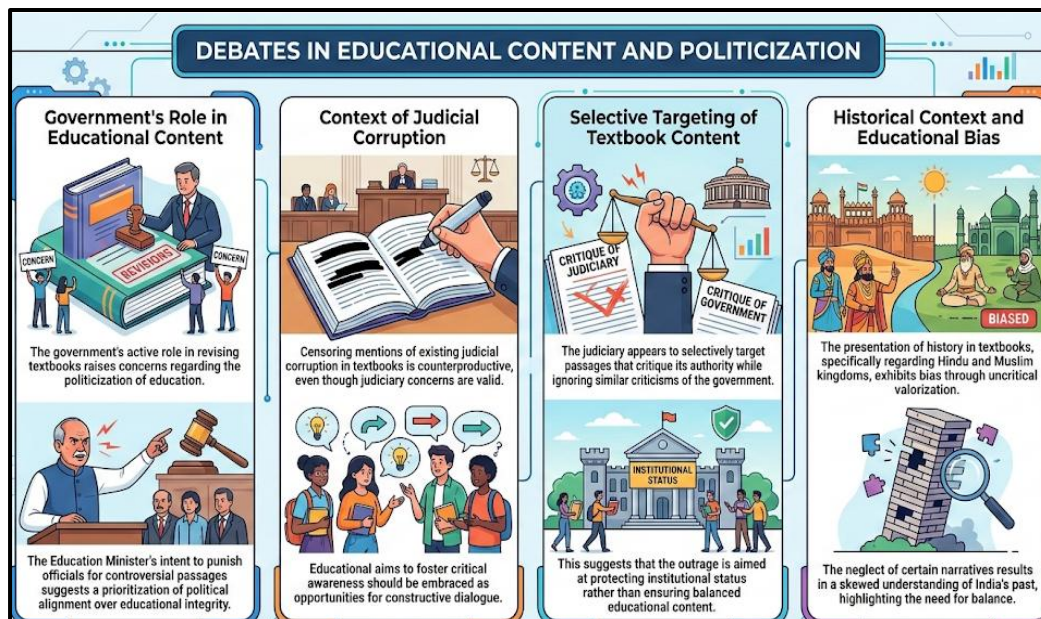
7. Supreme Court's response to the NCERT Chapter incident.**Context:**

A Bench of the Supreme Court of India took strong exception to references in an NCERT Class 8 social science textbook mentioning judicial corruption and case pendency.

Key Highlights:**Judicial Sensitivity to Criticism:**

- The Supreme Court's immediate response to the textbook's references to "judicial corruption" and "case pendency" indicates a heightened sensitivity to perceived attacks on its integrity.
- The Court's declaration to protect its reputation suggests a defensive stance that may inhibit open dialogue about judicial accountability.

Space for Notes



Implications for Civic Education:

- The intention behind to promote civic awareness and encourage students to engage with complex societal issues.
- Censoring such content risks and undermining the educational objective of preparing informed citizens.

Broader Societal Impact:

- The incident reflects a broader trend of selective outrage in various institutions, where criticism is often met with defensiveness rather than introspection.
- Encouraging open discourse about institutional shortcomings can lead to improvements and greater public trust in these institutions.

The Supreme Court's reaction to an NCERT textbook highlights the need to balance judicial integrity with critical education, as censorship is counterproductive compared to fostering open dialogue.

8. Foreign Contribution (Regulation) Amendment Bill, 2026

Context:

The Foreign Contribution (Regulation) Amendment Bill, 2026, introduced by the Ministry of Home Affairs, seeks to amend the Foreign Contribution (Regulation) Act, 2010. The Act regulates the acceptance and use of foreign funds by individuals and NGOs to ensure they are not used against national interest. The amendment focuses on closing gaps in asset management, improving accountability, and strengthening regulatory oversight.

Key Provisions of the Amendment Bill:

- Introduces a **Designated Authority** to manage assets created from foreign funds when an organisation's FCRA registration is cancelled, surrendered, or not renewed.

- Provides for **provisional vesting** of assets during suspension, with possible return if registration is restored.
- Allows **permanent vesting** if the organisation fails to renew registration or becomes defunct.
- Permits transfer or sale of such assets, with proceeds credited to the **Consolidated Fund of India**.
- Introduces **automatic cessation of registration** if renewal is not applied for or denied.
- Expands the definition of “**key functionary**” to include directors, trustees, partners, and others controlling management, making them accountable.
- Imposes duties such as providing access to records, not transferring assets without approval, and operating under supervision.
- Requires **prior approval of the Central Government** before initiating any investigation under the Act.
- Reduces maximum imprisonment for offences from **5 years to 1 year**, with rationalised penalties.
- Expands prohibition on foreign funding to **any person engaged in news or current affairs activities**.
- Provides an **appeal mechanism** to the District Judge within 90 days.

Key Features of the FCRA, 2010:

- Regulates foreign contributions to prevent misuse for political or anti-national activities.
- Requires **mandatory registration or prior permission** to receive foreign funds.
- Registration valid for **5 years**, subject to renewal.
- Funds must be received in a **designated SBI account in New Delhi**.
- **No sub-granting** allowed to unregistered entities.
- Administrative expenses capped at **20% of total funds**.
- Prohibits foreign funding to political actors, judges, media persons, and government servants.

Significance:

- Addresses ambiguity regarding management of NGO assets after cancellation of registration.
- Strengthens accountability of organisations and their functionaries.
- Enhances regulatory clarity through timelines and structured asset handling.
- However, provisions like prior approval for investigation may raise concerns about **centralisation of power and reduced autonomy of civil society**.

Conclusion:

The 2026 amendment represents an attempt to balance regulation with accountability in the use of foreign funds. While it improves clarity and strengthens enforcement mechanisms, its success will depend on ensuring transparency, fairness, and protection of legitimate civil society activities.

9. Sixth Schedule and Tribal Autonomy in India

Space for Notes

Context:

Recent developments, including amendments by the Garo Hills Autonomous District Council and renewed demands in Ladakh, have highlighted the relevance of the Sixth Schedule in ensuring tribal autonomy and governance.

About the Sixth Schedule:

- The Sixth Schedule, under **Articles 244(2) and 275(1)**, provides for autonomous administration of tribal areas based on the **Bordoloi Committee** recommendations. It applies to **Assam, Meghalaya, Tripura, and Mizoram**, creating a “State within a State” model.

Structure and Powers:

Autonomous District Councils (ADCs) consist of **30 members** (26 elected, 4 nominated). They have:

- **Legislative powers** over land, forests, and customary laws
- **Judicial powers** through village courts
- **Financial powers** including taxation. The Governor supervises by approving laws and reorganizing councils.

Demand in Ladakh:

Civil society groups in Ladakh demand Sixth Schedule status to protect land, culture, and local governance, especially after the detention of Sonam Wangchuk under the National Security Act, 1980.

Significance and Challenges:

- Ensures **tribal identity and self-governance**
- Promotes **decentralization and conflict resolution**
- Faces issues like **limited autonomy and administrative inefficiencies**

10. Justice G. Rohini Commission

Context:

Demand for OBC sub-categorisation has renewed focus on the Justice G. Rohini Commission (2017).

About Justice G. Rohini Commission:

- Constituted in 2017 under Article 340; headed by Justice G. Rohini.
- Mandate: Examine sub-categorisation of OBCs for equitable distribution of 27% reservation.
- Identified skewed distribution, with dominant groups cornering benefits.
- Proposed division of OBCs into sub-groups with separate quota shares.
- Report submitted in 2023 to the President.

11. Uniform Civil Code (UCC) in India

Space for Notes

The Gujarat Legislative Assembly passed the UCC Bill, 2026, becoming the second state after Uttarakhand. The Supreme Court of India has also reiterated the importance of UCC under Article 44.

About UCC:

The Uniform Civil Code proposes a **common set of civil laws** governing marriage, divorce, adoption, and succession, applicable to all citizens irrespective of religion.

Constitutional and Legal Basis:

- **Article 44 (DPSP):** Directs the State to secure a UCC (non-justiciable).
- Falls under **Concurrent List (Entry 5)** – allowing both Centre and States to legislate.
- Requires **Presidential assent (Article 254(2))** if conflicting with central laws.

About Article 44:

Feature	Details
Constitutional Provision	Article 44 of the Constitution of India
Part of Constitution	Part IV – Directive Principles of State Policy (DPSP)
Nature	Non-justiciable (not enforceable by courts)
Objective	The State shall endeavour to secure a Uniform Civil Code for all citizens throughout India

Current Scenario:

- India follows **religion-based personal laws** (Hindu, Muslim, Christian, Parsi).
- Goa is the only state with a form of UCC (Portuguese Civil Code, 1867).
- Uttarakhand (2024) and Gujarat (2026) mark recent legislative progress.

Objectives:

- Ensure **equality before law**
- Promote **gender justice**
- Strengthen **national integration**

Judicial View:

Key cases like **Shah Bano (1985)** and **Sarla Mudgal (1995)** emphasized the need for UCC to address legal disparities.

12. Corporate Laws (Amendment) Bill, 2026

Context:

Lok Sabha referred the Corporate Laws (Amendment) Bill, 2026 to a Joint Parliamentary Committee (JPC) for detailed scrutiny.

Key Facts:

- **Bill:** Seeks to decriminalise minor corporate offences and rationalise penalties to improve ease of doing business
- **Amends:** Companies Act, 2013 and Limited Liability Partnership (LLP) Act, 2008

- Companies Act, 2013: Governs incorporation, regulation, and governance of companies; replaced Companies Act, 1956
- CSR Rules: Mandatory 2% of average net profits (last 3 years) for eligible companies
- CSR Applicability: Net worth $\geq$ ₹500 crore OR turnover $\geq$ ₹1000 crore OR net profit $\geq$ ₹5 crore
- Amendment Concern: Changes in net profit calculation may affect CSR compliance
- JPC: Temporary parliamentary committee with members from Lok Sabha and Rajya Sabha
- Role of JPC: Conducts detailed scrutiny of bills and submits recommendations

Space for Notes

13. National Symbols of India

Context:

A recent complaint over alleged disrespect to the national flag and renewed debates on Vande Mataram have brought focus on rules and evolution of India's national symbols.

About National Symbols of India:

- National Flag: Adopted on 22 July 1947; based on design by Pingali Venkayya (1921)
- Evolution: Bhikaji Cama unfurled the flag at (Stuttgart, 1907)
- Feature: Ashoka Chakra (24 spokes) replaced charkha in final design
- Law: Governed by Flag Code of India, 2002 → allows citizens to hoist the flag with dignity (all days, subject to rules)
- Display Rules: Must be rectangular (3:2 ratio); saffron at top; should not touch ground/water or be used as drapery
- Restrictions: Prohibits use for commercial purposes, costume, or uniform
- Protection: Prevention of Insults to National Honour Act, 1971 penalises desecration

14. Section 69A of IT Act, 2000

Context:

The Centre is considering allowing more ministries to issue content blocking orders under Section 69A of the Information Technology (IT) Act, 2000.

About Section 69A:

- Provision: Empowers government to block public access to online content
- Authority: Currently exercised by Ministry of Electronics and Information Technology (MeitY)
- Grounds: Sovereignty, integrity, defence, security of State, public order
- Scope: Applies to websites, apps, and social media platforms
- Process: Requires reasoned order under IT Rules, 2009

Shreya Singhal v. Union of India (2015):

- Section 66A struck down (violates Article 19(1)(a) due to vague terms).
- Section 69A upheld due to procedural safeguards and due process

15. Anti-Defection Law

Context:

The Telangana Assembly Speaker dismissed disqualification petitions against some MLAs under the **Anti-Defection Law**.

About Anti-Defection Law:

Feature	Details
Constitutional Provision	Tenth Schedule
Introduced by	52nd Constitutional Amendment Act, 1985
Objective	Prevent political defections and government instability
Authority	Speaker/Chairman decides disqualification

Grounds for Disqualification:

A legislator is disqualified if they:

- Voluntarily give up party membership.
- Vote/abstain against party whip without permission.
- Independent member joins a party after election.
- Nominated member joins a party after six months.

Exception (Merger):

- Disqualification not applicable if **two-thirds of members of a legislative party merge with another party**. (*Split provision removed by 91st Constitutional Amendment Act, 2003.*)

Role of the Speaker:

- Acts as quasi-judicial authority deciding defection cases.
- Decision subject to judicial review.

Key Judgments:

- **Kihoto Hollohan v. Zachillhu (1992):** Upheld validity of the Tenth Schedule; allowed judicial review of Speaker's decision.
- **Keisham Meghachandra Singh (2020):** Court suggested defection cases be decided within about three months.

16. Rajasthan Panchayati Raj (Amendment) Bill, 2026

Context:

The **Rajasthan Panchayati Raj (Amendment) Bill, 2026** has scrapped the 30-year-old "two-child norm," removing the disqualification criteria for candidates with more than two children.

The 2026 Amendment: Key Changes

Feature	Old Provision (1995)	New Provision (2026)
Eligibility	Barred if > 2 children	No restriction based on child count
Focus	Population Control	Democratic Inclusivity
Status	Disqualification Active	Disqualification Scrapped

Justification for the Reversal:

The Rajasthan government cited decline in the **Total Fertility Rate (TFR)** in Rajasthan and improved grassroots awareness regarding family planning and reproductive health.

Judicial Position:

The constitutionality of such provisions was upheld by the **Javed v. State of Haryana (2003)**, where the **Supreme Court of India** ruled that:

- The two-child norm **does not violate fundamental rights**.
- It is a reasonable measure to promote population control.

17. Appointment of Governor
Context:

The President of India appointed new Governors for several States and Union Territories.

Constitutional Framework:

The Governor acts as the **constitutional head of a State**, serving as a vital link between the Union and State governments.

Article	Key Provision
153	Each State must have a Governor (one person can serve multiple states).
155	Appointment is made by the President (Executive appointment).
156	Office is held during the " Pleasure of the President "; standard term is 5 years.
157	Qualifications: Must be a citizen of India and 35 years of age.
158	Cannot be a member of Parliament/Legislature or hold an office of profit.

The Appointment Process:

- **Method:** The President appoints the Governor based on the binding advice of the **Union Council of Ministers** headed by the PM.
- **Oath:** Administered by the **Chief Justice of the concerned High Court** (or the senior-most judge).
- **Removal:** Can resign via a letter to the President or be removed **by the President** at any time **without** a stated constitutional reason. This power cannot be exercised in an **arbitrary, capricious, or unreasonable manner**. (**B.P. Singhal v. Union of India**)

Conventions:

While not mandated by the Constitution, certain norms are generally followed:

- **"Outsider" Status:** The appointee is usually **not a resident of the state** to ensure political neutrality.
- **Consultation:** The **Chief Minister** should be consulted in the appointment.

Space for Notes

Major Recommendations:

Two key commissions have proposed reforms to **depoliticize** the office:

Commission	Core Recommendations
Sarkaria (1988)	Appointee should be an eminent person from outside the state , not involved in active politics recently, and appointed after CM consultation .
Punchhi (2010)	Suggested a fixed tenure for Governors and a formal "Committee" approach for selection , including the Chief Minister.

Space for Notes

18. Permanent Commission (PC) and pensionary benefits for women officers in Armed Forces

Context:

The Supreme Court upheld Permanent Commission (PC) and pensionary benefits for women officers and highlighted systemic bias against Short Service Commission (SSC) officers in the armed forces.

About PC & SSC:

- Type: Two modes of officer entry in Armed Forces – PC (career service) and SSC (short tenure).
- Permanent Commission: Provides full career till retirement with pension and long-term benefits.
- Short Service Commission: Initial 10 years, extendable up to 14 years, without guaranteed career continuity.
- Transition: SSC officers may be considered for Permanent Commission based on selection.
- Coverage: Applicable across Army, Navy, and Air Force, for both men and women.
- Legal Basis: SC linked PC access to Articles 14, 15, and 16 (equality & non-discrimination).
- Key Issue: SSC officers (especially women) faced limited career progression and institutional bias.

19. Cross-voting in Rajya Sabha Elections

Context:

Some MLAs in Odisha cross-voted in a recent Rajya Sabha election and challenged party show-cause notices as illegal and arbitrary.

Key Facts:

- Nature of Election: Rajya Sabha members are elected by MLAs through proportional representation (Single Transferable Voting) system
- Voting Type: Open ballot system (MLAs show vote to authorised party agent)

- Whip Issue: Political parties cannot legally compel voting in Rajya Sabha elections like in legislative votes (disputed area)
- Undue Influence: Forcing voting preference may attract provisions related to undue influence in elections (BNS/earlier IPC Sec 171)
- **Anti-Defection Law: Tenth Schedule generally not applicable to Rajya Sabha elections** (not a House vote)
- SC Judgment: Kuldip Nayar (2006) upheld open ballot and held that Rajya Sabha elections are an electoral process, not legislative voting thereby limiting strict application of party whip and anti-defection provisions.
- Implication: Cross-voting may invite party disciplinary action, but not automatic disqualification

Space for Notes

20. Speaker of the Lok Sabha

Context:

A resolution seeking the **removal of Speaker Om Birla** was introduced and defeated in Lok Sabha.

1. Constitutional Framework:

Article	Provision
Art. 93	Election of Speaker & Deputy Speaker
Art. 94	Vacation, Resignation, and Removal
Art. 95	Deputy Speaker (or others) to perform duties when the office is vacant
Art. 96	Speaker/Deputy Speaker not to preside during their removal resolution

2. Appointment & Election:

- **Method:** Elected by the Lok Sabha from amongst its members by a **Simple Majority**.
- **Election Date:** Fixed by the **President**.
- **Presiding Authority:** The **Speaker Pro-tem** (appointed by the President) presides over the sitting where the Speaker is elected.
- **Oath:** The Speaker does not take a separate oath as Speaker; they take an oath only as a Member of Parliament (MP).

3. Tenure & Continuity:

- **Normal Tenure:** Coterminous with the Lok Sabha (usually 5 years).
- **Post-Dissolution:** The Speaker **does not vacate** office upon dissolution. They continue until **immediately before the first sitting** of the newly elected Lok Sabha.

4. Removal Procedure (Article 94):

- **Method:** Resolution passed by an **Effective Majority** (i.e., a majority of all the *then* members of the House).
- **Notice:** Requires at least **14 days'** prior notice.

- **During the Debate:**
 - The Speaker **cannot preside** but has the right to speak and take part in proceedings.
 - **Voting:** Can vote in the **first instance** (as a regular member) but **cannot exercise a casting vote** in case of a tie.

5. Resignation & Vacation:

- **Resignation:** Handed to the **Deputy Speaker** (and vice-versa).
- **Vacation:** Occurs if they cease to be a member of the Lok Sabha.

6. Institutional Powers & Features:

- **Casting Vote:** Exercises a casting vote only to resolve a tie (under normal circumstances).
- **Money Bills:** Final authority to certify whether a bill is a **Money Bill** (Art. 110).
- **Anti-Defection:** Decides on disqualification of members under the **10th Schedule** (Judicial review applies).
- **Precedence:** Ranks **7th** in the Table of Precedence (along with the Chief Justice of India).

21. Urban Challenge Fund (UCF)

Context:

The Union Cabinet approved the **Urban Challenge Fund (UCF)** in **2026** to promote market-linked, reform-based urban infrastructure development.

Key Facts:

- **Type:** Centrally Sponsored Scheme with challenge-based funding model
- **Objective:** Develop cities as economic growth hubs, enable redevelopment, and improve water & sanitation systems
- **Corpus:** ₹1 lakh crore central assistance to catalyse approx ₹4 lakh crore total investment
- **Financing Model:** 25% Centre + 50% market finance (mandatory) + 25% State/ULB share
- **Fund Mobilisation:** Cities must raise market funds via municipal bonds, bank loans, and Public-Private Partnerships (PPPs)
- **Approach:** Competitive “challenge mode” selection of bankable, reform-oriented projects
- **Eligibility:** Cities ≥10 lakh population; all State/UT capitals; industrial cities >1 lakh; smaller/hilly/NE ULBs via credit guarantee window
- **Duration:** FY 2025–26 to FY 2030–31 (extendable)

22. Removal of the Chief Election Commissioner (CEC)

Context:

Rajya Sabha Chairman and Lok Sabha Speaker reject Opposition's notice for Chief Election Commissioner's removal.

Constitutional & Institutional Framework:

- **Article 324:** Establishes the ECI as a permanent constitutional body.
- **Composition:** 1 CEC and 2 Election Commissioners (multi-member since 1993).
- **Status:** The CEC is "first among equals" with the same salary and powers as Election Commissioners.

Appointment Mechanism (Act of 2023):

The Chief Election Commissioner and Other Election Commissioners Act, 2023 regulates the process:

Aspect	Provision
Appointing Authority	President of India
Search Committee	Headed by the Cabinet Secretary; suggests 5 names.
Selection Committee	PM (Chair), Leader of Opposition/Single Largest Party (LS), and a Union Cabinet Minister (nominated by PM).
Tenure	6 years or up to 65 years of age (whichever is earlier).
Reappointment	Not eligible for reappointment.

Procedure for Removal of the CEC and EC:

The Constitution provides strong protection to ensure the independence of the Election Commission.

- **Initiation:** A removal motion may be introduced in either House of Parliament.
- **Notice Requirement:** Must be supported by at least 100 Lok Sabha MPs or 50 Rajya Sabha MPs.
- **Admission:** The Speaker (Lok Sabha) or Chairman (Rajya Sabha) may admit or reject the motion.
- **Inquiry:** If admitted, a Judges Inquiry Committee (Supreme Court judge, High Court Chief Justice, and a distinguished jurist) investigates the charges.
- **Parliamentary Approval:** If charges are proven, the motion must be passed in both Houses by special majority (majority of total membership + two-thirds of members present and voting).
- **Final Removal:** The President of India issues the removal order after parliamentary approval.

B. Election Commissioners (ECs):

- **Process:** Removed by the President only on the recommendation of the CEC.
- **Safeguard:** They do not require the parliamentary removal process (impeachment-style) but are protected from arbitrary executive dismissal by the CEC's recommendation requirement.

23. Directorate General of Civil Aviation (DGCA)
Context:

The office of DGCA is in news for various developments.

Space for Notes

Legal Status & Origin of DGCA:

- **Established:** 1958; Headquartered in New Delhi.
- **Status:** An Attached Office under the **Ministry of Civil Aviation (MoCA)**.
- **Legal Framework:** Operates under the **Aircraft Act, 1934** and **Aircraft Rules, 1937**.
- **Nature:** It is a regulatory body functioning under executive and delegated legislative authority.

Core Mandate & Powers:

- **Safety Oversight:** Primary regulator for civil aviation safety, including airworthiness and operational standards.
- **Licensing Authority:** Issues licenses for Pilots, Aircraft Maintenance Engineers (AMEs), and Air Operator Permits (AOPs).
- **Rule Making:** Issues **Civil Aviation Requirements (CARs)** and **Aeronautical Information Circulars (AICs)**, which are binding under the Aircraft Rules.
- **Enforcement:** Empowered to ground aircraft, suspend/cancel licenses, and impose penalties for safety violations.
- **ICAO Compliance:** Ensures India adheres to the **International Civil Aviation Organization (ICAO)** Standards and Recommended Practices (SARPs).

Space for Notes

24. Lokpal and Lokayuktas Act, 2013**Context:**

A Parliamentary Committee sought details on operationalisation of the inquiry and prosecution wings under the Lokpal.

Key Facts:

- **Objective:** Establishes anti-corruption ombudsman — Lokpal (Centre) and Lokayukta (States)
- **Composition:** Chairperson + up to 8 members; 50% judicial; 50% from SC/ST/OBC/minorities/women
- **Appointment:** The Chairperson and Members of Lokpal are appointed by the President of India based on the recommendation of the Selection Committee.
- **Selection Committee:** PM (Chair), Speaker, LoP (or largest opposition leader), CJI/nominee, eminent jurist
- **Jurisdiction:** Covers PM (with safeguards), Ministers, MPs, and all central govt employees (Group A–D)
- **Powers:** Can order inquiry and direct agencies like CBI; has superintendence in referred cases
- **Wings:** Provides for Inquiry Wing and Prosecution Wing for handling corruption cases
- **States:** Mandates establishment of Lokayuktas within 1 year through state laws

25. Election Schedule & Model Code of Conduct (MCC)

Space for Notes

Context:

The Election Commission of India announced Assembly election schedules for States including Assam, Kerala, Tamil Nadu, and West Bengal, bringing the Model Code of Conduct (MCC) into force.

Key Facts:

- Constitutional basis: Election conduct is vested in the Election Commission of India under Article 324.
- Election schedule: The Commission independently announces polling dates, nomination deadlines, scrutiny, withdrawal, and counting schedules.

Model Code of Conduct (MCC):

- Origin: First introduced during the 1960 Kerala Assembly elections and adopted nationwide in 1962.
- Nature: A non-statutory, consensus-based code where political parties voluntarily agreed to follow rules ensuring a level playing field during elections.
- Duration: Operates from the announcement of the election schedule until completion of the election process (including counting).
- Key restrictions: Prohibits new financial grants, ad-hoc appointments, misuse of official machinery, and inducements to voters.
- Enforcement: Violations may attract action under provisions of the Representation of the People Act, 1951 and the Indian Penal Code.

26. National Family Health Survey (NFHS-5) vs POSHAN TRACKER

Context:

A recent debate in the Gujarat Legislative Assembly has brought attention to **child malnutrition**, with disagreements arising over the comparison between **NFHS-5 data** and Poshan Tracker data. The discussion reflects broader concerns about **data reliability, policy interpretation, and the actual extent of malnutrition** in the state.

About NFHS-5:

- Conducted by: International Institute for Population Sciences (IIPS), Mumbai, under Ministry of Health & Family Welfare,.
- Nature: Large-scale, nationally representative sample survey on health and nutrition.
- Coverage: Provides national, state, and district-level data.
- Indicators: Measures stunting (low height-for-age), wasting (low weight-for-height), underweight (low weight-for-age).
- National Averages (NFHS-5): Stunting – 36%; Wasting – 19.3%; Underweight – 32.1%.
- Periodicity: Conducted in multiple rounds (latest: 2019–21).
- Use: Basis for policy planning and monitoring (e.g., POSHAN Abhiyaan, NHM).

NFHS (NATIONAL FAMILY HEALTH SURVEY)	POSHAN TRACKER
▶ MINISTRY: MINISTRY OF HEALTH & FAMILY WELFARE ▶ CONDUCTED BY: IIPS & FIELD INVESTIGATORS ▶ SAMPLE SURVEY (PERIODIC) ▶ COVERAGE: REPRESENTATIVE HOUSEHOLDS ACROSS INDIA ▶ DATA: ▶ FERTILITY, MORTALITY, MATERNAL & CHILD HEALTH ▶ NUTRITION (STUNTING, WASTING), ▶ FAMILY PLANNING, ANAEMIA, ETC. ▶ DATA: ▶ FERTILITY, MORTALITY, MATERNAL & CHILD HEALTH ▶ NUTRITION (STUNTING, WASTING), ▶ FAMILY PLANNING, ANAEMIA, ETC.	▶ MINISTRY: MINISTRY OF WOMEN & CHILD DEVELOPMENT ▶ UNDER: POSHAN ABHIYAAN / ANGANWADI SERVICES ▶ COLLECTED BY: ANGANWADI WORKERS ▶ REAL-TIME ADMINISTRATIVE DATA ▶ DATA: ▶ CHILD GROWTH (HEIGHT, WEIGHT) ▶ PREGNANT & LACTATING WOMEN, ▶ SERVICE DELIVERY, ▶ BENEFICIARY MONITORING ▶ DATA: ▶ CHILD GROWTH (HEIGHT, WEIGHT) ▶ PREGNANT & LACTATING WOMEN, ▶ SERVICE DELIVERY

Space for Notes

27. Jal Jeevan Mission (JJM)

Context:

The Centre has set conditions for States/UTs to receive funds under Jal Jeevan Mission, while extending it till 2028.

Key facts:

- Launched in 2019 under the Ministry of Jal Shakti to provide Functional Household Tap Connections (FHTC) to all rural households with 55 litres per capita per day (LPCD) of potable water.
- Coverage: Universal rural tap water supply across villages.
- Implementation: Executed by States/UTs through State Water & Sanitation Missions.
- Village Action Plans are prepared by Gram Panchayats/Paani Samitis.
- Monitoring: Water quality surveillance using field test kits and digital platforms (e.g., JJM dashboard,

INTERNATIONAL RELATIONS

Space for Notes

1. At a Crossroads: WTO Faces Reform Test after Ministerial Conference

Context:

The World Trade Organization (WTO)'s 14th Ministerial Conference (MC14) took place from 26 to 30 March 2026 in Yaoundé, Cameroon. It ended without consensus due to disagreements among members.

Background:

WTO was established in **1995** to promote: Rule-based global trade, non-discrimination and Dispute resolution through legal mechanisms.

- **WTO's Current Crisis:** Since its establishment in 1995, the **WTO has faced significant challenges**, including a paralyzed dispute settlement system due to **stalled Appellate Body appointments**. This has eroded trust in the organization and its ability to enforce rules.
- **Global Trade Dynamics:** The rapid growth of digital commerce and the increasing complexity of global production have outpaced the WTO's existing rules, which were designed for a late 20th-century trading system.
- **Geopolitical Tensions:** The rise of unilateral tariffs and economic coercion has distorted markets and created an environment where rule-based trade is at risk of being replaced by ad hoc arrangements.
- Hence the **14th Ministerial Conference** presented an opportunity to **rebalance and reform global trade governance**. However, it ended without consensus due to disagreements.



Key Outcomes of the 14th Ministerial Conference of the WTO:

- The long-standing e-commerce moratorium ended due to lack of consensus, allowing WTO members to potentially impose taxes on electronic transmissions.
- The e-commerce moratorium (1998) was an agreement under which countries agreed **not to impose customs duties on digital products** like software, music, and e-books transmitted electronically.
- The TRIPS safeguard against non-violation complaints lapsed, reducing protection for public health measures such as compulsory licensing.

- Members agreed to continue negotiations on curbing harmful fisheries subsidies, with further decisions deferred to the next Ministerial Conference.
- Harmful fisheries subsidies refer to **government financial support that encourages overfishing and illegal, unreported, and unregulated (IUU) fishing**, leading to depletion of marine resources.
- India opposed the inclusion of the Investment Facilitation for Development (IFD) agreement, citing risks to WTO's multilateral principles.
- A group of 66 countries made progress on a plurilateral e-commerce agreement to frame common rules on digital trade, including data flows and consumer protection.
- India and African countries demanded a permanent solution for Public Stockholding (PSH) to ensure food security without breaching WTO rules.
- Developing countries continue to face challenges such as market access barriers, climate shocks, and trade distortions due to subsidies by developed nations.

Overall, the conference saw limited consensus, with several critical issues postponed for future negotiations.

Mains Practice Question:

- Q. Discuss the structural challenges facing the World Trade Organization in the 21st century. In light of the outcomes of the 14th Ministerial Conference, examine why consensus-based multilateralism is weakening.

(15 marks, 250 words)

2. India's Diplomatic Test Amid West Asia Crisis

Context:

US and Israel have declared Military operation against Iran. US has named it "Operation Epic Fury". The war has reverberated through South Asia, affecting millions of South Asian expatriates in the region and raising questions about India's diplomatic stance.

The Impact of West Asia Crisis:

Impact of West Asia war on South Asia:	Impact on India's Neighbourhood First Policy
The conflict in West Asia has created a multifaceted crisis that extends beyond its borders. The immediate challenges include: 1. Diaspora vulnerability: Approximately 25 million South Asians, including a significant number of Indians, Pakistanis, and Bangladeshis, live and work in West Asia. 2. Energy dependence & Economic Disruptions: The war has caused shortages of essential goods, including fuel and food, impacting daily life in South Asia. Remittances, which are key source of income for countries like India, Nepal, Bangladesh are at risk. 3. Security Concerns: The presence of South Asian seafarers in the region, particularly around the Strait of Hormuz, poses significant risks. The weaponization of access to this strategic waterway by Iran raises alarms about the safety of Indian and other South Asian nationals.	The ongoing conflict poses significant challenges to India's "Neighbourhood First" policy: 1. Regional Trust: India's perceived alignment with U.S. actions may undermine trust among its neighbours, particularly those who have expressed solidarity with Iran. 2. Economic Assistance: The requests for fuel and other essentials from neighbouring countries highlight the need for India to be proactive in providing support, avoiding a repeat of past crises like the COVID-19 vaccine supply halt. 3. Youth Discontent: The socio-economic challenges exacerbated by the conflict may lead to unrest in neighbouring countries, impacting India's diplomatic relations and requiring a more nuanced approach to engagement.

Space for Notes

India's Strategic Stakes in West Asia:

Sector	Importance for India
Energy Security	West Asia supplies over 60% of India's crude oil imports.
Indian Diaspora	Around 9 million Indians live in Gulf countries.
Trade & Connectivity	Critical sea lanes such as the Strait of Hormuz carry a major share of global oil trade.
Remittances	Gulf countries are among the largest sources of remittances to India.

Space for Notes

India and the West Asia Conflict: Strategic Stakes

1 INDIA-ISRAEL STRATEGIC BOND

- Strong defense and security cooperation
- Modi-N Netanyahu political engagement
- Israel major defence technology partner
- Visit before Iran strikes signalled alignment

2 INDIA-IRAN STRATEGIC IMPORTANCE

- Historic friendly ties
- Key for energy imports
- Chabahar port connectivity
- Access to Central Asia & Afghanistan
- Silence during attacks raises questions

3 GULF COUNTRIES' DEFENSIVE POSTURE

- Intercepting Iranian missiles and drones
- Actions framed as defensive
- Avoiding direct participation in war
- Air defence systems under pressure

4 INDIA'S STAKES IN WEST ASIA

- Energy security
- Trade and investment
- Connectivity projects
- Safety of 10 million Indians

5 IMEC CORRIDOR UNCERTAINTY

- Announced as major connectivity project
- October 7 attacks disrupted progress
- Gulf instability discourages investment
- Corridor currently stalled

6 WAR TRAJECTORY & DIPLOMACY GAP

- Urgent need for ceasefire
- Lack of regional dialogue platforms
- Possible multilateral engagement
- Role for India and emerging powers

OVERALL DEPENDENCY

IMPACT ON INDIA

OIL IMPORTS

India world's third largest crude consumer

88% import dependency

Well-positioned with alternative sources AND sources but facing higher energy prices

2.5-2.7 million bpd pass through strait

Iraq Saudi Arabia UAE Kuwait

Around half of India's total oil transit Hormuz

LPG IMPORTS

Greater vulnerability

Imports **80-85%** of needs from Gulf suppliers

Almost entirely transits Hormuz

No strategic LPG reserves of comparable scale

LNG IMPORTS

60% pass through strait

No structural buffers in place

Spot cargo availability is thin

STRAIT OF HORMUZ OVERVIEW

Handles **~4 million bpd** of liquid petroleum consumption

~3 million bpd of global LNG trade

Iran Primes Half Gulf of Sea

Navigable lanes just two miles wide

INDIA'S NEAR-TERM OPTIONS

Increased sourcing from Russia, US, West Africa, Latin America

Russian cargoes available in Indian Ocean and Arabian Sea, including floating storage volumes

PRICE IMPACT & DURATION

Brent crude over **\$72/barrel** (highest since late July)

Every \$1/barrel increase raises India's oil import bill by **\$1.8-2 billion** or every \$1/billion annually

Analysts believe full blockade unlikely to last long

Provoker international response

Alienating Iran's allies like China

Iran has frequently threatened closure, but never done it

Gulf producers depend on the strait for export revenues

MITIGATION

Strategic petroleum reserves

Accelerated spot procurement from non-Hormuz regions

Strategic petroleum reserves in the mandir of non-Hormuz regions

Accelerated spot procurement from non-Hormuz regions

India's Response with Diplomacy:

- India's initial response to the conflict has been scrutinized for its perceived alignment with U.S. and Israeli actions. India's delayed condemnation of the killing of Iran's Supreme Leader and subsequent attacks has raised concerns about a shift from its usual prompt diplomatic responses.

2. India has traditionally followed a balanced West Asia policy, maintaining strong ties with all sides and ensuring strategic interests like safe passage for Indian ships.
3. With the conflict intensifying, India needs to recalibrate its approach by emphasizing humanitarian concerns and promoting regional stability.

Way Forward:

- India should actively strengthen regional coalitions and multilateral platforms such as IORA, Colombo Security Conclave, Quad, and BRICS to enhance strategic cooperation, expand diplomatic influence, and effectively address evolving security and economic challenges in the region.
- India must adopt a balanced and long-term West Asia strategy by maintaining strategic autonomy between competing blocs (U.S.–Israel and Iran) while integrating economic engagement, security cooperation, and humanitarian outreach to ensure regional stability and protect national interests.

Mains Practice Question:

- Q. Discuss how geopolitical conflicts in West Asia impact India's energy security, economic stability, and diaspora welfare. (15 marks, 250 words)**

3. Indian Foreign Policy Autonomy**Context:**

India's response towards various policies of US President Donald Trump and the ongoing West Asia conflict involving **Israel, United States, and Iran** raises concerns about India's foreign policy autonomy affecting its energy security, economy, diaspora safety, and geopolitical balance.

Key Historical Instances:**Soviet Invasion of Afghanistan (1979):**

- Janata government initially criticised Soviet intervention.
- After **Indira Gandhi** returned to power, India softened its stance and justified Soviet action for regional stability.

Cambodia–Vietnam Crisis (1978–80):

- Janata government avoided recognising the Vietnam-backed regime in Cambodia.
- Congress government later recognised it to counter China, showing **pragmatic strategic balancing**.

Korean War (1950):

- India tried to prevent UN condemnation of **China's intervention**.
- Reflected early diplomatic tilt toward Beijing to build an **Asian strategic order**.

Iraq–Kuwait Crisis (1990):

- India avoided strongly condemning Iraq's invasion of Kuwait.
- Reasons: **oil dependence, Indian diaspora concerns, and ties with Saddam Hussein**.

India's response to recent Geo-political developments:

Space for Notes

NON-ALIGNMENT vs. NEUTRALITY



- In the early years post-Independence, India **emphasized** its **non-alignment** policy, asserting that it was not merely a stance of neutrality but a principled approach to international relations.
- Non-alignment allowed India to engage with various global powers without being beholden to any bloc.

MORAL POSITIONS



- India's political and intellectual elite have often adopted **strong moral positions**, particularly against Western powers, reflecting a legacy of **anti-colonial** sentiment.
- This moral commentary has sometimes been selective, particularly when it comes to actions by the **Soviet Union**.

DOUBLE STANDARDS



- India's reluctance to criticize Soviet actions during key historical events (e.g., invasions of Hungary, Czechoslovakia, and Afghanistan) highlights a pattern of **double standards** in its foreign policy.
- The strategic value of the Soviet connection often outweighed moral considerations, leading to muted responses to **Soviet transgressions**.

West Asia Conflict & India's Stakes:

- The Israel-US-Iran conflict threatens India's key interests in West Asia.
- Risks include energy supply disruptions, rising oil prices, trade instability, and threats to the safety of approx 10 million Indians in the Gulf.
- India's relatively cautious response has raised concerns about whether it is maintaining strategic balance or appearing closer to the US-Israel position.

Constraints from U.S. Policies:

- The Trump administration's policies show increasing economic and geopolitical pressure on partners.
- Examples include tariffs, pressure over Russian oil imports, and unequal trade negotiations.
- This reflects a broader trend of weaponisation of trade, finance, and energy, limiting the policy autonomy of other countries.

India's Foreign Policy Autonomy: Pressures and Challenges

1 TRUMP'S ECONOMIC PRESSURE ON INDIA



- Tariffs on Indian exports
- Pressure on Russian oil imports
- One-sided trade negotiations

2 WEAPONISATION OF TRADE AND ENERGY



- Energy supply used as geopolitical leverage
- Financial sanctions shaping global politics
- G7 weaponisation of finance and energy

3 ENERGY SECURITY RISKS

- West Asia war threatens oil supply
- Rising energy prices
- Impact on India's economy and growth
- Strategic vulnerability from import dependence

India's Strategic Policy Response:

- **Proactive Diplomacy:** Move from **passive neutrality** to **proactive stabilisation**, leveraging ties with **Israel, Iran, and Arab states** to support dialogue and de-escalation.

- **Protect Strategic Connectivity:** Safeguard projects like Chabahar Port and the International North–South Transport Corridor (INSTC) from conflict spillovers.
- **Energy Security Measures:** Accelerate diversification of crude imports and strengthen domestic energy transition initiatives such as ethanol blending.
- **Strategic Autonomy:** Maintain a balanced foreign policy (“non-West but not anti-West”), avoiding military coalitions while sustaining global partnerships.
- **Economic & Security Preparedness:** Manage risks from oil price volatility and Current Account Deficit (CAD). Strengthen Strategic Petroleum Reserves (SPR) and maritime security operations such as Operation Sankalp.

Need for Strategic Autonomy through Atmanirbharta:

- True Atmanirbharta means managing external dependencies rather than isolation or tsking sides.
- India must diversify energy sources, strengthen economic resilience, and avoid over-dependence on any major power.
- The core challenge is balancing relations with the US, Russia, and China while protecting independent decision-making.

Mains Practice Question:

- Q. Analyze the impact of regional conflicts in West Asia on India’s strategic connectivity projects, specifically the Chabahar Port and the International North-South Transport Corridor (INSTC). To what extent do these projects serve as pillars of India’s independent decision-making in a polarized global order? (15M, 250 Words)

4. China's Border Defence Villages

Context:

India and China have an unresolved border dispute, so both are developing villages near the frontier to strengthen presence and claims. China builds strategic settlements to consolidate territorial control, while India’s Vibrant Villages Programme focuses on development to retain population and improve border security.

Key Features:

Line of Actual Control (LAC):

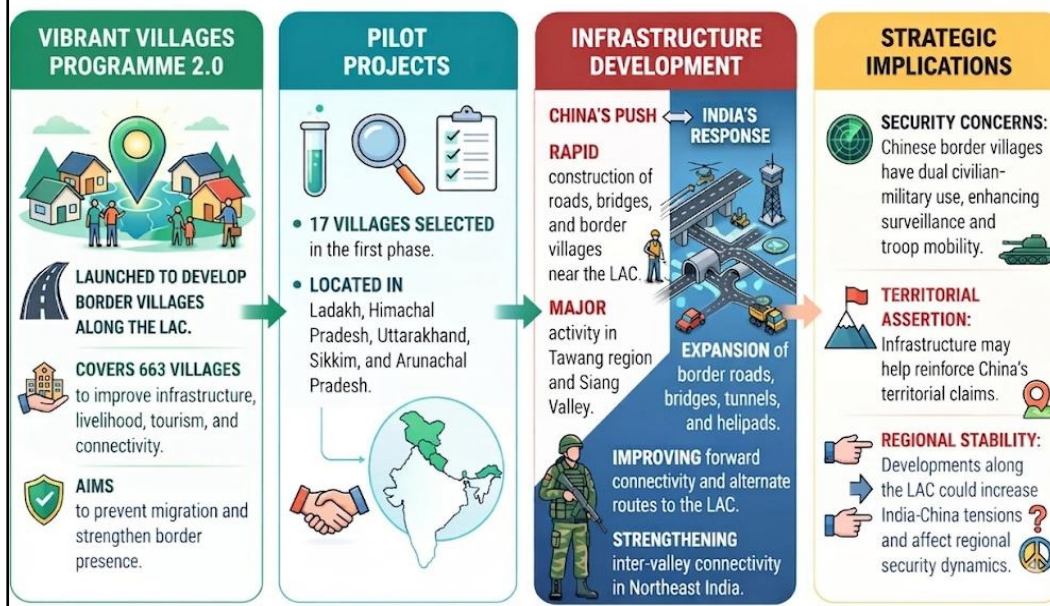
- LAC is the demarcation that separates Indian-controlled territory from Chinese controlled territory.
- India considers the LAC to be 3,488 km long, while the Chinese consider it to be only around 2,000 km.



- LAC is divided into **three sectors**:
 - **Eastern sector** (spans Arunachal Pradesh & Sikkim): Boundary dispute over the MacMahon Line.
 - **Middle sector** (Uttarakhand & Himachal Pradesh): It is the only one where India and China have exchanged maps on which they broadly agree.
 - **Western sector** (in Ladakh): Boundary dispute pertains to the Johnson Line.

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INDIA'S RESPONSE TO CHINA'S BORDER DEVELOPMENTS



China's Border Villages and the Challenges They Pose:

China has been constructing Xiaokang ("well-off") border villages along the Line of Actual Control (LAC), particularly opposite Arunachal Pradesh, as part of its broader border management strategy.

Challenges for India:

- **Strengthening Territorial Claims** Settlements in disputed areas help China demonstrate effective control, thereby reinforcing its claims along the LAC.
- **Dual-Use Civil-Military Infrastructure:** These villages may support surveillance, logistics, and troop mobilisation, increasing China's operational advantage.
- **Demographic and Psychological Pressure:** Civilian settlement close to the border creates a permanent population presence, altering ground realities and signalling long-term intent.
- **Improved Border Infrastructure:** Associated development of roads, bridges, and communication networks enhances China's ability to mobilise forces quickly.
- **Legal and Policy Backing** China's 2022 Land Border Law institutionalises development and settlement in border areas, strengthening state control.

India's Response: India has launched the Vibrant Villages Programme to develop border villages, improve connectivity, retain population, and strengthen border security.

In essence: China's border villages represent a strategic attempt to consolidate territorial control, posing security and geopolitical challenges for India along the LAC.

Mains Practice Question:

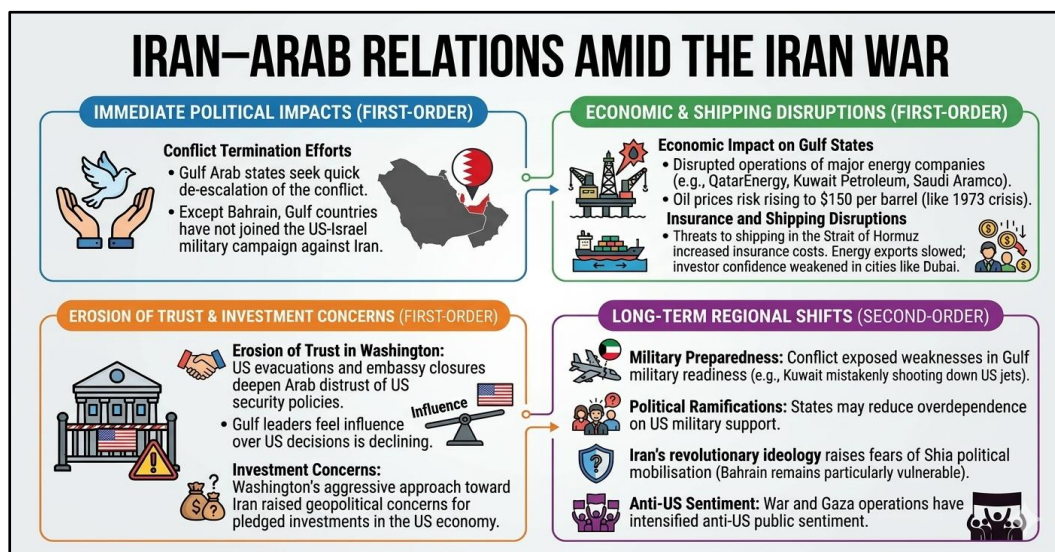
Q. China's construction of "Xiaokang" border defence villages along the Line of Actual Control marks a shift from passive to assertive territorial consolidation. Critically examine its implications for India–China relations.

(15 marks, 250 words)

5. Iran-Arab Relations

Context:

The war between United States–Israel and Iran have intensified, affecting regional relations between Iran & Arab countries.



Iran's Regional Strategy:

Reinforcing Arab Relations: Iran stresses that its conflict is against the US, not Arab states. Tehran seeks to maintain friendly relations with Gulf neighbours.

- Preventing Escalation:** Iran wants to avoid involvement of regional alliances such as the Pakistan–Saudi Arabia Strategic Mutual Defense Agreement.
- Highlighting Costs of US Presence:** Iran's attacks demonstrate the risks Gulf states face by hosting US bases, encouraging them to rethink security dependence on Washington.

Path Forward: Toward a New Geopolitical Contract

- Reconciliation Strategy:** Arab states may prefer diplomatic reconciliation with Iran to maintain regional stability.
 - Example: Saudi Arabia–Iran rapprochement mediated by China.

- **Strengthening Domestic Military Capacity:** Gulf countries aim to develop indigenous defence industries.
- **Iran's Long-Term Influence:** Iran's ability to withstand military and economic pressure could strengthen its regional bargaining power.



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The conflict **between the United States–Israel alliance** and Iran may reshape Iran–Arab relations, prompting regional recalibration, new security arrangements, and cooperation based on mutual interests and stability if Tehran withstands current press.

Mains Practice Question:

- Q. Iran's strategy in West Asia reflects a calibrated mix of confrontation and cooperation." Discuss this statement with reference to its engagement with Arab countries. (10 marks, 150 words)

6. India's Strategic Position in West Asia

Context:

The ongoing conflict involving Iran, Israel, and the United States has escalated tensions in West Asia. Unlike previous conflicts focused on nuclear weapons or immediate threats, this war is aimed at weakening Iran's ideological influence and pursuing regime change. The conflict is reshaping regional geopolitics and energy security, directly affecting countries like India.

Nature of the Iran War:

1. Ideological Warfare:

- The conflict targets the **ideology of the Iranian regime**, not just military capabilities.
- The U.S. and Israel aim to **weaken Iran's influence** in West Asia and potentially push for **regime change**.

2. Proxy Warfare:

- Iran supports **non-state actors** such as Hezbollah and the Houthis.
- These proxies help Iran **project power and challenge Israel and Gulf states**, increasing regional instability.

3. Recent Escalations:

- The **October 2023 Hamas attacks** intensified Israeli retaliation against Iran-backed groups.
- The conflict has **exposed vulnerabilities in Iran** but **strengthened its resistance to external pressure**.

U.S. and Israel's Strategic Objectives:
Regime Change:

- Aim to weaken Iran's ideological regime and provoke internal dissent.
- Goal is to reduce Iran's influence in West Asia and proxy networks.

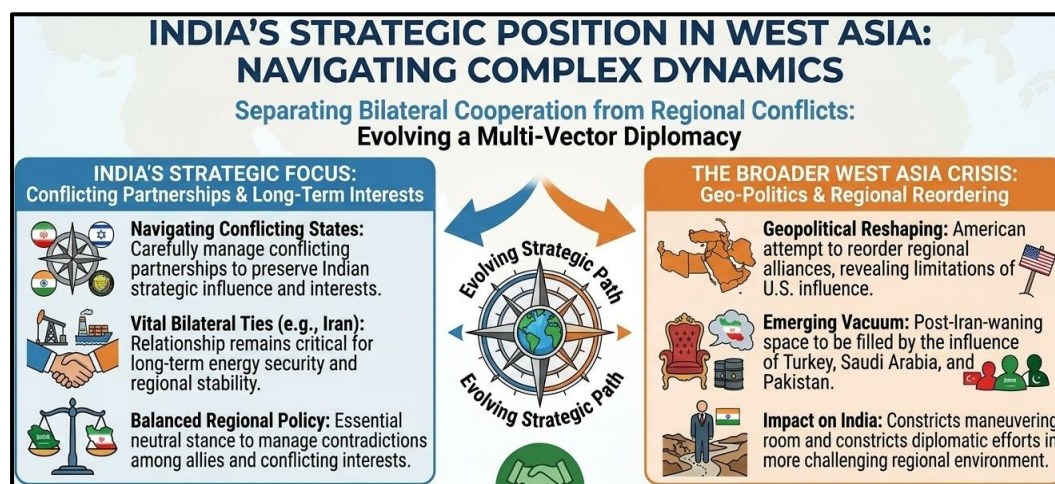
Military Campaigns:

- Airstrikes targeted Iran's military and nuclear infrastructure.
- However, air power alone may not achieve regime change.

Pressure on the U.S. to End the War:
Differing Endgames:

- Israel: prefers continued military pressure on Iran.
- U.S.: seeks a political settlement to avoid prolonged instability.

Mixed Messaging: U.S. leadership shows inconsistent signals on whether to escalate or de-escalate the conflict.



The Iran war is reshaping West Asian geopolitics and global power dynamics. For India, the conflict creates challenges in energy security, regional diplomacy, and strategic balancing among competing partners. A coherent regional strategy will be essential to safeguard India's long-term interests.

Mains Practice Question:

- Q. India's West Asia policy is being tested by the evolving nature of the Iran conflict." Discuss the challenges India faces in balancing energy security, diplomacy, and strategic autonomy. (15 marks, 250 words)

7. War and Global Politics
Context:

War has evolved into a spectacle, where the performance of power overshadows rational objectives. The recent conflict involving the US, Israel, and Iran exemplifies this trend, revealing a moral void that permeates global politics.

The Nature of Modern Warfare:

Performance Over Purpose:

- The war is characterized by a lack of coherent objectives. It is not aimed at liberation or conquest but rather serves as a platform for demonstrating military prowess.
 - a. The focus has shifted to testing new technologies, such as missiles and cyber warfare, rather than achieving meaningful political outcomes.
- 2. **Nihilism in Power Dynamics:** The Trump administration's approach exemplifies a nihilistic display of power, breaking international laws and disregarding established norms.
- 3. **Iran's Response:** Iran's strategy has evolved into a form of desperation, attempting to raise the stakes of the conflict by drawing in global actors.

Global Leadership Vacuum:

- **Confusion Among Leaders:** Leaders such as Keir Starmer of UK and Emmanuel Macron of France show **uncertainty and indecision** regarding the war.
- **Role of Gulf Monarchies:** Saudi Arabia and the UAE have been involved in **regional proxy wars**, weakening their ideological credibility.
 - Their strategy of **aligning with Western powers while suppressing domestic civil society** has left them without a clear political vision.

India's Position:

- Initially India's foreign policy is portrayed as **increasingly aligned with the United States**.
- Prime Minister of India **engagement with Israel** just before the conflict is seen as reflecting a **shift toward accommodating American strategic interests**.
- But overall, India maintained a balanced stance.

China's Paralysis:

- Despite its global power, China has not taken a leadership role in building a **peace coalition**.
- Its response to the conflict is largely **passive and observational** rather than **proactive**.



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The US–Israel–Iran conflict reflects a moral crisis in modern warfare. Global leaders must reject the normalization of violence and confront nihilistic power politics to prioritize diplomacy, peace, and responsible international leadership.

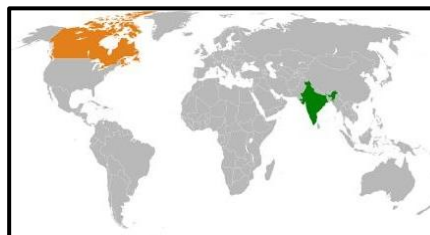
Mains Practice Question:

Q. The nature of modern warfare has shifted from purpose-driven conflict to performance-driven spectacle.” Critically examine this statement in the context of recent conflicts involving United States, Israel, and Iran.

8. India – Canada Relations

Context:

The recent visit of Canadian Prime Minister Mark Carney to India resulted in a landmark agreement between India's Department of Atomic Energy and Cameco, a Canadian uranium supplier.



- This deal is pivotal for India's nuclear energy strategy, aiming to significantly increase its nuclear power production by 2047.

Key Details of the Agreement:

- Supplier:** Cameco, a Canadian uranium company.
- Quantity:** 22 million pounds (approximately 10,000 tonnes) of uranium.
- Duration:** Supply scheduled between 2027 and 2035.
- Contract Value:** 26 billion Canadian dollars (approximately \$1.9 billion).

Key Outcomes of the Meeting:

Sector	Decision / Outcome
Trade Target	Agreed to increase bilateral trade to USD 50 billion by 2030.
Trade Agreement (CEPA)	Reaffirmed commitment to conclude the Comprehensive Economic Partnership Agreement (CEPA) by the end of 2026.
Private Sector Engagement	Roadmap for enhanced business-to-business collaboration and joint ventures.
Innovation & Technology	Expanded cooperation in AI, quantum computing, supercomputing, and semiconductor development.
Critical Minerals	MoU signed to strengthen supply chain resilience in critical minerals.
Climate Platforms	Canada announced its intention to join the International Solar Alliance and the Global Biofuel Alliance.
Nuclear Cooperation	Long-term uranium supply agreement signed; collaboration on Small Modular Reactors (SMRs) and advanced reactors.
Agriculture	Plan to establish an India-Canada Pulse Protein Centre of Excellence.
Defence & Security	Agreement to enhance defence industrial cooperation, maritime domain awareness, military exchanges, and establish an India-Canada Defence Dialogue.
Education & Culture	Expansion of Canadian universities in India; MoU on cultural and Indigenous community exchanges.
Regional Cooperation	Canada expressed interest in becoming a Dialogue Partner in the Indian Ocean Rim Association.

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Dependence on Imported Uranium:**Current Situation:**

- **Domestic Production:** India has substantial uranium deposits, but they are of low quality (0.02% to 0.45% uranium content) compared to global averages (1% to 2%).
- **Import Reliance:** Over 70% of India's uranium needs are met through imports, primarily from Kazakhstan, Canada, Uzbekistan, and Russia.

Historical Context:

- **Previous Suppliers:** India has a long-standing relationship with Cameco, having received uranium supplies as recently as 2020-21.
- **Nuclear Collaboration:** Canada has historically played a significant role in India's nuclear development - Establishment of the CIRUS reactor in the 1950s.

Domestic Uranium Production:**Current Capacity:**

- **Annual Consumption:** India consumes approximately 1,500 to 2,000 tonnes of uranium annually.
- **Future Projections:** The annual requirement could rise to 5,400 tonnes, with domestic production expected to meet only about 30% of this demand.

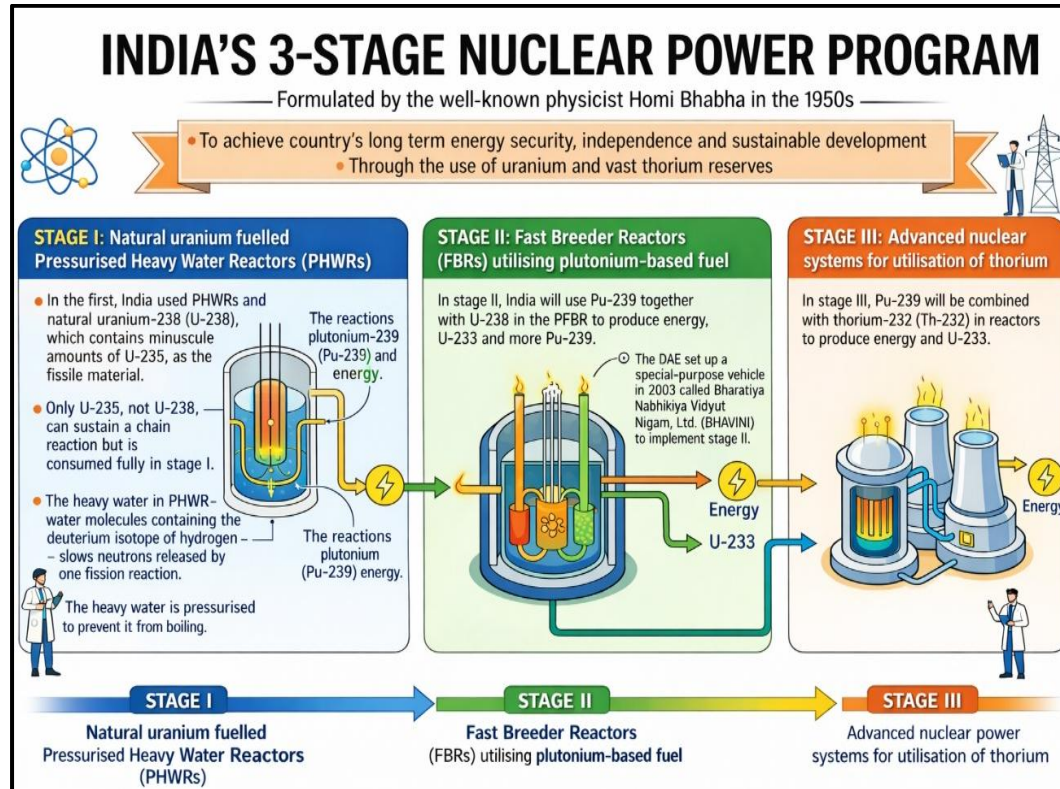
Mining Landscape:

- **Operational Mines:** The majority of uranium production occurs in Jharkhand and Andhra Pradesh, with seven active mines.

Diversifying Supply Sources: With the new agreement with Cameco, India is now sourcing uranium from four countries: Uzbekistan, Kazakhstan, Canada, and Russia.

Future agreements may include suppliers from Australia or the United States.

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**Challenges:**

- **Slow Progress:** The three-stage program, conceptualized in the 1950s, has faced significant delays.
- **Technological Development:** India needs to develop specialized reactors for thorium utilization, which are not yet in use.

Conclusion:

The recent uranium supply agreement with Canada is a significant step in India's nuclear energy expansion plans. India's long-term ambition to transition to a thorium-based nuclear program remains a critical aspect of its energy security strategy.

Mains Practice Question:

- Q.** Analyze the significance of the recent uranium supply agreement between India and Canada for India's energy security and bilateral ties.

(10M, 150 Words)

9. Pakistan – Afghanistan Conflict**Context:**

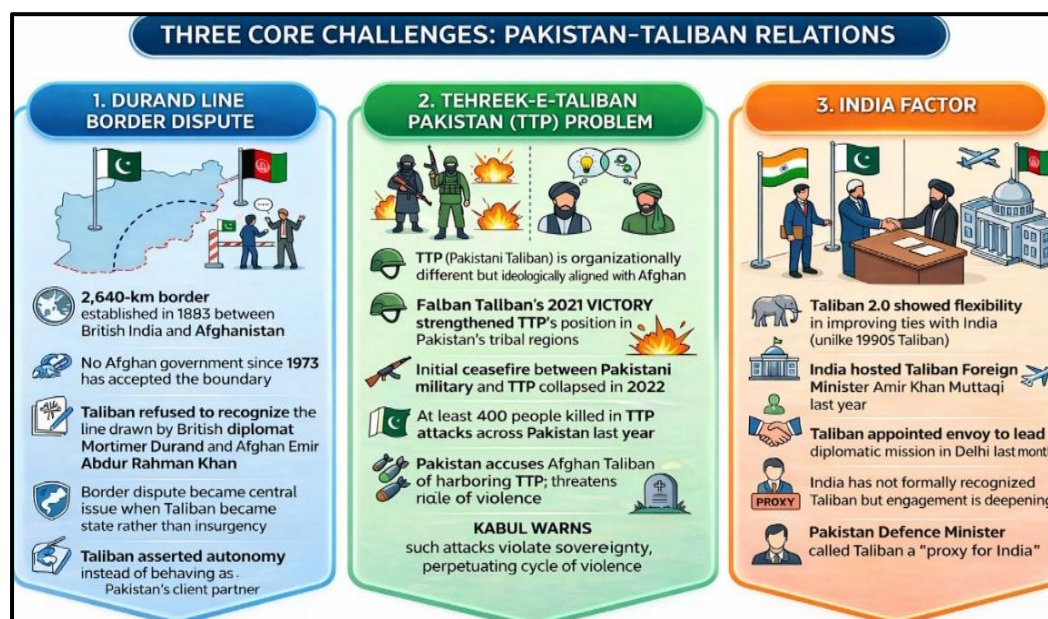
Pakistan and Taliban-ruled Afghanistan have seen a brief conflict, in which peace was mediated by China.

Historical Alliance:

- Taliban relied on Pakistan's support during insurgency against U.S. forces. (2001-2021)
- Pakistan viewed Taliban as vehicle to extend influence and counter India's presence in Afghanistan
- Pakistan believed Taliban's return would restore "strategic depth" in South-Central Asia.
- **The Pashtun Factor:** The border divides ethnic Pashtun tribes, fueling the "Pashtunistan" nationalist movement and causing recurring clashes over Pakistan's unilateral border fencing



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Broader Implications:

- Regional instability in South-Central Asia
- Refugee and humanitarian crisis risk
- Increased militancy spillover
- China–Pakistan Economic Corridor (CPEC) security concerns
- India's cautious strategic opportunity

Pakistan's support to the Afghan Taliban was rooted in strategic depth calculations. However, Taliban nationalism, the TTP insurgency, and India's renewed engagement have reshaped regional dynamics. The former allies are now locked in a volatile security confrontation.

Mains Practice Question:

- Q. The Pakistan–Afghanistan relationship has transitioned from strategic alignment to strategic friction. Discuss the factors responsible for this shift and its broader implications. (15 marks, 250 words)

10. India–Israel Special Strategic Partnership

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Context:

Few days before the beginning of ongoing West Asia conflict, India and Israel have elevated their bilateral ties to a **Special Strategic Partnership for Peace, Innovation and Prosperity**, signing 17 agreements during Prime Minister-level talks.

Key Takeaways:

Institutional Elevation of Ties:

- **Formal Upgrade:** The relationship has been elevated to a *Special Strategic Partnership*, accompanied by the signing of 17 agreements spanning technology, defence, critical minerals and innovation.
- **Structural Shift:** This transition reflects movement from issue-based or sectoral cooperation toward an integrated, long-term strategic framework grounded in sustained convergence.

Technology as the Central Pillar:



- **Institutional Mechanism:** Launch of the *Critical and Emerging Technology Partnership* to institutionalise collaboration.
- **Priority Domains:** Artificial Intelligence (AI), quantum technologies and advanced digital systems constitute the core sectors of engagement.
- **Strategic Evolution:** The emphasis on frontier technologies signals a shift toward knowledge-intensive diplomacy and high-value strategic cooperation.

Critical Minerals and Supply Chain Security:

- **Strategic Objective:** Collaboration to secure access to critical minerals essential for semiconductor manufacturing and renewable energy systems.
- **Strategic Autonomy:** By diversifying supply chains, both countries aim to reduce dependence on geographically concentrated sources, thereby linking economic security with strategic resilience.

Defence and Security Convergence:

- **Continuity of Core Pillar:** Defence cooperation remains foundational, including collaboration in missile systems, surveillance platforms and counter-terror mechanisms.
- **Regional Dimension:** India has underscored that its security interests are intrinsically connected to developments in West Asia, situating bilateral cooperation within a broader regional security context.

Economic and Innovation Ecosystem:

- **Beyond Traditional Trade:** Engagement is progressively shifting from commodity-based exchanges to technology-driven value chains and joint research and development.
- **Innovation Linkages:** Strengthening of start-up ecosystems and collaboration in agriculture, water management and green technologies reinforce the innovation dimension of the partnership.

Strategic Context in West Asia:

- **Multi-alignment Approach:** The partnership aligns with India's calibrated West Asia policy, balancing relations with Israel, Gulf states and other regional actors.
- **Regional Positioning:** Enhanced cooperation positions India as a credible technology and security partner within the evolving geopolitical landscape of West Asia.

The institutionalization of India-Israel ties through defense, minerals, and emerging technologies reinforces **strategic resilience**. By merging innovation with security, both nations advance a technology-driven agenda centered on **long-term stability**.

Mains Practice Question:

- Q. The elevation of ties between India and Israel to a "Special Strategic Partnership" marks a transition from transactional engagement to structural convergence. Critically examine. (15 marks, 250 words)

11. Italy**Context:**

Italian voters rejected a judicial reform proposal in a referendum, **dealing a setback to Prime Minister Giorgia Meloni**.

About Italy:

- **Southern Europe;** Mediterranean peninsula; capital: Rome
- **Parliamentary republic;** bicameral Parliament (**Chamber of Deputies & Senate**)

- Currency: Euro (€); member of EU, G7, NATO, OECD
- Borders: France, Switzerland, Austria, Slovenia; encloses Vatican City & San Marino
- Geography: Alps (north), Apennines (spine), Po (longest) & Tiber rivers
- Islands: Sicily, Sardinia; volcanoes: Etna, Vesuvius, Stromboli.



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12. Kurdistan Region

Context:

Ongoing developments in West Asia continue to highlight the Kurdish issue and regional dynamics.

About Kurdistan:

- Refers to areas inhabited by Kurds across Turkey, Iraq, Iran, and Syria.
- Kurds: Largest stateless ethnic group (approx 30–40 million; Indo-Iranian origin).
- Iraqi Kurdistan: Autonomous region governed by the Kurdistan Regional Government (KRG) in northern Iraq.
- Geographically dominated by the Zagros Mountains; major rivers include Tigris and Greater Zab.
- Key issue: Demand for independence/autonomy across multiple countries.



13. Nigeria

Context:

Nigeria is frequently in news due to security issues, energy sector developments, and regional geopolitics in West Africa.

Key Facts:

- Location: West Africa; borders Niger, Chad, Cameroon, Benin; coast on Atlantic Ocean (Gulf of Guinea)
- Capital: Abuja; Largest city: Lagos, Currency: Naira

- River: Niger River and Benue River (confluence at Lokoja)
- Economy: One of Africa's largest; major crude oil producer (OPEC member)
- Organization: Member of ECOWAS (Economic Community of West African States)
- Security: Affected by Boko Haram insurgency in northeastern region
- Demography: Most populous country in Africa



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14. Lebanon

Context:

Lebanon remains in news due to constant attacks from Israel.

About Lebanon:

- Location: Country in the Levant region (West Asia) on the eastern coast of the Mediterranean Sea; bordered by Syria (N & E) and Israel (S).
- Capital: Beirut; part of the Fertile Crescent ("Cradle of Civilization").
- Physical Features: Includes Lebanon Mountains, Anti-Lebanon ranges, and fertile Bekaa Valley.
- Rivers: Litani (major perennial river), Orontes.



15. Cuba

Context:

Cuba is in the news after the Cuban President confirmed talks with the United States to resolve bilateral differences in light of ongoing energy crisis in Cuba.

About Cuba (Capital: Havana):

- Location: Island country in the Caribbean Sea, south of the United States (Florida) and west of Haiti.
- Political System: Socialist republic governed by the Communist Party of Cuba.
- Geography: Largest island in the Caribbean, bordered by the Gulf of Mexico, Caribbean Sea, and Atlantic Ocean.
- Economy: Historically dependent on sugar exports, tourism, and remittances.



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16. Cambodia–Thailand border

Context:

The Preah Vihear Temple and Ta Moan Thom Temple have come into focus amid renewed Cambodia–Thailand border tensions.

About the Temples:

- **Location:** Both temples are situated in the Dangrek Mountains along the Cambodia–Thailand border.
- **Period:** Built during the Khmer Empire (11th–12th centuries).
- **Religion:** Originally Hindu temples dedicated to Lord Shiva, later associated with Buddhist worship.
- **Architecture:** Built mainly of sandstone in classical Khmer architectural style, located on elevated ridges.
- **Preah Vihear Temple:** A UNESCO World Heritage Site (2008); the International Court of Justice (1962; reaffirmed 2013) ruled that the temple lies in Cambodia.
- **Ta Moan Thom Temple:** Located directly on the border ridge and remains disputed between Cambodia and Thailand.



17. Nepal

Context:

Nepal has witnessed a major political transition following its recent general elections.

About Nepal:

Nepal is a **landlocked country in South Asia**, situated between two major powers—India and China.

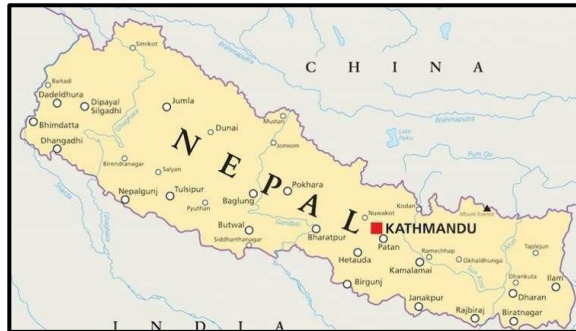
- **Capital:** Kathmandu
- **Political System:** Federal Democratic Republic
- **Geography:**
 - Home to the **Himalayas**, including Mount Everest
 - Divided into mountains, hills, and plains (Terai region)
- **Economy:**
 - Primarily dependent on **agriculture, remittances, and tourism**.

The border between India and Nepal is one of the **most unique international borders in the world**, characterized by its **open and friendly nature**.

- **Total Length:** approx 1,751 km
- **Nature:** Open border (no visa/passport required for citizens)
- Based on the **India–Nepal Treaty of Peace and Friendship (1950)**

Bordering Indian States:

The India–Nepal border passes through five Indian states: Uttarakhand, Uttar Pradesh, Bihar, West Bengal and Sikkim


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ECONOMY

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1. India's Energy Dependence and Vulnerability

Context:

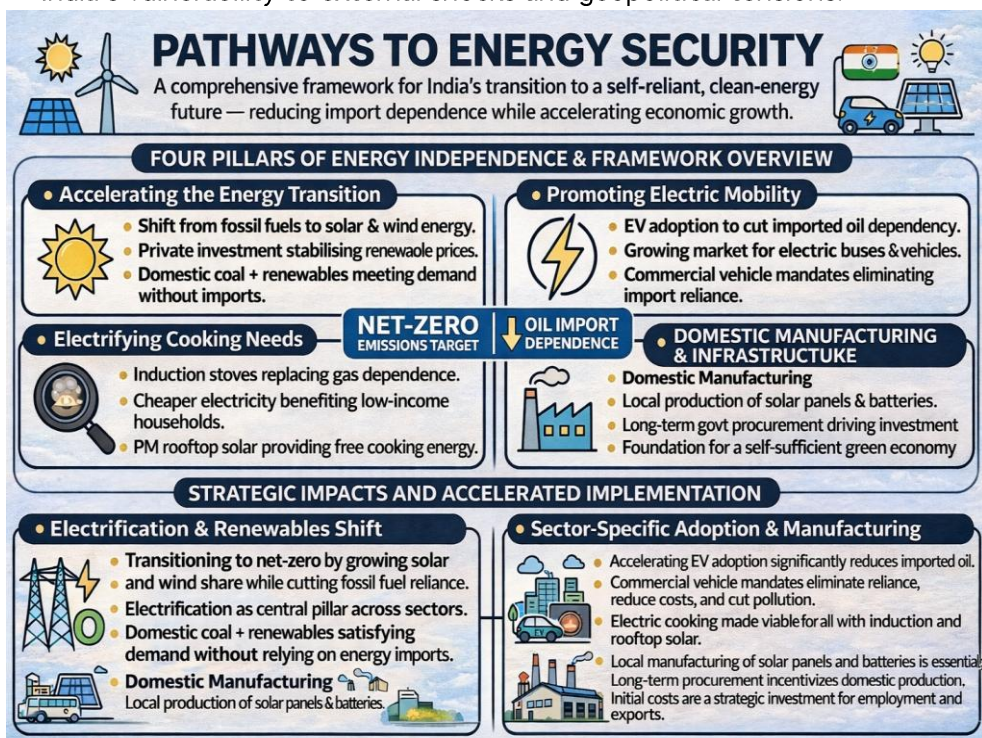
The recent disruptions in oil and gas supplies due to geopolitical conflicts have starkly highlighted India's energy vulnerabilities. As one of the world's largest importers of crude oil, India finds itself at a crossroads, necessitating a reevaluation of its energy strategy.

Current Energy Landscape:

1. **High Import Dependence:**
 - India imports over 85% of its crude oil and nearly 40% of its natural gas.
 - The country is the third-largest importer of crude oil globally, making it highly susceptible to global market fluctuations.
2. **Geopolitical Vulnerabilities:**
 - A significant portion of India's oil supply (over 40%) passes through the Strait of Hormuz, a critical maritime chokepoint.
 - Recent conflicts have led to increased oil prices, with crude oil rising from \$65 to \$109 per barrel, exacerbating inflation and economic strain.
3. **Impact on Domestic Economy:**
 - Rising energy prices have led to increased costs for LPG and other energy sources, affecting households and industries alike.
 - The closure of gas export facilities in Qatar has further strained supply chains, impacting industrial production reliant on imported gas.

The Need for Energy Security:

- **Rising Costs:** India's oil and gas imports cost over \$100 billion annually, constituting 25-30% of total imports. The inflationary impact of rising energy prices is substantial, necessitating a shift in strategy.
- **Long-term Vulnerability:** Continued reliance on imported fossil fuels increases India's vulnerability to external shocks and geopolitical tensions.



The road to energy security for India runs through a comprehensive transition away from imported oil and gas, focusing on electrification and renewable energy. By embracing this shift, India can enhance its energy independence, reduce vulnerability to external shocks, and pave the way for a sustainable and resilient energy future.

Mains Practice Question:

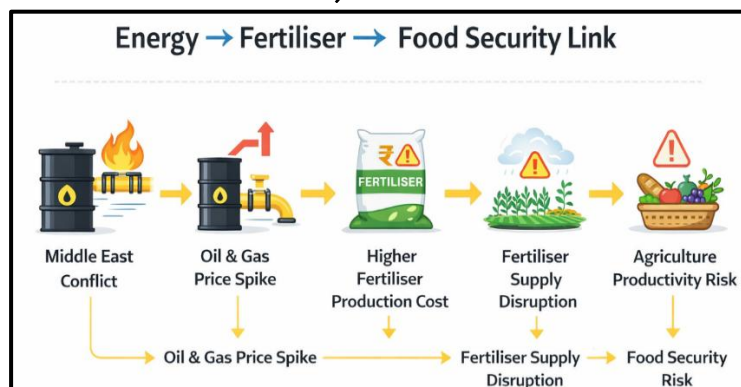
- Q.** India's high dependence on imported fossil fuels exposes it to significant geopolitical and economic risks. Critically examine in the context of recent global energy disruptions. (15 marks, 250 words)

2. Policy reforms in fertiliser sector
Context:

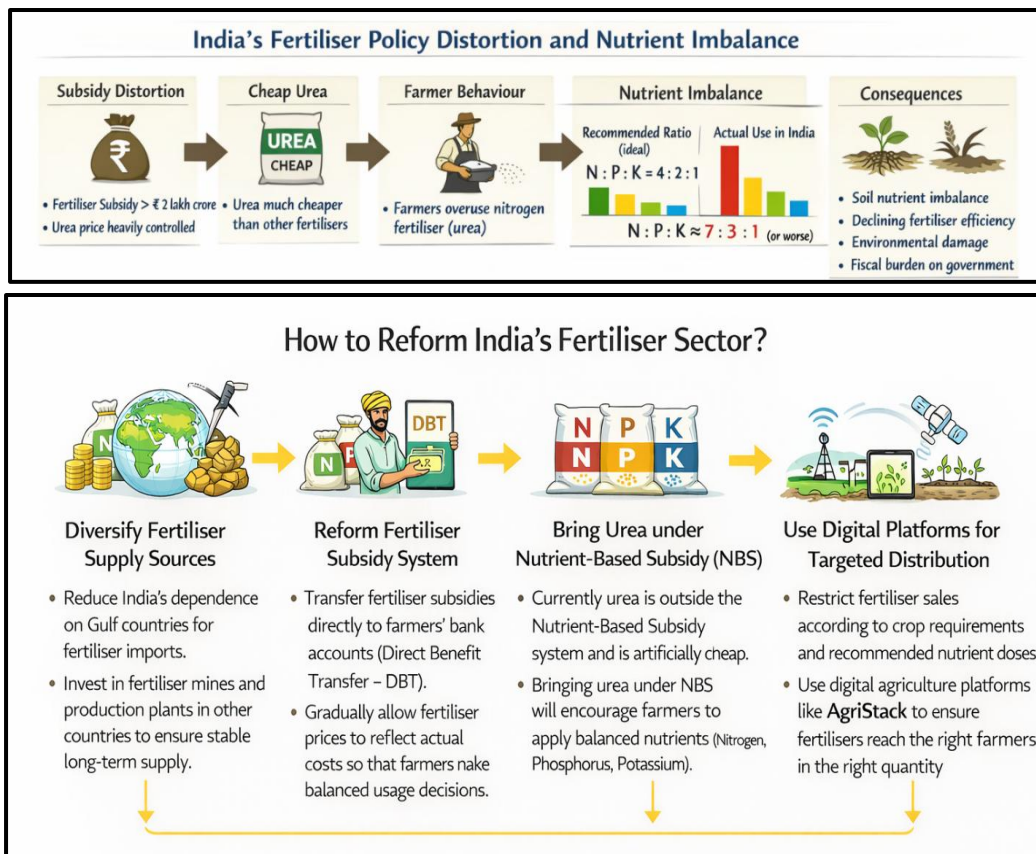
Rising geopolitical tensions in West Asia and disruptions in global energy markets have highlighted India's heavy dependence on imported fertilisers and feedstocks, raising concerns about food security and subsidy burden.

Key Idea of the Article (Current Challenges in Indian fertilizer sector):

1. **Geopolitical Exposure:**
 - Global conflicts can disrupt fertiliser supply because fertiliser production depends heavily on natural gas and global trade routes. India is highly dependent on imports for fertilisers and their raw materials.
 - **Stagnant Domestic Production:** India consumes about **40 million tonnes of urea annually**, while domestic production is only about **30 million tonnes**.
 - More than **80% of ammonia and sulphur imports (raw materials)** come from **Gulf countries**. India imports almost all **potash (MOP)** and **90–95% of phosphatic raw materials**.
 - Most of these imports are mainly from Gulf countries through strait of Hormuz.
 - Agricultural exports to Middle East (\$11.8B in FY25) also strained during ongoing west asia conflict.
2. **Fertiliser subsidy policies** of Indian Government distorting nutrient usage in agriculture and subsidy leakages are high (20%), which are undesirable.
3. The current crisis offers an opportunity to **reform the fertiliser sector for long-term food security** (in similar way 1991 Balance of Payments crisis compelled India to undertake LPG reforms).



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**Conclusion:**

The current geopolitical crisis highlights the **strategic vulnerability** of India's fertiliser sector.

If used wisely, this disruption can become an opportunity to implement **long-overdue** fertiliser policy reforms that strengthen food security and fiscal sustainability.

Mains Practice Question:

Q. India's fertiliser sector reflects structural vulnerabilities arising from import dependence and subsidy distortions. Critically examine.

(15 marks, 250 words)

3. Invocation of Essential Commodities Act & LPG/LNG Supply Crisis in India

Context:

Escalating tensions in West Asia, particularly around the Strait of Hormuz, have disrupted LNG shipments to India. In response, the Government of India invoked the **Essential Commodities Act, 1955 (Section 3)** to regulate supply and ensure priority allocation of natural gas and LPG.

Why LNG Supply to India is Disrupted?

- India consumes around 190 mscmd of natural gas, with nearly **50% met** through LNG imports.
- Over **50% of LNG imports** come from Qatar and UAE, largely routed through the Strait of Hormuz.

- The Strait handles **approx. 20% of global oil trade** and is a critical LNG transit route.
- Around **30% of India's gas consumption** is linked to this route, making it a major vulnerability.
- Ongoing conflict has led to **shipping risks, higher insurance costs, and halted vessel movement**, disrupting supply chains.
- India, being the **4th largest LNG importer globally**, faces heightened exposure to such disruptions.

Government Emergency Response (Gas Allocation Strategy):

- Priority-based allocation introduced to manage shortages:
- **1st Priority (100%):** PNG (households), CNG (transport), LPG production, essential pipeline operations
- **2nd Priority (70%):** Fertilizer sector
- **Lower Priority:** Petrochemicals, gas-based power plants, refineries (supply curtailed)
- **Natural gas supply to refineries reduced to approx 65%** of average consumption.
- Gas from **KG-D6 Basin redirected** to critical sectors.

Ensuring LPG Supply (Under Essential Commodities Act):

- Government invoked powers under:
- **Essential Commodities Act, 1955 (Section 3)**
- **Petroleum Products Order, 1999**
- Key regulatory measures:
 - Refineries must **maximize LPG production**.
 - **Propane and butane to be used only for LPG**, not petrochemicals.
 - **Diversion to non-essential uses prohibited**.
 - Entire LPG output to be supplied to public sector OMCs.

Key Institutional Role:

- Public Sector Oil Marketing Companies such as:
- Indian Oil Corporation
- Bharat Petroleum Corporation
- Hindustan Petroleum Corporation: ensure last-mile LPG supply, especially for domestic cooking.

LPG Supply Dynamics in India

- Around **60% of LPG demand** is met through imports (mainly from Gulf countries).
- Remaining **40% is produced domestically**.
- Refining processes can be adjusted to **increase propane-butane output**, boosting LPG availability.
- Government and OMCs have assured **adequate short-term reserves**.

Key Challenges Highlighted (From Crisis)

- High import dependence on geopolitically sensitive regions.
- Limited LNG storage infrastructure compared to crude oil reserves.
- Global price volatility impacting fiscal stability and subsidies.
- Supply chain vulnerability due to maritime chokepoints.

Way Forward:

- Diversification of energy imports beyond West Asia (USA, Africa, Latin America).
- Expansion of Strategic Petroleum Reserves (SPR) and LNG storage capacity.
- Boost domestic gas exploration and refining efficiency.
- Accelerate transition to electric cooking, biogas, and green hydrogen.
- Strengthen maritime security and international cooperation for safe sea lanes.

Conclusion:

- The crisis underscores India's energy security vulnerability to geopolitical chokepoints.
- While emergency measures protect households and essential sectors, long-term resilience requires diversification, domestic capacity building, and clean energy transition.

Mains Practice Question:

- Q. India's reliance on imported LNG exposes it to geopolitical risks and supply disruptions. Examine the implications of recent LNG crises on India's energy security. *(15 marks, 250 words)*

4. India's Oil Supply Security
Context:

The ongoing war in Iran has led to a significant spike in crude oil prices, which jumped nearly 30% to around \$120 per barrel. Although prices have slightly retreated, they remain above \$100 per barrel.

Why Oil Prices Matter for India?

India is highly vulnerable to oil price shocks because of high import dependence.

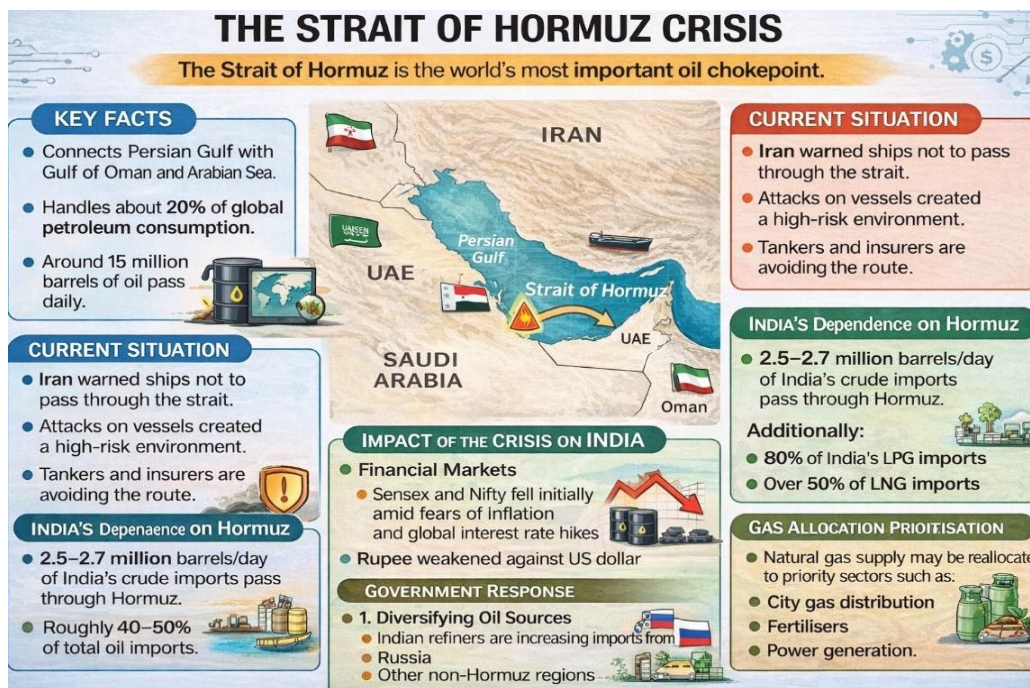
Key Data:

- Oil import dependency: Over 88%
- Crude imports: Around 1.8–2 billion barrels annually
- Impact of price increase: Every \$1 rise per barrel - increases India's import bill by about \$2 billion annually

Macroeconomic Impact:

- High oil prices affect: Current Account Deficit (CAD), Rupee exchange rate, foreign exchange reserves and Inflation
- Example: A 10% increase in oil prices may widen India's CAD by around 0.4% of GDP.

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Broader Strategic Lessons:

- Energy Security Challenge:** India's high dependence on imported fossil fuels makes it vulnerable to **geopolitical disruptions**.
- Importance of Diversification:** India has been diversifying imports to countries like: Russia, USA, Brazil and African producers
- Need for Long-Term Solutions:**
 - Renewable energy expansion
 - Strategic petroleum reserves
 - Alternative fuels (biofuels, hydrogen)

The Strait of Hormuz crisis highlights India's vulnerability to global energy shocks. While short-term measures like supply diversification and strategic reserves help manage disruptions, **long-term energy security requires reducing dependence on imported fossil fuels.**

Mains Practice Question:

- Q. India's high dependence on crude oil imports poses significant macroeconomic risks." Discuss the impact of global oil price volatility on India's economy. (10M, 150 words)

5. Farm Loan Waivers**Context:**

The Reserve Bank of India (RBI) has repeatedly cautioned against farm loan waivers. However, the Government of Maharashtra recently announced a ₹35,000 crore farm loan waiver scheme, reviving the debate on its impact on credit culture, state finances, and agricultural reforms.

Key Highlights of the Maharashtra Scheme:

- Total scheme size: ₹35,000 crore
- Beneficiaries: Around 30 lakh farmers: 20 lakh non-defaulters receive incentive of ₹50,000 and Waiver for defaulters estimated at ₹20,000 crore
- Incentive for regular payers: ₹15,000 crore

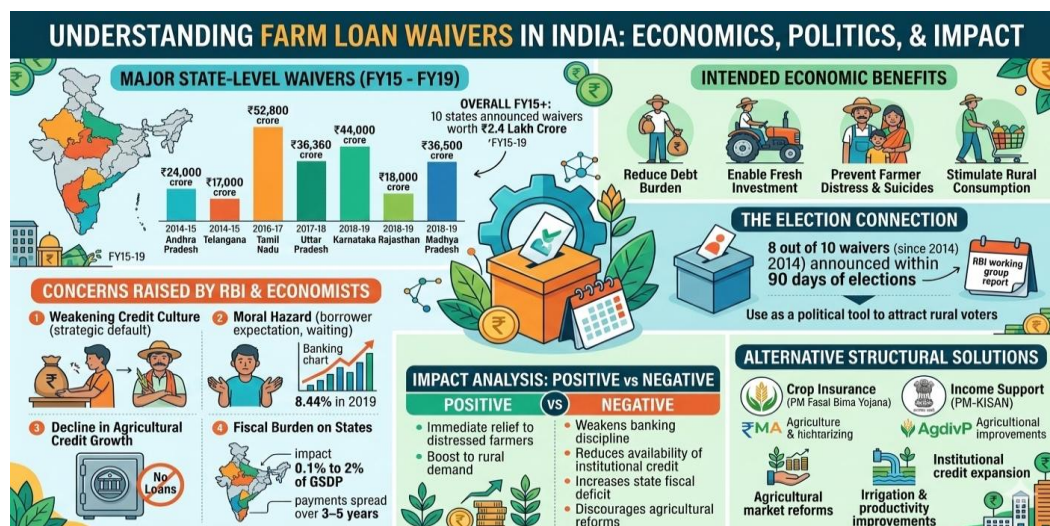
The state government argues that the waiver is necessary to protect farmers from debt distress, despite the fiscal burden.

History of Farm Loan Waivers in India:

Scheme	Year	Amount
Agriculture and Rural Debt Relief Scheme (ARDRS)	1990	₹10,000 crore
Agricultural Debt Waiver and Debt Relief Scheme (ADWDRS)	2008	₹52,500 crore

Important point:

- These waivers were announced close to elections, highlighting their political economy dimension.
- These programs aimed to alleviate the debt burden on farmers but have faced criticism for their long-term implications.
- **State-Level Initiatives:** Since 2014-15, numerous state governments have introduced their own loan waiver schemes, resulting in a cumulative expenditure exceeding Rs 3 lakh crore over 35 years.
 - However, only about 50% of eligible farmers have benefited from these waivers.



Farm loan waivers provide short-term relief but create long-term economic distortions. Sustainable agricultural development requires structural reforms, better credit access, crop insurance, and income support policies rather than repeated debt waivers.

Mains Practice Question:

- Q. Farm loan waivers provide immediate relief but undermine long-term financial discipline in agriculture. Critically examine. (15 marks, 250 words)

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6. CPI 2025 Impacts of India's Development

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CONTEXT:

The Corruption Perceptions Index 2025 highlights a worsening global trend of corruption. The global average score has declined to 42 out of 100, and 122 out of 182 countries score below 50. This indicates weakening governance, declining institutional credibility, and erosion of public trust across nations.

INDIA'S POSITION: India scores 39 and ranks 91 out of 182 countries, placing it in the lower half globally. While India performs better than some neighbouring countries, it lags behind many developed and East Asian nations. The stagnation in India's score over the past decade reflects persistent weaknesses in transparency, accountability, and institutional effectiveness despite strong economic growth.



CORE INSIGHT:

Corruption is not merely a moral or legal issue. It is fundamentally an economic problem that affects efficiency and growth, and a strategic vulnerability that weakens institutional capacity and national competitiveness.

WAY FORWARD:

India must strengthen institutional independence and reduce political interference. Regulatory simplification and reduction of compliance burden are necessary. Transparency mechanisms must be improved, and digital governance should be expanded. Judicial efficiency and contract enforcement must also be strengthened.

CONCLUSION:

The CPI 2025 should be viewed as a benchmark for reform rather than a final judgment. India has strong institutional foundations, but sustained improvements in governance are essential. Countries that have improved their rankings have done so through continuous and long term reforms. India must align governance reforms with its economic ambitions to ensure sustainable development.

Mains Practice Question:

- Q. Analyze how corruption affects economic growth, investment climate, and public trust in India. Suggest measures to improve transparency and accountability. (15 marks, 250 words)

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7. The Decline of the Washington Consensus**Context:**

Amid rising protectionism, industrial policy, and supply-chain security concerns, global debate has revived around the decline of the Washington Consensus, the free-market reform model that shaped development policy since the 1990s.

Washington Consensus and Changing Ideas of Economic Development:

Background	Main Policy Ideas: The Washington Consensus promoted a set of market-oriented reforms:	Major Criticisms and Contradictory Development Experiences
- During the 1980s, many developing countries faced severe economic difficulties such as high debt, inflation, and slow growth. - To address these problems, global financial institutions like the International Monetary Fund (IMF) and the World Bank promoted a set of policy reforms aimed at stabilising and liberalising these economies.	- Governments should maintain fiscal discipline and limit budget deficits. - Countries should reduce trade barriers and integrate into global markets. - Countries should reduce trade barriers and integrate into global markets. - Foreign investment should be encouraged by removing restrictions. - State-owned enterprises should be privatised to improve efficiency. - Regulations should be reduced to	- Over time, several weaknesses became evident. Many developing countries had weak institutions, so rapid liberalisation sometimes produced instability instead of growth. - Fiscal austerity and privatisation often reduced public spending on social services, which increased poverty and inequality in some cases. - Financial crises - such as the Asian Financial Crisis (1997) and the Global Financial Crisis (2008) also exposed vulnerabilities in the free-market approach.

- These reforms came to be known as the Washington Consensus, a term coined in 1989 by economist John Williamson. - The core belief behind this framework was that reducing government intervention and allowing markets to operate freely would promote economic growth and efficiency.	facilitate business activity, while property rights should be protected. These reforms were broadly summarised as liberalisation, privatisation, and deregulation.	- Some of the most successful economies, including South Korea, Taiwan, Singapore, and China, achieved rapid growth through strong government support for domestic industries, targeted subsidies, and long-term industrial policy rather than relying solely on free markets. - Their experience demonstrated that development often requires a combination of state guidance and market mechanisms.
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4. Changing Global Economic Trends:

- In recent years, economic thinking has shifted. Governments increasingly prioritise domestic industrial capacity, supply-chain resilience, national economic security, and strategic sectors such as semiconductors, energy, and digital technologies. As a result, countries are again using industrial policy, subsidies, tariffs, and strategic public investment to support domestic industries.

5. Emerging Understanding:

- The earlier belief that a single economic formula could work for every country has weakened. Policymakers now recognise that markets require effective institutions, regulation, and public investment to function well. Economic strategies must therefore consider national conditions, institutional capacity, and social needs.

6. Key Lesson:

- Economic development cannot rely on one universal model. Successful development requires a balanced approach that combines market efficiency with social equity, institutional strength, and strategic national priorities. Modern economic policymaking is therefore becoming more pragmatic, flexible, and context-specific rather than guided by a single global consensus.

Mains Practice Question:

- Q. What are the key features of the Washington Consensus? Why did it face criticism in developing countries? (10 marks, 150 words)

Space for Notes

8. Ethanol Blending for Energy Security**Context:**

The urgent need for India to accelerate its ethanol blending initiatives in light of recent global oil shocks. Ethanol, derived from various agricultural feedstocks, presents a viable solution to mitigate dependence on imported fossil fuels.

- **India's Ethanol Blending Programme (EBP)** aims to blend ethanol (derived from molasses, sugarcane, and grains) with petrol to reduce crude oil imports, save foreign exchange, lower emissions, and **boost farmers' income**. India achieved its 10% target in 2022 and advanced the E20 (20% blend) target to 2025/2026.

Historical Context: Learning from Brazil:

- **Proalcool Program:** Launched in Brazil in 1975 post the first oil shock, the hugely successful Proalcool program aimed to reduce reliance on imported fuels by mandating ethanol blending in gasoline.

Current Ethanol Supply in India:

- **Rising Production:** India has seen a substantial increase in ethanol supply to Oil Marketing Companies (OMCs), from 38 crore liters in 2013-14 to an expected 1,039 crore liters in 2024-25.
- **Diverse Feedstocks:** Ethanol is produced from various sources, including C-heavy molasses, B-heavy molasses, sugarcane juice, maize, and surplus rice.
- **Government Support:** The Indian government has incentivized ethanol production by fixing ex-distillery prices for different feedstocks, encouraging distilleries to diversify their sources.

The Case for Increased Ethanol Blending

Key Benefits: The Case For	Policy Recommendations	The Road Ahead
• Energy Security With India importing 90% of its crude oil, increasing ethanol blending can significantly reduce vulnerability to global oil price shocks. • Sustainable Agriculture Utilizing surplus agricultural products like sugarcane, rice, and maize for ethanol production can provide farmers with additional income streams. • Environmental Benefits Ethanol is a cleaner-burning fuel compared to fossil fuels, contributing to reduced greenhouse gas emissions.	• Increase Blending Mandate The government should work towards raising the ethanol blending mandate from 20% to 30%, similar to Brazil's approach. • Incentivize Flex-Fuel Vehicles Encourage the auto industry to produce flex-fuel vehicles capable of running on both gasoline and high-ethanol blends. • Taxation Reforms Bring all ethanol-blended fuels under the Goods and Services Tax (GST) regime to create a level playing field with pure petrol. • Infrastructure Development Establish separate dispensing units for E30 and E100 fuels at fuel stations to facilitate consumer choice.	• >1,800 Crore Liters per India currently has an ethanol production capacity exceeding 1,800 crore liters per annum, indicating that supply constraints are not a significant barrier. • Policy Push Needed A strong policy framework is essential to promote flex-fuel vehicles and provide conversion kits for existing vehicles, ensuring a smooth transition to higher ethanol blends. • Consumer Awareness Educating consumers about the benefits of ethanol-blended fuels can drive demand and support the transition.

India's ethanol programme has made significant progress, but global energy shocks underline the need for faster expansion. By learning from Brazil and addressing policy, technological, and ecological challenges, ethanol can become a cornerstone of India's energy security strategy.

Mains Practice Question:

Q. Ethanol blending has emerged as a key strategy for enhancing India's energy security. Discuss its benefits, challenges, and future prospects.

(15 marks, 250 words)

9. AgriPV: Balancing Agriculture and Energy
Context:

Agri-photovoltaics (AgriPV) emerges as a promising approach, allowing farmers to cultivate crops while generating solar energy on the same land. India aims to achieve 300 GW of installed solar capacity by 2030 and net-zero emissions by 2070.

PM-KUSUM scheme:

Increased Budget Allocation: The 2026-27 Budget nearly doubled the outlay for the to ₹25,000 crore, emphasizing the government's commitment to enhancing solar power production focused on farmers.

Objectives:

- Provide energy and water security to farmers.
- Enhance farmers' incomes.
- Decarbonize the agricultural sector through decentralized solar pumps and power plants.

Understanding AgriPV:

Definition: AgriPV integrates solar systems with farming, enabling farmers to generate electricity while cultivating crops on the same land.

Design Variations:

- **Elevated Systems:** Panels mounted a few meters above ground to allow crops to grow below.
- **Row-Based Systems:** Panels positioned between crop rows to minimize shading.
- **Vertical Systems:** Upright panels capturing sunlight from both sides.
- **Greenhouse-Integrated Systems:** Panels on roofs or walls to maintain a controlled growing environment.

Importance of Local Adaptation: The suitability of AgriPV designs depends on local climate, irrigation practices, and crop types, necessitating systematic planning.

Crop Selection for AgriPV:

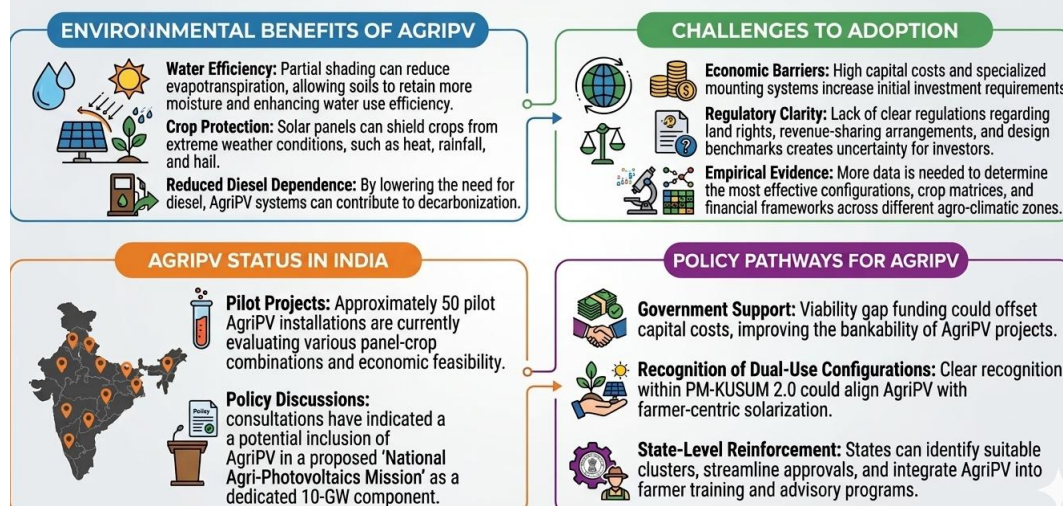
1. **Shade-Tolerant Crops:** These crops thrive in partially shaded areas under solar panels. Examples include leafy vegetables and herbs.

2. **Sunlight-Dependent Crops:** Crops requiring more sunlight perform better in spaces between rows of panels. Suitable options vary by region:
 - Madhya Pradesh: Tomato, onion, garlic, turmeric, ginger, leafy vegetables, and tulsi.
 - Karnataka and Maharashtra: Ragi, jowar, grapes, tomato, potato, chillies, banana, and brinjal.

Economic Viability and Business Models:

1. **Ownership Models:**
 - Farmers can own and operate AgriPV systems, using a portion of the electricity generated and selling the surplus.
 - Collective development through Farmer Producer Organisations or cooperatives can enhance bargaining power and access to finance.
2. **Private Developer Involvement:** Developers can lease farmland, sharing revenues or paying fixed rents to farmers.
3. **Public Sector Role:** State governments or public agencies can develop AgriPV systems to support local energy needs.

BENEFITS, CHALLENGES & POLICY PATHWAYS FOR AGRIPV IN INDIA



Conclusion:

AgriPV presents a viable pathway for India to balance its energy transition goals with agricultural productivity. By leveraging dual-use land for solar energy generation and crop cultivation, AgriPV can enhance farmer incomes and contribute to sustainable development. With the right policy frameworks and support, AgriPV can move from pilot projects to a scalable model, addressing both energy and food security challenges in India.

Mains Practice Question:

- Q. Agri-photovoltaics (AgriPV) has emerged as a sustainable solution to address the twin challenges of energy security and agricultural productivity. Discuss its potential, challenges, and policy requirements in the Indian context. (250 words)

10. New GDP Series

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Context:

The Government of India is releasing a new series of National Accounts with **base year 2022–23**.

The Update:

- NSO (MoSPI) transitioned from **2011–12** to **2022–23** base year.
- **Goal:** Capture structural shifts (digital economy, GST impact), improve informal sector capture, and align with **SNA 2008/2025** international standards.

Major Methodological Shifts:

Feature	Old Series (2011–12)	New Series (2022–23)
Core Data Sources	ASI, limited MCA-21, NSSO surveys	GSTN, comprehensive MCA-21, ASUSE
Informal Sector Estimation	Benchmark-indicator (proxy-based)	Direct survey-based (ASUSE) + PLFS integration
Corporate Sector Data	Extrapolated from old benchmarks	Direct annual filings (MCA-21 + GST data)
Financial Sector Coverage	Partial regulatory data	Full integration of RBI/SEBI/IRDAI datasets

New Data Sources & Technology:

- **GSTN Database:** Provides transaction-level and “Place of Supply” data, improving State/Regional GDP estimates and capturing formal-informal linkages more accurately.
- **MCA-21 (Ministry of Corporate Affairs):** Electronic filings of 10 lakh+ companies; enables direct use of annual financial statements and reduces shell-company distortions.
- **ASUSE (Annual Survey of Unincorporated Sector Enterprises):** Survey-based data on informal/MSME enterprises; improves measurement of output and value added in the unorganised sector.
- **PLFS (Periodic Labour Force Survey):** Employment and labour input data used to estimate value added where financial records are unavailable (Labour Input Method).

Expected Impacts:

- **Sectoral Weights:** Likely shift in weightage toward **Services** (IT, FinTech) and **Manufacturing** (PLI impact).
- **Informal Economy:** Better “visibility” of the unorganized sector, potentially leading to a more realistic (and often higher) GVA for trade and transport.
- **Fiscal Indicators:** Revision of absolute GDP figures often results in a marginal change in **Debt-to-GDP** and **Fiscal Deficit** ratios.

Institutional Framework for revision:

- **Nodal Agency:** National Statistical Office (NSO), Ministry of Statistics and Programme Implementation (MoSPI).
- **Advisory:** Advisory Committee on National Accounts Statistics (ACNAS).
- **Frequency:** Revision typically occurs every **7–10 years** (delayed this time due to COVID-19).

11. National Debt

Space for Notes

Context:

The U.S. national debt has crossed \$39 trillion amid increased fiscal spending linked to the Iran-related conflict.

Key Facts:

- Definition: National debt is the total accumulated borrowings of a government over time to finance deficits
- Components: Includes public debt (market borrowings) and intra-governmental liabilities
- High Debt Countries: USA, Japan, and China have among the highest debt levels globally (absolute terms and/or high debt-to-GDP ratios)
- USA Status: Largest absolute public debt globally
- India Debt Level: Centre's outstanding liabilities estimated at 55.6% of GDP (2026–27); combined (Centre + States) approx 80%+
- India Target: Government aims to reduce debt to approx 50% ± 1% of GDP by 2031
- Fiscal Indicators (India): Fiscal deficit targeted at 4.3% of GDP (2026–27); revenue deficit at 1.5% of GDP

12. Index of Eight Core Industries (ICI)
Context:

Recent data showed a slowdown in the Index of Eight Core Industries, indicating weakening core sector growth.

Key Facts:

- Measures performance of 8 core infrastructure industries
- Released monthly by the Office of Economic Adviser, Ministry of Commerce & Industry. Base Year: 2011–12 = 100.
- Components: Coal, Crude Oil, Natural Gas, Refinery Products, Fertilisers, Steel, Cement, Electricity
- Weight: Accounts for approx 40% of IIP
- IIP: ICI forms a major part of Index of Industrial Production (IIP). Base Year: 2011–12 = 100
- Published by: National Statistical Office (NSO), Ministry of Statistics & Programme Implementation
- Sectors: Mining, Manufacturing (largest share), and Electricity

13. National Mineral Development Corporation (NMDC)
Context:

NMDC signed an MoU with Gujarat Mineral Development Corporation (GMDC) to collaborate on exploration and development of Rare Earth Elements (REEs).

About NMDC

- Type: A Navratna Central Public Sector Enterprise (CPSE) under the Ministry of Steel.
- Headquarters: Hyderabad.
- Core Activity: India's largest producer of iron ore.
- Diversification: Engaged in exploration of strategic minerals including copper, rock phosphate, limestone, and Rare Earth Elements (REEs).
- REEs: Group of 17 metallic elements with unique properties, used in electronics, EVs, renewable energy (wind turbines), defence systems, and high-tech manufacturing. Examples: Neodymium (Nd), Dysprosium (Dy), Lanthanum (La)

Space for Notes

14. Critical Mineral Blocks Auction**Context:**

The Government of India has launched the 7th tranche of auctions for 19 critical and strategic mineral blocks across multiple states.

Key Facts:

- Authority: Conducted by Ministry of Mines under the Mines and Minerals (Development and Regulation) Act, 1957
- Critical minerals are essential for economic development and strategic sectors, with supply risk and limited substitutes
- Examples: Lithium, graphite, rare earth elements, tungsten, vanadium, titanium
- Type of Allocation: Mining lease and composite licence (prospecting + mining)
- Objective: Strengthen mineral security and reduce import dependence
- Usage: Key inputs for clean energy, electronics, fertilizers, and advanced technologies
- Significance: Supports energy transition and resilient supply chains

15. Captive Power Generation**Context:**

The Union Government has amended the Electricity Rules, 2005 to strengthen and clarify the regulatory framework for captive power generation.

About Captive Power Generation:

- Meaning: Electricity generated by industries primarily for their own consumption instead of purchasing from the public grid.
- Legal basis: Provided under the Electricity Act, 2003 and regulated by the Electricity Rules, 2005.
- Ownership & consumption rule: Captive users must hold $\geq 26\%$ ownership in the plant and consume $\geq 51\%$ of the electricity generated annually.
- Group captive model: Multiple entities may jointly own a plant; power consumption must broadly match their equity share ($\pm 10\%$ variation allowed).

- Key benefit: Captive users are exempt from Cross-Subsidy Surcharge (CSS) and Additional Surcharge, making electricity cheaper.
- Recent amendment: Captive status will be verified for the entire financial year by Load Despatch Centres.
- Non-compliance: If ownership or consumption criteria are not met, the plant loses captive status for that year and surcharges become applicable.

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16. Section 301 of the U.S. Trade Act

Context:

The United States has initiated Section 301 investigations under the Trade Act, 1974 against 16 countries, including India, China, Bangladesh, and Vietnam.

About Section 301:

- Enables the U.S. to act against unfair or discriminatory foreign trade practices harming U.S. commerce and to impose tariffs or other trade restrictions on imports.
- Scope: Covers issues such as intellectual property violations, subsidies, market access barriers, and forced labour.
- Special 301 Report: An annual report issued by the U.S. Trade Representative (USTR) that reviews the intellectual property protection of trading partners, placing countries on the Priority Watch List or Watch List for inadequate IPR safeguards.
- Issue flagged for India: Concerns over excess manufacturing capacity in the solar sector.

17. Foreign Portfolio Investors (FPIs)

Context:

FPIs have net sold Indian equities worth about \$5.73 billion, putting pressure on the rupee and domestic equity markets.

About Foreign Portfolio Investors (FPIs):

- Definition: As per SEBI (Foreign Portfolio Investors) Regulations, 2019, FPIs are foreign entities investing in financial assets without management control.
- 10% Rule: Holding below 10% of a listed company's paid-up equity; beyond this it is treated as FDI.
- Nature: Highly liquid portfolio investment ("hot money"), often volatile.
- Categories of Investors:
 - Category I: Government entities, central banks, sovereign wealth funds, multilateral agencies.
 - Category II: individual foreign investors, Regulated funds, endowments, charities and corporate bodies.

Factors Affecting FPI Flows (India):

- **Inflows Increase When:** Strong GDP growth and corporate earnings, Indian interest rates higher than global rates, stable or appreciating rupee, stable fiscal deficit and current account deficit, predictable regulatory and tax environment, and favourable global market sentiment.
- **Outflows Increase When:** Economic slowdown, rise in US/global interest rates, rupee depreciation, widening fiscal deficit or current account deficit, policy uncertainty or higher taxes, and global geopolitical or financial shocks.

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18. Foreign Direct Investment (FDI)
Context:

The Union Cabinet has amended the **2020 FDI restrictions** introduced through **Press Note 3**, easing certain curbs on investments from countries sharing a land border with India.

Key Terms:

- **Foreign Direct Investment (FDI):** Investment by a foreign entity in an Indian company to obtain **ownership or lasting control/interest** in the business.
- **Automatic Route:** FDI allowed **without prior government approval**; investor only needs to **report the investment to RBI**.
- **Government Route:** FDI that requires **prior approval from the Government of India** before investment. The application from Foreign Investment Facilitation Portal will be forwarded to the respective ministries which will act on the application.
- **Beneficial Ownership (BO):** The **ultimate person/entity that actually owns or controls an investment**, even if routed through intermediary companies or countries.

The New Framework:

Previously, **all FDI** from land-border countries (China, Pakistan, Bangladesh, Myanmar, Nepal, Bhutan, Afghanistan) required mandatory Government Approval.

- **The 10% Rule:** Investments where the **Beneficial Ownership (BO)** from a land-border country is **up to 10%** are now permitted via the **Automatic Route**.
- **Threshold:** If BO exceeds 10% or involves a shift in "control," the **Government Route** (Prior Approval) remains mandatory.
- **Pakistan/Bangladesh Restriction:** FDI from Pakistan remains prohibited in sensitive sectors (Defense, Space, Atomic Energy) and requires Government Route for all other sectors regardless of the 10% rule.

Strategic Fast-Track Approval

To support the **India Semiconductor Mission**, specific high-priority sectors now receive expedited security clearance (within 60 days):

- **Electronics Ecosystem:** Electronic capital goods, components, and assembly.

- **Semiconductor Value Chain:** Polysilicon, Ingots, and Wafer manufacturing.
- **Green Tech:** Advanced Chemistry Cells (ACC) and specialized solar components.

Administrative & Monitoring Mechanism

- **Nodal Agency:** Department for Promotion of Industry and Internal Trade (DPIIT).
- **Oversight:** A **Committee of Secretaries (CoS)** under the Cabinet Secretary monitors the "Beneficial Ownership" disclosures to prevent "treaty shopping" (routing Chinese capital through Singapore/Mauritius).

Space for Notes

19. Economic Stabilisation Fund

Context:

The Union Government proposed an Economic Stabilisation Fund to provide fiscal space to manage global economic shocks.

About Economic Stabilisation Fund:

- **Purpose:** To provide cushion against global economic headwinds such as oil price shocks, supply-chain disruptions and external crises without deviating from fiscal consolidation targets.
- **Allocation:** Total proposed size of fund is Rs. 1 lakh crore. Currently allocated ₹57,381 crore.
- **Source of Funds:** Created through the Supplementary Demand for Grants approved by Parliament (under Article 115 for additional expenditure beyond the Union Budget).

20. Securities and Exchange Board of India (SEBI)

Context:

SEBI has revamped its conflict-of-interest framework for top officials and introduced measures to improve ease of doing business.

About SEBI:

- **Type:** Statutory regulator of securities and commodity derivatives market in India.
- **Establishment:** Set up in 1988; given statutory powers under SEBI Act, 1992, under the Ministry of Finance.
- **Headquarters:** Mumbai (regional offices in Delhi, Kolkata, Chennai, Ahmedabad).
- **Role:** Exercises quasi-legislative, executive, and judicial powers.
- **Objectives:** Protect investors, regulate market intermediaries, promote market development.

21. IRDAI

Context:

The Insurance Regulatory and Development Authority of India (IRDAI) has proposed a Public Insurance Registry (PIR) to improve data sharing in the insurance sector.

Public Insurance Registry (PIR):

- Proposed consent-driven digital infrastructure to integrate insurance data across the policy lifecycle (issuance to claims & grievance redressal)
- Aims to reduce information asymmetry, enable interoperable data sharing, and improve fraud detection & regulatory oversight; To be linked with Bima Sugam platform.

About IRDAI:

- Statutory body under IRDA Act, 1999. Autonomous regulator under Ministry of Finance. Headquarters: Hyderabad
- Regulates insurance, reinsurance, and intermediaries. Ensures policyholder protection, fair practices, and financial stability

22. Bharat Audyogik Vikas Yojana (BHAVYA)**Context:**

The Union Cabinet has approved the BHAVYA scheme with an outlay of ₹33,660 crore to develop 100 industrial parks across India.

About BHAVYA:

- Type: Industrial infrastructure development scheme (plug-and-play parks)
- Objective: Create “future-ready” industrial parks with multimodal connectivity under PM Gati Shakti
- Target: 100 industrial parks across the country by 2032
- Implementation: Involves Centre, State governments, and private sector
- Financial Support: Up to ₹1 crore per acre by Union Government
- Land Norms: Minimum approx 100 acres (25 acres for hilly/Northeast); maximum 1,000 acres
- Timeline: Scheme duration 6 years (from 2026–27)
- Aim: Improve logistics efficiency, ease of doing business, and manufacturing productivity

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SCIENCE AND TECHNOLOGY

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1. Weight loss Drugs

Context:

The expiry of semaglutide patents (weight loss drugs) in India has enabled the entry of cheaper generic versions of GLP-1 receptor agonists, widely used for Type-2 diabetes and obesity management.

- With India facing a growing burden of obesity and diabetes, these drugs present both a public health opportunity and a regulatory challenge.

Nature and Mechanism:

- GLP-1 receptor agonists mimic gut hormones that regulate appetite, insulin secretion and blood glucose levels.
- They aid weight loss, improve glycaemic control and reduce cardiovascular risks.
- Common formulations include semaglutide-based drugs administered via injections or oral forms. Public Health Significance
- India has one of the largest populations of diabetics and a rapidly rising obesity burden.
- Wider access to these drugs can improve metabolic health outcomes, especially for middle- and lower-income groups.
- They complement lifestyle interventions such as diet and exercise in chronic disease management.
- The World Health Organization has recently released global guidelines on the use of widely used GLP-1 drugs for weight loss.

Benefits of expanded access	Risks and concerns
Affordability Generic entry significantly reduces cost, enhancing accessibility for all patients.	Misuse and overmedicalisation Rising demand for cosmetic weight loss may lead to irrational use of these drugs.
Disease burden reduction Effective management of diabetes and obesity can reduce long-term cardiovascular risks.	Not a substitute for lifestyle changes These drugs must not replace dietary and physical activity interventions.
Healthcare efficiency Preventive impact may reduce pressure on an already strained healthcare system.	Side effects and safety Gastrointestinal issues and long-term risks require monitoring and medical supervision.
Improved quality of life Better glycaemic and weight control can improve daily functioning and well-being.	Data and evidence limitations Clinical guidelines based on Western data may not reflect Indian metabolic profiles.
Reduced hospitalisation costs Fewer complications from chronic disease can lower overall expenditure on treatment.	Regulatory and equity concerns Unregulated promotion and OTC access may bypass supervision and widen inequalities.

Regulatory Framework in India:

- GLP-1 drugs are classified as Schedule H medicines, requiring a valid prescription.

- The Central Drugs Standard Control Organisation oversees approval, safety and quality standards.
- Pharmacovigilance mechanisms exist but require strengthening for large-scale deployment.

Policy Imperatives:

- Strengthen prescription protocols and enforce restrictions on non-prescribed sale.
- Develop India-specific clinical guidelines and eligibility criteria.
- Enhance pharmacovigilance systems for long-term monitoring of outcomes and side effects.
- Regulate advertising to prevent misleading claims and misuse.
- Promote integration with lifestyle-based interventions for holistic care.

Conclusion:

GLP-1 drugs represent a significant advancement in managing diabetes and obesity in India. However, their benefits can be fully realised only through a balanced approach that combines wider access with robust regulatory safeguards, ensuring safe, equitable and rational use.

Mains Practice Question:

- Q. The introduction of affordable GLP-1 receptor agonists offers new opportunities for tackling obesity and diabetes in India. Discuss the public health benefits and regulatory challenges. *(15 marks, 250 words)*

2. SHANTI Act and India's Thorium Energy Vision
Context:

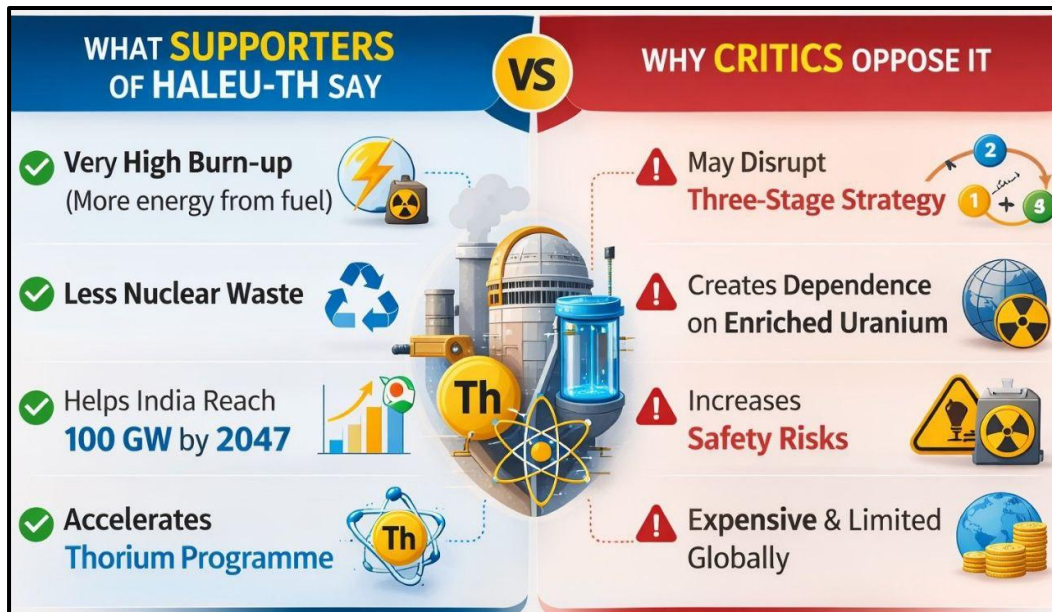
Scientists and industry experts are divided over a study questioning the viability of a nuclear reactor fuel called HALEU-thorium; while critics cite safety risks, proponents argue the technology is vital to achieve national energy goals.

About HALEU-Th Fuel (High Assay Low Enriched Uranium - Thorium.):

- HALEU Th is an advanced nuclear fuel mix **combining** uranium (enriched to between 5% and 20%) and Thorium.
- **Fission Process:** While Thorium itself is not fissile (cannot sustain a chain reaction), the U-235 in the HALEU act as the driver to initiate and maintain the nuclear reaction, eventually converting Thorium into fissile U-233

Debate Over HALEU-Thorium Fuel:

- A recent **BARC study** questioned the **suitability of HALEU-Th fuel** for existing Indian reactors.
- The study highlighted **possible safety risks and suggested design modifications.**
- However, this received mixed reactions.



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The Emerging Policy Debate:

- Under the SHANTI Act framework, India is pushing to expand nuclear power to 100 GW by 2047 as part of its energy security and low-carbon transition strategy. This has triggered a debate on how to balance long-term thorium strategy with faster nuclear expansion.

Two perspectives have emerged:

- Gradualist Approach:** Continue following the traditional three-stage nuclear programme designed by Homi J. Bhabha, focusing on fast breeder reactors to systematically transition to thorium.
- Accelerated Innovation Approach:** Use the innovation ecosystem enabled by the SHANTI Act to test advanced fuel cycles like HALEU-thorium, potentially speeding up nuclear capacity growth.

In essence: the debate is about whether India should prioritise its long-term thorium roadmap or adopt newer technologies to expand nuclear power faster, shaping the future of its energy security, technological self-reliance, and climate strategy.

Mains Practice Question:

- Q. India's long-term nuclear strategy is centered around thorium, but emerging technologies like HALEU-based fuels are challenging this approach. Critically analyze. (15M)

3. NavIC Under Strain: Atomic Clock Failure Raises Concerns

Context:

The clock on the **IRNSS-1F** satellite of India's regional navigation system **NavIC** has failed. This reduces the number of operational satellites needed for reliable navigation services.

Key details:

IRNSS / NAVIC

IRNSS (INDIAN REGIONAL NAVIGATION SATELLITE SYSTEM), OPERATIONALLY CALLED NAVIC (NAVIGATION WITH CONSTELLATION), IS AN INDEPENDENT REGIONAL NAVIGATION SYSTEM DEVELOPED BY ISRO.

PROVIDES ACCURATE POSITIONING OVER INDIA AND UP TO 1,500 KM BEYOND ITS BORDERS.

SIMILAR TO GPS (USA), GLONASS (RUSSIA), GALILEO (EU), AND BEIDOU (CHINA) BUT WITH REGIONAL COVERAGE.

ORIGINALLY DESIGNED AS A 7-SATELLITE CONSTELLATION

- SATELLITES PLACED IN GEOSTATIONARY (GEO) AND GEOSYNCHRONOUS (GSO) ORBITS.
- ENSURES CONTINUOUS NAVIGATION COVERAGE OVER INDIA.

ISRO HAS LAUNCHED 11 NAVIC SATELLITES SINCE 2013

- FIRST-GENERATION SATELLITES (IRNSS-1A TO 1I) FACED ATOMIC CLOCK FAILURES.
- THIS REDUCED THE OPERATIONAL CONSTELLATION.

SECOND-GENERATION NVS SATELLITES (STARTING WITH NVS-01)

- INTRODUCE THE L1 BAND ALONG WITH L5 & S BANDS.
- ENABLE DIRECT COMPATIBILITY WITH MODERN SMARTPHONES.
- USE INDIGENOUSLY DEVELOPED RUBIDIUM ATOMIC CLOCKS.

NAVIC PROVIDES TWO SERVICES

- RESTRICTED SERVICE (ENCRYPTED) – FOR INDIAN MILITARY**
- STANDARD POSITIONING SERVICE – FOR CIVILIAN USERS**

Status of All NavIC Satellites (Till Now)

First Generation: IRNSS Satellites		
SATELLITE	LAUNCH	STATUS
IRNSS-1A	2013	Atomic clocks failed → decommissioned
IRNSS-1B	2014	Operational but beyond design life
IRNSS-1C	2014	Operational
IRNSS-1D	2015	Operational
IRNSS-1E	2016	Operational
IRNSS-1F	2016	Atomic clock failure reported
IRNSS-1G	2016	Operational
IRNSS-1H	2017	Launch failure
IRNSS-1I	2018	Operational replacement for 1A

These satellites form the original NavIC constellation, designed with 7 satellites (3 GEO + 4 ICSS)

Second Generation: NVS Satellites (NavIC 2.0)		
SATELLITE	LAUNCH	STATUS
NVS-01	2023	Operational
NVS-02	2025	Orbit-raising anomaly
NVS-03	Planned	Future
NVS-04	Planned	Future
NVS-05	Planned	Future

These satellites form the original NavIC constellation, designed with 7 satellites (3 GEO + 4 ICSS)

About Atomic Clock:

- An atomic clock is an extremely precise timekeeping device that measures time using the natural oscillations of atoms, usually caesium or rubidium.

Conclusion:

NavIC is a critical element of India's **strategic and technological sovereignty**. Strengthening satellite infrastructure and indigenising key components such as atomic clocks will be essential to ensure reliable navigation services and reduce dependence on foreign systems.

Mains Practice Question:

- Q. India's long-term nuclear strategy is centered around thorium, but emerging technologies like HALEU-based fuels are challenging this approach. Critically analyze. (15M)

4. Human Papillomavirus (HPV) vaccine**Context:**

India has launched a nationwide rollout of the **Human Papillomavirus (HPV) vaccine** to prevent cervical cancer among adolescent girls. With this initiative, India joins **148 countries** that have implemented **HPV vaccination programmes**.

- Targeted at **14-year-old girls**, this initiative aims to eliminate cervical cancer, a disease that remains a premier health threat to women in India.

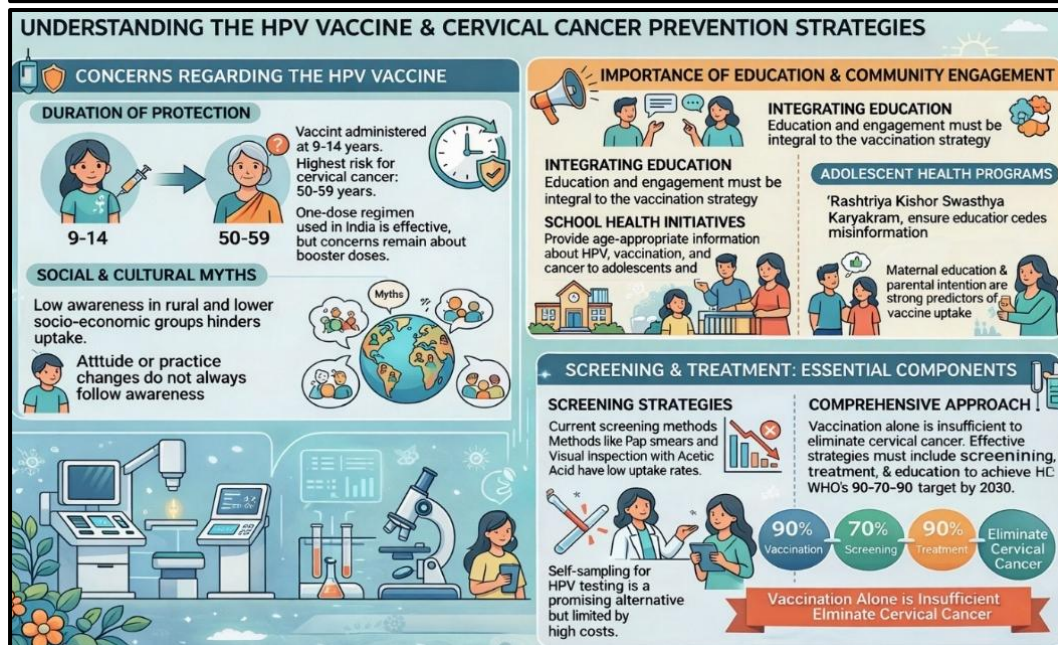
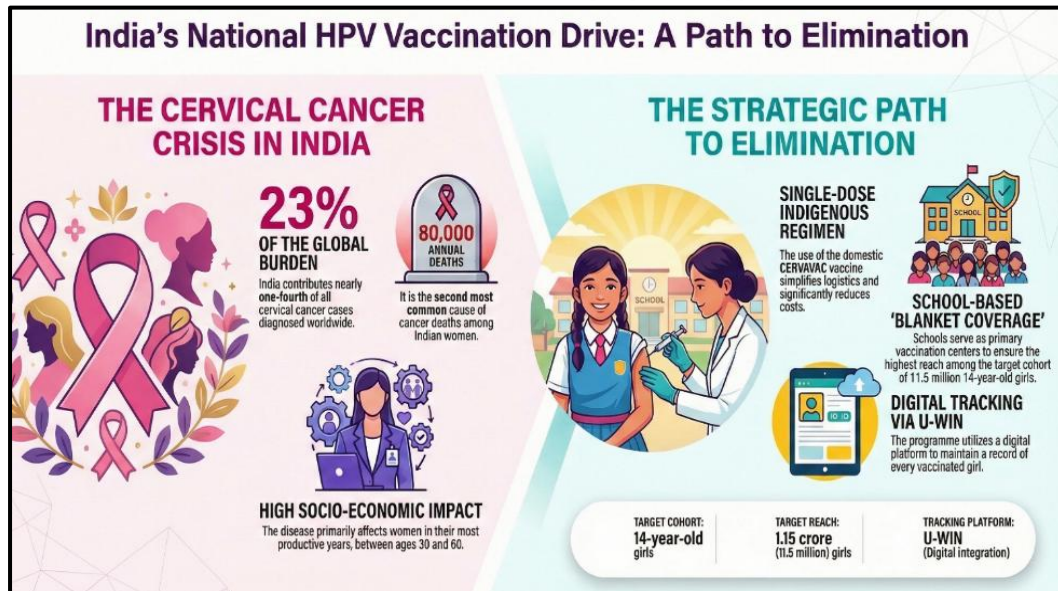
The Burden of Cervical Cancer:

- Prevalence:** Cervical cancer is the fourth most common cancer among women globally and the second-most common in India.
- Incidence:** A new case of invasive cervical cancer is diagnosed every four months, and a death occurs every seven minutes in India.

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- **Risk Factors:** Key risk factors include:
 - Early age of sexual activity
 - Multiple sexual partners
 - Smoking
 - Weakened immune system
 - Poor hygiene
- **HPV Association:** High-risk HPV strains are linked to nearly 70% of cervical cancer cases, with Gardasil 4 protecting against types 16, 18, 6, and 11.

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HPV vaccination is vital to prevent cervical cancer, but its success requires education, screening, treatment access, and overcoming social barriers. A comprehensive strategy is essential to reduce disease burden and meet global health targets.

Mains Practice Question:

- Q. Discuss the significance of HPV vaccination in reducing the burden of cervical cancer in India. What challenges hinder its effective implementation?

(15M)

5. Gravity Bomb Deployment

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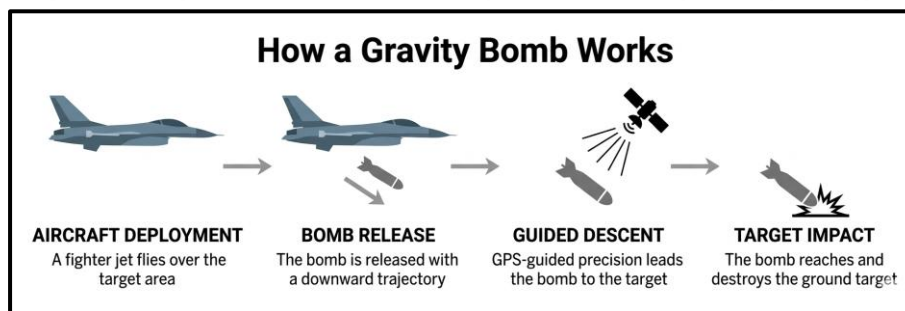
Context:

The United States is reportedly considered **deploying conventional gravity bombs** in potential military operations involving Iran, marking a shift from **long-range stand-off munitions** to **direct aerial bombing tactics**.

What is a Gravity Bomb?

A gravity bomb, or "**free-fall**" bomb, is an unpowered munition. Unlike cruise missiles, it **lacks an internal engine**; once released, its trajectory is **dictated by gravity**, aerodynamics, and the speed/altitude of the aircraft.

- **Modernization (JDAM):** Traditionally unguided, gravity bombs can be converted into **precision-guided munitions** by attaching **Joint Direct Attack Munition (JDAM)** kits. These kits add **GPS guidance and steerable fins**, enabling the bomb to glide accurately to designated coordinates.
- **Operational Requirement:** Unlike **stand-off weapons** fired from outside enemy air-defence range, gravity bombs require aircraft to **fly close to or over the target**, making their use feasible mainly after achieving **air superiority**.



Technical Comparison: Current vs. Previous Strategy:

Feature	Previous: Stand-off Munitions	New: Precision Gravity Bombs
Examples	Tomahawk Cruise Missiles, LUCAS drones	MK-82, MK-83, MK-84 (2,000-lb)
Cost	Millions of dollars per unit	Approx. \$25,000 – \$30,000 (with JDAM kit)
Pilot Risk	Low: Launched outside enemy range	Higher: Requires flying over/near target
Purpose	Dismantling early-warning radars/SAMs	Critical direct bombardment
Platforms	Naval destroyers, stealth aircraft	F-15E Strike Eagle, F-35 stealth jets, B-52 bombers

Strategic Rationale for the Shift:

1. **Cost-Efficiency:** Reduces the financial burden of high-volume bombardment compared to cruise missiles.
2. **Neutralized Threat:** The shift is a declaration that the Pentagon believes Iranian anti-aircraft threats have been effectively neutralized.
3. **Tactical Flexibility:** Deployed by theatre commanders for direct impact on military complexes or large industrial facilities.

Conclusion:

The potential deployment of gravity bombs highlights a **shift in modern aerial warfare** toward **cost-effective, precision-guided conventional weapons**, balancing **military effectiveness** with **operational flexibility**.

Mains Practice Question:

Q. The use of gravity bombs reflects a shift in modern warfare from stand-off precision to cost-effective direct engagement.” Discuss the strategic, economic, and operational implications of this shift.

6. India's TB Elimination Strategy**Context:**

March 24, 2026 marked **World Tuberculosis Day**.

1. Introduction and Basic Understanding:

- **Tuberculosis (TB)**, caused by **Mycobacterium tuberculosis**, primarily affects the lungs but can also involve other organs.
- It spreads through airborne droplets and continues to be a major public health challenge in India.
- Despite being preventable and curable, TB persists due to a complex interaction of biological resilience, socio-economic vulnerability, and systemic limitations. India carries a significant share of **the global TB burden** and has set an **ambitious target to eliminate TB by 2025**.

2. Biological Complexity and Survival Mechanisms:

- The persistence of TB is closely linked to the unique biological properties of the bacterium.
- **Mycobacterium tuberculosis** possesses a **lipid-rich cell wall** that enables it to resist drugs, evade immune responses, and survive in adverse conditions. It can exist in both active and dormant states, allowing it to remain undetected and reactivate later.
- Recent scientific findings indicate that the **bacterium can alter its lipid composition**, facilitating adaptation to stress and enabling transitions between active and latent phases. This biological flexibility contributes to latency, relapse, and drug resistance, making TB difficult to eliminate.

3. Evolving Diagnostic Landscape:

- India has moved from traditional **sputum microscopy** to **more advanced diagnostic methods** such as **CBNAAT** and **TrueNat**, which allow rapid detection of TB and drug resistance. AI-enabled chest X-rays and portable diagnostic tools have expanded screening into communities, while non-sputum-based methods are improving access for children and vulnerable groups.

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- Emerging approaches such as mass spectrometry-based detection, which identifies lipid signatures of TB bacteria, hold promise for detecting low bacterial loads and distinguishing between active and latent infections. However, challenges remain in terms of unequal access, high costs, weak infrastructure, and difficulties in diagnosing extra-pulmonary, pediatric, and asymptomatic TB.
- 4. Epidemiological Trends and Public Health Response:**
- India has achieved measurable progress, including a notable decline in TB incidence and mortality. Large-scale initiatives such as the TB Mukh Bharat Abhiyaan have enabled mass screening, covering over 20 crore individuals and identifying millions of TB cases, including a significant number of asymptomatic patients.
 - This reflects a strategic shift from passive, symptom-based detection to proactive, community-level case finding, which is essential given that many TB patients do not exhibit typical symptoms.
- 5. Shift to Person-Centred and Integrated Care:**
- TB management is increasingly moving from a disease-specific approach to a person-centred model. TB frequently coexists with conditions such as diabetes, malnutrition, and chronic respiratory diseases, as well as broader socio-economic vulnerabilities. Integrated care involves bidirectional screening, management of comorbidities, and provision of counselling and follow-up services. This approach improves treatment outcomes, reduces relapse, and enhances overall patient well-being by addressing the full spectrum of patient needs.
- 6. Role of Nutrition in TB Care:**
- Undernutrition plays a critical role in TB incidence and outcomes, creating a vicious cycle in which malnutrition increases susceptibility to TB, while TB worsens nutritional status.
 - Evidence indicates that a substantial proportion of TB cases in India are linked to undernutrition and that even modest weight gain during treatment significantly improves survival. Government initiatives such as the Ni-kshay Poshan Yojana and Ni-kshay Mitra Scheme aim to provide nutritional support, but challenges remain, including inadequate dietary quality and food insecurity.
 - Strengthening food-based interventions and ensuring access to protein-rich diets are essential for improving treatment outcomes.
- 7. Mental Health and TB:**
- Mental health is a crucial yet often neglected dimension of TB care. A significant proportion of TB patients experience depression, anxiety, and emotional distress due to stigma, prolonged treatment, and socio-economic hardship.

- These factors can delay diagnosis, reduce adherence to treatment, and increase the risk of poor outcomes. In addition, caregivers often face considerable emotional and financial strain. Integrating mental health screening, counselling, and support services into TB programmes is therefore essential for improving both clinical and social outcomes.

8. Community Participation and TB Champions:

- Community engagement has emerged as a key pillar of TB control.
- The TB Champions model, which involves TB survivors acting as peer counsellors and advocates, has been effective in reducing stigma, improving awareness, and encouraging treatment adherence. Broader initiatives based on the principle of **Jan Bhagidari** have mobilised civil society, local institutions, and communities to participate actively in TB elimination efforts. Such participation strengthens last-mile delivery, builds trust in healthcare systems, and transforms TB elimination into a collective social movement.

9. Social Determinants and Structural Challenges:

- TB is deeply linked to social determinants such as poverty, malnutrition, overcrowding, and limited access to healthcare. Migration and urbanisation further exacerbate vulnerability, particularly in densely populated settlements. Stigma and discrimination continue to discourage individuals from seeking timely diagnosis and treatment, thereby sustaining transmission and worsening outcomes. Addressing these structural factors is essential for achieving sustained reductions in TB burden.

10. Key Systemic Challenges:

- Despite progress, several systemic challenges persist, including unequal access to diagnostics and treatment, fragmented healthcare delivery, workforce shortages, and limited focus on vulnerable populations. Ensuring the sustainability of community-based initiatives and maintaining momentum in TB control efforts remain critical concerns.

11. Way Forward:

- A **comprehensive TB elimination strategy** must integrate scientific innovation, health system strengthening, and social interventions. Expanding access to advanced diagnostics, strengthening primary healthcare systems, addressing nutrition and mental health, and enhancing community participation are essential components. Targeted interventions in high-risk populations, particularly in urban and socio-economically vulnerable areas, will be crucial for accelerating progress.

Conclusion:

Tuberculosis is not merely a biomedical condition but a complex socio-economic and public health challenge. Its elimination requires a shift towards a holistic, person-centred, and community-driven approach. India's experience demonstrates that combining scientific advancements with social mobilisation can significantly improve outcomes. Sustained efforts across diagnostics, nutrition, mental health, and community engagement will be necessary to achieve the goal of a TB-free India.

FINAL KEY LINE:

TB elimination in India requires a convergence of science, systems, and society, integrating diagnostics, nutrition, mental health, and community participation into a unified and person-centred framework.

Mains Practice Question:

Q. *Tuberculosis in India is not merely a biomedical issue but a socio-economic challenge.* Examine the multidimensional nature of TB and evaluate India's strategy for its elimination.

7. Mineral Security as a Pillar of Strategic Autonomy**Context:**

Critical minerals have moved from the margins of policy discourse to the strategic core of India's economic planning, institutionalised through the **National Critical Mineral Mission (NCMM)** and a ₹16,300 crore budgetary commitment.

Power Reconfiguration:

- **Access Equals Power:** Access to critical minerals is now tied to national power, determining technological capability and strategic autonomy.
- **Integrated Value Chain:** Strategic sovereignty is achieved not just through resource extraction but **through high-end component manufacturing** and advanced processing and refining.

The Strategic Bottleneck:

- **Possession vs. Leverage:** Simple geological possession of raw ore does not translate into strategic leverage.
- **China's Dominance:** China controls up to **90% of global processing capacity** for several critical minerals.
- **Vulnerability:** Global concentration of advanced processing and refining creates structural vulnerability, making downstream industrial ecosystems the primary constraint.

Goeconomic Reorientation:

- **From Commodity to Leverage:** Critical minerals have evolved into instruments of goeconomic influence, essential for EV batteries, semiconductors, and renewable energy systems.
- **Cross-Sector Convergence:** Mineral governance now operates at the intersection of climate transition, industrial policy, and national security planning.
- **Technological Drivers:** Technology, including AI, is key to the partnership for mineral exploration and processing, alongside AI and quantum.

Institutional Design and Alignment:

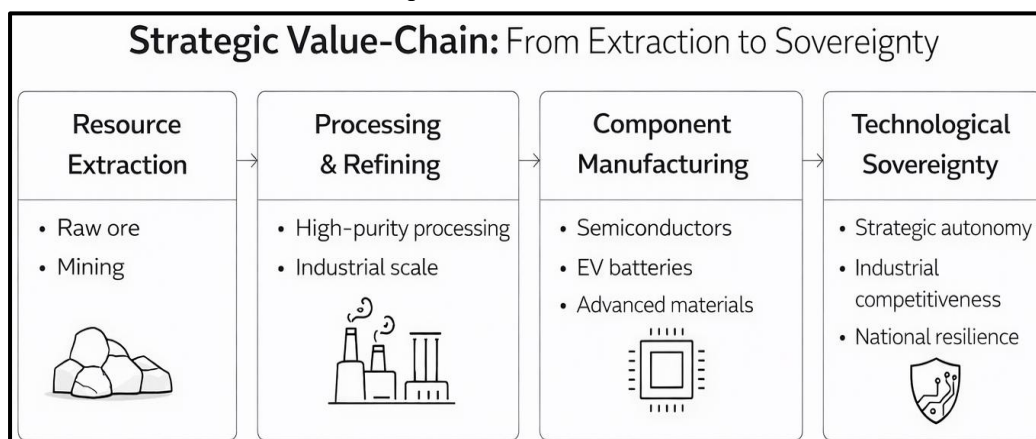
- **Execution over Policy:** Sustainable advantage requires moving from policy announcements (such as NCMM with its 1,200 exploration targets) to coordinated execution, regulatory harmonisation, and infrastructure for deep refining.

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- **Supply Chain Diversification:** Partnerships with Australia, the US, and the EU, alongside new tech-focused alliances like the India-Israel Critical & Emerging Technologies Partnership, aim to reduce dependency on concentrated suppliers.

The Deeper Strategic Question:

- The central challenge is **whether India can ascend the value chain** from extraction to advanced processing and high-end manufacturing and thereby translate mineral access into technological sovereignty.
- This progression from extraction to sovereignty is not automatic; it requires deliberate value-chain integration.



The value-chain framework illustrates that sovereignty emerges not from raw extraction alone, but from sustained movement toward processing depth and manufacturing capability.

The centrality of critical minerals marks a **structural shift** in India's economic and strategic thinking. **Long-term strategic autonomy** will depend not merely on resource discovery, but on **sustained value-chain integration**, processing capacity, and coordinated institutional execution.

Mains Practice Question:

- Q.** *Critical minerals are emerging as the backbone of geopolitical power in the 21st century.” Discuss India's strategy to achieve mineral security and the challenges in achieving value-chain sovereignty.*

8. Helium
Context:

Rising geopolitical tensions in the Gulf region have raised concerns over global helium supply affecting MRI-based diagnostics.

About Helium:

- **Type:** Noble gas (Group 18), atomic number 2, chemically inert ($1s^2$ configuration).
- **Physical Property:** Has the lowest boiling point (-268.9°C) among all elements.

- Density: Second lightest element; non-flammable and non-toxic gas.
- Source: Formed by alpha decay of uranium and thorium in Earth's crust.
- Extraction: Obtained from natural gas deposits via fractional distillation.
- Key Use: Used in cryogenics to cool MRI superconducting magnets (approx -269°C).
- Applications: Used in rocketry (fuel pressurization), deep-sea diving (Heliox), semiconductors, balloons.
- Special Feature: Exhibits superfluidity (Helium II) near 2.17 K with zero viscosity.

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9. Breast Cancer

Context:

A new global analysis published in **The Lancet Oncology** projects a sharp rise in global breast cancer cases and mortality, with younger women increasingly affected.

About Breast Cancer:

- Uncontrolled growth of abnormal cells in breast tissue. Most common cancer among women globally.
- Can spread (metastasize) to lymph nodes and distant organs.

Risk Factors:

- Ageing population, Obesity, Physical inactivity, Alcohol consumption, Hormonal factors, Family history

Screening & Prevention:

- **Mammography** for early detection.
- Lifestyle modifications include regular physical activity, healthy body weight, reduced alcohol intake

Key Findings of the Study:

A Looming Crisis in India:

- **Leading Cancer:** Breast cancer is the most common cancer among Indian women, accounting for **approx 27%** of all female cancers.
- **The "Age Shift":** Indian women are diagnosed **10 years younger** on average than their Western counterparts.
- **Stage at Diagnosis:** 50–70% of Indian patients present at **Stage III or IV**, compared to only 20% in the USA.
- **Hotspots:** Hyderabad recorded the highest age-adjusted incidence rate in India (54 per 100,000) in 2025-26.

10. Meningococcal Disease

Context:

Following suspected deaths in Shillong, the Meghalaya Government has activated the **Integrated Disease Surveillance Programme (IDSP)** to contain *Neisseria meningitidis*.

The Pathogen: *Neisseria meningitidis*

- **Nature:** A Gram-negative bacterium; humans are the only natural reservoir.
- **Transmission:** Direct contact via **respiratory droplets** or oral secretions (coughing, kissing, sharing utensils).
- **Incubation:** Usually 3–4 days (range 2–10 days).
- **Key Risk:** High fatality rate if untreated; survivors may face long-term neurological damage or limb loss.

Clinical Presentation:

Meningococcal disease primarily manifests in two ways:

1. **Meningitis:** Inflammation of the brain/spinal cord membranes. Symptoms include neck stiffness, sudden high fever, severe headache, photophobia, and confusion.
2. **Meningococemia (Septicaemia):** Bloodstream infection. Symptoms include Fatigue, vomiting, cold hands/feet, and a characteristic **non-blanching petechial rash** (purple spots).

Public Health Response:

- **Surveillance:** Active case searching and contact tracing by the District Surveillance Unit.
- **Chemoprophylaxis:** Administration of antibiotics (usually Rifampicin or Ciprofloxacin) to close contacts to "clear" asymptomatic carriage.
- **Lab Review:** Confirmation via Cerebrospinal Fluid (CSF) analysis or blood cultures.
- **Protocol:** Isolation of suspected cases and strict adherence to respiratory hygiene in crowded settings (e.g., hostels/training centers).

11. Nucleic Acid Testing (NAT)
Context:

The Supreme Court has agreed to examine the feasibility of making **Nucleic Acid Testing (NAT)** mandatory in blood banks to ensure safe blood transfusion, particularly considering reported HIV infections linked to contaminated transfusions.

About NAT:

- **Nucleic Acid Test (NAT)** is a highly sensitive **molecular diagnostic technique**.
- It detects the **genetic material (RNA/DNA)** of pathogens in donated blood.
- Used for early detection of transfusion-transmitted infections (TTIs).

Objective: To ensure **safe and infection-free blood transfusion**, thereby protecting the Right to Life under Article 21.

Pathogens Detected: NAT is primarily used to detect **HIV, Hepatitis B Virus (HBV), Hepatitis C Virus (HCV)**.

NAT vs. ELISA (The "Window Period" Advantage):

The "Window Period" is the time between initial infection and when a test can detect it.

Feature	ELISA (Traditional)	NAT (Advanced)
Detection Basis	Detects Antibodies or Antigens.	Detects Viral RNA/DNA (Genetic material).
Window Period	Long (weeks to months).	Very Short (days).
Sensitivity	Lower in early stages of infection.	Ultra-high; detects very low viral loads.
False Negatives	Higher risk during the window period.	Significantly minimized.

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Implementation Issues:

- Higher cost compared to ELISA.
- Infrastructure and technical expertise required.
- Not uniformly implemented across all States.

12. WHO Pandemic Agreement**Context:**

Countries are negotiating implementation rules of the WHO Pandemic Agreement, including mechanisms for pathogen sharing and equitable benefits.

About the Agreement:

- Adopted: By the World Health Assembly in May 2025 after lessons from the COVID-19 pandemic.
- Objective: Strengthen global cooperation on pandemic prevention, preparedness and response.
- PABS Mechanism: Creates a Pathogen Access and Benefit-Sharing (PABS) system to share pathogen samples and genetic sequence data globally.
- Benefit Sharing: Countries providing pathogen materials receive monetary and non-monetary benefits from vaccines, diagnostics and medicines.
- Implementation: An Intergovernmental Working Group (IGWG) is finalizing operational rules before countries sign and ratify the treaty.
- Group for Equity: Coalition of 29 developing countries (including India, Brazil and South Africa) advocating legally binding provisions, equitable vaccine access and fair sharing of pandemic benefits.

13. Exercise Vayu Shakti-2026**Context:**

The Indian Air Force (IAF) conducted Exercise Vayu Shakti-2026 at the Pokhran Field Firing Range, Rajasthan.

Details:

- A firepower demonstration exercise of the IAF.
- Location: Pokhran Field Firing Range, Jaisalmer
- Theme: "Achook, Abhedya aur Sateek"
- Scale: 130+ aircraft (fighters, transport, helicopters)
- Chief Guest: President Droupadi Murmu

14. INS Anjadip

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Context:

The Indian Navy commissioned **INS Anjadip**, the fourth **Anti-Submarine Warfare Shallow Water Craft (ASW-SWC)**, to enhance India's coastal anti-submarine and littoral security capabilities.

About INS Anjadip:

- A 77-metre-long, indigenously designed and built ASW-SWC.
- Built by Garden Reach Shipbuilders & Engineers (GRSE), Kolkata.
- Constructed at Kattupalli (Tamil Nadu).
- Named after **Anjadip Island** off the Karwar coast (Karnataka).

Key Features:

1. **Advanced ASW Suite:** Integrated indigenous weapon-sensor package featuring shallow-water sonars, lightweight torpedoes, and anti-submarine rockets.
2. **Littoral Specialist:** High-agility design optimized for precision targeting in shallow coastal waters.
3. **Core Mission:** Real-time detection, tracking, and neutralization of enemy submarines in coastal zones.
4. **Multi-Role Versatility:** Supports coastal surveillance, low-intensity maritime operations, and Search and Rescue (SAR).

15. Superconductivity

Context:

Researchers have achieved a record increase in superconducting temperature using a new pressure-based technique.

About Superconductivity:

- Phenomenon where a material shows zero electrical resistance and expels magnetic field (Meissner effect)
- Occurs typically at very low temperatures (near absolute zero)
- High-temperature superconductors work at relatively higher temperatures but still require cooling
- Recent studies achieved superconductivity up to around -13°C under extremely high pressure
- Applications: lossless power transmission, MRI, maglev trains, efficient electric motors
- Limitation: Requires very high pressure, making large-scale use difficult
- Key challenge: Achieving superconductivity at room temperature and normal pressure

16. Large Hadron Collider (LHC)

Context:

Scientists at CERN have discovered a new particle " $\Xi\text{-cc}^{++}$ " using the Large Hadron Collider.

Xi-cc⁺⁺ Particle:

- It is 4× heavier than a proton.
- Validates Standard Model predictions on quark interactions.

About Large Hadron Collider (LHC):

- World's largest particle accelerator at CERN (Geneva, Switzerland–France border), built in a 27 km underground circular tunnel.
- Accelerates protons to near speed of light for high-energy collisions.
- Uses superconducting magnets maintained at 1.9 K (−271.3°C) via cryogenics.
- Recreates conditions of the early universe (Big Bang).
- Discovered Higgs Boson (2012) and several hadrons.
- Hadron: A quark-based composite particle bound by the strong nuclear force.

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ENVIRONMENT

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1. Between Power and Preservation: India's Green Policy Challenge

Context:

The Karnataka High Court directed a halt to the Sharavathi Pumped Storage Hydroelectric Project in the Western Ghats following environmental concerns raised by activists.

Arguments in Favour of the Project

- Ensures energy security by providing reliable electricity for industrial growth and peak demand management.
- Supports clean energy transition by reducing dependence on fossil fuels.
- Contributes to India's target of achieving 50% non-fossil fuel capacity by 2030.
- Functions as a pumped storage system, helping store excess renewable energy from solar and wind sources.
- Enhances grid stability and efficiency by addressing intermittency of renewable energy.

Sharavathi River: Flows into the Arabian Sea and forms Jog Falls in Karnataka.

National Board for Wildlife (NBWL): Statutory body (Wildlife Protection Act, 1972) chaired by Prime Minister; clears projects in protected areas.

Arguments Against the Project

- Located in the Western Ghats, a biodiversity hotspot, and within or near the habitat of the endangered lion-tailed macaque.
- Likely to cause large-scale deforestation (7,000-16,000 trees), leading to habitat destruction and biodiversity loss.
- Infrastructure activities such as road construction and widening may fragment forests.
- Tunnel construction may increase landslide risks and damage fragile wet evergreen ecosystems.
- Wildlife and environmental clearances are pending, with allegations of violations of forest protection laws.
- Expert assessments indicate that ecological costs may outweigh benefits, causing irreversible damage.
- Faces local opposition from farmers and communities due to risks to livelihoods and safety.
- Highlights a broader conflict between development (energy security, economic growth) and environmental sustainability (biodiversity protection, forest conservation).

Key Policy Issue:

- Not all renewable energy sources are environmentally safe in all contexts.
- Hydropower is considered clean energy, but its location determines ecological impact.
- Projects in sensitive regions can create a “green vs green” conflict between clean energy and ecological protection.

Way Forward (Balanced Approach):

- Avoid projects in biodiversity hotspots through careful site selection.
- Ensure strict Environmental Impact Assessment (EIA).
- Promote alternatives like solar energy with battery storage.
- Ensure community participation and transparent decision-making.

Summary: The issue reflects the challenge of balancing clean energy goals with ecological conservation in sensitive regions.

Mains Practice Question:

- Q. What is pumped storage hydroelectric projects? Discuss their advantages and environmental concerns. (10 marks, 150 words)

2. Aravalli Hills Ecological Debate

Space for Notes

Context:

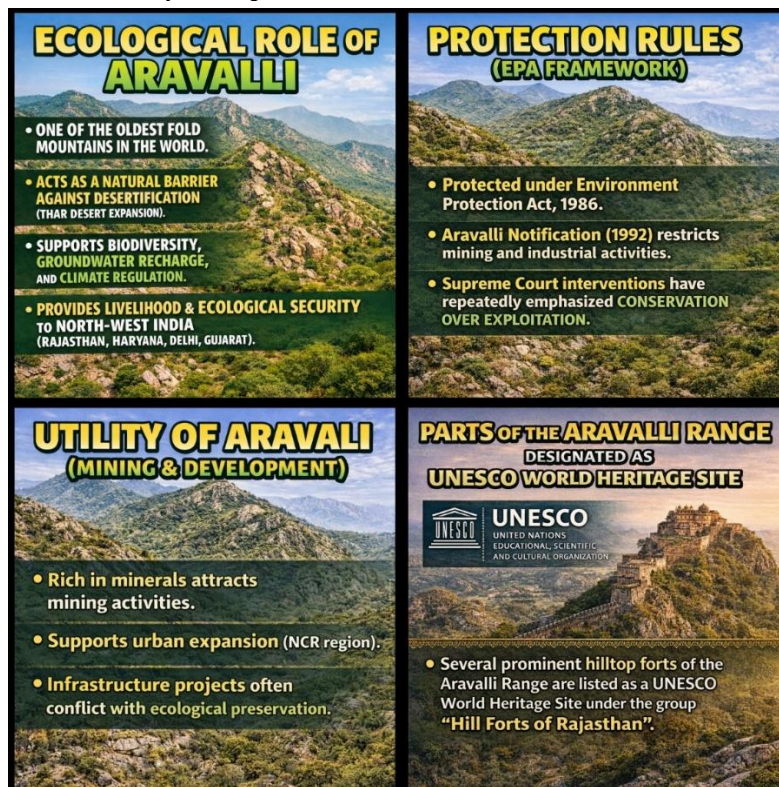
There is an ongoing debate on how to **define the Aravalli hill range**, its extent and scope of developmental activities to be allowed. The article discusses how to scientifically define the boundary of the Aravalli hill range and why this is important for environmental protection vs development.

Criteria and Scope of Definition:

- Previously in a 2010 study, Forest Survey of India (FSI) proposed a boundary for the Aravalli hills based on a 3-degree slope criterion, which was deemed effective in identifying the hills accurately. 62 districts qualify for inclusion in the Aravalli region (Larger area and more conservation)
- However, a 2024 Government appointed committees proposed a different criteria for Aravalli hills based on a minimum 100 m elevation (Smaller area and less conservation) and covering only 37 districts.
- This raised concerns about its environmental implications and hence Supreme Court appointed another committee recently again to define Aravallis.

Author's suggestion:

- Process is becoming vexatious and repetitive. Since Aravallis were already scientifically mapped in 2011 by FSI, new committee should use existing data and avoid arbitrary changes.



Mains Practice Question:

- Q. The debate over defining the Aravalli range reflects the broader tension between environmental conservation and developmental pressures. Discuss.
 (15 marks, 250 words)

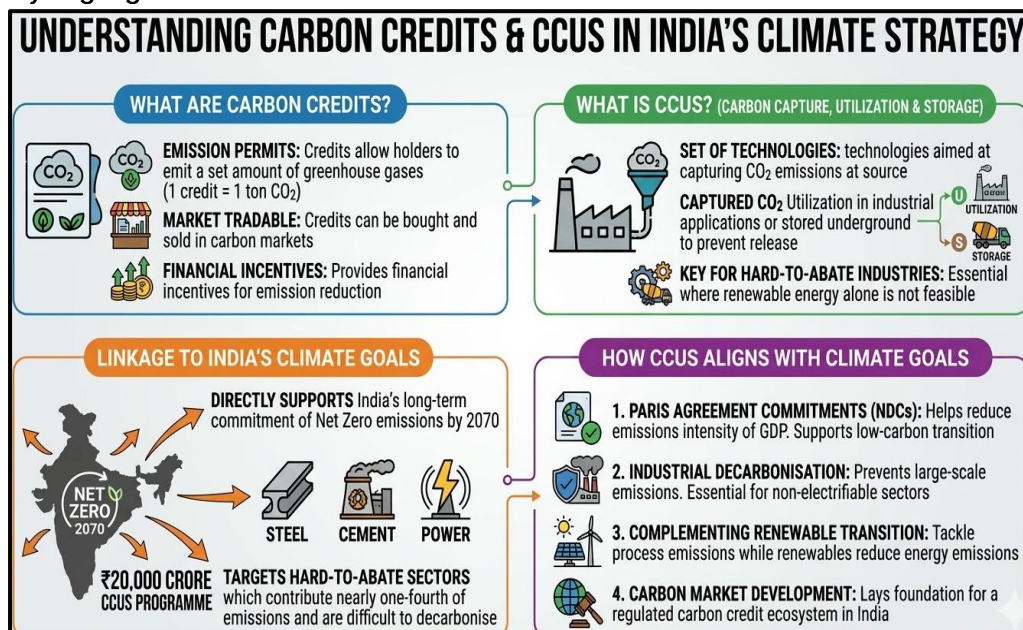
3. India's Carbon Credit Program

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Context:

Recent announcement in India's Union Budget 2026 regarding a substantial allocation for a carbon credit program. The allocation of ₹20,000 crore has led to confusion about its intended purpose whether it is aimed at funding Carbon Capture, Utilization, and Storage (CCUS) technologies for heavy industries or if it is designed to help farmers earn carbon credits through sustainable agricultural practices.

Key Highlights:



The Confusion Surrounding the Budget Announcement:

- **₹20,000 Cr Allocation Focus:** Budget 2026 funding is primarily for CCUS (Carbon Capture, Utilisation & Storage) in industrial sectors.
- **Targeted Sectors:** Power, steel, cement, refineries, and chemicals identified in DST's R&D roadmap.
- **The Role of Agriculture:** Agriculture is not included in the CCUS sectors outlined in the roadmap. While agriculture does contribute to greenhouse gas emissions, primarily in the form of methane and nitrous oxide, these emissions are diffuse and biologically mediated, making them unsuitable for point-source capture technologies.
- However, Agriculture also contributes to carbon dioxide removal via soil carbon sequestration, agroforestry etc. Farmers can participate in carbon credit markets by adopting practices that reduce or sequester carbon, getting the reductions verified, and selling the resulting carbon credits.
- **Farmer Narrative:** Misinterpretation that funds will support farmers via carbon markets; actually, refers to separate voluntary carbon market mechanisms.
- **The Communication Gap:** A communication gap between the DST's technical roadmap and broader Budget language caused confusion; the usage of the words "carbon credit program" in budget announcement led to expectations of farmer support, though the focus is industrial carbon capture.
- **Clarifying the Announcement:** Govt must clearly separate CCUS funding (industry-focused) from potential farmer carbon market initiatives.

Way forward:

While CCUS targets major industrial emissions, a separate framework is needed to support agricultural carbon credits. Government must include all stakeholders' farmers, experts, and industry in policy design. India's climate strategy should simultaneously focus on reducing industrial emissions ("smokestack") and enhancing carbon sequestration through agriculture and land use ("soil").

Mains Practice Question:

Q. What is Carbon Capture, Utilisation and Storage (CCUS)? Evaluate its relevance for India's industrial decarbonisation.

4. Carbon Capture and Utilisation (CCU)**Context:**

India, the world's third-largest CO₂ emitter, is exploring Carbon Capture and Utilisation (CCU) to reduce emissions from hard-to-abate sectors like cement, steel, and chemicals.

What is CCU?

- **Carbon Capture and Utilisation** refer to technologies that capture CO₂ emissions from industrial sources or directly from air, then convert them into useful products like **fuels, chemicals, building materials, and polymers**.
- Unlike carbon capture and storage (which permanently stores CO₂ underground), CCU reuses captured carbon in the economy.

How CCU Reduces Carbon Dioxide Emissions?

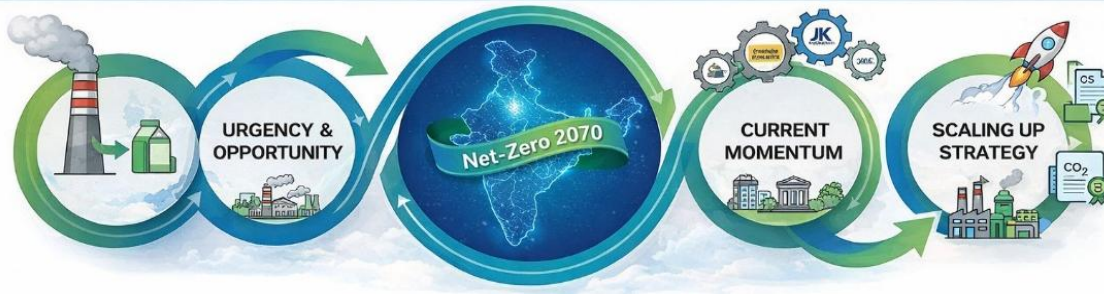
- **Removes CO₂ from atmosphere and industrial sources:** especially "hard-to-abate" sectors (cement, steel, chemicals).
- **Converts captured carbon into economic value:** Creates alternative feedstocks for fuels and chemicals
- **Supports circular economy principles:** Enables sustainable product manufacturing.

EU Bioeconomy Strategy and Circular Economy Action Plan

- **Explicitly supports CCU as sustainability mechanism:** Converts CO₂ into feedstocks for chemicals, fuels, materials
- **Promotes integrated approach to resource management:** Drives innovation in low-carbon industrial processes

Why India Needs CCU	India's Current CCU Status	How to Scale-Up CCU Technology in India
 India is world's third-largest CO₂ emitter • Emissions driven by power generation, cement, steel, chemicals  Renewable energy alone insufficient for hard-to-abate sectors  CCU creates alternative decarbonisation pathway • Aligns with India's net-zero 2070 target • Builds circular, low-carbon economy • Creates new industrial value chains	 Government support and roadmaps • Department of Science and Technology funding research • Ministry of Petroleum drafted 2030 CCUS roadmap  Private sector initiatives • Ambuja Cements (Adani): Indo-Swedish CCU pilot with IIT Bombay • ORSL JK Cement: CCU testbed for concrete blocks and olefins • ORSL: India's first Bio-CCU platform converting biogas CO₂ to bio-alcohols	 Address cost competitiveness challenge • Implement policy incentives and subsidies • Reduce energy costs through renewable integration • Make CCU products competitive with fossil alternatives  Develop infrastructure readiness • Create co-located industrial clusters • Build reliable CO₂ transport networks • Integrate with downstream manufacturing  Establish market framework • Create clear standards and certification system

Space for Notes



Key Risks in Scaling CCU:

- **Cost competitiveness:** Capturing, purifying, converting CO₂ is energy-intensive and expensive and Without incentives, CCU products cannot compete with fossil-based alternatives
- **Infrastructure gaps:** Uneven development across Indian industrial regions and Lack of integrated CO₂ transport and storage systems
- **Market uncertainty:** Absence of standards and certification and Limited demand signals for CO₂-derived products

CCU offers India a pragmatic pathway to decarbonise heavy industry while building new value chains. However, **without policy incentives, cost reduction, and infrastructure readiness**, scaling CCU beyond pilot projects will remain difficult.

5. Belem Summit & Tropical Forest Forever Facility (TFFF)

Context:

The COP30 Climate Summit (2025) in Belém, Brazil introduced the Tropical Forest Forever Facility (TFFF). It has a good aim of shifting global forest conservation from pledges to performance-based finance; however, it raised debates on equity, inclusion, and accountability.

Tropical Forests Forever Facility (TFFF):

- The TFFF is a **blended-finance mechanism** designed to reward tropical forest countries for preventing deforestation through results-based payments **funded by investment returns rather than traditional aid**.
- Previous global initiatives like REDD & REDD+ functioned like a performance bonus rewarded for reducing the rate of forest loss compared to the past. However, TFFF acts as a maintenance contract that provides steady payments for the simple act of keeping existing forests standing and healthy.
- **Global South-led initiative:** Spearheaded by Brazil with nations like Colombia, Ghana, Indonesia, Malaysia, and the DRC, TFFF is supported by Germany, France, UAE, Norway, and the UK.

Other Issues in Global Forest Governance

1. Power Imbalances

Forest conservation has largely been controlled by **global institutions and national governments**, often excluding **local communities**.

In TFFF, **decision-making** remains **concentrated**, raising concerns about limited participation of forest-dependent groups.



2. Indigenous Rights and Land Tenure

- For many indigenous groups, the fight to protect the Amazon is intertwined with their struggle for survival.
- Indigenous communities view forests not merely as economic resources but as sources of identity, culture, and survival.
- Protests during COP30 highlighted the demand for recognition of territorial rights and community ownership of forest lands.
- The Forest and Climate Leaders' Partnership (FCLP) has renewed its Forest and Land Tenure Pledge, committing \$1.8 billion (2026–2030) to support indigenous and local communities.
- Secure land tenure is widely recognised as a critical precondition for effective and sustainable forest conservation.



3. Climate Justice and Equity

- Civil society groups have emphasised that climate justice and environmental conservation are intrinsically linked.
- Effective conservation requires community participation, equitable benefit-sharing, and protection of human rights.
- Exclusion of indigenous leadership not only weakens conservation outcomes but also undermines democratic governance and social justice.



- **Aim:** To establish a permanent, self-sustaining global fund that monetises the ecological value of tropical forests, ensuring “standing forests are worth more than felled ones”. It also promotes climate justice and equitable global finance.
- Brazil has initiated efforts to improve accessibility through a dedicated digital platform for TFFF implementation.

Criticism and Concerns:

- The **Global Forest Coalition (GFC)** criticized the fund as "colonialistic," arguing that it primarily benefits intermediaries and Governments rather than the forest people themselves, reinforcing existing power asymmetries.
- They contend that a **market-driven approach** may fail to address the root causes of deforestation, such as **agribusiness expansion and large infrastructure projects**.
- The **GFC warns** that rewarding standing forests without curbing exploitative activities risks creating a **superficial conservation narrative**.
- Critics argue that the **market-based structure may prioritise financial returns over ecological and social outcomes**, making it vulnerable to volatility.

The TFFF marks a **paradigm shift in forest finance**, but its success hinges on a deeper transformation **from funding forests to empowering forest communities**. Without addressing structural inequalities and governance deficits, even well-funded initiatives risk replicating past failures. True conservation will emerge only when **finance, rights, and power converge at the grassroots level**.

Mains Practice Question:

- Q. *The Tropical Forest Forever Facility represents a shift from ‘reducing deforestation’ to ‘rewarding conservation’. Critically examine.*

6. India's Climate Resilience Through Water-Centred Strategy

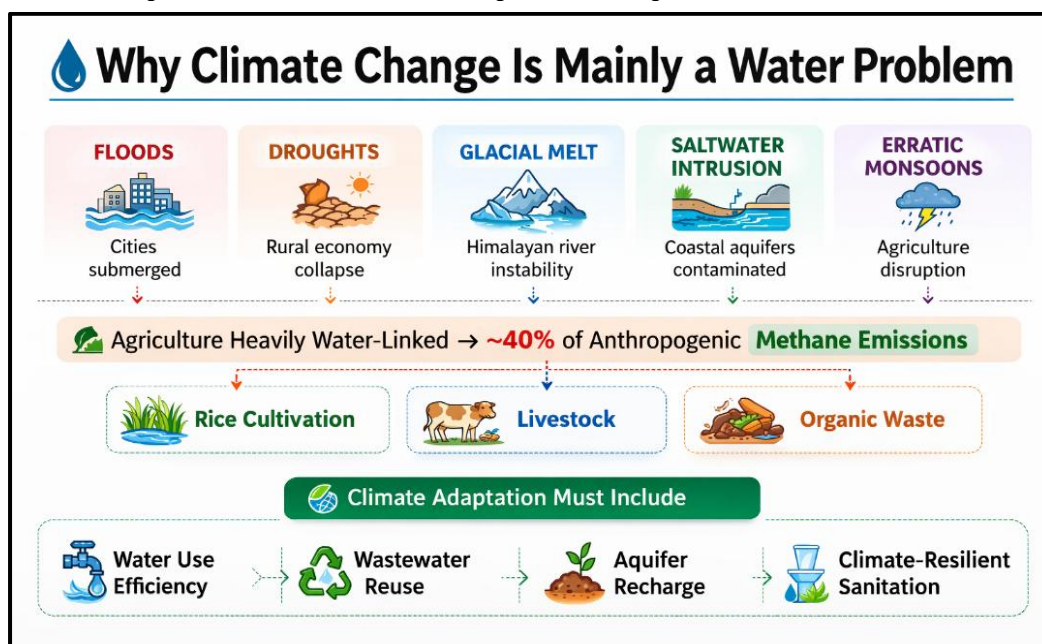
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Context:

COP30 in Belém introduced adaptation indicators integrating water, sanitation, and hygiene (WASH) into climate accountability. For India, strengthening water management is essential to address floods, droughts, and increasingly erratic monsoon patterns

Key Highlights/ Main idea of the Article:

- Earlier: Climate policy focused mainly on **mitigation** (reducing emissions).
- Now: Focus of the world is shifting towards **adaptation** (surviving climate impacts).
- Established at COP30, the **Belém Adaptation Indicators** are 59 voluntary metrics used to track global **adaptation** progress across sectors like water, food, and health.
- **Most climate impacts occur through water systems.** Hence Water management decisions influence greenhouse gas emissions.



Belém Adaptation Indicators (COP30 Framework):

- Focus on **climate-resilient water systems** – reducing water scarcity, improving flood and drought resilience, and ensuring universal drinking water and sanitation.
- Emphasise stronger **risk governance** – developing multi-hazard early warning systems, strengthening hydrometeorological services, and updating national vulnerability assessments.
- Together, these indicators integrate **water, health and climate policy** and improve countries' capacity to **anticipate and manage climate risks**.

Good news: India doesn't have to start from scratch (Building on Existing Foundations)

- India strengthened **integrated water governance** by creating the Ministry of Jal Shakti in 2019 to coordinate drinking water, sanitation and river management.
- Long-term planning through **Water Vision 2047** aligns with Belém's adaptation framework and aims to ensure sustainable, equitable and climate-resilient water systems.
- The **National Aquifer Mapping and Management Programme (NAQUIM)** is shifting groundwater policy from merely mapping aquifers to implementing aquifer-level management plans.
- River rejuvenation initiatives like the **National Mission for Clean Ganga (NMCG)** now include biodiversity restoration and digital monitoring, helping rivers act as buffers against climate shocks.

However, there are **Systemic Risks to Progress**:

- **Water Scarcity:** Water scarcity is acute and unevenly distributed in India, with most climate disasters in India being water-related.
- **Weak funding for climate adaptation:** Even though the world says it will mobilise about \$1.3 trillion per year by 2035 to deal with climate impacts, there is still no clear system on who will provide the money, how it will be distributed, and how long the funding will continue. Because of this uncertainty, many important water projects needed to protect people from floods and droughts do not get enough funding.
- **Digital Fragmentation:** There is a lack of real-time integration of hydrological and meteorological data into planning and governance systems in India.

Institutional Landscape and Opportunities:

- **Existing Domestic Missions:** Many global adaptation targets have corresponding domestic missions, including: **Drinking water coverage, Sanitation expansion, Irrigation efficiency and Urban water reforms.**
- **Embedding Climate Stress Indicators:** Government programme dashboards should also display **climate warning signals** like drought levels, flood risks, and rainfall shortages. This helps officials **identify problems early and respond faster**, making schemes more accountable and effective during climate shocks.
- **Leveraging Digital Infrastructure:** India's strength in digital public infrastructure such as Aadhaar, UPI, & AgriStack etc can facilitate the integration of hydrological data, crop advisories, and financial flows into interoperable platforms.

Water is emerging as the **central axis of climate resilience and adaptation policy**. By aligning its water governance reforms with global adaptation frameworks, India can strengthen domestic climate resilience while positioning itself as a **leader for the Global South in climate adaptation**.

Mains Practice Question:

- Q.** *Climate adaptation has shifted from a peripheral concern to a policy priority."*
 Examine this shift with reference to water governance in India.

7. ISRO Study on Himalayas Glacier hazards

Space for Notes

Context:

A study by scientists from the Indian Space Research Organisation (ISRO) analysing the August 2025 flash flood in Dharali village, Uttarakhand found that exposed ice patches on glaciers are early warning signs of glacier instability and possible floods. Satellite images of the Srikanta Glacier showed exposed ice patches just before the disaster, indicating rapid deglaciation and cryospheric instability.

Key Idea of the Article:

- Melting glaciers are not only dangerous because of glacial lake outburst floods (GLOFs).
- The study shows that smaller instabilities like collapsing ice patches on glaciers can also trigger deadly downstream floods.

What are Ice Patches on Glaciers?

- Exposed ice patches appear when seasonal snow cover and firn layers thin due to warming.
- Normally Snow cover acts as an insulating protective layer over glacier ice.
- But when warming reduces this layer: The bare glacier ice becomes unstable and more vulnerable to collapse.



Implications and Takeaway:

- Himalayan cryospheric hazards may be more widespread than previously understood, as glacier instability can occur beyond glacial lakes.
- Exposed ice patches and nivation zones can act as early indicators of glacier weakening and potential floods.
- Satellite monitoring and early-warning systems are therefore essential for identifying hidden instability zones and reducing disaster risks in Himalayan regions.

Mains Practice Question:

- Q. *Climate change is accelerating cryospheric instability in the Himalayas. Discuss its implications for downstream ecosystems and human settlements.*

8. Judicial Mandate Drives Environmental CSR

Space for Notes

CONTEXT:

India institutionalised Corporate Social Responsibility under the Companies Act 2013 to promote social development. Environmental concerns continue to receive limited attention despite rising climate challenges and net zero commitments. The Supreme Court has reframed environmental responsibility as a constitutional obligation rather than voluntary charity.

- **JUDICIAL INTERVENTION:** The Court invoked Article 51A g to emphasise the duty to protect the environment. It linked the right to conduct business with responsibility towards ecological restoration. Environmental protection is treated as a mandatory component of corporate conduct.
- **SKEWED CSR PATTERN:** Corporate spending remains concentrated in social sectors such as education, health, and rural development. Environmental spending remains low and insufficient to address sustainability challenges. This imbalance reflects a preference for short term and visible outcomes.
- **KEY CHALLENGES:** Corporations prioritise quick impact initiatives such as awareness campaigns over long term ecological restoration. Activities such as forest regeneration and biodiversity conservation require time, expertise, and sustained investment. There exists a significant gap between environmental damage and restoration efforts.
- **LIMITATIONS OF CURRENT APPROACH:** Plantation driven models focus on numbers rather than ecosystem health. Projects often neglect native biodiversity and ecological balance. Weak coordination with local institutions and forest departments reduces effectiveness.

STRATEGIC SHIFT REQUIRED:

- Environmental CSR must move towards ecosystem recovery rather than symbolic interventions.
- Focus should be on soil health, water conservation, and biodiversity restoration.
- Scientific planning and long-term monitoring are essential for meaningful outcomes.

WAY FORWARD:

Environmental Corporate Social Responsibility must move beyond a compliance driven approach and evolve into a core governance responsibility. This requires strengthening collaboration between corporations, government agencies, and research institutions to ensure scientifically informed interventions. Greater emphasis should be placed on restoring degraded landscapes using native species, supported by long term financing mechanisms for sustainability projects. In addition, the adoption of measurable ecological indicators such as carbon sequestration and biodiversity recovery is essential to assess impact. Integrating ecological restoration into corporate strategy is therefore critical for achieving sustainable and long-term development outcomes.

Mains Practice Question:

- Q.** Critically examine the limitations of current CSR practices in addressing environmental challenges in India. Suggest measures for a strategic shift toward ecological restoration. (15 marks, 250 words)

9. Project Cheetah

Space for Notes

Context:

- African cheetahs released in **Kuno National Park (Madhya Pradesh)** have dispersed into the **Gandhi Sagar Wildlife Sanctuary landscape (MP–Rajasthan region)**, reflecting natural movement across habitats.
- Recently, additional cheetahs translocated from Botswana have increased India's total cheetah population to around 48.

About Project Cheetah:

- It is the **world's first intercontinental large wild carnivore translocation project**.
- The objective is the **reintroduction of cheetahs in India**, after they were declared extinct in 1952.
- The **African cheetah** is classified as **Vulnerable**, while the **Asiatic cheetah** is **Critically Endangered**, now restricted to Iran with an estimated population of 30–50 individuals.



Institutional Framework

- The **National Tiger Conservation Authority (NTCA)** is the nodal implementing agency.
- The project is governed internationally under **CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora)**.

Key Features of the Project

- The **Kuno–Gandhi Sagar landscape plan** anticipates inter-state movement of cheetahs between Madhya Pradesh and Rajasthan.
- Cheetahs are **satellite-tracked using radio collars** for real-time monitoring.
- Management is carried out by **joint inter-state teams and wildlife experts**.

Behavioural Aspect:

- **Long-distance dispersal** is a natural behaviour of cheetahs as they explore territory and search for suitable habitats.
- Movement from Kuno to Gandhi Sagar reflects **normal ecological adaptation**, not abnormality.

Indian Sites:

- Major sites include **Kuno National Park** and the **Gandhi Sagar Wildlife Sanctuary landscape**.

Significance:

- **Ecological:** Helps in restoring the **grassland and savanna ecosystems** in India.
- **Diplomatic:** Strengthens **South-South cooperation** through international conservation partnerships.

Limitations / Issues:

- **Adaptation challenges** such as mismatch in seasonal patterns (e.g., winter coat development) and acclimatization to Indian conditions.
- **Survival concerns** due to mortality observed in earlier batches from Namibia and South Africa, requiring improved management strategies.

10. Hudsonian Godwit

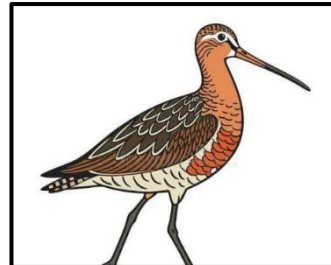
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Context:

Global conservation efforts are being strengthened to protect the Hudsonian Godwit due to risks to its long-distance migratory routes.

About Hudsonian Godwit:

- Type: Long-distance migratory shorebird (family Scolopacidae).
- Scientific Name: *Limosa haemastica*.
- Habitat: Breeds in subarctic Alaska and Canada; winters in southern South America.
- Migration: Undertakes approx 30,000 km annual round-trip migration.
- Route: Uses key wetland stopover sites (e.g., James Bay), showing migratory connectivity.
- Feeding: Probing feeder, consumes invertebrates like mollusks and crustaceans.
- Conservation Status: Vulnerable (IUCN Red List).



11. Vela carli

Context:

A freshwater crab species (*Vela carli*) found in Silent Valley exhibited both male and female biological traits.

About Gynandromorphy:

- Definition: A biological condition where an organism shows both male and female characteristics.
- Cause: Results from genetic or chromosomal anomalies during early cell division.
- Pattern: Often shows bilateral division (one half male, other female).
- Occurrence: Reported in some insects, birds, crustaceans, and rare vertebrates.
- Rarity: Extremely rare in nature, especially in vertebrates.
- Related Concept: Different from hermaphroditism (e.g., earthworms, snails possess both reproductive organs simultaneously).
- Silent Valley: Located in Palakkad district of Kerala, it is a tropical evergreen rainforest region forming part of the Nilgiri Biosphere Reserve.



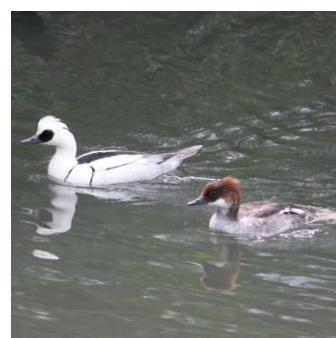
12. Eurasian Diving Duck (Smew)

Context:

The 7th waterbird census (January 2026) in Kaziranga National Park recorded the first-ever sighting of the Eurasian diving duck (Smew).

Species Profile: Smew (*Mergellus albellus*)

- Classification: Smallest Eurasian diving duck (Family: *Anatidae*).



- **Breeding Ground:** Eurasian Taiga (Northern Europe/Asia).
- **Status in India:** Rare winter visitor; typically stays in Northern/Central India
- **2026 Record:** First-ever sighting in Kaziranga (Rowmari–Donduwa wetlands).
- **Role:** Indicator Species for wetland health and climate-driven range shifts.

Space for Notes

BIRDLIFE INTERNATIONAL

Core Identity

- **Nature:** World's largest **global** partnership of NGOs (not an inter-governmental body).
- **Established:** 1922 (as ICBP); HQ in Cambridge, UK.
- **India Partner:** Bombay Natural History Society (BNHS)
- **Flagship Program:** Important Bird & Biodiversity Areas (IBA)

Conservation Authority

- **IUCN Red List:** Official scientific authority for all bird species on the Red List.
- **IBA Program:** Identifies sites of global significance for bird conservation using standardized criteria (Threatened species, Congregations, etc.).
- **Flyways:** Lead role in the **Central Asian Flyway (CAF)** and protecting migratory routes.

Important Bird Areas (IBA) Criteria

A site is an IBA if it holds:

- ☐ Globally Threatened species (CR, EN, VU).
- ☐ Restricted-range or Biome-restricted species.
- ☐ Large Congregations (e.g., 1% of a global population).

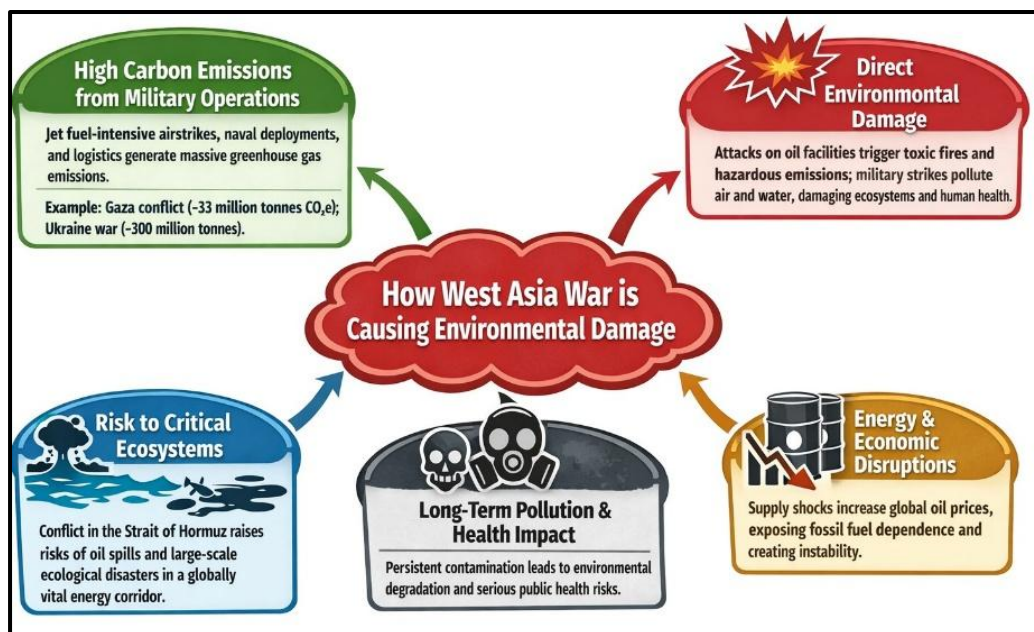
Ecological Significance & Concerns:

- **Range Shift:** The Smew's presence in Assam suggests **altered migration patterns** or habitat stress in traditional zones, likely due to climate change.
- **Global Population:** approx 130,000 (Trend: **Declining**).
- **Threats:** Habitat loss, human disturbance, and wetland degradation.
- **Migratory Route:** **Central Asian Flyway (CAF)**.
- **IBA Status:** Kaziranga is an **Important Bird Area** identified by BirdLife International.
- **Habitat:** Prefers freshwater lakes, sheltered wetlands, and floodplains.

13. Environment: Yet Another Casualty of The West Asia War

Context:

The West Asia conflict is not only a humanitarian crisis but also a major environmental challenge, with military operations, fossil fuel use, and ecosystem destruction significantly increasing emissions and ecological damage.



Space for Notes

14. Oleum Gas

Context:

A major oleum gas leak from a chemical unit in **Palghar district (MH)** led to the evacuation of over 2,600 people after dense white fumes spread across nearby areas.

Nature of the Substance:

- Definition:** Oleum is **Fuming Sulphuric Acid**. It is a solution of **Sulphur Trioxide (SO₃)** dissolved in **Sulphuric Acid (H₂SO₄)**.
- Physical Appearance:** An oily, colorless-to-dark liquid that emits **dense white fumes** upon exposure to air.

The "White Fume" Phenomenon:

- Reaction:** When Oleum leaks, the dissolved SO₃ gas reacts instantly with atmospheric moisture.
- Result:** This creates a fine mist of **Sulphuric Acid aerosol**. The "white smoke" is actually a cloud of tiny, highly corrosive acid droplets.
- Heat Generation:** The reaction is **highly exothermic** (releases significant heat), which can further volatilize the liquid and spread the plume.

Impact Profile:

Category	Effects
Health	Severe corneal burns (eyes), pulmonary edema (fluid in lungs), and chemical skin burns.
Environment	Rapid acidification of local soil/water; "acid burn" on surrounding vegetation.
Infrastructure	Highly corrosive to metals, electronics, and stone (calcium carbonate).

15. Domestic Sourcing of Solar Wafers & Ingots

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Context:

The government has extended domestic sourcing norms for solar equipment to include wafers and ingots from June 2028.

About Domestic Sourcing Policy:

- Solar Module life cycle: polysilicon → ingot → wafer → cell → module.
- Upstream (polysilicon–ingot–wafer) is weak and import-dependent, while downstream (cell–module) is relatively strong in India.
- Aims to reduce import dependence (especially on China) for wafers and ingots.
- ALMM (Approved List of Models & Manufacturers): Maintained by MNRE, lists eligible domestic manufacturers for government-backed projects.
- Introduces ALMM List-III (wafers) along with List-I (modules) and List-II (cells).
- Mandates cascading sourcing → modules must use domestic cells, and cells must use domestic wafers from approved lists.

16. Khavda Solar Project

Context:

NTPC Renewable Energy Ltd has commissioned 165 MW from the 1200 MW Khavda-II solar project in Gujarat.

About Khavda Solar Project:

- Located in Khavda (Kutch district, Gujarat) near the Rann of Kutch.
- Part of the Gujarat Hybrid Renewable Energy Park (solar + wind).
- Planned capacity: approx 30 GW expected to be the largest hybrid renewable energy park globally.
- Implemented by Gujarat govt agencies (GUVNL/GPCL) with NTPC Renewable Energy Ltd.

17. World Meteorological Organization (WMO)

Context:

The WMO highlighted rising “surplus heat” and record climate indicators in its latest State of the Global Climate report.

Key Facts:

- Establishment: 1950; specialized UN agency headquartered in Geneva, Switzerland
- Membership: 193 Member States and 6 Territories; India is a founding member
- Mandate: Coordinates meteorological, climatological, and hydrological services globally
- Data Role: Promotes free and unrestricted exchange of weather and climate data

- Reports: Publishes State of the Global Climate Report and Global Annual to Decadal Climate Update
- Recent Findings: Record global temperatures (approx 1.45–1.54°C above pre-industrial levels); ocean heat content at record highs
- Initiatives: Early Warnings for All (EW4All) and Global Framework for Climate Services (GFCS)

Space for Notes

18. Forest Survey of India (FSI)

Context:

The Forest Survey of India has halted the AI-based fortnightly deforestation alerts issued to states through the Anavaran portal.

Anavaran Deforestation Alert System:

- AI-based deforestation monitoring system developed by FSI.
- Operational since January 2024 as a pilot project.

Forest Survey of India (FSI):

- Nodal national organisation responsible for assessment and monitoring of India's forest resources.
- Functions under the Ministry of Environment, Forest and Climate Change.
- Headquartered in Dehradun.
- Established in 1981, succeeding the Pre-Investment Survey of Forest Resources (PISFR).
- Major Reports: India State of Forest Report (ISFR) - Published biennially, National Forest Inventory (NFI) reports.

WORLD HISTORY

Space for Notes

1. Historical Evolution of West Asia Conflict

Context:

The contemporary West Asia conflict involving Iran, Israel, and global powers cannot be understood without tracing its deep historical roots in colonial restructuring, Cold War rivalries, and ideological transformations.

These historical processes have shaped the region into a persistent zone of geopolitical instability, making present conflicts a continuation of long-term structural tensions rather than isolated events.

1.1 Colonial Legacy and Boundary Redrawal:

- The collapse of the Ottoman Empire after World War I (1914–1918) enabled Britain and France to redraw West Asian boundaries through the Sykes-Picot Agreement, creating artificial states that ignored ethnic, tribal, and religious realities, embedding long-term instability.
- These arbitrary borders forced diverse communities into single political units while dividing homogeneous groups across states, resulting in weak national identities, internal conflicts, and recurring instability that continues to influence regional geopolitics.
- The Balfour Declaration supported a Jewish homeland in Palestine, triggering competing territorial claims between Arabs and Jews, leading to displacement, political violence, and the institutionalization of the Arab-Israeli conflict.
- Colonial policies prioritised strategic control over legitimacy, resulting in fragile states, entrenched identity conflicts, and enduring external interference, which collectively form the structural foundation of the modern West Asian crisis.

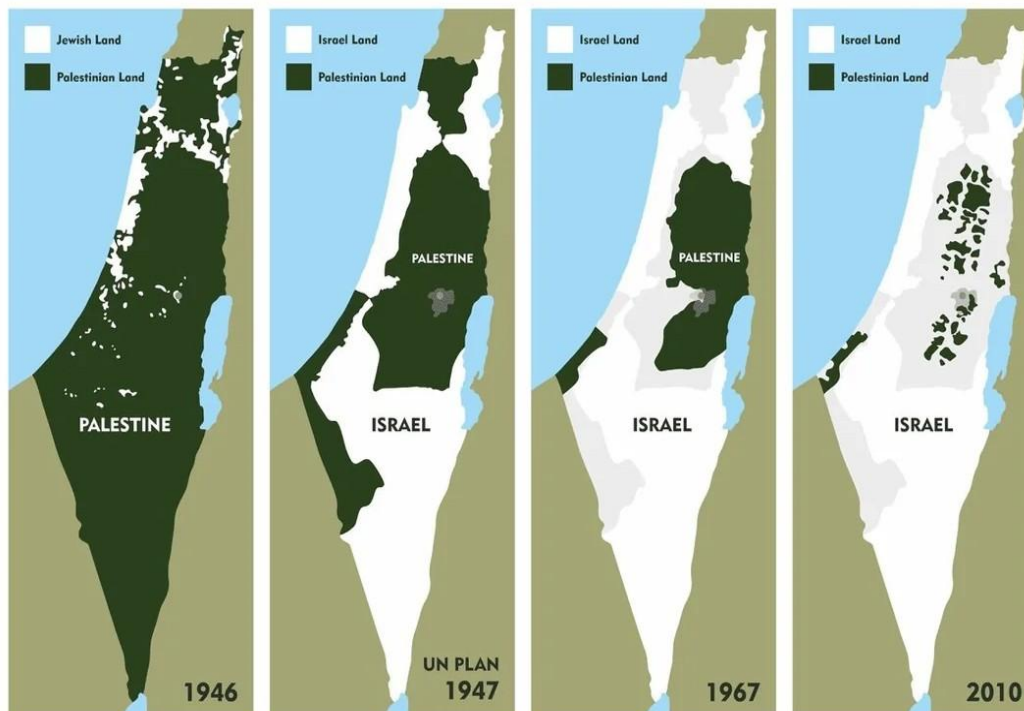
1.2 Cold War Politics (United States vs Soviet Union Influence):

- After World War II (1939–1945), West Asia became a key arena of rivalry between the United States and the Soviet Union, driven by competition over oil resources, strategic routes, and ideological influence.
- The United States supported pro-Western regimes, secured oil supplies, and strengthened ties with Israel and Gulf monarchies, while the Soviet Union backed nationalist and socialist governments such as Egypt, Syria, and Iraq, polarizing regional politics.
- Regional conflicts became proxy wars, where local disputes were amplified by external intervention, leading to militarization, regime instability, and long-term dependence on foreign powers for security and economic support.
- The Cold War entrenched external influence, expanded military capabilities, and created persistent geopolitical fault lines, which continue to shape alliances, conflicts, and strategic calculations in contemporary West Asia.

1.3 Rise of Ideological Conflicts (Iran Revolution and Israel Issue)

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- **Iranian Revolution (1979):**
 - The Iranian Revolution replaced a pro-Western monarchy with an Islamic theocratic state, introducing a strong anti-Western and anti-Israel stance, and transforming Iran into a central ideological challenger in West Asia.
 - The revolution shifted conflict dynamics from territorial disputes to ideological confrontation, promoting resistance against Western influence and supporting regional non-state actors, thereby intensifying instability and proxy conflicts.
- **Israel and Territorial Expansion:**
 - Israel was established in 1948, leading to the 1948 Arab–Israeli War, after which Israel expanded beyond the UN partition plan and displaced large Palestinian populations (Nakba).
 - In the 1967 Six-Day War, Israel captured West Bank, Gaza Strip, East Jerusalem, Sinai Peninsula, and Golan Heights, significantly expanding its territory and altering regional power dynamics.



- Following the 1973 Yom Kippur War, Israel retained key territories, later returning Sinai to Egypt under the 1979 Camp David Accords, while continuing occupation and settlement expansion in West Bank and East Jerusalem.
- Continuous settlement expansion and control over Palestinian territories have deepened the conflict, transforming it into a long-term political, humanitarian, and geopolitical issue with global implications.

Shift to Proxy and Ideological Warfare:

- The conflict evolved from conventional wars to proxy and asymmetric warfare, with Iran supporting groups such as Hezbollah and others, while Israel views Iran as an existential threat due to nuclear ambitions, missile capabilities, and regional influence.
- This transformation has converted West Asia into a complex conflict system involving ideological confrontation, non-state actors, and global strategic interests, linking regional instability with broader international security concerns.


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Summary:

Colonial boundary creation produced structurally unstable states, Cold War rivalry militarized and polarized the region, and ideological conflicts after the Iranian Revolution and Israel's expansion transformed the conflict into a hybrid, identity-driven, and globally significant geopolitical crisis.

Mains Practice Question:

- Q.** Contemporary conflicts in West Asia are a continuation of historical processes rather than isolated events. Critically analyze.

(15 marks, 250 words)

SOCIETY AND SOCIAL JUSTICE

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1. Demographic Shifts Impact India's Future

Context:

A recent report titled *"Unravelling India's Demographic Future: Population Projections for States and Union Territories, 2021–2051"* by International Institute of Migration and Development and Population Foundation of India highlights that India is entering a new demographic phase characterized by slower population growth, declining fertility rates and ageing population

Key Details:

1. Population Growth Trends:

- **Projected Increase:** India's population is expected to rise from 1,355.8 million in 2021 to 1,590.1 million by 2051.
- **Slower Growth Rate:** The average annual growth rate is projected at 0.5%, indicating a shift from rapid population expansion to a more stable demographic structure.
- **Demographic Transition:** The country is moving from a youth-led population to an ageing and urbanized demographic.

2. Impact on Education:

- **Declining Pre-Primary Population:** The number of children aged 0-4 is projected to decrease from 113.5 million in 2021 to 8.6 million by 2051.
- **School Infrastructure:** With near-universal primary school enrolment, the demand for new government schools may decline, leading to potential job losses for teachers.
- **Shift to Private Schools:** The number of private schools has increased from 2.88 lakh to 3.31 lakh, driven by parental preference for perceived better-quality education.

3. Ageing Population Concerns:

- **Elderly Population Growth:** The elderly population (60+) is projected to rise from 130.5 million (9.62%) in 2021 to 325.3 million (20.5%) by 2051.
- **Economic Implications:** The demographic dividend, reliant on the working-age population, is expected to peak around 2041 before declining, necessitating urgent economic strategies.
- **Healthcare Strain:** An increasing elderly population will place additional pressure on healthcare and social security systems.

4. Policy Recommendations:

- **Education and Skill Development:** An overhaul of the education system is essential to prepare the younger generation for future challenges and opportunities.
- **Gender Dividend:** Encouraging more women to enter the workforce can help offset the decline in the working-age population.

- **Healthcare System Redesign:** The healthcare system, particularly geriatric care, must adapt to meet the needs of an ageing population.
- **Family Planning Investments:** Continued investment in family planning and reproductive health is crucial to manage fertility rates and ensure women's reproductive rights.

5. Economic Opportunities:

- **Silver Economy Potential:** The growing elderly demographic presents opportunities for a thriving silver economy, which could unlock a second demographic dividend in the future.
- **Workforce Participation:** By enhancing access to quality employment and improving the teacher-pupil ratio, India can better leverage its demographic advantages.

Conclusion:

India's demographic landscape is undergoing significant changes that present both challenges and opportunities. By proactively addressing these shifts through targeted policies in education, healthcare, and workforce participation, India can harness its demographic potential and ensure sustainable economic growth in the coming decades.

Mains Practice Question:

- Q. India's demographic transition presents both risks and opportunities for economic growth. Analyze the concept of "silver economy" and its potential in sustaining growth. (250 words)

2. Paid Menstrual Leave

Context:

The Supreme Court expressed concerns that making **paid menstrual leave a mandatory legal right** could unintentionally harm women's career prospects, while hearing a petition seeking a **uniform law granting menstrual leave to working women and students**.

Key Highlights:

- The Supreme Court cautioned against making menstrual leave a compulsory statutory right.
- The Court noted that such a law might discourage employers from assigning important responsibilities to women.
- The Court distinguished between a legal mandate and voluntary employer policies.
- It encouraged voluntary initiatives by States and institutions instead of compulsory legislation.
- Some States such as Odisha, Karnataka, and Kerala provide menstrual leave to students in educational institutions.

Background / Historical Context:

- Menstrual leave debates in India focus on **gender equality, workplace inclusion, and health rights**.
- The **Maternity Benefit Act, 1961** currently provides maternity leave but does not include menstrual leave provisions.

Significance of providing menstrual leave policy in India:

- **Aligns with fundamental rights:** Menstrual leave could be in line with **Article 21 (Right to Life)** and **Article 14 (Right to Equality)** of the Constitution.
 - Additionally, the Constitution empowers the State to make **special provisions for women and children under Article 15(3)**.
- **Addresses the unique health needs of women:** Menstruation is accompanied by a variety of moderate to severe symptoms such as cramps and fatigue, etc., impacting women's daily lives.
 - Further, lack of proper sanitation facilities at the workplace can impact women's hygiene and reproductive health.
- **Mitigates presenteeism:** It would provide an opportunity for society and employers to reevaluate attitudes surrounding absenteeism and work ethic.



The Supreme Court highlighted the need to balance women's health rights with risks of workplace discrimination, suggesting voluntary menstrual leave policies and broader gender-sensitive reforms as a more practical and balanced approach.

Mains Practice Question:

- Q. Making paid menstrual leave a statutory right may have unintended consequences for women's employment." Critically examine in light of constitutional provisions and workplace realities in India. (250 words)

3. Andhra Pradesh's Population Management Policy

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Context:

The Andhra Pradesh government has introduced a draft Population Management Policy in the Legislative Assembly. This policy is a response to the state's declining fertility rate, which has fallen to 1.5, significantly below the replacement level of 2.1.

- The government, aims to shift the focus from "population control" to "population management" to address not only fertility rates but also the associated issues of aging, women's health, and economic productivity.

What is Total Fertility Rate (TFR)?

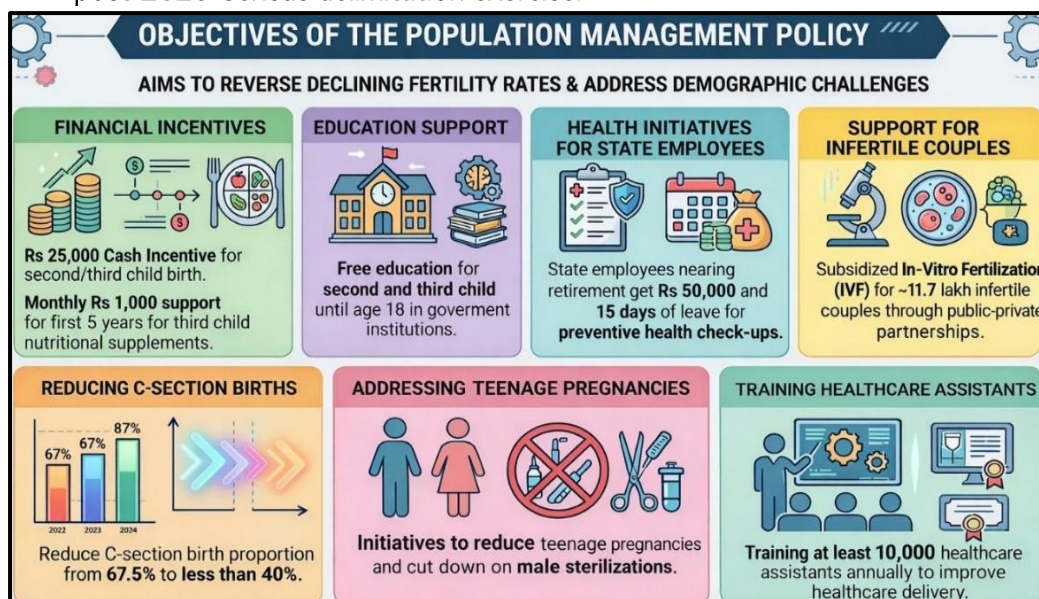
- Definition:** TFR refers to the average number of children a woman is expected to bear during her reproductive years (usually 15–49 years) under current fertility patterns.
- A TFR above 2.1 indicates population growth, around 2.1 suggests replacement-level fertility, while below 2.1 signals population decline and aging, leading to long-term socio-economic and workforce challenges for a country.

Current Demographics of Andhra Pradesh:

- Total Fertility Rate (TFR):** The TFR in Andhra Pradesh has decreased from 2.2 in 2003 to 1.5 in 2023. In comparison, India's TFR has dropped from 3 to 1.9 during the same period.
- Ageing Population:** The median age in Andhra Pradesh is 32.5 years, compared to 28.4 years for India. Nearly 10% of the population is over 60 years, projected to rise to 23% by 2047.
- Workforce Participation:** The female workforce participation in Andhra Pradesh stands at 31%, lower than the national average of 37%.

Political Context:

- Economic Impact:** Declining fertility rates may result in a smaller workforce and higher fiscal burden on the government.
- Delimitation Concern:** Tamil Nadu fears that lower population growth in southern states could reduce their parliamentary representation during the post-2026 Census delimitation exercise.



Andhra Pradesh's draft Population Management Policy shifts focus from **population control** to **management**, aiming to ensure **sustainable demographics**, **better healthcare**, and **economic productivity**, with success depending on **effective implementation** and **public support**.

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Mains Practice Question:

Q. Critically examine the shift from “population control” to “population management” in India. How can such policies address challenges of ageing, fertility decline, and workforce participation? (250 words)

4. Overcrowded and Overlooked: The Silent Epidemic in Indian Prisons
Context:

India's prisons are facing a serious public health crisis, highlighted by the HSV outbreak in Jalpaiguri Central Correctional Home (92 cases, 7 deaths). The core problem lies in overcrowding, poor hygiene, and inadequate healthcare. In essence, prisons are becoming spaces where preventable diseases spread easily, rather than institutions of correction.

Key Details:

STRUCTURAL CAUSES	CONSTITUTIONAL AND HUMAN RIGHTS PERSPECTIVE
• Slow judicial processes and limited bail • Underfunded and poorly governed prison system • Policy neglect due to low political priority • Lack of integration with public health systems This reflects a systemic governance failure rather than an isolated issue.	• Article 21 guarantees right to life and health • Prisoners retain fundamental rights • Supreme Court judgments (Sunil Batra, Hussainara Khatoon) stress humane conditions and legal aid • Nelson Mandela Rules emphasize dignity and minimum standards • Thus, the crisis is also a human rights violation. This reflects a systemic governance failure rather than an isolated issue.

OVERCROWDING TO OUTCOMES: SYSTEMIC CRISIS IN INDIAN PRISONS

OVERCROWDING PRESSURE	DISEASE BURDEN	WEAK HEALTHCARE	LEGAL DRIVERS	KEY CONSEQUENCES
PRISONS OPERATE AT 160%–400% CAPACITY, LEADING TO POOR SANITATION, CONGESTION, AND LACK OF ISOLATION FACILITIES	• TB PREVALENCE IS 5× HIGHER THAN GENERAL POPULATION • HIGHER HIV INCIDENCE • ~30% INMATES SUFFER SKIN DISEASES IN SOME PRISONS • VIRAL OUTBREAKS (E.G., HSV) HIGHLIGHT VULNERABILITY	• 43% VACANCY OF MEDICAL OFFICERS • INMATE–DOCTOR RATIO 2.6× HIGHER THAN NORMS • SEVERE SHORTAGE OF MENTAL HEALTH PROFESSIONALS	• MAJORITY INMATES ARE UNDERTRIALS • JUDICIAL DELAYS AND LIMITED BAIL INCREASE PRISON POPULATION	• RAPID SPREAD OF DISEASES • DETERIORATING MENTAL HEALTH • VIOLATION OF RIGHT TO HEALTH AND DIGNITY

Public Health Perspective:

Prison health is not an isolated concern. It has direct implications for society at large:

- Diseases originating in prisons can spread to the general population through staff, visitors, and released inmates.
- High-density prison populations act as amplifiers for infectious diseases such as tuberculosis and HIV.

Therefore, prison health must be viewed as an integral component of national public health security.

Way forward:

- **Mandatory Health Screening:** Ensure compulsory medical check-ups at entry for early detection and treatment of diseases.
- **NHM Integration:** Bring prisons under the **National Health Mission** for better resources, trained staff, and outbreak management and Strategic investment in prison infrastructure expansion.
- **Judicial Reforms:** Speed up undertrial cases, promote bail, and adopt non-custodial measures to reduce overcrowding.
- **Boost Healthcare Staff:** Fill vacancies of doctors and mental health professionals to improve inmate care.
- **Awareness & Advocacy:** Increase public and civil society engagement to push for systemic prison health reforms.

India's prison system stands at a crossroads. As the country advances technologically and economically, its correctional system needs equal attention to ensure dignity, health, and safety for all inmates, aligning with international human rights standards

Mains Practice Question:

- Q. Examine how overcrowding in prisons contributes to the spread of infectious diseases. Suggest institutional measures to integrate prison health into national public health systems.** *(15 marks, 250 words)*

5. New Accessibility Norms for Persons with Disabilities**Context:**

On March 15, 2024, the Ministry released the "Guidelines of Accessibility Standards in the Public Exhibition of Feature Films in Cinema Theatres for Persons with Hearing and Visual Impairment."

Key details:

- Cinema is a vital part of culture. However, for individuals with disabilities, particularly those with visual and hearing impairments, these experiences have often been inaccessible till now.
- Rights of Persons with Disabilities (RPWD) Act was enacted in 2017, laying the groundwork for accessibility in electronic media. Section 42 of the RPWD Act mandates that content must include accessibility features such as audio descriptions and captions.

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- Despite the legal framework, compliance was minimal, and accessibility features were often absent in mainstream films.
- After some Judicial interventions, Ministry of Information and Broadcasting formulated the recently issued guidelines for enforcing accessibility standards across the film industry.
- Accessibility is already mandatory for **multilingual films** and those applying for **National Awards**.
- A key challenge is the **delayed implementation for OTT platforms**, with a **3-year phased timeline**.

Overall, the reform promotes **social inclusion**, enabling persons with disabilities to participate in cultural and cinematic experiences.

Mains Practice Question:

- Q.** Despite a strong legal framework, accessibility for persons with disabilities in digital and media spaces remains inadequate. Examine the challenges in implementation and suggest measures to ensure compliance. (15 marks, 250 words)

6. Society and Globalisation Impact

Context:

- The ongoing West Asia conflict is not confined to geopolitics alone, as its effects extend deeply into Indian society through migration, remittances, and household energy access.
- Globalisation has tightly linked India's domestic socio-economic conditions with developments in the Gulf region, making external conflicts directly impact internal social structures.

Indian Diaspora in the Gulf:

- Approximately **1 crore (10 million) Indians** reside in Gulf countries such as United Arab Emirates, Saudi Arabia, Qatar, Kuwait, and Oman, forming one of the largest overseas Indian communities globally.
- This diaspora is concentrated in:
 - Construction and infrastructure sectors
 - Service industries
 - Healthcare and skilled professions
- The ongoing conflict exposes them to:
 - Security risks due to military escalation
 - Job losses due to economic slowdown
 - Evacuation challenges during emergencies

Remittance Dependence:

- Gulf countries are among the largest contributors to India's remittance inflows, which constitute a significant share of household incomes, particularly in states such as Kerala, Uttar Pradesh, Bihar, and West Bengal.

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- Remittances play a crucial role in:
 - Supporting rural and urban consumption
 - Financing education, healthcare, and housing
 - Reducing poverty and regional inequalities
- Conflict-induced disruptions may lead to:
 - Decline in remittance inflows
 - Financial instability for dependent families
 - Reduced consumption and local economic slowdown

Gender Impacts of Energy Crisis (LPG Shortage):

- The disruption of LPG supply due to the West Asia conflict has significant gendered implications, particularly for women in low-income households who are primary users of cooking fuel.
- Under schemes like Pradhan Mantri Ujjwala Yojana, access to clean cooking fuel has improved, but supply disruptions and rising prices force households to revert to traditional fuels such as firewood and dung.
- This reversal leads to:
 - Increased physical burden on women for fuel collection
 - Health risks due to indoor air pollution
 - Loss of time that could otherwise be used for education or income-generating activities
- Thus, the energy crisis triggered by external conflict directly undermines social welfare gains and disproportionately affects women, highlighting the intersection between global geopolitics and local social equity.

Integrated Social Impact:

- The West Asia conflict demonstrates how globalisation has interconnected:
 - Labour migration
 - Household income systems
 - Gender roles and welfare outcomes
- Consequently, external geopolitical instability translates into:
 - Domestic social vulnerability
 - Increased inequality
 - Pressure on welfare systems

Mains Practice Question:

- Q.** The benefits of globalisation are accompanied by new forms of social vulnerability." Critically analyze with reference to labour migration and remittance dependence. (15 marks, 250 words)

7. Sex Education Impacts Student Well-Being
Context:

Rising mental health issues, student suicides, and persistent stigma around sexuality in higher education have renewed focus on comprehensive sex education. The Supreme Court has repeatedly emphasized inclusive, especially transgender-sensitive, sex education and mental health safeguards.

The issue:

1. **Stigma & Silence:** Sexuality remains taboo, leading to shame, isolation, and mental health deterioration—especially among LGBTQ+ students facing institutional discrimination.
2. **Curriculum Gaps:** Existing curricula are largely **heteronormative and biomedical**, ignoring consent, sexual politics, and lived realities of diverse identities, limiting professional and social understanding.
3. **Institutional & Social Barriers:** Deep-rooted taboos, lack of trained educators, unsafe classroom environments, and discomfort in discussing intimacy hinder meaningful engagement.

Way Forward:

1. **Inclusive & Participatory Pedagogy:** Use icebreakers, small-group discussions, and interactive methods to build trust and enable open dialogue.
2. **Holistic Curriculum Reform:** Move beyond a biomedical lens to include consent, relationships, power dynamics, and cultural context—aligned with global standards like WHO.
3. **Mental Health Integration:** Develop safe spaces and peer-support systems to reduce isolation and address discrimination-linked distress proactively.

Mains Practice Question:

- Q. Evaluate the challenges in implementing comprehensive sex education in India. How can institutions overcome socio-cultural resistance?

(15 marks, 250 words)

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Geography

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1. Strategic Petroleum Reserves (SPR)

Context:

India's strategic petroleum reserve capacity of approx 5.33 million tonnes is only partially filled, with about 36% remaining unutilized.

About SPR:

- Emergency crude oil stockpile for energy security during supply disruptions. Stored in underground rock caverns for safety and strategic security.
- Concept emerged after the 1973 Oil Crisis.
- Maintained by Indian Strategic Petroleum Reserves Limited (ISPRL).
- **Storage Locations:** Phase-I: Visakhapatnam, Mangaluru, & Padur. Phase-II Expansion: Proposed at Chandikhol (Odisha) and Padur (expansion); Future sites include Bikaner (Rajasthan) and Rajkot (Gujarat).

2. Lipulekh Pass

Context:

Border trade between India and China via Lipulekh Pass is set to resume after a six-year hiatus.

Key Facts:

- Location: Pithoragarh (Uttarakhand), Kumaon Himalayas; approx 5,200 m; near India–Nepal–China (Tibet) tri-junction
- Connectivity: Provides access to Tibet Autonomous Region of China
- Border Trade: One of three India–China trade routes (along with Nathu La and Shipki La)
- Operation: Seasonal trade (June–September) with limited, regulated goods
- Other Significance: Route for Kailash Mansarovar Yatra; linked to India–Nepal Kalapani dispute



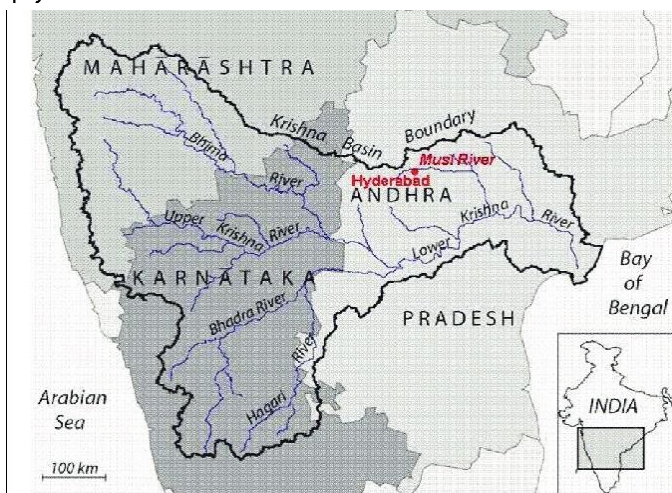
3. Musi River

Context:

The Telangana government is implementing the Musi Riverfront Development Project along the Musi River in Hyderabad.

About Musi River:

- Origin: Ananthagiri Hills, located on the eastern edge of the Deccan Plateau.
- Course: Flows eastward through Hyderabad.
- Tributary: The Musi meets the Krishna River at Wadapally
- Reservoirs: Osman Sagar and Himayat Sagar built for flood control and drinking water supply.



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4. Geomagnetic Reversal**Context:**

A recent study published in Communications Earth & Environment suggests that some geomagnetic reversals may last up to 70,000 years, longer than earlier estimates.

About Geomagnetic Reversal:

- Definition: Process in which Earth's magnetic north and south poles interchange positions.
- Origin: Caused by disturbances in the geodynamo—the motion of molten iron in the Earth's outer core that generates the magnetic field.
- Occurrence: Hundreds of reversals have occurred during Earth's geological history.
- Evidence: Alternating magnetic polarity recorded in basaltic rocks and ocean-floor sediments, forming magnetic stripes along mid-ocean ridges (e.g., Mid-Atlantic Ridge).
- Duration: Earlier estimates suggested reversals lasted approx 10,000 years, but recent research indicates some may persist 18,000–70,000 years.
- Nature: Reversal is a gradual process during which the magnetic field weakens and may temporarily develop multiple magnetic poles.

5. Mapping in News:

- **South Pars gas field (Iran) & Ras Laffan LNG hub (Qatar):** South Pars is the world's largest gas field (shared by Iran/Qatar), Ras Laffan is its primary Qatari LNG processing hub.



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- **Diego Garcia:** Diego Garcia is a major US-UK military base in Indian ocean targeted during the ongoing West Asia conflict by Iran.



ETHICS

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1. SC's Ban on NCERT Text Book

Context:

The Supreme Court banned a Class 8 NCERT textbook chapter citing concerns over references to judicial corruption and delay. This raises issues of transparency, accountability, and public trust in judiciary.

- The Court's action reflects a broader issue regarding the relationship between **the judiciary and public perception**, particularly in the context of corruption and delays in the judicial process.

Key Points:

1. Judicial Accountability and Public Trust:

- The Supreme Court's ban on the NCERT textbook is indicative of a troubling trend in judicial accountability.
- The Court's decision to punish authors without due process undermines public trust in the judiciary.
- Judicial transparency is essential for maintaining the integrity of the legal system.

2. Freedom of Speech and Censorship

- The ban on the textbook constitutes a severe form of censorship, infringing upon the right to freedom of speech as guaranteed by Article 19 of the Indian Constitution.
- Judicial orders do not equate to laws made by the state, and thus cannot justify restrictions on free speech.
- The lack of a legal basis for the ban raises questions about the Court's adherence to constitutional principles.

3. Criteria for Contempt of Court:

- The Court's decision did not adequately address whether mere references to corruption and delays in the judiciary met the threshold for contempt of court.

4. Global Perspectives on Judicial Reform:

- In advanced democracies, **judicial credibility is a priority**, with various reforms aimed at enhancing transparency and accountability. The Kenyan judiciary's reforms serve as a successful model, demonstrating that acknowledging issues leads to increased public trust.

5. Judicial Integrity and Corruption:

- The judiciary must confront its internal challenges, including corruption and delays, to maintain public confidence. The Supreme Court has previously recognized the need for high standards of conduct among judges, emphasizing that even a single dishonest judge can tarnish the entire system.

6. The Role of Dissent, Acknowledgement and Reform:

- An effective judiciary must remain open to dissent and reform, as suppressing criticism weakens democratic discourse. Acknowledging institutional weaknesses is necessary for meaningful reform and for fostering an informed and accountable society.

Recommendations:

- **Promote Judicial Transparency:** Establish mechanisms for public engagement and feedback on judicial processes.
- **Encourage Open Dialogue:** Foster a culture where dissenting opinions are welcomed and considered in judicial deliberations.
- **Implement Reforms:** Learn from global best practices to enhance judicial accountability and public trust.
- **Educate Civil Society:** Increase awareness about judicial challenges and the importance of transparency in governance.

The NCERT book ban highlights a deeper tension between **judicial authority and democratic accountability**. From both governance and ethical standpoints, **credibility of the judiciary is best preserved not by suppressing criticism, but by embracing transparency, introspection, and reform.**

Mains Practice Question:

- Q.** The credibility of the judiciary is best preserved through transparency rather than suppression of criticism.” Critically analyze in the context of recent judicial interventions restricting academic content. *(15 marks, 250 words)*

2. Ethical Analysis of the West Asia Conflict

Context:

- The ongoing West Asia conflict involving Iran, Israel, and the United States raises profound ethical questions regarding the conduct of war, legitimacy of state actions, and the role of morality in international relations.

Nature of Morality in War:

- Morality in war refers to the ethical framework that governs how combatants must behave during conflict, ensuring that military necessity is balanced with humanitarian considerations and protection of non-combatants.
- Ethical conduct in war can be understood through three categories:
 - Moral actions respect human dignity, such as providing medical aid to injured enemy soldiers.
 - Immoral actions involve deliberate harm to civilians or defenseless individuals.
 - Amoral actions prioritise efficiency and outcomes while ignoring human cost.

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Core Ethical Concerns in Modern Warfare:
Reduction of Conflict to Right versus Wrong:

- Conflicts are often simplified into binary moral narratives where one side is portrayed as entirely right and the other as wrong, which obscures complex historical, political, and social realities.
- Such simplification encourages:
 - Polarisation of public opinion
 - Justification of violence
 - Reduction of space for diplomatic resolution

Punishment and Revenge as Justification:

- War is frequently justified as a form of retaliation or punishment, where violence is seen as a legitimate means of correcting perceived injustice.
- This creates cycles of escalation where:
 - Each side justifies further violence
 - Proportionality is compromised
 - Ethical restraint is weakened

Degradation of Human Beings:

- Individuals are reduced to instruments of war, where human lives are treated as expendable in pursuit of strategic objectives.
- Civilian deaths are often described as “collateral damage,” reflecting a moral shift where:
 - Efficiency overrides empathy
 - Human dignity is undermined

Individual versus Collective Identity:

- Modern conflicts tend to view individuals through the lens of collective identity such as religion, nationality, or ethnicity, rather than as independent human beings.
- This leads to:
 - Collective punishment
 - Dehumanisation of entire populations
 - Justification of indiscriminate violence

Just War Theory as an Ethical Framework:
Philosophical Basis:

- Just War Theory, developed by thinkers such as Augustine of Hippo and Thomas Aquinas, seeks to reconcile the moral prohibition of violence with the necessity of war in certain circumstances.
- It attempts to balance:
 - The moral wrong of taking human life
 - The duty of states to defend citizens
 - The need to protect innocent life and uphold justice

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Key Principles:**Jus ad Bellum (Justice Before War):**

- War must satisfy conditions such as:
 - Just cause
 - Right intention
 - Legitimate authority
 - Proportionality

Jus in Bello (Justice During War):

- Ethical conduct during war requires:
 - Distinction between combatants and civilians
 - Proportionality in use of force

Purpose of Just War Theory:

- The theory aims to:
 - Guide states toward ethical decision-making
 - Prevent unnecessary wars by imposing strict conditions
 - Encourage peaceful alternatives to conflict

Importance of Ethics in War:

- Ethical norms protect non-combatants, including civilians, prisoners of war, and medical personnel, thereby preserving human dignity even in extreme situations.
- Ethical conduct helps maintain civilised standards by restricting the use of weapons and tactics that cause unnecessary suffering.
- It facilitates post-war reconciliation by reducing bitterness and enabling rebuilding and cooperation.
- Adherence to ethical norms enhances global legitimacy and strengthens international support for states.

Challenges in Implementation of War Ethics:**Involvement of Non-State Actors:**

- Terrorist organisations and insurgent groups often operate outside legal and moral frameworks, frequently targeting civilians and violating established norms.

Violation of Distinction Principle:

- In modern conflicts, especially urban warfare, civilians are frequently caught in crossfire, making it difficult to clearly separate combatants from non-combatants.

Technological Advancements:

- Advanced weapons such as drones, precision-guided missiles, and autonomous systems raise concerns about:
 - Reduced human accountability
 - Difficulty in maintaining proportionality

Limited Global Governance:

- International institutions often lack enforcement power, making it difficult to ensure compliance with humanitarian norms.

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Additional Ethical Challenges:

- Fog of war and intelligence failures can lead to unintended civilian casualties.
- Dehumanisation through propaganda weakens moral restraints.
- Political pressure may prioritise quick military success over ethical considerations.

Key Ethical Principles in Warfare

- The principle of distinction requires separation between combatants and civilians at all times.
- The Martens Clause ensures protection based on humanity and public conscience even when laws are incomplete.
- Jus post bellum emphasises justice after war, including reconstruction and reconciliation.
- Moral injury highlights the psychological trauma experienced by soldiers who violate ethical norms.

Ethical Analysis of the Current West Asia Conflict:
Violation of Civilian Protection Norms:

- Incidents such as attacks on civilian infrastructure, including schools and hospitals, represent clear violations of international humanitarian law and ethical principles of distinction and proportionality.

Pre-emptive Strike and Moral Legitimacy

- The justification of pre-emptive strikes raises ethical concerns, as it prioritises hypothetical future threats over immediate human costs, thereby challenging the principle of just cause.

War as Performance of Power

- Modern warfare increasingly appears as a demonstration of military capability rather than a pursuit of clear political objectives, leading to ethical concerns about the instrumentalisation of violence.

Global Ethical Inconsistency:

- Selective condemnation and inconsistent application of moral standards by global powers undermine the credibility of international ethics and weaken the rule-based global order.

India's Ethical Position:

- India emphasises dialogue, diplomacy, and peaceful resolution, reflecting its commitment to ethical foreign policy principles.
- Its approach seeks to balance:
 - National interests such as energy security and diaspora protection
 - Moral commitments to global peace and humanitarian values

Way Forward: Strengthening Ethics in War:

- Strengthening international cooperation and enforcement of humanitarian laws such as the Geneva Conventions is essential.
- Advocacy for arms control and disarmament can reduce the use of weapons causing disproportionate harm.

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- Investment in peacebuilding and conflict resolution can address root causes of conflict.
- Establishing enforceable codes of conduct for militaries can ensure accountability.
- Enhancing human rights monitoring systems can improve documentation and response to violations.

Conclusion:

- The West Asia conflict demonstrates that war is not merely a strategic or political phenomenon but a profound ethical challenge that tests the values of humanity.
- Ethical conduct in war is essential to preserve human dignity, maintain global order, and ensure that the pursuit of security does not come at the cost of fundamental moral principles.

Quote:

- “There is nothing that war has ever achieved that we could not better achieve without it. All the art of living lies in a fine mingling of letting go and holding on.” – H. Havelock Ellis

Mains Practice Question:

- Q.** Discuss the relevance of Just War Theory in evaluating the ethical legitimacy of contemporary conflicts. *(15 marks, 250 words)*

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Miscellaneous

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1. World Happiness Report

Context:

The World Happiness Report 2026 ranked Finland as the happiest country and flagged the adverse impact of excessive social media use on well-being.

About World Happiness Report:

- Published by UN Sustainable Development Solutions Network (SDSN).
- Uses self-reported life evaluation (0–10 scale).
- Key indicators: income, social support, life expectancy, freedom, generosity, corruption perception.
- Rankings use 3-year averaged data.
- India's Rank (2026): 126th.

2. United States Commission on International Religious Freedom (USCIRF)

Context:

The Ministry of External Affairs criticized the latest USCIRF report for presenting a distorted picture of India.

About USCIRF:

- Nature: Independent, bipartisan U.S. federal commission.
- Monitors religious freedom conditions globally and reports violations.
- Function: Recommends designation of Countries of Particular Concern (CPCs).
- Powers: Advisory only; recommendations are not binding on the U.S. government.
- Reports: Publishes annual reports submitted to the U.S. President and Congress.
- Concern on India: Highlighted alleged religious freedom violations and suggested targeted sanctions on certain entities.

3. World Obesity Atlas 2026

Context:

According to the World Obesity Atlas 2026, India ranks 2nd globally (after China) in the number of overweight and obese children aged 5–19 years.

About World Obesity Atlas:

- Publisher: World Obesity Federation.
- Nature: Global analytical report tracking obesity trends, health risks and projections.
- Coverage: Provides country-wise data and projections up to 2040 on overweight, obesity and related diseases.

Major Drivers of Childhood Obesity	Associated Health Risks
Ultra-processed foods & sugary drinks	Type-2 Diabetes
Sedentary lifestyle / physical inactivity	Hypertension
Urbanisation and lifestyle changes	Cardiovascular diseases
Aggressive marketing of unhealthy foods to children	Higher probability of adult obesity

Space for Notes

4. World Athletics Indoor Championships 2028

Context:

Bhubaneswar (Odisha) has been selected to host the World Athletics Indoor Championships 2028.

About World Athletics Indoor Championships:

- Organized by World Athletics (global governing body for athletics). Held biennially (every 2 years).
- Features indoor track & field events (shorter tracks, typically 200 m indoor track).
- Includes events like sprints, hurdles, jumps, throws, combined events.
- India will host the event for the first time.

Additional information:

- India will also host the 2030 Commonwealth Games (Ahmedabad) and has bid for the 2036 Olympic Games (proposed Ahmedabad).

Prelims Practice Questions

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1. With reference to euthanasia in India, consider the following statements:
 1. Active euthanasia is legally permitted under certain judicial safeguards in India.
 2. Passive euthanasia involves withdrawal or withholding of life-sustaining treatment.
 3. The Supreme Court of India has recognized the validity of living wills or advance directives.
 4. The right to die with dignity has been interpreted as part of Article 21.
 Which of the statements given above are correct?
 - (a) 2, 3 and 4 only
 - (b) 1 and 2 only
 - (c) 2 and 4 only
 - (d) 1, 3 and 4 only

2. With reference to the Transgender Persons (Protection of Rights) Amendment Bill, 2026, consider the following statements:
 1. The Bill removes the recognition of self-perceived gender identity provided under the 2019 Act.
 2. It proposes that a certificate of identity be issued solely on the basis of self-declaration without any medical intervention.
 3. It introduces stringent penal provisions for offences such as forced conversion and exploitation of transgender persons.
 4. The Bill is fully consistent with the principles laid down in NALSA v. Union of India.
 How many of the statements given above are correct?
 - (a) Only one
 - (b) Only two
 - (c) Only three
 - (d) All four

3. With reference to the “creamy layer” criterion for Other Backward Classes (OBCs), consider the following statements:
 1. The concept of creamy layer was introduced by the Supreme Court in Indra Sawhney v. Union of India.
 2. The creamy layer income limit for OBCs is determined solely based on individual income of the candidate.
 3. Children of Group A government officers are automatically classified under creamy layer irrespective of parental income.
 Which of the statements given above is/are correct?
 - (a) 1 and 2 only
 - (b) 1 and 3 only
 - (c) 2 and 3 only
 - (d) 1, 2 and 3

	Space for Notes
4. Consider the following statements regarding regulation of social media usage by minors: 1. Imposing a blanket ban on minors' access to social media may raise concerns related to the right to freedom of speech and expression under Article 19(1)(a) of the Indian Constitution. 2. Child protection laws in India exclusively focus on punitive measures and do not include preventive or regulatory mechanisms. 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 5. With reference to the Finance Commission of India, consider the following statements: 1. It recommends the distribution of tax revenues between the Union and the States. 2. The share of grants to Urban Local Bodies (ULBs) has shown a consistent increasing trend from the 13th to the 16th Finance Commission. 3. Its recommendations are binding on the Government of India. Which of the statements given above is/are correct? (a) 1 and 2 only (b) 1 only (c) 2 and 3 only (d) 1, 2 and 3 6. With reference to parental leave provisions in India, consider the following statements: 1. The provisions relating to maternity benefits are now governed under the Code on Social Security, 2020. 2. Biological mothers are entitled to 26 weeks of paid leave for all children under the current framework. 3. There is a uniform statutory provision mandating paternity leave in both public and private sectors in India. Which of the statements given above is/are correct? (a) 1 only (b) 1 and 2 only (c) 2 and 3 only (d) 1, 2 and 3	

- 7.** Which of the following countries border the Strait of Hormuz?
1. Iran
 2. Oman
 3. United Arab Emirates
 4. Saudi Arabia
- Select the correct answer:
- (a) 1 and 2 only
 - (b) 1, 2 and 3 only
 - (c) 2 and 4 only
 - (d) 1, 2, 3 and 4
- 8.** With reference to the Durand Line, consider the following statements:
1. It forms the international boundary between Pakistan and Afghanistan.
 2. It was demarcated during British colonial rule in India.
 3. It is officially recognized by Afghanistan as a permanent border.
- Which of the statements given above is/are correct?
- (a) 1 and 3 only
 - (b) 2 only
 - (c) 1 and 2 only
 - (d) 1, 2 and 3
- 9.** Which of the following best describes Total Fertility Rate (TFR)?
- (a) The number of births per 1,000 population in a year
 - (b) The average number of children a woman is expected to have during her reproductive years
 - (c) The number of women in the reproductive age group in a population
 - (d) The ratio of working population to dependent population
- 10.** With reference to India's fertiliser sector, consider the following statements:
1. India is self-sufficient in urea production.
 2. India imports almost all of its potash requirements.
 3. Natural gas is a key input in fertiliser production.
- Which of the statements given above is/are correct?
- (a) 1 and 2 only
 - (b) 2 and 3 only
 - (c) 1 and 3 only
 - (d) 1, 2 and 3

Space for Notes

- 11.** With reference to the Essential Commodities Act, 1955, consider the following statements:
1. It empowers the government to regulate production, supply, and distribution of essential commodities.
 2. Section 3 allows the government to control prices and allocate commodities during crises.
 3. It is applicable only to agricultural commodities.
- Which of the statements given above is/are correct?
- (a) 1 and 2 only
 - (b) 2 only
 - (c) 1 and 3 only
 - (d) 1, 2 and 3
- 12.** Consider the following statements regarding farm loan waivers:
1. They improve long-term credit culture in the agricultural sector.
 2. They can reduce banks' willingness to lend to farmers.
 3. They may crowd out productive public expenditure.
- Which of the statements given above is/are correct?
- (a) 2 and 3 only
 - (b) 1 and 2 only
 - (c) 1 only
 - (d) 1, 2 and 3
- 13.** The Corruption Perceptions Index (CPI) is released by:
- (a) World Bank
 - (b) Transparency International
 - (c) United Nations Development Programme
 - (d) International Monetary Fund
- 14.** With reference to the Washington Consensus, consider the following statements:
1. It emphasized liberalisation, privatisation, and deregulation.
 2. It promoted greater state control over industries.
 3. It encouraged fiscal discipline and trade openness.
- Which of the statements given above is/are correct?
- (a) 1 and 3 only
 - (b) 2 only
 - (c) 1 and 2 only
 - (d) 1, 2 and 3

Space for Notes

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15. With reference to India's Ethanol Blending Programme (EBP), consider the following statements: 1. It aims to reduce dependence on imported crude oil. 2. Ethanol is blended with diesel under the programme. 3. It helps in reducing greenhouse gas emissions. Which of the statements given above is/are correct? (a) 1 and 3 only (b) 2 only (c) 1 and 2 only (d) 1, 2 and 3 16. With reference to GLP-1 receptor agonists, consider the following statements: 1. They mimic gut hormones that regulate appetite and insulin secretion. 2. They are primarily used for treating infectious diseases. 3. They help in improving blood glucose control. Which of the statements given above is/are correct? (a) 1 and 3 only (b) 2 only (c) 1 and 2 only (d) 1, 2 and 3 17. With reference to Thorium-based nuclear energy, consider the following statements: 1. Thorium is a fissile material. 2. It can be converted into Uranium-233 in nuclear reactors. 3. India has one of the largest thorium reserves in the world. Which of the statements given above is/are correct? (a) 1 and 2 only (b) 2 and 3 only (c) 1 and 3 only (d) 1, 2 and 3 18. Atomic clocks used in satellites are important because they: (a) Generate power for satellites (b) Enable precise time measurement for navigation (c) Control satellite propulsion (d) Detect space debris 19. Human Papillomavirus (HPV) is primarily associated with: (a) Tuberculosis (b) Cervical cancer (c) Diabetes (d) Malaria	

- 20.** With reference to “Gravity Bombs”, consider the following statements:
1. They are powered missiles with onboard propulsion systems.
 2. They can be converted into precision-guided munitions using GPS-based kits.
 3. Their deployment requires aircraft to operate within enemy air defence range.
- Which of the statements given above is/are correct?
- (a) 1 and 3 only
 - (b) 1 and 2 only
 - (c) 2 and 3 only
 - (d) 1, 2 and 3
- 21.** With reference to Tuberculosis (TB) in India, consider the following statements:
1. TB is caused by a virus and spreads through contaminated water.
 2. CBNAAT and TrueNat are used for rapid TB diagnosis.
 3. Undernutrition is a significant risk factor for TB incidence.
- Which of the statements given above is/are correct?
- (a) 2 and 3 only
 - (b) 1 and 2 only
 - (c) 1 and 3 only
 - (d) 1, 2 and 3
- 22.** With reference to the Aravalli Range, consider the following statements:
1. It is one of the oldest fold mountain ranges in the world.
 2. It runs from Gujarat to Delhi.
 3. It acts as a natural barrier against desertification from the Thar Desert.
- Which of the statements given above is/are correct?
- (a) 1 and 2 only
 - (b) 2 and 3 only
 - (c) 1 and 3 only
 - (d) 1, 2 and 3
- 23.** With reference to India’s Carbon Credit Program announced in Union Budget 2026, consider the following statements:
1. The ₹20,000 crore allocation is primarily aimed at Carbon Capture, Utilisation and Storage (CCUS) in industrial sectors.
 2. Agriculture is a major focus of CCUS as it allows direct capture of methane emissions at source.
 3. Farmers can participate in carbon credit markets through practices like soil carbon sequestration and agroforestry.
- Which of the statements given above is/are correct?
- (a) 1 and 3 only
 - (b) 1 and 2 only
 - (c) 2 and 3 only
 - (d) 1, 2 and 3

Space for Notes

24. With reference to the Tropical Forest Forever Facility (TFFF), consider the following statements:

1. It provides payments to countries for maintaining existing forest cover.
2. It is based entirely on traditional donor-funded aid mechanisms.
3. It aims to create a self-sustaining global fund using investment returns.

Which of the statements given above is/are correct?

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

25. With reference to the Belém Adaptation Indicators, consider the following statements:

1. They are legally binding targets for all countries under the Paris Agreement.
2. They include metrics related to water, food, and health sectors.
3. They aim to track global progress on climate adaptation.

Which of the statements given above is/are correct?

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

26. With reference to satellite monitoring of glaciers, consider the following statements:

1. It can detect changes in snow cover and exposed ice surfaces.
2. It helps in identifying potential early warning signals of glacier instability.
3. It can completely eliminate glacier-related disasters.

Which of the statements given above is/are correct?

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

Space for Notes

Answers

1. Answer: A

Explanation:

- **Statement 1 is incorrect:** Active euthanasia (deliberate act to end life) is not legally permitted in India. Only passive euthanasia is allowed under strict judicial safeguards.
- **Statement 2 is correct:** Passive euthanasia involves withholding or withdrawing life-sustaining treatment (e.g., ventilator support) in certain medical conditions.

- **Statement 3 is correct:** The Supreme Court has recognized the validity of **living wills (advance directives)** in cases like **Common Cause (2018)**, allowing individuals to decide future medical care.
- **Statement 4 is correct:** The **right to die with dignity** has been interpreted as part of **Article 21 (Right to Life)** by the Supreme Court.

2. **Answer: B**

Explanation:

- **Statement 1 is incorrect:** The Amendment Bill does **not remove recognition of self-perceived gender identity**; rather, it seeks to **modify/clarify the certification framework**, while continuing to acknowledge identity rights.
- **Statement 2 is correct:** The Bill moves towards strengthening **self-declaration** by reducing or removing the need for **medical intervention**, aligning more closely with **dignity and autonomy principles**.
- **Statement 3 is correct:** It introduces **stronger penal provisions** for offences such as **forced conversion, abuse, and exploitation**, enhancing **legal protection** for transgender persons.
- **Statement 4 is incorrect:** While the Bill attempts alignment, it is **not fully consistent with NALSA v. Union of India (2014)**, as debates remain regarding procedural requirements and state oversight vs absolute self-identification.

3. **Answer: (b)**

Explanation:

- **Statement 1 is correct:** The concept of “**creamy layer**” was introduced by the Supreme Court in **Indra Sawhney v. Union of India (1992)** to exclude the advanced sections of OBCs from reservation benefits.
- **Statement 2 is incorrect:** The **creamy layer criterion** is **not based solely on the individual income of the candidate**; it is primarily determined based on **parental income and status (occupation, rank, etc.)**.
- **Statement 3 is correct:** Children of **Group A (Class I) officers** are generally classified under the **creamy layer**, **irrespective of income**, due to their **high social and administrative status**.

4. **Answer: A**

Explanation:

- **Statement 1 is correct:** A **blanket ban on minors' access to social media** can raise concerns under **Article 19(1)(a)**, which guarantees **freedom of speech and expression**. Although **reasonable restrictions** are allowed, a total ban may be seen as **disproportionate** and not narrowly tailored.
- **Statement 2 is incorrect:** **Child protection laws in India** (e.g., **POCSO Act, Juvenile Justice Act, IT rules**) include both **preventive and regulatory measures** along with punitive provisions; they are **not exclusively punitive**.

5. Answer: (b)

Explanation:

- Statement 1 is correct: The Finance Commission (Article 280) recommends the distribution of tax revenues between the Union and the States (vertical devolution) and among states (horizontal devolution).
- Statement 2 is incorrect: The share of grants to Urban Local Bodies (ULBs) has not shown a strictly consistent increasing trend across Finance Commissions; allocations vary based on recommendations, fiscal priorities, and criteria used.
- Statement 3 is incorrect: The recommendations of the Finance Commission are advisory, not binding on the Government of India, though they are generally given significant weight.

6. Answer: (a)

Explanation:

- Statement 1 is correct: Provisions relating to maternity benefits have been subsumed under the Code on Social Security, 2020, which consolidates earlier laws like the Maternity Benefit Act, 1961.
- Statement 2 is incorrect: 26 weeks of paid maternity leave is available only for the first two children; for subsequent children, it is reduced (12 weeks).
- Statement 3 is incorrect: There is no uniform statutory provision mandating paternity leave across both public and private sectors in India. Limited provisions exist for government employees, but not universally.

7. Answer: (b)

Explanation

The Strait of Hormuz is bordered by:

- Iran on the north
- Oman (Musandam Peninsula) and partly the United Arab Emirates (UAE) on the south



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8. Answer: A Explanation: • Statement 1 is correct: The Durand Line forms the de facto international boundary between Pakistan and Afghanistan (though disputed). • Statement 2 is correct: It was demarcated in 1893 during British colonial rule in India between Sir Mortimer Durand (British India) and Amir Abdur Rahman Khan of Afghanistan. • Statement 3 is incorrect: Afghanistan has not officially recognized the Durand Line as a permanent international border, making it a contentious boundary. 9. Answer: (b) Explanation • Option (a) is incorrect: This describes the Crude Birth Rate (CBR)—number of births per 1,000 population in a year. • Option (b) is correct: Total Fertility Rate (TFR) is the average number of children a woman is expected to have during her reproductive years (15–49 years), based on current fertility patterns. • Option (c) is incorrect: This refers to the size of the reproductive-age female population, not fertility. • Option (d) is incorrect: This describes the dependency ratio, which measures the ratio of dependents to the working-age population. 10. Answer: B Explanation: • Statement 1 is incorrect: India is not fully self-sufficient in urea production; it still imports a portion of its urea demand, although domestic capacity has increased in recent years. • Statement 2 is correct: India imports almost all of its potash (K) requirements, as it has very limited domestic reserves. • Statement 3 is correct: Natural gas is a key input (feedstock) in the production of urea fertiliser. 11. Answer: A Explanation: • Statement 1 is correct: The Essential Commodities Act, 1955 empowers the government to regulate production, supply, and distribution of essential commodities to ensure availability and prevent hoarding/black marketing. • Statement 2 is correct: Section 3 of the Act gives the government wide powers to control prices, impose stock limits, regulate movement, and allocate commodities, especially during crises like shortages, inflation, or emergencies. • Statement 3 is incorrect: The Act is not limited to agricultural commodities; it also covers items like petroleum products, drugs, fertilizers, etc.	Space for Notes
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12. Answer: (a) Explanation: - Statement 1 is incorrect: Farm loan waivers tend to weaken credit discipline rather than improve it, as borrowers may expect future waivers (moral hazard). - Statement 2 is correct: Loan waivers can make banks more cautious and reduce their willingness to lend to farmers due to repayment uncertainty. - Statement 3 is correct: They impose a fiscal burden on governments, potentially crowding out productive expenditure like infrastructure, irrigation, or health.	
13. Answer: (b) Explanation: The Corruption Perceptions Index (CPI) is an annual index published by Transparency International, a global civil society organization headquartered in Berlin. Key Points about CPI: Measures: Perceived levels of public sector corruption in countries. Scale: 0 to 100 0 → Highly corrupt 100 → Very clean Basis: Expert assessments and opinion surveys (not direct measurement of corruption). Coverage: Around 180+ countries.	
14. Answer: A Explanation: - Statement 1 is correct: The Washington Consensus emphasized liberalisation, privatisation, and deregulation (LPG reforms) as key policy prescriptions for economic growth. - Statement 2 is incorrect: It did not promote greater state control; instead, it advocated reducing the role of the state in economic activities. - Statement 3 is correct: It encouraged fiscal discipline, trade openness, tax reforms, and market-oriented policies.	
15. Answer: (a) Explanation: - Statement 1 is correct: The Ethanol Blending Programme (EBP) aims to reduce dependence on imported crude oil by substituting petrol with ethanol-blended fuel. - Statement 2 is incorrect: Ethanol is blended with petrol, not diesel. - Statement 3 is correct: Ethanol blending helps in reducing greenhouse gas emissions, as ethanol is a cleaner, renewable biofuel compared to fossil fuels.	

	Space for Notes
16. Answer: (a) Explanation: - Statement 1 is correct: GLP-1 receptor agonists mimic the action of the GLP-1 hormone (incretin), which helps regulate appetite, insulin secretion, and gastric emptying. - Statement 2 is incorrect: They are not used for infectious diseases; they are mainly used in the management of Type 2 Diabetes and obesity. - Statement 3 is correct: These drugs help in improving blood glucose control by increasing insulin secretion and reducing glucagon levels.	
17. Answer: A Explanation: - Statement 1 is incorrect: Thorium (Th-232) is not a fissile material; it is a fertile material. It cannot sustain a chain reaction on its own. - Statement 2 is correct: Thorium can absorb a neutron and be converted into Uranium-233 (U-233), which is a fissile material used for nuclear energy generation. - Statement 3 is correct: India has one of the largest thorium reserves in the world, particularly in monazite sands along coastal regions (Kerala, Tamil Nadu, Odisha).	
18. Answer: B Explanation: Atomic clocks are extremely accurate timekeeping devices used in satellite systems like GPS, GLONASS, and NavIC. Why are atomic clocks important? - Satellite navigation works on the principle of time delay. - Signals are sent from satellites to receivers (like your phone). - The exact travel time of the signal is used to calculate distance: - Distance = Speed of light × Time taken - Even a tiny error (like a microsecond) can cause huge location errors (kilometers!).	
19. Answer: (b) Explanation: Human Papillomavirus (HPV) is a group of viruses, some of which are sexually transmitted and strongly linked to cancer development, especially: Cervical cancer (cancer of the cervix in women) - High-risk HPV types (especially HPV-16 and HPV-18) cause ~70% of cervical cancer cases worldwide. - Persistent infection with these strains leads to abnormal cell growth, which can turn cancerous over time.	

20. Answer: C

Explanation:

- Statement 1 is incorrect: Gravity bombs are unguided, free-fall bombs and do not have onboard propulsion systems. They rely on gravity after being released from aircraft.
- Statement 2 is correct: They can be converted into precision-guided munitions (PGMs) by adding GPS/laser guidance kits (e.g., JDAM-type kits), improving accuracy.
- Statement 3 is correct: Since gravity bombs are dropped from aircraft and lack propulsion, the aircraft typically needs to enter or come close to enemy air defence zones, increasing operational risk.

21. Answer: (a)

Explanation:

- Statement 1 is incorrect: Tuberculosis (TB) is caused by the bacterium *Mycobacterium tuberculosis*, not a virus. It spreads mainly through airborne droplets when an infected person coughs or sneezes—not through contaminated water.
- Statement 2 is correct: CBNAAT (Cartridge-Based Nucleic Acid Amplification Test) and TrueNat are rapid molecular diagnostic tools used to detect TB and drug resistance.
- Statement 3 is correct: Undernutrition is a major risk factor for TB, as it weakens immunity and increases susceptibility to infection.

22. Answer: (d)

Explanation:

- Statement 1 is correct: The Aravalli Range is among the oldest fold mountain systems in the world, formed during the Precambrian era and now highly eroded.
- Statement 2 is correct: It extends roughly from Gujarat (near Palanpur) through Rajasthan to Haryana and Delhi, forming a southwest–northeast alignment.
- Statement 3 is correct: The Aravallis act as a natural ecological barrier against the eastward expansion of the Thar Desert, helping to check desertification and supporting climatic stability in northwestern India.

23. Answer: (a)

Explanation:

- Statement 1 is correct: The allocation under India's Carbon Credit Programme (Budget 2026) is largely aimed at promoting Carbon Capture, Utilisation and Storage (CCUS), especially in hard-to-abate industrial sectors like steel, cement, and energy.

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- Statement 2 is incorrect: CCUS is primarily relevant to industrial emissions (CO₂), not agriculture. Methane emissions in agriculture (e.g., livestock, paddy fields) are addressed through **management practices**, not direct CCUS capture at source.
- Statement 3 is correct: Farmers can participate in **carbon markets** through practices such as **soil carbon sequestration**, **agroforestry**, **regenerative agriculture**, and **improved land management**, earning **carbon credits**.

24. Answer: C

Explanation:

- Statement 1 is correct: The Tropical Forest Forever Facility (TFFF) is designed to provide **financial incentives** to countries for **preserving existing tropical forests**, not just reducing deforestation.
- Statement 2 is incorrect: It is **not based entirely on traditional donor-funded aid**. Instead, it aims to move beyond aid by using **innovative financial mechanisms**.
- Statement 3 is correct: TFFF proposes a **self-sustaining global fund**, where **investment returns** are used to generate continuous payments for forest conservation.

25. Answer: B

Explanation:

- Statement 1 is incorrect: The Belém Adaptation Indicators are **not legally binding targets**. They are part of a **monitoring and assessment framework**, not enforceable obligations under the Paris Agreement.
- Statement 2 is correct: They include **sectoral metrics** related to **water, food, health, ecosystems, and infrastructure**, reflecting key areas of climate adaptation.
- Statement 3 is correct: Their primary purpose is to **track and assess global progress on climate adaptation**, helping in evaluation under mechanisms like the Global Stocktake.

26. Answer: (a)

Explanation:

- Statement 1 is correct: Satellite monitoring can detect **changes in snow cover, glacier extent, and exposed ice surfaces** using remote sensing technologies (e.g., optical and radar imagery).
- Statement 2 is correct: It helps identify **early warning signs of glacier instability**, such as **glacial lake formation, crevasses, and ice movement**, which are crucial for disaster preparedness.
- Statement 3 is incorrect: Satellite monitoring **cannot completely eliminate glacier-related disasters**; it can only **improve prediction, monitoring, and risk mitigation**, not prevent natural hazards entirely.



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