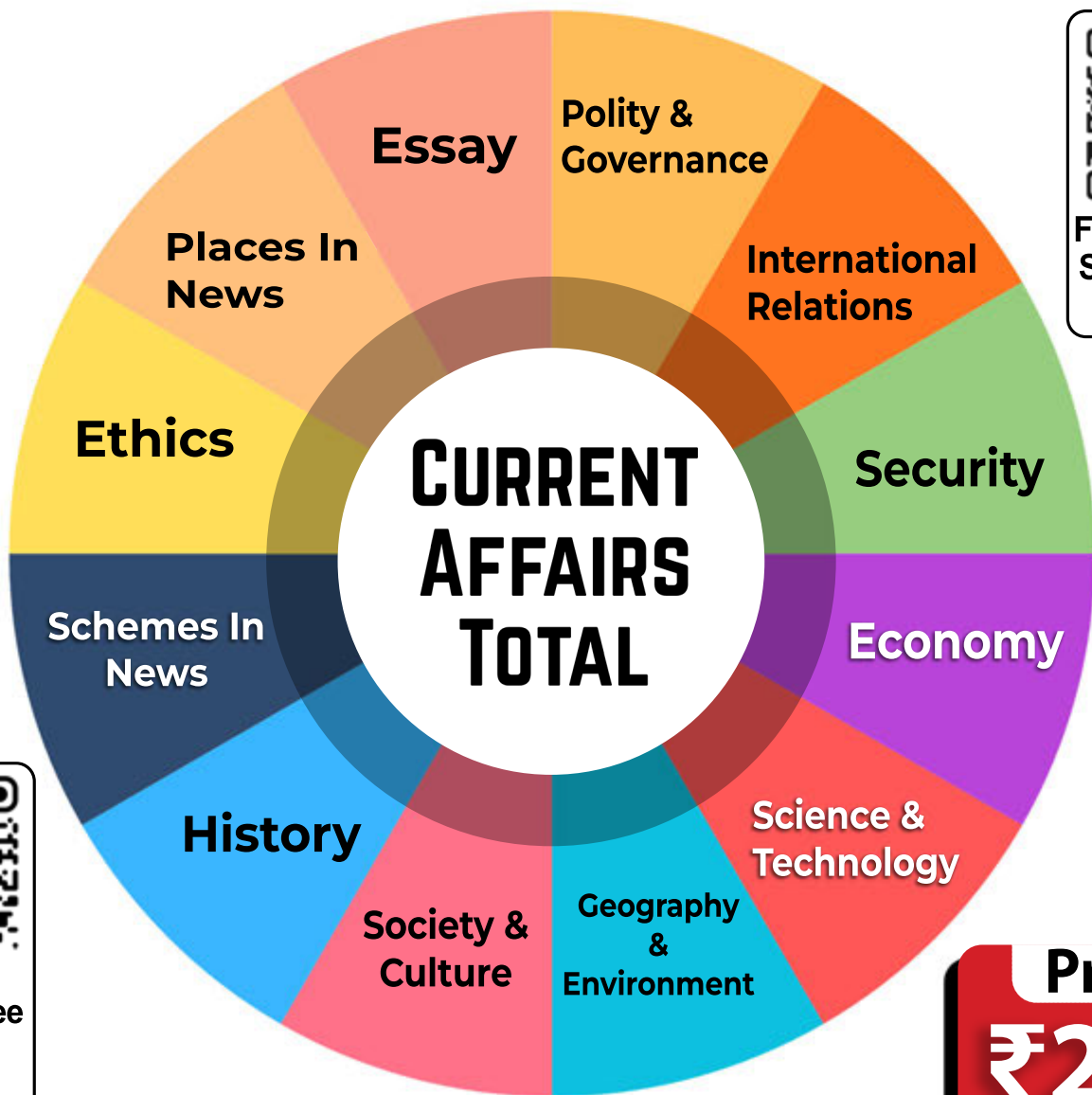




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POLITY & GOVERNANCE

1. Anti-Defection Law in India

Context

The recent defection of multiple Rajya Sabha MPs from the Aam Aadmi Party to the Bharatiya Janata Party has reignited debate over the effectiveness and interpretation of India's anti-defection law.

Q1. What is the constitutional basis and key objective of the Anti-Defection Law under the Tenth Schedule in India?

1. The anti-defection law is enshrined in the **Tenth Schedule of the Constitution**, inserted through the **52nd Constitutional Amendment Act, 1985**.
2. Its **primary objective** is to **prevent political defections** motivated by personal gain, which can destabilise governments and undermine democratic mandates.
3. The law seeks to **ensure party discipline** in legislatures by disqualifying members who voluntarily give up party membership or defy the party whip.
4. Thus, it aims to **balance political stability** with ethical conduct in representative democracy.

Q2. How did the 91st Constitutional Amendment Act, 2003 strengthen the Anti-Defection Law and address earlier loopholes?

1. The **91st Amendment** introduced **stricter provisions** to curb misuse of earlier loopholes.
2. It replaced the **earlier one-third "split" provision with a two-thirds requirement**, making defections valid only if a substantial majority supports a merger.
3. It also capped the **size of the Council of Ministers at 15% of the strength** of the legislature, reducing incentives for office-based defections.
4. Additionally, the removal of the split provision closed a major loophole that had enabled frequent and opportunistic party switching.

Q3. What are the major criticisms of the Anti-Defection Law regarding legislative independence and democratic functioning?

1. The law has been criticised for **limiting the autonomy** of elected representatives.

2. Members risk disqualification even for **expressing dissent** against party decisions, which restricts their ability to **represent constituency interests**.
3. This has led to **excessive centralisation of power** within party leadership, reducing legislators to mere followers of party directives.
4. As a result, the law, while **promoting stability**, has **weakened deliberative democracy and independent decision-making**.

Q4. How has the recent Rajya Sabha defection case created legal ambiguity regarding the merger provision under the Anti-Defection Law?

1. The defection of several MPs has raised questions about correct interpretation of merger clause.
2. One view holds that since more than two-thirds of the party's MPs in the Rajya Sabha have defected, the move may qualify as a valid merger and avoid disqualification.
3. However, another interpretation argues that the merger must occur at the level of the entire political party, not just its legislative wing.
4. This difference in interpretation has created legal uncertainty and may lead to adjudication by constitutional authorities and courts.

Q5. What is the role of the Rajya Sabha Chairman in deciding disqualification petitions under the Anti-Defection Law?

1. The **Vice-President of India**, acting as the **Rajya Sabha Chairman**, has the authority to **decide on disqualification** petitions under the Tenth Schedule.
2. The Chairman can **either accept the defection as a valid merger**, thereby protecting members from disqualification, **or reject it** and initiate disqualification proceedings.
3. Until a decision is made, defecting members continue to hold their seats, even if their political alignment changes.
4. The Chairman's decision is **subject to judicial review**, but only after it is formally delivered.

Q6. What are the implications of the Anti-Defection Law on parliamentary voting and



legislative dynamics during pending decisions?

1. During the period when disqualification decisions are pending, a **unique situation** arises where defecting MPs may technically belong to one party but functionally support another.
2. This can **alter the effective strength** of political alliances in the House and influence legislative outcomes.
3. At the same time, the **original party** can still issue a **whip**, and any violation may become an **independent ground for disqualification**.
4. Such situations **expose gaps** in the law and **create uncertainty** in parliamentary functioning.

Q7. What are the consequences and procedural challenges if the two-thirds threshold for valid merger is not met under the Anti-Defection Law?

1. If fewer than two-thirds of members defect, they are liable for disqualification under the Tenth Schedule.
2. Any member of the House can file a petition before the Chairman seeking action against such defectors.
3. However, the law does **not prescribe a strict timeline** for deciding such cases, leading to delays that allow members to continue in office.
4. Although courts, including the Supreme Court of India, have emphasised timely decisions, the **absence of binding timelines** creates **prolonged uncertainty** in practice.

Conclusion

The anti-defection law remains crucial for **ensuring political stability**, but recent developments highlight **interpretational gaps** and **procedural delays**. Strengthening clarity and timelines is essential to balance stability with democratic accountability.

2. FCRA Amendment Bill 2026

Context

The **FCRA Amendment Bill, 2026** has been introduced to tighten oversight of foreign funding to NGOs, but it has raised concerns about increased government control and civil society autonomy.

Q1. What is the purpose and scope of the Foreign Contribution (Regulation) Act, and why is it important for regulating NGOs in India?

1. The **Foreign Contribution (Regulation) Act**

(FCRA) regulates the **acceptance and utilisation of foreign funds** by NGOs and associations in India.

2. Its main objective is to ensure that foreign contributions do not harm **national interest, public order, or internal security**.
3. Organisations must obtain **mandatory registration or prior permission** to receive such funds, with registration valid for a fixed period and subject to renewal.
4. The Act allows funds for **social, educational, cultural, economic, and religious activities**, but under strict compliance norms.
5. It plays a crucial role in maintaining **transparency, accountability, and financial discipline** in the NGO sector, especially given the large volume of foreign funding involved.

Q2. What are the key provisions introduced in the Foreign Contribution (Regulation) Amendment Bill, 2026, and how do they change the existing framework?

1. The Bill introduces **structural reforms** to strengthen regulation and plug gaps in the earlier law.
2. A major change is the creation of a **Designated Authority** with powers to manage assets derived from foreign contributions.
3. The definition of **“key functionary”** has been expanded to include a wider group of individuals responsible for decision-making. It introduces **fixed timelines** for utilisation of funds under prior permission, replacing earlier open-ended provisions.
4. The Bill mandates **automatic cancellation of registration** if renewal is not obtained or validity expires. It also introduces **centralised approval** for investigations, requiring prior clearance from the Central government.
5. Penal provisions have been **rationalised**, reducing maximum imprisonment from 5 years to 1 year. Overall, these changes shift the framework towards **greater control, clarity & enforcement efficiency**.

Q3. How does the proposed ‘Designated Authority’ alter the governance and control of NGO assets under FCRA?

1. The Bill establishes a **Designated Authority** with powers similar to a **civil court**.
2. This authority can **take over, manage, or dispose of assets** created from foreign funds when an NGO’s registration is suspended, cancelled, or not renewed.



3. It can also **transfer or sell such assets** to the government or other entities. This provision fills a previous gap where there was **no clear legal mechanism** to handle such assets.
4. However, it significantly increases **state control over NGO resources**, altering the balance between regulation and autonomy.

Q4. What is the significance of expanding the definition of ‘key functionary’, and how does it impact accountability?

1. Bill broadens the definition of “key functionary” to include **trustees, partners, Karta of Hindu Undivided Family, governing body members & persons involved in management or control**.
2. These individuals can now be **held directly responsible** for violations of FCRA provisions.
3. Liability applies unless they can prove **lack of knowledge or due diligence**.
4. This expansion enhances **individual accountability and oversight**, ensuring that responsibility cannot be avoided through organisational structures.
5. At same time, it increases **compliance burden & legal risk** for individuals associated with NGOs.

Q5. What are the major procedural and enforcement changes introduced in the Bill, and what are their implications?

1. The Bill requires **prior approval from the Central government** before any investigation by State authorities or enforcement agencies, leading to **centralised control**.
2. It introduces **time-bound rules** for receipt and utilisation of foreign funds, improving clarity and reducing misuse. The provision for **automatic expiry of registration** ensures stricter compliance and reduces administrative ambiguity.
3. The shift from **harsher criminal penalties to lighter punishments** reflects a move towards a more proportionate enforcement approach. These changes aim to improve **regulatory efficiency and compliance**, but may also increase **bureaucratic oversight and delays**.

Q6. What concerns have been raised by experts, states, and civil society regarding the amendments?

1. Experts have raised concerns about **excessive government control** over NGOs, especially via asset takeover provisions. There are fears that the law may enable **arbitrary cancellation of registrations and**

interference in NGO functioning.

2. Some state governments have expressed concern that the provisions could be used **against minority institutions**, affecting their independence.
3. Civil society groups worry that increased regulation may **restrict operational freedom and discourage foreign funding**. Overall, critics argue that the amendments may tilt the balance too much towards **control rather than facilitation**.

Q7. How can India balance national security concerns with the autonomy and functioning of civil society organisations?

1. The government must ensure that regulations are **transparent, proportionate, and non-arbitrary** in their application.
2. There should be **clear safeguards and accountability mechanisms** to prevent misuse of powers.
3. Greater **consultation with stakeholders**, including NGOs & states, can help create balanced framework. Strengthening **digital compliance systems** can improve monitoring without excessive interference.

Conclusion

The 2026 amendments aim to strengthen oversight of foreign funding but have raised concerns about over-centralisation. A balanced approach is essential to protect national interests while preserving the autonomy of civil society.



3. Chief Election Commissioner (CEC)

Context

Notices seeking the removal of the **Chief Election Commissioner (CEC)** were rejected due to lack of evidence, highlighting the strong constitutional safeguards protecting the office.

Q1. What is the constitutional status and role of the Chief Election Commissioner in India?

1. The **Chief Election Commissioner (CEC)** heads the **Election Commission of India (ECI)**, established under **Article 324** of the Constitution.
2. The ECI is responsible for conducting **free and fair elections** to Parliament, State Legislatures, and the offices of the **President and Vice-President**.
3. It exercises **superintendence, direction, and control** over the entire electoral process.
4. The Commission also enjoys **plenary powers**, allowing it to act even in areas where laws are silent.



5. This constitutional status ensures that elections remain **independent, impartial, and credible**.

Q2. How is the Chief Election Commissioner appointed, and what ensures the independence of the office?

- The CEC is appointed by the President of India. Under the 2023 Act, the appointment is based on recommendations of a **selection committee** comprising:
 - Prime Minister
 - Leader of Opposition in Lok Sabha
 - One Union Cabinet Minister
- The CEC has a tenure of **6 years or up to 65 years of age**, whichever is earlier.
- Service conditions cannot be altered to their disadvantage**, ensuring security of tenure.
- These provisions collectively aim to maintain **institutional independence and neutrality**.

Q3. What are the major powers and functions of the Election Commission under the CEC?

- The Commission supervises and manages **all electoral processes** in India.
- It prepares and updates **electoral rolls** to ensure accurate voter lists.
- It ensures **free and fair elections**, including monitoring conduct and procedures.
- It enforces the **Model Code of Conduct** to regulate political behaviour during elections.
- It monitors **election expenditure** to prevent misuse of money power.
- Through its **plenary powers**, it fills legal gaps to safeguard electoral integrity.

Q4. What is the constitutional procedure for the removal of the Chief Election Commissioner?

- The removal of the CEC is similar to that of a **Supreme Court judge** under **Article 324(5)**.
- It can be done only on grounds of **proved misbehaviour or incapacity**.
- The process requires:
 - A **motion passed in both Houses of Parliament**
 - Special majority** (majority of total membership + two-thirds of members present and voting)
- This high threshold ensures that removal is **rare and not politically motivated**.

5. It acts as a safeguard against **arbitrary executive interference**.

Q5. Why were the recent removal notices against the Chief Election Commissioner rejected?

- The presiding officers found that allegations did not establish **prima facie case of misbehaviour**.
- Many claims were **unsupported by evidence** or related to matters already decided or pending before courts.
- Allegations regarding bias and irregularities lacked **substantiated proof**.
- Issues such as non-disclosure of electoral data were found to be **consistent with legal provisions and privacy principles**.
- Therefore, the notices failed to meet the **high constitutional threshold** required to initiate removal proceedings.

Q6. What constitutional principles were reinforced through this decision?

- The decision reaffirmed the importance of **institutional independence of the Election Commission**.
- It emphasised that removal requires **strict proof of misconduct**, not mere allegations.
- The ruling upheld the concept of **plenary powers of the ECI** under Article 324.
- It reinforced the principle that **constitutional offices must be protected from political pressure**.
- Overall, it highlighted the need for **evidence-based accountability within constitutional limits**.

Q7. What challenges and concerns exist regarding the functioning and accountability of the Election Commission?

- Concerns are often raised about **perceived bias or lack of neutrality** in decision-making.
- There are debates over **transparency**, especially in areas like electoral data and processes.
- Balancing **independence with accountability** remains a key institutional challenge.
- Issues related to **appointment mechanisms** and executive influence are also discussed.
- Strengthening **institutional credibility and public trust** is essential for the Commission's effectiveness.

Conclusion

The rejection of removal notices highlights the strong constitutional safeguards protecting the CEC.



These safeguards ensure independence, but must be complemented with transparency and accountability to sustain public trust.

4. India Levels Up: Esports Regulation Era Begins

Context

The Government of India has introduced **new online gaming rules** with mandatory registration for esports platforms, marking a step toward **structured regulation of the rapidly growing esports sector**.

Q1. What is esports, and how has the esports industry evolved in India over time?

1. **Esports** refers to **organised, competitive video gaming** where individuals or teams compete professionally.
2. It differs from casual gaming due to **structured tournaments, skilled players, and a spectator ecosystem**.
3. Over the past decade, India has seen rapid growth due to:
 - a. **Smartphone penetration** and **affordable internet**
 - b. A large **youth population**
4. The industry is valued at around **\$1-1.5 billion** with strong future growth potential.
5. Emergence of **professional gamers, esports organisations, and large tournaments** has strengthened the ecosystem.

Q2. What are the different types of esports and components of the gaming ecosystem in India?

1. **Mobile esports:** Dominant in India due to accessibility; includes battle royale and multiplayer games.
2. **PC and console esports:** More prominent globally, requiring advanced infrastructure.
3. **Team-based esports:** Structured leagues and franchise-based competitions.
4. The ecosystem includes:
 - a. **Players, teams, organisers, streaming platforms, sponsors, and audiences**
5. Revenue sources include **advertising, sponsorships, media rights, and in-game purchases**.

Q3. How has the government recognised esports

and distinguished it from gambling activities?

1. Esports has been recognised as part of **multi-sports events under the Ministry of Youth Affairs and Sports**.
2. It is clearly differentiated from **betting and gambling activities**, giving it legitimacy as a sport.
3. This distinction enables **policy support and industry development** while preventing misuse.

Q4. What is the regulatory framework under the Online Gaming Act, 2025, and its objectives?

1. The **Promotion and Regulation of Online Gaming Act, 2025** provides the legal framework.
2. It aims to balance **innovation with user protection**.
3. Key objectives include:
 - a. Ensuring **user safety and preventing addiction**
 - b. Regulating **financial transactions**
 - c. Preventing **illegal betting and gambling**
4. The approach is **light-touch regulation**, especially for non-risk games.

Q5. What are the key features of the newly notified online gaming rules and regulatory authority?

1. Establishment of the **Online Gaming Authority of India (OGAI)** under the Ministry of Electronics and IT.
2. OGAI is a **multi-member body with inter-ministerial representation**.
3. It acts as the **central regulator** for compliance, safety, and grievance redressal.
4. Provides **institutional oversight** for the gaming sector.

Q6. What are the major compliance requirements for esports platforms and gaming companies?

1. **Mandatory registration** for esports platforms.
2. Other games require registration only if classified as **high-risk**.
3. Companies must implement **user protection safeguards** (financial and psychological).
4. Establish **grievance redressal systems** with escalation mechanisms.
5. **Banks and financial institutions** must verify legality before enabling transactions.
6. Non-compliant platforms may face **financial restrictions**.



Q7. What are the emerging challenges and future regulatory concerns in India's esports sector?

1. Presence of **illegal betting platforms and offshore gaming sites**.
2. Difficulty in regulation due to **VPN-based access**.
3. Rising concerns about **gaming addiction and user protection**.
4. Need for **age classification systems and codes of conduct**.
5. Balancing **innovation, industry growth, and regulation** remains a key challenge.

Conclusion

India's esports sector is rapidly expanding, and the new regulatory framework aims to ensure **safe, transparent, and sustainable growth**. Effective enforcement and adaptive policies will be crucial for long-term success.

5. Internet Censorship in India

Context

Internet censorship in India operates through legal provisions and ISP-level enforcement, but inconsistent implementation has raised concerns about transparency, fairness, and digital rights.

Q1. What is the legal and constitutional basis of internet censorship in India?

1. **Internet censorship** refers to the regulation or restriction of online content by the State.
2. **Article 19(1)(a)** guarantees **freedom of speech and expression**, which includes online communication.
3. However, **Article 19(2)** allows **reasonable restrictions** on grounds such as **sovereignty, security, public order, decency, and morality**.
4. Any censorship measure must satisfy the principles of **reasonableness and proportionality**.
5. Thus, internet censorship in India is a **balance between fundamental rights and state interests**.

Q2. What are the key legal provisions governing internet censorship in India?

1. **Information Technology Act, 2000:**
 - a. **Section 69A:** Empowers the government to **block websites or online content** in the interest of national security and public order.
 - b. **Section 79:** Provides **safe harbour protection** to intermediaries for third-party content.

- c. **Section 66A:** Previously criminalised offensive content but was **struck down** by the Supreme Court (2015).

2. IT Rules, 2021:

- a. Mandate **traceability of message originators**, affecting encryption.
- b. Require platforms to appoint **Grievance Officers** and ensure compliance.

3. Telecom Act, 2023:

Consolidates powers related to **telecom and internet suspension**, including shutdowns.

4. Additionally, **ISP licensing agreements** make compliance with government blocking orders **mandatory and confidential**.

Q3. What are the different forms of internet censorship practiced in India?

1. **Website Blocking:** ISPs restrict access to specific domains or URLs based on government orders.
2. **Internet Shutdowns:** Temporary suspension of internet services in regions during unrest.
3. **Social Media Takedowns:** Removal of posts, accounts, or content through official directives.
4. **App Bans:** Blocking of applications (e.g., foreign apps) citing **national security concerns**.
5. These measures are used to maintain **law and order**, but also raise concerns about **overreach and misuse**.

Q4. How do Internet Service Providers (ISPs) technically block websites?

1. ISPs use technical protocols such as **DNS, HTTP, and TLS** to restrict access.
2. The most common method is **DNS blocking (DNS poisoning):**
 - a. When a user enters a website, DNS converts the domain into an IP address.
 - b. ISPs return an **incorrect or blocked address**, preventing access.
3. This method is widely used because it is **low-cost and easy to implement**.
4. However, it is less precise and can lead to **over-blocking or inconsistent enforcement**.

Q5. What does recent data reveal about the scale and pattern of website blocking in India?

1. A large-scale analysis (2025) examined **294 million domains across six ISPs**.
2. Around **43,083 domains** were found blocked,



indicating widespread censorship.

3. Only **1,414 domains** were commonly blocked across all ISPs, showing **lack of uniformity**.
4. Most blocked content relates to **piracy, pornography, gambling, and file-sharing**.
5. Higher consistency is seen in **national security-related content** such as terrorism.
6. This reflects a system that is **broad in scale but uneven in implementation**.

Q6. What are the major challenges associated with India's internet censorship regime?

1. **Inconsistency**: Different ISPs block different websites despite similar orders.
2. **Opacity**: Blocking orders are **confidential**, limiting public scrutiny and accountability.
3. **Arbitrariness**: Lack of clear guidelines leads to **uneven and discretionary enforcement**.
4. **Overreach concerns**: Measures like shutdowns and traceability raise **privacy and free speech issues**.
5. **Technical limitations**: Methods like DNS blocking can result in **inefficient or excessive restrictions**.

Q7. What reforms are required to make internet censorship more transparent, accountable, and rights-compliant?

1. Introduce **greater transparency**, including disclosure of blocked websites except in sensitive cases.
2. Develop **uniform guidelines** for ISPs to ensure consistent implementation.
3. Strengthen **judicial oversight and review mechanisms** for blocking orders.
4. Ensure censorship measures follow **proportionality and necessity principles**.
5. Promote **technological upgrades** for more precise and less intrusive blocking methods.
6. Balance **national security needs with protection of digital rights and free expression**.

Conclusion

India's internet censorship framework reflects a complex balance between security and freedom. Strengthening transparency and consistency is essential to ensure that regulation does not undermine fundamental rights.

6. Judicial Accountability & Resignation

Context

The resignation of Justice Yashwant Varma during an ongoing inquiry has revived debate on **judicial accountability** and **gaps** in the **removal process** of judges in India.

Q1. What is the constitutional framework for removal of judges?

1. The removal of judges is governed by **Article 124(4)** (Supreme Court) and **Article 217** (High Courts).
2. Judges can be removed only on grounds of **proved misbehaviour or incapacity**.
3. The process begins with a **motion in Parliament**.
4. If admitted, an inquiry is conducted under the **Judges (Inquiry) Act, 1968**.
5. Removal requires a **special majority in both Houses of Parliament**.
6. The final order is issued by the **President of India**.
7. The process is intentionally **rigorous to protect judicial independence while ensuring accountability**.

Q2. How does the inquiry mechanism function?

1. A **three-member inquiry committee** is constituted:
 - a. A **Supreme Court judge**
 - b. A **Chief Justice of a High Court**
 - c. A **distinguished jurist**
2. The committee conducts **in-camera hearings**, examines witnesses, and reviews evidence.
3. It follows **principles of natural justice**, allowing the judge to defend themselves.
4. The committee submits a **report on whether charges are proved**.
5. Parliament proceeds with removal **only if charges are established**.

Q3. What is the issue with resignation during inquiry?

1. The Constitution and law do **not clearly state whether inquiry continues after resignation**.
2. In practice, there has been **inconsistency**:
 - a. Some inquiries were **stopped after resignation**
 - b. Others were **completed despite resignation**
3. If inquiries stop automatically, judges may **avoid**



adverse findings by resigning.

4. This creates concerns about **institutional credibility** and **accountability**.
5. Experts argue that inquiries should continue as they serve a **public interest** in **establishing truth**.

Q4. What happened in the Justice Varma case?

1. Allegations arose after **unaccounted cash** was **found** at the **judge's residence** following a **fire incident**.
2. A committee under the **Judges (Inquiry) Act, 1968** was constituted.
3. The panel conducted **multiple in-camera hearings** and **examined evidence** and **witnesses**.
4. The inquiry reached an **advanced stage**, with indications that evidence could substantiate charges such as:
 - a. Possession of unexplained cash
 - b. Interference with evidence
 - c. Misleading explanations
5. Before the defence stage, the judge **resigned** and **withdrew from proceedings**, citing procedural concerns.

Q5. What are the implications of resignation?

1. The **impeachment process stops**, as it applies only to a **sitting judge**.
2. The inquiry committee formally **closed proceedings** and **submitted its report**.
3. However, resignation does **not end all accountability**:
 - a. **Criminal proceedings** may still be initiated under ordinary law (with approval).
4. The case highlights a **legal gap** where **resignation interrupts institutional processes**.

Q6. What are the broader issues in judicial accountability?

1. Lack of **clarity on continuation of inquiries after resignation**.
2. Absence of a **permanent and independent oversight mechanism** for judges.
3. Over-reliance on a **lengthy and politically complex impeachment process**.
4. Risk of **erosion of public trust** due to perceived lack of accountability.
5. Need to balance **judicial independence** with **transparency and responsibility**.

Q7. What is the way forward?

1. Clarify through law whether **inquiries should**

continue even after resignation.

2. Strengthen the **Judges (Inquiry) Act, 1968** to remove ambiguities.
3. Consider creating an **independent judicial oversight body**.
4. Ensure **greater transparency while maintaining judicial independence**.
5. Streamline procedures to make accountability mechanisms **effective yet fair**.

Conclusion

The Justice Varma case exposes critical gaps in India's judicial accountability framework. Addressing these issues is essential to maintain **public trust while safeguarding judicial independence**.

7. Puducherry Union Territory

Context

The conduct of elections in Puducherry has brought attention to the **unique governance structure of certain Union Territories (UTs)** that combine central control with elected legislatures.

Q1. What is the constitutional framework governing Union Territories in India, and how does it differ from the governance structure of states?

1. **Union Territories (UTs)** are governed under **Part VIII of the Constitution (Articles 239–242)**.
2. They are administered by the **President through an appointed Administrator/Lieutenant Governor (LG)**.
3. Unlike states, UTs do **not have the inherent constitutional status of federal units** and remain under stronger central control.
4. Most UTs **do not have elected legislatures** and are directly administered by the Centre.
5. In contrast, **states have elected governments, constitutional autonomy, and legislative powers under the State List**, forming part of India's federal structure.

Q2. Why does Puducherry have a legislative assembly despite being a Union Territory, and what historical and legal factors contributed to this status?

1. Puducherry's legislative status is rooted in its **colonial history under French rule**.



- The **Treaty of Cession (1956)** formalised its transfer to India, with **de facto control from 1954** and legal ratification in 1962.
- Under French administration, the region had a **representative political system**, which India chose to continue.
- The **Government of Union Territories Act, 1963** granted Puducherry a **legislative assembly and Council of Ministers**.
- Thus, its status reflects a combination of **historical continuity and political accommodation**.

Q3. What are the constitutional provisions under Article 239A, and how do they shape Puducherry's governance structure?

- Article 239A** empowers Parliament to create:
 - A **legislative assembly**
 - A **Council of Ministers** for certain UTs, including Puducherry
- It allows for **partial state-like governance within a Union Territory framework**.
- The **President can nominate members** to the assembly, influencing political composition.
- Despite legislative powers, **Parliament retains overriding authority**, especially under **Article 246(4)**.
- This creates a system where **local governance exists but remains subordinate to the Union**.

Q4. How does the governance model of Puducherry differ from that of Delhi in terms of legislative powers and administrative control?

- Delhi (Article 239AA):**
 - Has a legislative assembly but with **explicit exclusions** (public order, police, land).
 - The **LG has defined discretionary powers**, leading to frequent Centre-State conflicts.
- Puducherry (Article 239A):**
 - Has **relatively broader legislative scope** without specific subject exclusions.
 - However, it remains subject to **Parliament's overriding power**.
- Delhi experiences **greater central oversight and institutional conflict**, while Puducherry allows **more operational flexibility in routine governance**.

Q5. What is the role of the Lieutenant Governor in Puducherry, and how has judicial

interpretation clarified its powers?

- The **Lieutenant Governor (LG)** acts as the **representative of the President** in Puducherry.
- Unlike Delhi, Constitution does **not clearly define discretionary powers** of the LG in Puducherry.
- In **K. Lakshminarayanan v. Union of India (2019)**, the Supreme Court clarified that:
 - The LG must generally act on the **aid and advice of the Council of Ministers**.
 - Discretion can be used only in **exceptional circumstances**.
- This interpretation strengthens **democratic governance and limits arbitrary interference**.

Q6. How does the governance structure of Jammu & Kashmir as a Union Territory compare with Puducherry and Delhi?

- After the **Jammu and Kashmir Reorganisation Act, 2019**, J&K became a UT with a legislature.
- Like Delhi, **public order and police are outside the Assembly's control**, limiting autonomy.
- The **LG has extensive discretionary powers**, including control over administration & bureaucracy.
- Financial matters often require **prior LG approval**, increasing central oversight.
- Compared to Puducherry and Delhi, **J&K has relatively lower legislative independence and greater central control**.

Q7. What are the broader implications of granting legislative powers to certain Union Territories for India's federal structure?

- It introduces a **hybrid governance model**, blending **unitary control with federal features**.
- Enhances **democratic representation** in UTs by allowing elected governments.
- However, it creates **ambiguity in power distribution**, leading to conflicts between Centre and local governments.
- Raises questions about **cooperative federalism**, especially when central control overrides local autonomy.
- Reflects India's **flexible federalism**, adapting governance structures to regional needs and historical contexts.

Conclusion

The governance of UTs like Puducherry, Delhi, and



J&K reflects a delicate balance between **central control and democratic representation**. Ensuring clarity and cooperation is essential to maintain India's evolving federal structure.

8. Right to Promotion

Context

A recent High Court ruling has reaffirmed that while promotion is not guaranteed, every eligible government employee has a fundamental right to be fairly considered for promotion.

Q1. What is the constitutional basis of the “right to be considered for promotion” in public employment, and how has it evolved through judicial interpretation?

1. The right to be considered for promotion is derived from Articles 14 and 16(1) of the Constitution, which ensure equality before law and equal opportunity in public employment.
2. Courts have interpreted the term “employment” broadly to include not only initial appointment but also career advancement. Over time, judicial interpretation has expanded this principle to ensure that all eligible employees are given a fair chance for promotion.
3. Thus, the right has evolved from a general equality principle to a specific enforceable guarantee that mandates fair and non-discriminatory consideration in promotions.

Q2. Why is there no fundamental right to promotion itself, and how do courts distinguish it from the right to fair consideration?

1. Courts have clarified that promotion depends on multiple factors such as availability of vacancies, merit, and service rules, and therefore cannot be claimed as an absolute right.
2. However, they distinguish this from the right to be considered for promotion, which is a fundamental right. Every eligible employee must be evaluated fairly whenever a promotion opportunity arises.
3. Thus, while promotion is conditional and not guaranteed, the process of consideration must always be fair, transparent, and in accordance with rules.

Q3. How did the recent Punjab and Haryana High Court judgment reinforce the principles of fairness and non-arbitrariness in promotions?

1. The case involved a government employee who

was excluded from the promotion process due to an incorrect interpretation of eligibility rules by authorities.

2. The court found that the rules had been misapplied and that the employee was wrongly denied consideration by the Departmental Promotion Committee (DPC).
3. It held that such exclusion violated his fundamental right and ordered a notional promotion with retrospective effect. The court also directed that DPC meetings be conducted regularly.
4. This judgment reinforced that administrative decisions must be accurate, fair, and free from arbitrariness, and that errors cannot deprive employees of their constitutional rights.

Q4. What role do Departmental Promotion Committees (DPCs) play in ensuring fairness in promotion processes?

1. Departmental Promotion Committees (DPCs) are responsible for evaluating eligible candidates and recommending promotions based on merit and service records.
2. They act as institutional mechanisms to ensure objectivity, consistency, and adherence to prescribed rules in the promotion process.
3. Regular and timely meetings of DPCs are essential to prevent delays that can hinder career progression. Courts have repeatedly emphasised that failure to convene DPCs on time can effectively deny employees their right to fair consideration.

Q5. How have Supreme Court judgments shaped the legal understanding of promotion rights in India?

1. The Supreme Court has played a key role in clarifying the scope of promotion-related rights.
2. In 1991, it held that while there is no fundamental right to promotion, eligible employees have a right to be considered whenever vacancies arise.
3. In 1999, a Constitution Bench reaffirmed that this right applies to all employees within the zone of consideration.
4. More recently, the Court clarified that although the right to consideration is fundamental, employees cannot claim promotion from the exact date a vacancy arises, as administrative delays may be justified in certain cases.
5. These rulings have created a balanced framework that protects fairness without imposing unrealistic obligations on the administration.



Q6. What constitutes a violation of the right to be considered for promotion, and what remedies have courts provided?

1. A violation occurs when an eligible employee is excluded from consideration due to arbitrary decisions, incorrect interpretation of rules, or failure to conduct timely promotion processes.
2. Prolonged delays in holding DPC meetings or ignoring eligible candidates also amount to denial of this right.
3. Courts have provided remedies such as directing reconsideration, granting notional promotions, and ordering retrospective benefits in appropriate cases.
4. These remedies aim to restore fairness and compensate for lost career opportunities caused by administrative lapses.

Q7. What reforms are required in administrative practices to ensure timely and fair promotion processes in government services?

1. Administrative systems need to ensure regular and time-bound conduct of DPC meetings to avoid unnecessary delays.
2. Clear and consistent interpretation of service rules is essential to prevent wrongful exclusion of candidates.
3. Digitisation and better record management can improve transparency and efficiency in evaluating candidates.
4. Accountability mechanisms should be strengthened so that officials responsible for delays or errors are held answerable.
5. A proactive approach that prioritises timely career progression will help align administrative practices with constitutional principles.

Conclusion

While promotion itself is not a guaranteed right, courts have firmly established that fair and timely consideration is a fundamental entitlement. Strengthening administrative practices is essential to uphold this constitutional guarantee in practice.

9. Jan Vishwas Bill Reforms

Context

The **Jan Vishwas (Amendment of Provisions) Bill, 2025–26** seeks to transform India's regulatory framework from a **punitive, criminalisation-heavy system to a trust-based and facilitative governance model**, building on earlier reforms that decriminalised several minor offences.

Q1. What is the Jan Vishwas Bill and its objective?

1. The **Jan Vishwas (Amendment of Provisions) Bill, 2025–26** is a reform initiative aimed at transforming India's regulatory framework.
2. Its objective is to shift from a **punitive, criminal-based system** to a **trust-based governance model**.
3. It seeks to **decriminalise minor procedural offences** and replace them with **civil or administrative penalties**.
4. The Bill builds on the **Jan Vishwas Act, 2023**, which had already **decriminalised 183 provisions across 42 Central laws**, continuing the reform momentum.
5. Overall, it aims to improve **ease of doing business, ease of living, and regulatory rationality**.

Q2. Why was this Bill introduced?

1. India's regulatory system traditionally imposed **criminal penalties even for minor technical lapses**, creating a compliance burden.
2. There was a need to **separate serious offences (fraud, threats to safety)** from **procedural non-compliance**.
3. The Bill expands reform by proposing changes to **784 provisions across 79 Central Acts**, with **717 provisions targeted for decriminalisation**.
4. It addresses challenges faced by **MSMEs**, which often struggle with complex compliance requirements.
5. With over **4.8 crore pending cases**, many related to minor violations, the Bill aims to **reduce judicial backlog**.
6. It is guided by the principle of **proportionality**, ensuring punishment matches the gravity of the offence.

Q3. What are the key features of the Bill?

1. **Large-scale Decriminalisation:** Conversion of **717 provisions** from criminal offences to civil penalties.
2. **Shift to Monetary Penalties:** Replaces **imprisonment with fines** for procedural violations.
3. **Graded Response Mechanism:** Introduces **warnings, advisory notices, and lighter penalties** for minor or first-time defaults.
4. **Expanded Compounding Provisions:** Enables **faster settlement of cases** without lengthy judicial proceedings.
5. **Strengthened Adjudication System:** Empowers **adjudicating officers** to resolve cases within **fixed timelines**, supported by appellate mechanisms.



6. **Dynamic Penalty Framework:** Allows periodic revision of penalties to maintain deterrence.
7. **Simplification and Digitisation:** Improves procedural clarity, transparency, and ease of compliance.
8. **Clear Distinction of Offences:** Focuses criminal law only on serious misconduct involving intent or harm.

Q4. How does it impact governance and institutions?

1. It significantly reduces the burden on the **judiciary** by diverting minor cases away from criminal courts.
2. It enhances the role of **regulatory agencies**, shifting enforcement from courts to administrative bodies.
3. It promotes **formalisation and compliance**, especially among **MSMEs**, by reducing fear of prosecution.
4. However, it increases the need for **institutional capacity, clear guidelines, and oversight mechanisms**.
5. Effective **appellate systems** become crucial to ensure fairness and prevent misuse of authority.

Q5. How does it promote efficient justice?

1. It **limits criminal liability** to serious offences, reducing unnecessary criminalisation.
2. Encourages **quick dispute resolution** through compounding and administrative processes.
3. Helps courts focus on **serious and complex cases**, improving judicial efficiency.
4. Promotes **voluntary compliance** by creating a predictable and less intimidating regulatory environment.
5. Aligns enforcement with the principle of **proportionality and fairness**.

Q6. What are the concerns and risks?

1. Increased reliance on administrative authorities may lead to **excessive discretion and arbitrariness**.
2. **Weak or inaccessible appellate mechanisms** could undermine justice.
3. Monetary penalties may still create a **financial burden on small businesses**.
4. Lack of **uniformity across different laws** may lead to inconsistent implementation.
5. Risk that decriminalisation may reduce **deterrence** in certain sectors if not properly balanced.
6. The reform's success depends heavily on **institutional capacity and accountability**, which may vary.

Q7. What is the way forward?

1. Strengthen **institutional capacity** of regulators and adjudicating authorities.
2. Develop **clear, standardised guidelines** to minimise arbitrariness.
3. Ensure **robust and independent appellate mechanisms** for fairness.
4. Maintain **balanced penalties** that deter violations without overburdening businesses.
5. Expand **digitisation and transparency** to improve compliance and monitoring.
6. Conduct **periodic review of provisions** to ensure effectiveness and adaptability.

Conclusion

The Jan Vishwas Bill represents a major step toward **decriminalisation and trust-based governance**. Its long-term success will depend on **strong institutions, fair implementation, and maintaining a balance between facilitation and regulation**.

10. Premature Release & SRB Review

Context

The Delhi High Court's scrutiny of the **Sentencing Review Board (SRB)** in the Mattoo case has raised concerns about whether **premature release decisions follow legal principles or public pressure**.

Q1. What is premature release in India?

1. **Premature release** refers to the **early release of a life convict before completing the full sentence**.
2. It is based on the idea of **reform, rehabilitation, and reintegration into society**.
3. It balances **punishment with correction**, ensuring that reformed individuals are not kept incarcerated unnecessarily.
4. Importantly, eligibility for consideration does **not guarantee actual release**.

Q2. What is the constitutional and legal framework governing premature release?

1. **Constitutional provisions:**
 - a. **Article 72** → Power of the **President** to grant pardon, remission, or commutation
 - b. **Article 161** → Similar powers vested in the **Governor**
2. **Statutory provisions (BNSS):**
 - a. **Sections 473 & 474** → Empower State



governments to grant remission

- b. **Section 475** → Requires a **minimum of 14 years of actual imprisonment** in serious offences (especially where death penalty was possible)
3. These provisions ensure a **structured and legally guided remission process**.

Q3. What is the role of the Sentencing Review Board (SRB) in premature release decisions?

1. The **Sentencing Review Board (SRB)** is a committee of senior officials such as:
 - a. DG Prisons
 - b. Police Commissioner
 - c. Chief Secretary
2. It **examines individual cases** of convicts seeking premature release.
3. The SRB makes **recommendations to the government**, which takes the final decision.
4. Its role is to ensure decisions are based on **objective assessment and legal criteria**.

Q4. What criteria are used for granting premature release?

1. **Conduct in prison**, including discipline and behaviour
2. **Compliance with parole/furlough conditions**
3. **No involvement in further criminal activities**
4. **Rehabilitation potential and psychological evaluation**
5. **Age and circumstances at the time of offence**
6. The **nature of the crime is considered**, but it should not be the **sole deciding factor**.

Q5. What has the Supreme Court clarified regarding remission and premature release?

1. In *Union of India v V. Sriharan*:
 - a. Remission is **not an absolute executive power**.
 - b. Decisions must be **reasoned and based on multiple factors**, not just the seriousness of the offence.
2. The Court has emphasised **judicial oversight and fairness** in the process.
3. It also clarified that if a **fixed judicial sentence is completed**, no further approval (like SRB) is needed.
4. This prevents **executive overreach over judicial decisions**.

Q6. What are the issues highlighted by the

current case and broader practice?

1. The Delhi High Court observed that SRB decisions may be influenced by **public perception**, especially in high-profile cases.
2. There is a tendency toward **over-cautious decision-making**, leading to frequent rejection of release pleas.
3. This creates a cycle:
 - a. SRB rejects → Convict approaches court → Court orders reconsideration
4. Raises concerns about **lack of consistency, transparency, and due process**.
5. Highlights tension between **public sentiment and rule of law**.

Q7. What is the way forward to improve the premature release system?

1. Ensure **strict adherence to legal criteria and objective evaluation**.
2. Reduce influence of **public opinion in judicial-administrative decisions**.
3. Strengthen **transparency and accountability** in SRB functioning.
4. Develop **uniform guidelines across states** for consistency.
5. Enhance **judicial oversight** to prevent arbitrary decisions.
6. Focus on **rehabilitation-based justice rather than purely punitive approaches**.

Conclusion

Premature release is a crucial part of India's **reformatory justice system**, but its credibility depends on **fair, consistent, and law-based decision-making free from external pressures**.

11. Commission for Air Quality Management

Context

The 128th meeting of the Enforcement Task Force (ETF) of the **Commission for Air Quality Management** was recently held, highlighting ongoing efforts to tackle **air pollution in Delhi-NCR and adjoining regions** through coordinated and statutory mechanisms.

Q1. What is the Commission for Air Quality Management (CAQM)?

1. Statutory body established under **CAQM Act, 2021**



- Objective: Address air pollution in **Delhi-NCR and adjoining areas**
- Focus:** Coordination, monitoring, and resolution of air quality issues
- Coverage:** Delhi + Punjab, Haryana, Rajasthan, Uttar Pradesh

Q2. What is the mandate of CAQM?

- Improve:** Air quality management and coordination
- Functions:**
 - Identify pollution sources
 - Conduct research and analysis
 - Frame policies and guidelines
- Goal:** Prevent and control air pollution effectively

Q3. What are the powers of CAQM?

- Regulatory Powers:** Restrict polluting activities
- Investigative Powers:** Conduct studies and research
- Directive Powers:** Issue binding directions to authorities
- Enforcement Authority:** Orders are legally binding on individuals and government bodies.

Q4. How does CAQM ensure coordination?

- Works with State governments of NCR and adjoining areas
- Aligns monitoring and enforcement actions
- Mechanism: Multi-state coordination platform
- Ensures unified response to pollution issues

Q5. What is the composition of CAQM?

- Chairperson**
 - Rank:** Secretary/Chief Secretary
 - Tenure:** 3 years or up to 70 years
- Members**
 - 5 ex-officio members (state representatives)
 - 3 full-time technical members
 - 3 NGO representatives
- Technical institutions**
 - Central Pollution Control Board
 - Indian Space Research Organisation
 - NITI Aayog

Q6. What is the role of the Enforcement Task Force (ETF)?

- Monitors implementation of CAQM directions
- Ensures compliance with pollution control measures

- Conducts regular review meetings (e.g., 128th meeting)
- Acts as operational enforcement arm

Q7. What are the challenges and way forward?

1. Challenges

- Multi-state coordination complexity
- Seasonal pollution (stubble burning, winter smog)
- Enforcement gaps at local level

2. Way Forward

- Strengthen real-time monitoring systems
- Improve inter-state coordination
- Enhance accountability and enforcement
- Promote long-term pollution control strategies

Conclusion

The CAQM represents a **centralised and legally empowered mechanism** to tackle air pollution in India's most affected region. Its effectiveness depends on **strong enforcement, inter-state coordination, and sustained policy implementation** to achieve long-term air quality improvement.

12. IBC Amendments 2026

Context

The Parliament has passed the Insolvency and Bankruptcy Code (Amendment) Bill, 2026 to address delays and improve efficiency in India's insolvency resolution framework.

Q1. What is the Insolvency and Bankruptcy Code (IBC)?

- IBC, enacted in **2016**, provides a **structured and time-bound system** to resolve insolvency of companies, partnerships, and individuals with the **aim** to **either revive** stressed entities via **resolution plan** or **liquidate them** in an orderly manner if revival is not possible.
- The process is supervised by the National Company Law Tribunal (NCLT), while the Insolvency and Bankruptcy Board of India (IBBI) regulates the ecosystem.
- Marks a shift from fragmented and debtor-friendly laws to a unified, creditor-driven framework.
- It introduced strict timelines for resolution, improved credit discipline, and enhanced recovery prospects for lenders, thereby strengthening the overall financial system.

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Q2. What are the major structural and operational challenges faced in the implementation of IBC?

1. **Delays in admitting insolvency cases**, which weakens the objective of time-bound resolution.
2. **Prolonged resolution timelines**, often exceeding prescribed limits due to a growing backlog of cases in tribunals.
3. **Recovery rates** for creditors, especially banks, have **remained moderate** in many cases, reducing the overall effectiveness of the process.
4. This highlights gaps in implementation and creates a need for reforms to make the system faster, more predictable, and efficient.

Q3. What are the key provisions introduced under the IBC (Amendment) Bill, 2026?

1. **Faster admission of cases** by requiring the NCLT to accept applications once default is established, thereby removing unnecessary delays.
2. Introduction of **out-of-court resolution mechanisms**, which provide flexibility and reduce dependence on tribunal-driven processes.
3. **Incorporated recommendations to ensure stricter timelines** for appellate decisions and grant **greater oversight powers** to regulators, improving accountability.
4. **Replaces certain criminal penalties with civil penalties** for **procedural lapses**, recognising that not all violations involve deliberate wrongdoing.
5. To prevent conflicts of interest, **resolution professionals are now barred** from acting as **liquidators** in the same case.

Q4. How does the newly introduced Creditor-Initiated Insolvency Resolution Process (CIIRP) differ from the traditional insolvency process?

1. Unlike traditional process, which is primarily court-driven & initiated via the NCLT, **CIIRP** allows **specified financial creditors** to initiate insolvency proceedings **outside formal court framework**.
2. This process requires **approval of at least 51% of creditors**, ensuring collective decision-making.
3. By enabling early and out-of-court intervention, **CIIRP reduces procedural delays, lowers litigation burden, and facilitates faster resolution** compared to the conventional mechanism.

Q5. What is the significance of introducing group insolvency and cross-border insolvency frameworks in India?

1. The introduction of **group insolvency provisions** allows **interconnected companies** within a **corporate group** to be **resolved** in a **coordinated manner**.
2. This is important because **financial distress in one entity** often **affects related entities**, and separate proceedings can **reduce efficiency and value**.
3. **Cross-border insolvency provisions** address cases involving assets, creditors, or operations in multiple countries. These rules help **coordinate proceedings across jurisdictions** and ensure fair and efficient resolution.

Q6. How do the recent amendments impact stakeholders such as creditors, investors, and resolution professionals?

1. **For creditors**, faster admission of cases and new resolution mechanisms improve recovery prospects and reduce delays.
2. **Investors benefit** from greater predictability, reduced litigation, and alignment with global standards, which enhances confidence in the Indian financial system.
3. **Resolution professionals** gain from clearer rules and improved regulatory oversight, although restrictions such as separation of roles aim to ensure fairness and reduce conflicts of interest.

Q7. What further reforms are required to strengthen the insolvency ecosystem in India?

1. To ensure long-term success, **strengthening institutional capacity**, especially of tribunals like the NCLT, is essential to handle increasing caseloads efficiently.
2. **Reducing excessive litigation and ensuring strict adherence** to timelines will be critical to maintaining the time-bound nature of the process.
3. **Greater clarity & detailed rules** for cross-border insolvency are required for effective implementation.
4. A **balanced approach** that prioritises revival of stressed assets over liquidation should be adopted to preserve economic value and support growth.
5. **Continuous regulatory improvements and capacity building** will be necessary to sustain the effectiveness of the insolvency framework.

Conclusion

The 2026 amendments mark an important step in refining the IBC by **addressing delays and structural gaps**. With **effective implementation and continued reforms**, the insolvency framework can significantly **support economic stability and investor confidence** in India.





INTERNATIONAL RELATIONS

1. India-South Korea's Expanding Ties

Context

The recent India–South Korea summit has strengthened their **Special Strategic Partnership**, with new agreements in **trade, technology, maritime cooperation, and cultural exchange**.

Q1. How have India–South Korea relations evolved historically into a Special Strategic Partnership since 1973?

1. Diplomatic relations were established in **1973**, gradually expanding across multiple sectors.
2. In **2015**, ties were elevated to a “**Special Strategic Partnership**”, reflecting deeper cooperation.
3. The relationship is driven by:
 - a. **Economic engagement and trade expansion**
 - b. **Technology and innovation collaboration**
 - c. **Defence and security cooperation**
 - d. Investments by major Korean firms like **Samsung and Hyundai**
4. Strategic alignment is supported by India's **Act East Policy** and Korea's **New Southern Policy**.

Q2. What are the key pillars of India–South Korea cooperation in political, defence, technological, and cultural domains?

1. **Political and strategic cooperation:** Shared vision for a stable **Indo-Pacific region**.
2. **Defence collaboration:** Joint production such as **K9 Vajra-T artillery system**, along with cooperation in **shipbuilding and defence R&D**.
3. **Technology partnership:** Growing focus on **AI, semiconductors, and digital innovation**.
4. **Cultural relations:** Strengthened through initiatives like the **Queen Suriratna memorial** and increasing cultural exchanges.
5. These pillars create a **multi-dimensional partnership** combining security, economy, and culture.

Q3. What are the major outcomes of the recent India–South Korea summit in trade and economic cooperation?

1. Both countries set a target to increase bilateral trade from **\$27 billion to \$50 billion by 2030**.

2. Agreement to **restart CEPA** (Comprehensive Economic Partnership Agreement) **upgrade negotiations**. CEPA (since 2010) has already led to nearly **90% growth in trade**.
3. New initiatives include **India–Korea Financial Forum, Industrial Cooperation Committee and Economic Security Dialogue** (for supply chains and critical technologies).
4. However, India continues to face a **trade deficit** with South Korea.

Q4. How does the India–Korea Digital Bridge and industrial cooperation enhance technology and manufacturing partnerships?

1. Launch of the **India–Korea Digital Bridge** to deepen collaboration in **Artificial Intelligence (AI), Semiconductors and Information Technology**.
2. Agreements to support **Small and Medium Enterprises (SMEs)** in both countries.
3. Proposal to establish a **Korean Industrial Township in India** to boost manufacturing and ease market entry. These initiatives strengthen **innovation ecosystems and industrial integration**.

Q5. What is the significance of maritime and shipbuilding cooperation between India and South Korea?

1. A **Comprehensive Framework on Shipbuilding, Shipping & Maritime Logistics** has been signed.
2. South Korea contributes **advanced shipbuilding technology**, while India offers **policy support and growing demand**. The partnership aligns with India's **Maritime India Vision 2030**.
3. It enhances **maritime capacity, trade logistics, and strategic capabilities in the Indo-Pacific**.

Q6. How do India and South Korea align on multilateral, geopolitical & cultural dimensions?

1. South Korea joined India-led initiatives like **International Solar Alliance (ISA) and Indo-Pacific Oceans Initiative (IPOI)**.
2. Both countries support **reform of global institutions**.
3. They share views on global conflicts, emphasising **peace and stability in West Asia and Europe**.
4. Cultural ties are growing through:
 - a. Rising popularity of **K-pop and K-dramas** in



India

- b. Launch of **Mumbai Korea Centre**
 - c. Planned **India–Korea Friendship Festival (2028)**
5. This strengthens **people-to-people connections and soft power diplomacy**.

Q7. What are the key challenges and future policy priorities in strengthening India–South Korea strategic partnership?

1. Challenges

- a. Persistent **trade imbalance** in favour of South Korea.
- b. Slow progress in **CEPA upgradation negotiations**.
- c. Need for **infrastructure and skill development** in shipbuilding.
- d. **Geopolitical uncertainties** affecting supply chains.
- e. Difficulties in **implementation of MoUs**, especially for SMEs and technology transfer.

2. Way Forward

- a. **Fast-track CEPA renegotiation** to improve market access for Indian goods.
- b. Build **semiconductor and digital supply chains** jointly.
- c. Attract more **Korean FDI into Indian manufacturing sectors**.
- d. Develop **resilient supply chains for critical minerals and technologies**.
- e. Align maritime cooperation with **Sagarmala and national logistics initiatives**.
- f. Promote the **Indo-Pacific as a region of cooperative growth and stability**.

Conclusion

India–South Korea relations are evolving into a **future-oriented, technology-driven strategic partnership**. Strengthening cooperation across trade, technology, and security will be key in navigating a **multipolar global order**.

2. India in a Geopolitics-Driven Trade Era

Context

Global trade is shifting from **efficiency-driven (comparative advantage)** to **geopolitics-driven (power and strategic interests)**, directly impacting India's economic and strategic choices.

Q1. Why is global trade increasingly shifting from economic efficiency to geopolitical considerations?

1. Earlier, trade followed **comparative advantage** (David Ricardo), where countries exported what they produced efficiently.
2. It also operated under a **rules-based global order** led by institutions like the World Trade Organization.
3. Today, trade is increasingly influenced by **power politics and strategic interests**.
4. Examples:
 - a. **Unilateral tariffs by the US** on multiple countries
 - b. **China restricting exports of critical minerals and components**
5. Trade is now used as a **tool of geopolitical leverage**, not just economic exchange.

Q2. What are the key global challenges emerging in trade due to geopolitics?

1. **Decline of rules-based order:** WTO mechanisms (like dispute settlement) are weakening.
2. **Rise of protectionism:** Developed countries are imposing barriers to protect domestic industries.
3. **Politicisation of trade:** Trade decisions are based on **alliances and strategic alignment**.
4. **Carbon-based trade barriers:** Measures like CBAM impose tariffs under environmental pretexts.
5. **Breakdown of multilateralism:** Countries prefer **unilateral or selective agreements** over global cooperation.

Q3. What challenges does India face in this geopolitics-driven trade environment?

1. **Economic and Supply Chain Risks**
 - E **High import dependence:** ~45% imports concentrated in just five countries.
 - a. Heavy reliance on **China for APIs (65-70%) and critical minerals**.
 - b. Dependence on **foreign semiconductor and electronics supply chains**.
2. **Strategic Vulnerabilities**
 - a. Exposure to **external shocks (energy crises, wars)** despite neutrality.
 - b. Risk of **supply disruptions due to geopolitical tensions**.
3. **Technological Constraints**
 - a. Limited access to **advanced technologies and patents** held by developed nations.



- b. Weak position in **standard-setting** (e.g., 5G/6G technologies).

4. Diplomatic Pressures

- a. **Sanctions threats** (e.g., CAATSA) restricting independent decisions.
- b. Shrinking **strategic autonomy** due to global power rivalries.

Q4. What are the limitations of India's current trade approach, especially bilateral agreements?

1. India is expanding through **bilateral trade agreements** (EU, UAE, Australia, US).
2. These agreements improve **market access and exports**.
3. However, limitations include:
 - a. Focus on **short-term gains rather than long-term technological strength**
 - b. Based on **current capabilities, not future competitiveness**
 - c. Do not ensure **technological sovereignty or innovation leadership**
4. Thus, bilateralism alone may not secure India's **strategic interests**.

Q5. How are major powers using trade as a strategic and geopolitical tool?

1. **China:**
 - a. Dominates **manufacturing and supply chains**
 - b. Restricts exports of **critical inputs** (minerals, components)
2. **United States:**
 - a. Uses **tariffs and sanctions** to influence countries' policies
 - b. Pressures allies and partners on issues like **energy imports and strategic projects**
3. Trade is being weaponised to achieve **national and geopolitical objectives**.

Q6. What opportunities exist for India in this changing global trade landscape?

1. India's strength as a **large domestic market** attracts global investment.
2. Growth of **Digital Public Infrastructure (DPI)** like Aadhaar, UPI, DigiLocker offers global export potential.
3. Strong **human capital in AI and technology sectors**.
4. Opportunity to build **coalitions with middle powers** (France, Japan, UAE) for technology and innovation.
5. Scope to move from "**rule taker**" to "**rule maker**" in **global trade systems**.

Q7. What strategic measures should India adopt to safeguard its interests in geopolitics-driven trade?

1. Structural Reforms

- a. Build **domestic manufacturing capacity** through schemes like PLI.
- b. Reduce **import dependence and diversify supply chains**.

2. Strategic Trade Approach

- a. Shift towards **plurilateral partnerships (sector-specific coalitions)** instead of only bilateral deals.
- b. Strengthen **South-South cooperation** with Africa, ASEAN, and Latin America.

3. Technological Advancement

- a. Invest in **core technologies**: semiconductors, AI, blockchain, cloud computing.
- b. Develop **indigenous standards** (e.g., 6G technologies).

4. Economic Diplomacy

- a. Expand partnerships for **critical minerals and energy security**.
- b. Promote **co-development and co-production models**.

5. Institutional Role

- a. Lead in global platforms like **GPAI (AI governance)**.
- b. Strengthen **India's role in shaping global trade rules and norms**.

Conclusion

As trade becomes a **geopolitical instrument**, India must move from passive participation to **active global leadership**, balancing economic growth with **strategic autonomy and resilience**.

3. US-Iran Ceasefire Deal

Context

A ceasefire between the **United States** and **Iran** was announced after 39 days of conflict, marking a temporary de-escalation amid threats to global energy routes like **Strait of Hormuz**. The development has significant implications for **global energy security, regional stability, and India's economy**.

Q1. Why was the ceasefire reached?

1. **Escalation risks** posed threats to energy infrastructure and disruption of global oil supply.
2. **Diplomatic push**: Appeal by Shehbaz Sharif



3. **US strategy:** Shift from brinkmanship to de-escalation
4. **Outcome:** Temporary ceasefire to enable negotiations

Q2. What is the strategic importance of the Strait of Hormuz?

1. **Critical chokepoint:** ~20% of global energy trade
2. **Iran's leverage:** Control over passage of ships
3. **Impact:** Oil price volatility and global economic uncertainty
4. **Ceasefire condition:** Reopening of the Strait

Q3. What are Iran's key demands in negotiations?

1. Non-aggression guarantees
2. Recognition of uranium enrichment rights
3. Lifting of sanctions
4. Removal of UN restrictions
5. Compensation and troop withdrawal
6. **Challenge: Maximalist demands** complicate negotiations

Q4. What role did Pakistan play?

1. Mediation effort by Pakistan
2. **Initiative:** Proposal for "Islamabad Talks"
3. **Engagement:** Military and diplomatic channels
4. **Significance:** Rising diplomatic role in region

Q5. What are the regional impacts of the conflict?

1. Human cost: **3,000+ casualties**
2. **Affected regions:** Iran, Gulf countries, Israel
3. **Disruptions:**
 - a. Missile and drone attacks
 - b. Infrastructure damage
4. **Ceasefire effect:** Temporary relief and stability window

Q6. What is the impact on India?

1. **Economic Impact**
 - a. High dependence on Gulf energy (~60%)
 - b. Supply disruption → inflation risk
2. **Strategic Relief**
 - a. Strait reopening restores supply routes
 - b. Eases pressure on economy
3. **Diaspora Concerns**
 - a. ~1 crore Indians in Gulf
 - b. Safety and remittance concerns

4. **Diplomatic Position:** India
 - a. Welcomes ceasefire
 - b. Maintains neutral stance

Q7. What are the future challenges and outlook?

1. **Challenges**
 - a. Fragile ceasefire (only temporary)
 - b. Complex negotiation demands
 - c. Continued geopolitical tensions
2. **Outlook**
 - a. Need for sustained diplomatic engagement
 - b. Importance of securing energy routes and ensuring regional stability

Conclusion

The US-Iran ceasefire provides **short-term relief but not a permanent solution**, as deep strategic differences remain unresolved. Its success will depend on **continued diplomacy, stable energy flows, and balanced geopolitical engagement**.

4. Israel's Yellow Line

Context

Israel's announcement of a "Yellow Line" buffer zone in **southern Lebanon** during a ceasefire signals a shift toward **forward defence & deeper territorial control**, raising strategic and humanitarian concerns.

Q1. What is the "Yellow Line" strategy of Israel?

1. The "Yellow Line" is a **military buffer boundary** created by Israel inside conflict zones to enhance security.
2. It first emerged during the **2025 Gaza war** as a **demarcation between Israeli-controlled and Palestinian-held areas**.
3. Initially conceived as a **temporary security measure**, it is increasingly becoming a **permanent feature of military doctrine**.
4. Recently, it has been extended into **southern Lebanon** up to the **Litani River**, reflecting a broader strategic application.
5. The evolution shows a shift from **short-term containment to long-term territorial control**.

Q2. What are the strategic objectives behind Israel's Yellow Line?

1. The strategy aims to create a **forward defensive buffer** beyond Israel's borders.
2. It seeks to **prevent militant groups like Hamas** and



Hezbollah from regrouping near border areas.

3. Enables **pre-emptive control of territory**, reducing immediate security threats.
4. Facilitates **monitoring** and **rapid military response** in sensitive zones.
5. Reflects a shift toward **proactive defence** rather than reactive military operations.

Q3. How has the Yellow Line redefined the operational theatre and military doctrine of the Israel Defense Forces (IDF)?

1. The IDF has shifted from **mobile warfare** to a **static defensive posture**.
2. The Yellow Line functions as a **fixed, fortified boundary** rather than a temporary frontline.
3. It enables **long-term territorial management** of conflict zones.
4. Large areas (e.g., significant parts of Gaza) are treated as **restricted or free-fire zones**.
5. This marks a doctrinal change toward **sustained control** and **battlefield restructuring**.

Q4. What are the key features of the infrastructure and military deployment supporting the Yellow Line strategy?

1. Construction of **fortified defensive structures**, including:
 - a. Elevated earth mounds
 - b. Communication towers
2. Deployment of **large troop formations**, including multiple military divisions.
3. Establishment of **heavily monitored** and **restricted zones**.
4. **High logistical** and **resource requirements** to maintain **continuous surveillance** and **control**.

Q5. What is the “Gaza Model,” and how does it extend the Yellow Line strategy to other regions like Lebanon?

1. The “**Gaza Model**” refers to replicating the Yellow Line approach beyond Gaza.
2. It involves creating **deep, militarised buffer zones inside neighbouring territories**.
3. In Lebanon, it extends **up to the Litani River**, aiming to dismantle militant infrastructure.
4. Unlike earlier political boundaries (e.g., Green Line), it is a **military-controlled zone within hostile territory**.
5. It represents a shift toward **permanent, control-oriented security arrangements**.

Q6. What are the humanitarian, legal, and international concerns associated with the Yellow Line strategy?

1. Concerns of **violation of international humanitarian law** and ceasefire agreements.
2. Reports of **civilian casualties and restricted access** to essential areas.
3. Allegations of **forced displacement and land control** in affected regions.
4. Limitation of civilian movement leading to **economic and humanitarian distress**.
5. Criticism by international organisations regarding **disproportionate military actions**.

Q7. What are the internal criticisms and potential risks of Israel’s Yellow Line strategy?

1. Critics argue it may become a **strategic liability rather than an advantage**.
2. Static defence positions can expose troops to **guerrilla attacks, snipers, and missiles**.
3. High resource and manpower requirements make it **logistically demanding**.
4. Historical parallels with prolonged occupations suggest risk of **long-term attrition warfare**.
5. Raises concerns about **sustainability** and **escalation of conflict**.

Conclusion

The Yellow Line strategy reflects a major shift toward **forward, control-based defence**, but it carries significant **strategic, humanitarian and geopolitical risks**. Its long-term impact will shape the future of regional security dynamics.

5. Freedom of Navigation in International Waters

Context

Iran attacked some ships in the Strait of Hormuz after the United States seized Iranian-linked ships, as tensions between the two sides increased.

1. At its narrowest point, the Strait of Hormuz and its shipping lanes are completely within the territorial waters of Iran and Oman.

Institutional framework governing Freedom of Navigation in international waters:

1. **United Nations Convention on the Law of the Sea (UNCLOS):**
 - a. The main ideas include shared global use, free movement at sea, rights over resources, and ways to settle disputes.
 - b. It also explains different maritime zones.



Maritime zones	Length	Rights applicable
Territorial Sea	Upto 12 nautical miles	Coastal states have full control over their territorial sea, including the water, seabed, subsoil, and the airspace above it. Foreign ships can pass, but only under “ innocent passage ” (no threat or harmful activity).
Exclusive Economic Zones (EEZ)	Upto 200 nautical miles	Countries have rights to explore, use, protect, and manage natural resources—both living and non-living—found on and beneath the seabed. They can also carry out activities like generating energy from water, ocean currents, and wind.
High Seas	Beyond EEZ	It is regarded as the shared heritage of all humanity and does not belong to any one country. All states can use these areas for peaceful purposes, such as navigation, scientific research, and exploring the seabed.

Key Challenges to FoN in International Waters:

- Geopolitical and strategic issues:** Countries sometimes use narrow sea routes and key shipping lanes to gain strategic advantage, impose blockades, or compete for power, which can disrupt freedom of navigation.
- Legal confusion:** Different countries interpret international maritime laws (UNCLOS) differently, and there is no strong system to ensure strict enforcement.
- Unilateral actions and sanctions:** Some countries, like the U.S., have intercepted ships under their own domestic laws, such as vessels carrying Venezuelan oil or supplies to Cuba.
- Security threats:** Risks like piracy, terrorism, and armed attacks at sea also pose challenges to safe and free navigation.

6. United Nations Economic and Social Commission for Asia and the Pacific (ESCAP)

Context

A report by the United Nations Economic and Social Commission for Asia and the Pacific projects that **inflation in developing Asia-Pacific economies will rise to 4.6% in 2026**, up from 3.5% in 2025.

About United Nations ESCAP

- ESCAP, established in 1947 as part of the United Nations system, is the **most inclusive intergovernmental platform in the Asia-Pacific region**, facilitating cooperation among countries.
- It **aims** to address regional development challenges.
- Core mandate:** To **promote economic and social development through regional cooperation among member and associate member countries**.
- The Commission includes **53 member States and 9 associate members**, working collectively on sustainable development goals.
- ESCAP is one of the **five regional commissions of the United Nations**, focusing specifically on the Asia-Pacific region.
- Its functions include work across multiple sectors such as **macroeconomic policy, poverty reduction, trade and investment, transport, environment, ICT, disaster risk reduction, and social development**.
- The organisation is headquartered in **Bangkok, Thailand**, serving as a hub for regional policy coordination and development initiatives.

7. Druzhba Pipeline

Context

The Druzhba Pipeline has resumed operations after repairs, restoring oil supply from Russia through Ukraine to European countries like Hungary and Slovakia.

About Druzhba Pipeline

- Also known as the “**Friendship Pipeline**”, it is one of the **largest crude oil pipeline networks in the world**, playing a key role in Europe’s energy supply.
- It was constructed in the **1960s during the Soviet era** to transport oil from the USSR to various European countries.
- Today, it remains a major route for transporting **Russian and Kazakh crude oil across Europe**, acting as a crucial energy corridor.
- The pipeline system extends for about **5,500 km**, including all its branches.
- It originates at **Almetyevsk in Russia**, where oil from **Siberia, the Urals, and the Caspian region** converges before being transported westward.
- At **Mozyr in Belarus**, the pipeline splits into two major branches - the **northern branch** passing through Belarus and Poland to Germany, and the **southern branch** passing through Ukraine.
- The southern route further divides at **Uzhgorod**, supplying oil to **Slovakia, the Czech Republic, and Hungary**, with a current capacity of **1.2–1.4 million barrels per day**, expandable up to **2 million barrels per day**.





SECURITY

1. Maoist Insurgency in India

Context

Recent security operations and leadership losses have significantly weakened the Maoist insurgency, raising questions about whether the decades-old Left-Wing Extremism in India is nearing its end.

Q1. What is the current status of the Maoist insurgency in India?

1. The Maoist insurgency is currently in a **weakened and declining phase**.
2. **Elimination and surrender of top leaders**, including Nambala Keshava Rao and his successor, have left the organisation largely leaderless.
3. **Security operations** have resulted in **large-scale surrenders, arrests, and casualties**, severely disrupting its functioning.
4. While its armed capacity has diminished significantly, **residual networks still exist**, meaning the insurgency is weakened but not completely eliminated.
5. The geographical spread has **reduced drastically** over the past decade with insurgency affecting nearly **180 districts across the “Red Corridor” in 2013** to it being largely confined to a **few pockets** (Bijapur and Sukma districts of Chhattisgarh) at **present**.

Q2. What is the historical evolution of the Maoist movement in India from its origin to peak?

1. **Origin:** Naxalbari uprising of 1967 in West Bengal under Charu Majumdar, inspired by Maoist ideology advocating armed agrarian revolution.
2. After an **initial decline** in the early **1970s**, it **revived** in the **late 1970s** through the **People’s War Group** formed by Kondapalli Seetharamaiah.
3. The **formation of CPI (Maoist) in 2004** under Muppala Lakshmana Rao marked a consolidation phase, leading to expansion across multiple states.
4. At its peak, the movement developed a **militarised structure** with **guerrilla forces** and was considered a major internal security threat.

Q3. What factors led to the decline of the Maoist insurgency in India in recent years?

1. **Sustained and coordinated security operations**, including specialised forces and campaigns like **Operation Kagar**, weakened Maoist strongholds.
2. **Leadership losses & internal fragmentation** reduced organisational cohesion & strategic direction.
3. **Ideological appeal declined** as development initiatives and welfare schemes reduced grievances in affected areas.
4. **Falling recruitment** and increasing preference for democratic means of protest further eroded the movement’s support base.
5. **Surrender & rehabilitation policies** encouraged cadres to return to mainstream society.

Q4. What are the key challenges and the way forward to ensure the permanent end of Maoist insurgency in India?

1. **Challenges:**
 - a. **Persistent socio-economic inequalities** in tribal regions continue to create vulnerabilities.
 - b. **Reintegration of surrendered cadres** remains difficult due to legal hurdles and social stigma.
 - c. **Residual Maoist networks** and ideological influence still exist in remote areas.
 - d. **Weak local governance** in some regions can create spaces for resurgence.
2. **Way Forward:**
 - a. **Strengthening last-mile delivery** of development and governance in affected areas is essential.
 - b. **Improving rehabilitation policies** with legal clarity and livelihood support can ensure sustainable reintegration.
 - c. **Enhancing coordination** between security forces and civil administration will help maintain long-term stability.
 - d. **Promoting inclusive growth** and democratic participation will reduce the appeal of extremist ideologies.

Conclusion

The Maoist insurgency in India has significantly declined but is not entirely over. Sustained governance, development, and security efforts are essential to ensure its permanent resolution.



2. INS Aridhaman Induction

Context

India has quietly inducted its third nuclear-powered ballistic missile submarine, **INS Aridhaman**, strengthening its **sea-based nuclear deterrence**. The induction at Visakhapatnam follows the pattern of earlier Arihant-class submarines and marks a major step in enhancing India's **strategic defence capability**.

Q1. What is INS Aridhaman and why is it significant?

1. Third **SSBN (nuclear-powered ballistic missile submarine)** of India
2. Part of indigenous **Arihant-class programme**
3. **Significance:** Strengthens **credible nuclear deterrence** and enhances survivability of nuclear arsenal.
4. Milestone: India now operates **three SSBNs**.

Q2. What are the key features of INS Aridhaman?

1. **Displacement:** ~7,000 tonnes
2. **Armament:** 8 vertical launch tubes (higher than predecessors)
3. **Missile capability:** K-15 (~700 km range) and K-4 (~3,500 km range)
4. **Propulsion:** Nuclear-powered reactor
5. **Advantage:** Can remain submerged for **months** with high stealth and survivability.

Q3. How does it strengthen India's nuclear triad?

1. **Nuclear Triad** = Land (Agni Missiles) + Air (Rafale, Su-30MKI, Mirage 2000) + Sea capability (SSBNs (Arihant-class))
2. **Outcome:** Ensures **multi-platform nuclear capability**
3. **India joins** the select group (US, Russia, China, France).

Q4. What is its role in second-strike capability?

1. India follows **No First Use doctrine**
2. **Role** of SSBNs: Operate stealthily in oceans
3. **Function:** Ensure **retaliatory strike** even after first attack
4. **Result:** Maintains **credible deterrence**

Q5. How has India's SSBN programme evolved?

1. **INS Arihant (2016):** First nuclear submarine which completed deterrence patrol (2018).
2. **INS Arighaat (2024):** Improved technology and design
3. **INS Aridhaman:** Higher missile capacity and capability
4. **Development:** Indigenous effort with support from DRDO and Russian technical assistance.

Q6. What are India's future submarine plans?

1. **Fourth SSBN:** Larger and more advanced
2. **SSN programme:** Nuclear-powered attack submarines
3. **Leasing:** Submarine from Russia (by 2027–28)
4. **Project-75I:** 6 conventional submarines with AIP technology
5. **Goal:** Expand underwater warfare capability

Q7. What are the strategic implications?

1. **Security / Defence**
 - a. Strengthens **sea-based deterrence**
 - b. Improves **stealth and survivability**
2. **Technological**
 - a. Boosts **indigenous defence capability**
 - b. Advances nuclear propulsion technology
3. **Geopolitical**
 - a. Enhances India's position among major powers
 - b. Narrows gap with US, China and Russia.
4. **Operational Challenges**
 - a. Limited submarine fleet
 - b. Maintenance reduces availability
 - c. Capability gap vs major navies

Conclusion

The induction of INS Aridhaman marks a **critical advancement in India's nuclear deterrence architecture**, reinforcing the sea-based leg of the nuclear triad.

3. INS Nireekshak

Context

INS Nireekshak participated in **DIVEX 2026 in Colombo**, highlighting India's focus on **maritime cooperation and underwater operational capability**.

Q1. What is INS Nireekshak, and what are



its key roles in submarine rescue and diving operations?

1. INS Nireekshak is a **Dive Support and Submarine Rescue Vessel** of the Indian Navy.
2. It plays a crucial role in **deep-sea diving operations, submarine rescue missions, and underwater support tasks.**
3. The vessel is essential for **search-and-rescue, underwater inspection & diver training activities.**
4. It enhances India's capability in **maritime safety and emergency response operations.**

Q2. What are the technical capabilities and onboard systems of INS Nireekshak for deep-sea operations?

1. Equipped with **advanced deep-sea diving systems** for complex underwater missions.
2. Contains **recompression chambers** to treat divers and manage pressure-related conditions.
3. Capable of deploying **Deep Submergence Rescue Vehicles (DSRVs)** for submarine rescue.
4. Supports **saturation diving missions**, enabling prolonged underwater work.
5. Features **stability systems** for precise operations in challenging marine conditions.

Q3. What is the historical background and development of INS Nireekshak in the Indian Navy?

1. Built by **Mazagon Shipbuilders Limited** in **1985**.
2. Entered naval service in **1989** and was later **commissioned in 1995**.
3. Over time, it has evolved into a **key asset for underwater and rescue operations.**

Q4. What is DIVEX 2026, and what are its objectives in India–Sri Lanka maritime cooperation?

1. **DIVEX 2026** is the **fourth edition of the India–Sri Lanka Diving Exercise.**
2. It involves **joint participation of Indian and Sri Lankan naval diving teams.**
3. Focus areas include:
 - a. **Specialised underwater operations**
 - b. **Training drills and skill enhancement**
4. The exercise aims to improve **interoperability, coordination, and operational readiness.**

Q5. How does DIVEX 2026 enhance interoperability and knowledge exchange between the two navies?

1. Facilitates **sharing of best practices in diving and rescue operations.**
2. Improves **coordination during joint maritime missions.**
3. Builds **mutual trust and operational synergy** between the two countries.
4. Strengthens regional **maritime security cooperation** in the Indian Ocean.

Q6. What is the significance of the BHISM cubes under the Aarogya Maitri initiative?

1. INS Nireekshak will hand over **BHISM (Bharat Health Initiative for Sahyog Hita & Maitri)** cubes.
2. These are **portable medical units** designed for emergency response.
3. Capable of handling **up to 200 emergency cases.**
4. Equipped with **essential medicines and basic surgical facilities.**
5. Reflect India's commitment to **humanitarian assistance and regional cooperation.**

Conclusion

INS Nireekshak's deployment in DIVEX 2026 highlights India's growing emphasis on **maritime capability, regional cooperation, and humanitarian diplomacy.**

4. Pahalgam Attack & Security Shift

Context

The **April 2025 Pahalgam attack**, which killed 26 civilians (mostly tourists), exposed critical vulnerabilities and led to a **major shift in Jammu & Kashmir's security strategy.**

Q1. Why was the Pahalgam attack a turning point?

1. The attack **challenged the prevailing narrative of "normalcy"** in Jammu & Kashmir.
2. It marked an **unprecedented targeting of tourists**, shifting the conflict beyond traditional security targets.
3. Expansion of tourism into **remote, high-altitude areas** had increased exposure without matching security preparedness.
4. It revealed that **declining urban violence did not mean reduced overall threat.**
5. The incident forced a **complete reassessment of**



security priorities and threat perception.

Q2. What security gaps were revealed?

1. **Misjudged threat perception:** Agencies assumed attacks would remain focused on **urban areas or security forces**.
2. **Creation of “soft frontiers”:** Newly opened tourist zones lacked adequate **security presence**.
3. **Geographical vulnerability:** Many tourist sites were near **traditional infiltration routes in Pir Panjal**.
4. **Over-expansion of tourism:** Around **75 high-altitude destinations** were opened without sufficient safeguards.
5. **Operational gap:** Tourism development had **outpaced security planning and deployment**.

Q3. What immediate corrective measures were taken?

1. Closure of **over 50 vulnerable tourist sites** to reduce exposure.
2. Rapid **security reassessment of high-risk zones**.
3. Increased deployment of forces in **sensitive and remote regions**.
4. Recognition that **access must be balanced with security preparedness**.

Q4. How has the security strategy changed?

1. Shift from **road-centric security to terrain dominance**, especially in high-altitude areas.
2. Establishment of **43 Temporary Operating Bases (TOBs)** in the Pir Panjal range.
3. Deployment of forces like **CRPF and Rashtriya Rifles** in elevated zones (3,000–9,000 feet).
4. Focus on **“holding the ridge”** to control infiltration routes and deny militants terrain advantage.
5. Transition from **reactive response to proactive, intelligence-driven operations**.

Q5. What role does technology and intelligence play now?

1. Creation of an **Aadhaar-linked database with QR-coded IDs** for over **50,000 tourism stakeholders**.
2. Deployment of **facial recognition systems** at transit points.
3. Use of **drone corridors** for aerial surveillance in vulnerable regions.
4. Emphasis on **non-intrusive security presence** to sustain tourism.

5. Adoption of an **“Intel-first” strategy**, focusing on:
 - a. Deep network tracking
 - b. Precision operations with minimal collateral damage
6. Example: **Operation Mahadev (2025)** successfully neutralised attackers using **human intelligence and drone inputs**.
7. Crackdown on terror networks:
 - a. **Doctor Module case** (350 kg explosives seized)
 - b. Neutralisation of **Saifullah group (Kishtwar-Doda)**
 - c. Disruption of **cross-border recruitment networks**

Q6. What are the continuing challenges?

1. **Border surveillance gaps:** Lack of fully functional **all-weather monitoring systems**.
2. **Technological limitations:** Drones and sensors face difficulties in **extreme weather and terrain**.
3. **Dense forest cover:** Limits **intelligence gathering and tracking of militants**.
4. Emergence of **small, mobile “hybrid” militant groups** that evade detection.
5. Continued **cross-border infiltration and external support** sustaining threats.

Q7. What is the way forward?

1. Strengthen **all-weather surveillance systems and satellite capabilities**.
2. Improve **intelligence networks in difficult terrains**, especially forested regions.
3. Enhance **integration of technology with human intelligence**.
4. Ensure **balanced tourism expansion with security preparedness**.
5. Focus on **preventive, intelligence-led operations** rather than reactive measures.
6. Strengthen **inter-agency coordination and long-term counter-terror strategies**.

Conclusion

The Pahalgam attack triggered a shift from **reactive security to intelligence-led, terrain-focused strategy**. Sustained adaptation and technological strengthening are essential to ensure long-term stability in Jammu & Kashmir.



5. AI in Internal Security

Context

The Ministry of Home Affairs is increasingly deploying Artificial Intelligence (AI) to strengthen India's internal security architecture. From **predictive policing to cybercrime detection**, AI is emerging as a critical tool to enhance **surveillance, decision-making, and proactive threat prevention**.

Q1. What is the role of AI in internal security?

- 1. Predictive Policing:** Analyses historical crime data and identifies crime-prone areas.
- 2. Real-time Surveillance:** Continuous monitoring using AI systems and faster detection of suspicious activities.
- 3. Cybercrime Detection:** Tracks fraud networks and cyber threats and uses big data analytics.
- 4. Inter-agency Coordination:** Improves information sharing across agencies
- 5. Force Multiplier:** Enhances speed and accuracy of responses

Q2. What are the key AI-based initiatives in India?

- 1. Predictive Policing Systems**
 - a. It analyses crime patterns and behavioural trends.
 - b. **Outcome:** Efficient deployment of police resources and crime prevention.
- 2. Dark Web Monitoring Tools**
 - a. Tracks phishing campaigns, fraud networks and criminal communications.
 - b. **Enables:** Proactive cyber threat detection.
- 3. Mule Hunter Application**
 - a. Developed with Reserve Bank Innovation Hub
 - b. **Purpose:** Identify "mule accounts" used in fraud
 - c. **Mechanism:** Behavioural + transaction data analysis
 - d. **Outcome:** Real-time fraud detection and prevention
- 4. Surakshini Initiative**
 - a. **Focus:** Online harmful content
 - b. **Targets:** CSEAM (Child Sexual Exploitative Material) and NCII (Non-consensual intimate imagery).
 - c. **Mechanism:** Hash database to block re-upload

- d. **Approach:** Preventive rather than reactive

5. AI-based Cyber Complaint Systems

- a. Upgrades cybercrime helpline (1930)
- b. **Features:** Regional language support and faster complaint processing.

Q3. What are the institutional frameworks supporting AI deployment?

- 1. Central Nodal Agency:** Indian Cyber Crime Coordination Centre
- 2. Collaborations:** IIT Bombay (AI model development) and Reserve Bank Innovation Hub (Financial fraud detection)
- 3. Objective:** Build scalable and robust AI systems

Q4. How is AI transforming specific security domains?

- 1. Cybercrime Monitoring:** AI scans dark web and scam networks to automate complaint processing and data analysis.
- 2. Financial Fraud Prevention:** Mule Hunter integration helps in early fraud detection and real-time transaction scoring, representing a shift from reactive to proactive policing.
- 3. Content Moderation:** Surakshini system prevents upload of illegal content and tracks FIRs and takedowns.
- 4. Immigration & Border Security:** IVFRT 3.0 system (2026 rollout) integrates AI and Blockchain. It helps in intelligent traveller profiling and secure record management.

Q5. What are the advantages of using AI in internal security?

- 1. Administrative**
 - a. Improves efficiency of law enforcement
 - b. Enables data-driven decision-making
- 2. Technological**
 - a. Real-time analytics and automation
 - b. Scalable systems for large datasets
- 3. Security**
 - a. Early threat detection
 - b. Faster response to crimes
- 4. Governance**
 - a. Better coordination among agencies
 - b. Enhanced transparency through dashboards

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Q6. What are the concerns and challenges?

1. **Privacy Concerns:** Increased surveillance may infringe individual rights as there is risk of overreach by state agencies.
2. **Data Security Risks:** Sensitive data vulnerability and potential misuse or breaches.
3. **Algorithmic Bias:** AI may reflect biased training datasets which leads to discriminatory outcomes.
4. **Technological Limitations:** Some systems are still evolving. **Example:** document forgery detection.

Q7. What safeguards and oversight are required?

1. **Legal Framework:** Clear laws on AI use in policing
2. **Data Protection:** Strong cybersecurity measures
3. **Audit Mechanisms:** Regular review of AI decisions
4. **Transparency:** Explainable AI systems
5. **Human Oversight:** AI as support, not replacement
6. **Ethical Standards:** Avoid bias and ensure fairness

Conclusion

AI is emerging as a **transformative force in India's internal security framework**, enabling proactive and data-driven governance. However, its expansion must be balanced with **robust safeguards for privacy, accountability, and ethical use**, ensuring that technological advancement does not compromise democratic rights.

6. Prajna System

Context

The Ministry of Home Affairs has received the indigenously developed **AI-enabled satellite imaging system 'Prajna'** to strengthen internal security.

About Prajna System

1. The **Prajna System** is an **indigenous satellite-based imaging and analytics platform** designed to provide **real-time decision support** to security agencies.
2. It has been developed by the Centre for Artificial Intelligence and Robotics, a laboratory under Defence Research and Development Organisation.
3. The system aims to enhance **internal security operations**, particularly in **monitoring sensitive areas and supporting counter-terrorism efforts**.

4. It combines **satellite imagery with advanced AI-driven analytics**, enabling real-time generation of actionable intelligence.
5. By processing **large volumes of spatial data**, it can detect **patterns, trends, and anomalies** that may not be visible through traditional monitoring methods.
6. This significantly improves **situational awareness**, allowing agencies to respond more effectively during critical operations.

Conclusion

Overall, the system enables **faster and more accurate decision-making**, strengthening India's technological capabilities in security and surveillance.

7. INS Kalpeni

Context

To strengthen maritime cooperation between India and the Maldives, an Indian Navy fast attack craft, INS Kalpeni, recently arrived at Gan in the Addu Atoll.

About INS Kalpeni

1. INS Kalpeni is a fast attack craft of the Indian Navy designed for quick and agile coastal operations.
2. It is named after Kalpeni Island in Lakshadweep.
3. The ship was inducted into service on 14th October 2010.
4. It is part of the Fleet Car Nicobar class, a group of 10 waterjet-powered fast attack vessels built by Garden Reach Shipbuilders and Engineers (GRSE), Kolkata.
5. The vessel operates under the Southern Naval Command based in Kochi and is mainly used for safeguarding coastal areas.
6. Its roles include monitoring maritime traffic, preventing illegal activities at sea, and assisting in rescue missions.
7. For combat capability, it is equipped with a 30 mm main gun with an advanced targeting system, along with multiple machine guns and shoulder-fired air defence missiles for protection against aerial threats.





ECONOMY

1. Beyond the Goldilocks Narrative

Context

The idea of India being in a “Goldilocks economy” phase—marked by balanced growth and stability—has recently been questioned due to emerging economic data and global uncertainties.

Q1. What is meant by the term “Goldilocks Economy,” and why was it used to describe India’s economic condition in Budget 2026–27?

1. A “Goldilocks economy” refers to a situation where economic conditions are ideal—neither too hot nor too cold—characterised by steady growth, low inflation, and manageable unemployment.
2. This term was used in the Indian context during Budget 2026–27 to indicate a phase of economic stability and resilience, where growth appeared consistent without major inflationary pressures.
3. It reflected optimism that India had achieved a balanced macroeconomic position, suitable for sustained expansion.

Q2. What recent economic and global developments have raised concerns about the sustainability of India’s “Goldilocks Economy”?

1. Several developments have challenged the earlier optimistic assessment.
2. A revision in GDP calculation using a new base year revealed that earlier growth estimates were overstated.
3. Global geopolitical tensions, especially in West Asia, have raised concerns over oil supply disruptions and rising prices.
4. The Indian rupee has weakened against the US dollar, indicating external vulnerability.
5. Additionally, changes in global GDP rankings and rising fears of slower growth combined with higher inflation have raised the possibility of stagflation-like conditions.

Q3. How do nominal GDP and real GDP trends reveal the true trajectory of India’s economic growth?

1. Nominal GDP, which reflects output at current prices,

shows a gradual decline in growth rates over time, indicating weakening economic momentum.

2. Real GDP, which adjusts for inflation, provides a clearer picture of actual growth and shows only moderate expansion in recent years.
3. Recent trends indicate that real growth has slowed to relatively modest levels, which may not be sufficient for a rapidly developing economy.
4. Together, these indicators suggest that underlying economic performance is weaker than headline figures may indicate.

Q4. Why is the “base effect” considered a misleading factor in projecting India’s economic strength?

1. The base effect occurs when growth rates appear high due to comparison with a low base period, such as the economic contraction during the COVID-19 pandemic.
2. The sharp growth seen in subsequent years largely reflects recovery rather than genuine long-term acceleration.
3. Relying on such inflated figures creates a distorted perception of economic strength and can lead to overly optimistic policy narratives.
4. Thus, it may give a false impression of a stable “Goldilocks” phase.

Q5. What structural weaknesses in India’s economy challenge the claim of a stable and balanced growth phase?

1. India’s growth rate remains insufficient to meet long-term development goals, particularly the ambition of becoming a developed nation by 2047.
2. Corporate earnings have been relatively weak, reflecting subdued economic activity and limiting investor interest.
3. Net foreign direct investment has turned negative, indicating declining investor confidence and contributing to currency depreciation.
4. GDP revisions have also reduced the perceived size of the economy, affecting global positioning.
5. Additionally, heavy dependence on energy imports exposes the economy to external shocks, especially



from geopolitical tensions.

Q6. How do external vulnerabilities such as FDI trends, currency depreciation, and energy dependence affect India's economic stability?

1. Negative net FDI reflects capital outflows, signalling reduced confidence among global investors.
2. This contributes to the weakening of the rupee, even in conditions where the dollar itself is not particularly strong globally.
3. High dependence on imported energy, especially through critical maritime routes, exposes the economy to supply disruptions and price shocks.
4. These external vulnerabilities increase inflationary pressures and widen the current account deficit, undermining macroeconomic stability.

Q7. What policy reforms are required to move India from a perceived "Goldilocks phase" to sustained and robust economic growth?

1. India needs structural reforms in key areas such as manufacturing, labour markets, and land acquisition to enhance productivity and competitiveness.
2. Improving the investment climate through regulatory certainty and ease of doing business is essential to attract both domestic and foreign investment.
3. Energy diversification, including expansion of renewable sources and diversified import channels, can reduce external risks.
4. Policymakers must adopt realistic economic assessments rather than relying on short-term growth spikes.
5. Strengthening data transparency and ensuring accurate GDP measurement will support better policy formulation and long-term planning.

Conclusion

Recent evidence suggests that India's economy may not have truly achieved a "Goldilocks" balance, with structural weaknesses hidden beneath strong headline numbers. Sustainable growth will require honest assessment and deep structural reforms.

2. Regulating Payments Banks in India

Context

The rapid rise of digital payments in India has spurred innovations like Payments Banks to boost financial inclusion, but the RBI's cancellation of Paytm Payments Bank's licence underscores growing concerns over compliance, governance, and depositor safety.

Q1. What are Payments Banks and why were they created?

1. Payments Banks are niche banks licensed by RBI to provide basic banking and digital payment services. They aim to serve unbanked and underbanked populations.
2. **Need for creation:** Low penetration of formal banking in rural and informal sectors. Rising need for secure digital transaction platforms.
3. **Key features**
 - a. Deposit limit capped at ₹2 lakh per customer.
 - b. No lending activity (no loans or credit cards).
 - c. Focus on remittances, utility payments, and digital wallets.
4. **Policy objective:** Promote financial inclusion alongside the digital economy push (e.g., UPI ecosystem).

Q2. What led to regulatory action against Paytm Payments Bank?

1. **KYC and onboarding violations:** Multiple accounts linked to a single PAN. Weak customer identity verification processes.
2. **Transaction irregularities:** Transactions exceeding regulatory limits. Potential risks of money laundering.
3. **Persistent non-compliance:** RBI directions (since 2018) not fully implemented. Continued gaps despite supervisory warnings.
4. **Governance failure:** Lack of operational separation between bank and parent company. Violation of "Chinese wall" norms.

Q3. What is the legal basis for RBI's action?

1. **Under the Banking Regulation Act, 1949**
 - a. Section 22(3)(c): Management harmful to public interest.
 - b. Section 22(3)(e): No public interest in continuation.
 - c. Section 22(3)(g): Failure to meet licensing conditions.
2. **Operational prohibition:** Section 5(b) & Section 6: Restriction on carrying out banking business.
3. **Regulatory principle:** RBI acts as the guardian of depositor interests and systemic stability.



Q4. How are Payments Banks different from traditional commercial banks?

Basis	Payments Banks	Commercial Banks
Nature	Niche banking model	Full-service banking
Lending	Not allowed	Core function
Deposit limit	₹2 lakh cap	No such cap
Risk profile	Lower credit risk	Higher due to lending
Target group	Financially excluded populations	Broad customer base
Revenue model	Transaction-based	Interest + fees

Q5. What are the benefits of strict regulation of Payments Banks?

- Security and Governance Benefits**
 - Protects depositors from fraud and misuse.
 - Ensures integrity of digital payment systems.
 - Builds trust in fintech-led banking models.
 - Prevents systemic risks from weak compliance.
- Administrative and Institutional Benefits**
 - Strengthens RBI's supervisory credibility.
 - Promotes standardisation of KYC and AML norms.
 - Encourages responsible innovation in fintech.

Q6. What concerns does this case raise?

- Technological and Operational Concerns**
 - Difficulty in maintaining KYC compliance at scale in digital onboarding.
 - Over-reliance on automated systems without adequate checks.
- Legal and Privacy Concerns**
 - Risk of data misuse in large fintech ecosystems.
 - Ambiguity in accountability between bank and parent company.
- Federal and Institutional Concerns**
 - Regulatory arbitrage between fintech firms and traditional banks.
 - Challenges in supervising rapidly evolving digital entities.
- Ethical Concerns**
 - Prioritisation of growth over compliance.
 - Conflict of interest due to group entity entanglement.

Q7. What safeguards and oversight mechanisms are required?

- Regulatory safeguards**
 - Strict enforcement of KYC and Anti-Money Laundering (AML) norms.
 - Periodic audits and real-time monitoring systems.
- Institutional safeguards**
 - Clear separation between bank and parent entity operations.
 - Independent compliance and risk management units.
- Technological safeguards**
 - Use of AI-based anomaly detection with human oversight.
 - Secure data governance frameworks.
- Legal safeguards**
 - Stronger penalties for repeated non-compliance.
 - Transparent grievance redress mechanisms for customers.

Conclusion

The cancellation of Paytm Payments Bank's licence underscores RBI's firm regulatory stance, highlighting that fintech innovation must align with compliance to sustain trust and financial inclusion.

3. RBI Forex Exposure Cap

Context

The Reserve Bank of India (RBI) has directed banks to cap their **foreign currency exposure at \$100 million per day** to stabilise the sharply depreciating rupee amid rising crude oil prices and global uncertainties due to the West Asia conflict. Despite the move, the rupee has weakened further, highlighting pressures on India's **external sector and forex reserves**.

Q1. What is the RBI's forex exposure cap?

- RBI has limited banks' **Net Open Position (NOP)** in foreign currency to **\$100 million per day**
- Earlier limit:** Up to **25% of bank capital**
- Objective:** Reduce speculative currency positions and stabilise rupee volatility
- Timeline:** Banks must comply by **April 10**
- Nature:** Regulatory tightening (not direct intervention)

Q2. Why did RBI introduce this cap?

- Problem**



- a. Sharp depreciation of rupee: Fell to around **₹94.8 per dollar**
 - b. Rising crude oil prices: Above **\$100/barrel**
 - c. External pressures: West Asia conflict and inflation concerns
2. **Need**
- a. **Protect:** Forex reserves and currency stability
 - b. **Prevent:** Excessive speculation by banks

Q3. How does the forex cap work? (Mechanism)

- 1. Banks must reduce large foreign currency positions.
- 2. **Process:** Sell excess dollar holdings
- 3. **Expected impact:** Increase dollar supply in market and support rupee value.
- 4. Policy shift from **Direct intervention (selling reserves)** to **Regulatory control (limiting exposure)**

Q4. What is the current status of India’s forex reserves and rupee?

- 1. Forex reserves fell by **\$30+ billion** and now are around **\$698 billion**.
- 2. **Rupee trend:** Depreciated ~4% since conflict and breached ₹92 → ₹93 → ₹94 levels.
- 3. **Key drivers:** Oil imports and capital outflows.

Q5. What role do FPIs play in rupee depreciation?

- 1. **Foreign Portfolio Investors (FPIs):** Net sellers throughout March
- 2. **Reasons:** Weak global markets, falling rupee, high oil prices and growth concerns
- 3. **Impact:** Capital outflows, increased demand for dollars and downward pressure on rupee.

Q6. Why are banks concerned about the forex cap?

- 1. **Operational Concerns**
 - a. Short implementation timeline
 - b. Need for gradual transition (3 months requested)
- 2. **Financial Risks**
 - a. Forced unwinding of \$11–15 billion positions
 - b. Risk: **Mark-to-market losses**
 - c. Impact: Reduced treasury profits
- 3. **Market Impact**
 - a. Reduced arbitrage opportunities
 - b. Possible shift to offshore markets
 - c. Risk of increased speculation abroad and higher volatility

Q7. What are the broader implications of this move?

- 1. **Administrative / Regulatory**
 - a. Stronger control over banking sector forex exposure
 - b. Signals RBI’s proactive stance
- 2. **Economic**
 - a. Reflects external sector vulnerability
 - b. **Risks:** Inflation due to weak rupee
- 3. **Financial Stability**
 - a. Protects forex reserves
 - b. Reduces speculative pressure
- 4. **Global Linkages:** Sensitive to oil prices and geopolitical conflicts

Q8. What are the benefits and concerns of the policy?

Benefits	Concerns
1. Stabilises rupee in short term	1. Limited immediate impact on rupee
2. Preserves forex reserves	2. Financial losses for banks
3. Limits speculative currency trading	3. Shift of trading to off-shore markets
4. Enhances regulatory control	4. May not address structural causes



Q9. What safeguards and additional measures can RBI use?

- Past Lessons:** During crises (e.g., Global Financial Crisis, Taper Tantrum), RBI used:
- 1. FCNR(B) inflows (>\$30 billion)
 - 2. Repo rate hikes
 - 3. Import restrictions (e.g., gold)

Short-term Tools	Medium-term Measures	Long-term Strategy
1. Dollar swap windows	1. Attract capital inflows: FPI reforms and ECB relaxation.	1. Reduce import dependence (especially oil)
2. Liquidity management	2. Encourage NRI deposits: FCNR(B) accounts	2. Strengthen export competitiveness
3. Targeted interventions		



Conclusion

The RBI's forex exposure cap reflects a **strategic shift toward regulatory intervention** to stabilise the rupee amid external shocks. While it may offer short-term relief, sustained stability will depend on **managing capital flows, controlling inflation, and strengthening India's external sector fundamentals**.

4. Land Inequality in India

Context

A recent study by the **World Inequality Lab** highlights severe land concentration in rural India, showing that the top 10% of households own a disproportionately large share of land.

Q1. What is land inequality, and what are its historical and structural causes in India?

- Land inequality** refers to the **unequal distribution of land ownership** across households, especially in rural areas.
- Historically, it originates from **colonial land systems** like zamindari, which concentrated land in the hands of a few landlords.
- Post-independence land reforms** were implemented but remained uneven and incomplete across states.
- Socio-economic hierarchies**, including caste-based disparities, further deepened unequal access to land.
- Structurally, rural India consists of:
 - Large landholders** controlling major land resources
 - Small and marginal farmers** with limited holdings
 - Landless labourers** dependent on wages
- Land is a key asset as it determines **income, social status, and access to credit**, making inequality more impactful.

Q2. What are the key patterns and statistical findings on land distribution in India?

- Overall Distribution Pattern**
 - The **top 10% of rural households own around 44% of total land**, showing high concentration.
 - The **top 5% control about 32%**, while the **top 1% alone hold 18%** of land.
 - Around **46% of rural households are landless**, indicating widespread exclusion.
 - Among landowners, the **average landholding size is about 6.2 hectares**, but ownership remains

skewed.

- In villages, the **largest landowner controls about 12.4% of land on average**, and in some villages, a single landlord owns more than half.

2. Inequality Indicators

- Gini coefficient** is used to measure inequality; higher values indicate greater disparity.
- States** like Kerala, Bihar, Punjab, Tamil Nadu, & West Bengal show **high inequality levels**.
- Karnataka and Rajasthan** have relatively lower inequality.

Q3. What are the regional variations in land inequality across Indian states?

- Bihar** shows extremely high concentration, with top households controlling a significant share of land. **Uttar Pradesh** has relatively lower concentration compared to Bihar.
- Punjab**, despite being agriculturally advanced, has the **highest landlessness (around 73%)**.
- Rajasthan and Uttar Pradesh** have comparatively lower levels of landlessness.
- These variations are influenced by **historical land systems, policy implementation, and socio-economic conditions**.

Q4. What are the key drivers of land inequality identified in the study?

- Agricultural suitability and market access** explain a significant part of inequality, as fertile and well-connected areas attract land concentration.
- Social factors**, especially higher **Scheduled Caste population**, are linked to increased landlessness.
- Infrastructure proximity** (towns, highways, railways) often correlates with higher inequality, as land becomes more valuable.
- Historical factors** play a major role:
 - Areas under **zamindari system** show higher inequality
 - Former **princely states** tend to have relatively lower inequality
- These factors show that both **economic opportunities and historical legacies** shape land distribution.

Q5. What are the implications of persistent land inequality in rural India?

- It **reinforces rural poverty** and restricts upward mobility for disadvantaged groups.



2. It reduces **agricultural productivity** due to fragmented holdings and unequal resource access.
3. It deepens **social inequalities**, especially caste-based disparities.
4. High landlessness limits access to **institutional credit, subsidies, and welfare schemes**.
5. It may lead to **social tensions and conflicts** over resources.

Q6. What policy measures have been suggested to address land inequality in India?

1. **Strengthening land reforms** and ensuring effective implementation across states.
2. Improving **tenancy rights** to protect small farmers and cultivators.
3. Promoting **digitisation and transparency of land records** to reduce disputes and corruption.
4. Encouraging **cooperative farming and land pooling** to improve productivity.
5. Expanding access to **credit, inputs, and technology** for small and marginal farmers.
6. Designing **targeted interventions** for vulnerable communities, especially landless households.

Q7. What challenges exist in implementing reforms to reduce land inequality?

1. **Political resistance** and vested interests often hinder land redistribution efforts.
2. **Incomplete and outdated land records** create legal and administrative barriers.
3. Variations in **state capacity and governance** affect policy implementation.
4. Social factors like **caste and local power structures** limit equitable access.
5. Rapid development and rising land values may further **increase concentration instead of reducing it**.

Conclusion

Land inequality in India remains a deep-rooted structural issue shaped by history, economy, and social factors. Addressing it requires sustained reforms, better governance, and a strong focus on equity and inclusion.

5. Informal Work, Formal Challenges

Context

Recent worker protests in Noida highlight the **growing vulnerabilities of India's urban informal workforce**, raising concerns about **job security, living conditions,**

and policy gaps.

Q1. What is the informal sector in India, and what is its scope and defining characteristics?

1. The **informal sector** includes economic activities operating **outside formal regulation and institutional frameworks**.
2. It comprises **self-employed workers, daily wage labourers, street vendors, and unregistered enterprises**.
3. Workers typically lack:
 - a. **Written contracts**
 - b. **Job security**
 - c. **Social protection benefits**
4. This makes them highly vulnerable to **economic shocks and uncertainties**.

Q2. What is the size and economic significance of the informal sector in India's workforce?

1. The informal sector employs nearly **90% of India's workforce**, making it the dominant employment source.
2. Even in urban areas, **formal salaried jobs remain limited**, increasing dependence on informal work.
3. Despite its large contribution, the sector remains **under-recognised due to limited data and institutional coverage**.
4. It plays a crucial role in **livelihood generation and sustaining the economy**.

Q3. What are the major structural issues faced by workers in the informal sector?

1. **Employment insecurity:** Jobs are unstable, temporary, and low-paying.
2. **Lack of social security:** Limited access to **health insurance, pensions, and welfare schemes**.
3. **Low bargaining power:** Workers cannot negotiate wages or conditions effectively.
4. **Financial exclusion:** Dependence on **informal credit sources**, leading to debt cycles.

Q4. How have urban economic changes transformed employment patterns and increased informalisation?

1. Urban centres have shifted from **industrial production hubs to survival-oriented economies**.
2. Decline of industries (e.g., **textile mills in Mumbai and Ahmedabad**) reduced organised jobs.
3. Labour markets have become **fragmented and**



dominated by informal employment.

4. Cities now focus more on **basic survival activities** like **housing, food, and services** rather than production.

Q5. What are the key challenges faced by urban informal workers in terms of housing and living conditions?

1. Around **40%** of urban poor live in **slums or informal settlements**.
2. These areas often lack **sanitation, infrastructure, and legal protection**.
3. Workers spend a large portion of income (up to **50%**) on rent.
4. Many settlements are located in **hazard-prone areas**, increasing risks and vulnerability.

Q6. How have economic reforms and policies impacted informal workers in urban areas?

1. Liberalisation has shifted the state's role from **service provider to market facilitator**.
2. **Privatisation of basic services** (water, electricity) has increased living costs.
3. Urban policies promoting **gentrification and eviction** reduce access to affordable housing.
4. These changes have intensified **economic insecurity for informal workers**.

Q7. What measures and policy interventions are required for inclusive urban governance and informal sector support?

1. Strengthen implementation of **Code on Social Security, 2020** for wider coverage.
2. Improve reach and effectiveness of platforms like **e-Shram portal**.
3. Expand schemes like **PM SVANidhi** for credit access.
4. Promote **financial inclusion** through formal banking systems.
5. Develop **affordable housing policies and basic urban services**.
6. Encourage **worker participation mechanisms** such as workers' councils for better representation.

Conclusion

India's informal sector remains central to urban livelihoods but faces deep structural vulnerabilities. Addressing these challenges requires **inclusive policies, stronger social protection, and equitable urban governance**.

6. NDD Ban and Forex Market Stability

Context

The Reserve Bank of India has restricted banks' participation in offshore NDD markets to curb speculation, reduce volatility, and strengthen control over the rupee.

Q1. What are Non-Deliverable Derivatives (NDDs), and how do they function in currency markets?

1. Non-Deliverable Derivatives are financial contracts where two parties agree on a future exchange rate without actual delivery of the underlying currency.
2. These contracts are cash-settled, usually in a convertible currency like the US dollar.
3. The settlement is based on the difference between the agreed rate and the prevailing market rate at maturity.
4. They are mainly used for currencies that are not fully convertible, such as the Indian rupee.
5. These contracts are traded in offshore financial centres like Singapore, London, and Hong Kong.
6. They allow investors to hedge risks or speculate on currency movements without accessing domestic markets.

Q2. Why has the RBI restricted banks from NDD transactions, and what are its objectives?

1. The RBI has restricted NDD participation to curb excessive speculative trading in offshore markets.
2. It aims to strengthen control over the domestic foreign exchange market.
3. The move reduces regulatory arbitrage between offshore and onshore markets.
4. It seeks to enhance transparency in currency transactions and exposure.
5. The policy intends to stabilise the rupee amid global uncertainties and capital outflows.
6. It prevents misuse of derivatives as speculative tools instead of hedging instruments.
7. The decision also aims to boost confidence in the onshore forex market ecosystem.

Q3. How does the offshore NDD market influence the domestic forex market in India?

1. Offshore NDD markets often determine early price signals before Indian markets open.
2. These signals influence trader expectations and currency positioning in domestic markets.
3. Large offshore positions can create artificial pressure on the rupee's value.



4. Divergence between offshore and onshore rates can lead to volatility.
5. Speculative trades in NDD markets can amplify currency depreciation trends.
6. Domestic participants may react defensively to offshore movements.
7. This weakens the effectiveness of central bank interventions.
8. Overall, it reduces the RBI's control over currency price discovery.
3. During global crises, large offshore bets intensified currency pressure.
4. Speculative positions influenced onshore market sentiment and behaviour.
5. Artificial demand-supply imbalances increased exchange rate volatility.
6. Some entities used intra-group transactions to hide real exposure.
7. Rapid movements triggered panic among domestic investors.
8. This created a cycle of depreciation and instability in the rupee.

Q4. Who are the major participants in the NDD market, and what roles do they play?

1. Foreign institutional investors participate to hedge currency risks associated with investments.
2. Hedge funds actively use NDDs for speculative trading on currency movements.
3. Global banks facilitate trading and provide liquidity in offshore markets.
4. Multinational corporations use these contracts to manage exchange rate exposure.
5. Proprietary trading firms engage in arbitrage opportunities between markets.
6. These participants collectively shape global sentiment around the rupee.

Q5. What are the key concerns and criticisms associated with the NDD market?

1. The NDD market often leads to excessive speculation rather than genuine hedging.
2. Offshore trading is outside the direct regulatory control of Indian authorities.
3. It creates distorted price discovery unrelated to domestic economic fundamentals.
4. The market increases volatility in the rupee exchange rate.
5. It allows large players to influence currency trends disproportionately.
6. Regulatory gaps enable misuse through complex financial structures.
7. It undermines the effectiveness of domestic monetary and exchange rate policies.

Q6. How has misuse of the NDD market contributed to currency instability?

1. Traders have used NDDs for repeated entry and exit to gain speculative profits.
2. Contracts have been used to bet aggressively on rupee depreciation.

Q7. What are the likely impacts of RBI's regulatory measures on the forex market?

1. The immediate impact includes reduced speculative pressure on the rupee.
2. It strengthens the role of the domestic forex market in price discovery.
3. Currency volatility is expected to decline in the short term.
4. Investor confidence may improve due to greater regulatory clarity.
5. The rupee may stabilize against external shocks like oil price fluctuations.
6. However, reduced liquidity in offshore markets could impact hedging options.
7. In the long term, it promotes a more transparent and resilient forex ecosystem.

Conclusion

The RBI's restriction on NDD transactions signals a push for stronger domestic control over currency markets, aiming to curb volatility while ensuring transparency and stability in India's financial system.

7. Government e-Marketplace

Context

The Government e-Marketplace has achieved a cumulative **Gross Merchandise Value (GMV) of ₹18.4 lakh crore**, including over ₹5 lakh crore in FY 2025–26. This reflects the rapid expansion of **digital public procurement in India**, improving transparency and efficiency in government spending.

Q1. What is Government e-Marketplace (GeM)?

1. It was launched in **2016** by the **Ministry of Commerce and Industry**.
2. **Nature:** National public procurement portal



3. Users:

- a. Central & State Governments
- b. PSUs and affiliated bodies

4. Purpose: Procurement of goods and services**Q2. What are the key features of GeM?**

1. **Fully Digital Platform** - End-to-end procurement system
2. **Cashless & Paperless** - Online transactions and documentation
3. **AI-enabled Tools** - Smart recommendations and analytics
4. **Multilingual LMS** - Training for diverse users
5. **Inclusive Access**
 - a. Voice-enabled navigation
 - b. Regional support for sellers

Q3. What are the objectives of GeM?

1. To improve efficiency and speed in procurement
2. To ensure transparency and accountability
3. To enable mandatory procurement through portal
4. To promote best practices and standardisation
5. To achieve better price discovery and cost savings

Q4. What procurement methods are available on GeM?

1. **Direct Purchase:** For low-value transactions
2. **E-bidding:** Competitive bidding process
3. **Reverse Auction:** Sellers compete by lowering prices
4. **Hybrid Models:** Combination of bidding and auction

Q5. What is the significance of GeM's GMV growth?

1. Indicates rapid adoption across government agencies
2. Reflects increased digitalisation of procurement
3. Benefits include cost efficiency and reduced corruption
4. **Scale:** ₹18.4 lakh crore cumulative value

Q6. What are the benefits of GeM?

1. **Administrative**
 - a. Transparent procurement process
 - b. Reduced manual intervention
2. **Economic**
 - a. Better price discovery
 - b. Economies of scale
3. **Inclusive Growth:** Opportunities for MSMEs, Startups and Small sellers.

4. Technological: AI-driven and data-based decisions**Q7. What are the challenges and way forward?****1. Challenges**

- a. Digital literacy gaps among small sellers
- b. Resistance from traditional procurement systems
- c. Need for continuous system upgrades

2. Way Forward

- a. Expand training and awareness programmes
- b. Strengthen AI and analytics capabilities
- c. Improve ease of onboarding for MSMEs
- d. Ensure robust cybersecurity and data protection

Conclusion

GeM represents a **transformative shift in India's public procurement system**, combining **digital governance, transparency, and inclusivity**. Sustained focus on capacity building and technological enhancement will be key to maximising its long-term impact.

8. Production Linked Incentive Scheme for the Food Processing Industry (PLISFPI)

Context

The **Production Linked Incentive Scheme for the Food Processing Industry (PLISFPI)** has shown **strong performance**, with investments **exceeding initial commitments**, indicating rising growth and confidence in India's food processing sector.

Q1. What is PLISFPI and what are its key features?

1. PLISFPI is a scheme launched by the **Ministry of Food Processing Industries** to boost the **food processing sector**.
2. It aims to promote **value addition, capacity expansion, and global competitiveness**.
3. Implemented for **6 years (2021–22 to 2026–27)** with an outlay of **₹10,900 crore**.
4. Provides **financial incentives based on incremental production and sales**.
5. Focuses on building **global food manufacturing champions**.

Q2. What are the major components of the scheme?**1. Targeted Food Segments:**

- a. Ready-to-Cook / Ready-to-Eat (RTC/RTE) foods
- b. Processed fruits and vegetables



- c. Marine products
 - d. Mozzarella cheese
2. **Support for SMEs:**
- a. Encourages **innovative and organic food products**
 - b. Promotes participation of **small and medium enterprises (SMEs)**
3. **Branding & Marketing Support:**
- a. Assistance for **international branding, promotion, and market access**

Q3. What are the objectives of PLISFPI?

1. Promote **investment and infrastructure development**
2. Enhance **value addition to agricultural produce**
3. Create **globally competitive food brands**
4. Generate **employment**, especially in rural areas
5. Improve **farmer incomes through better price realisation**

Q4. How has the scheme performed so far?

1. Investments have crossed **₹9,000 crore**, higher than the committed **~₹7,000 crore**.
2. Shows **strong industry participation and confidence**.
3. Indicates effective **policy-driven private investment and sectoral growth**.

Q5. How does PLISFPI strengthen the food processing sector?

1. Expands **processing capacity**, reducing wastage
2. Promotes **high-value and export-oriented products**
3. Strengthens **supply chains and farmer-market linkages**
4. Builds a **modern and competitive food processing ecosystem**

Q6. What are the key challenges?

1. **Infrastructure gaps** (cold storage, logistics)
2. Limited participation of **small producers**
3. Shortage of **skilled workforce**
4. Difficulty in meeting **global quality standards**
5. **Regional imbalance** in benefits

Q7. What measures are needed going forward?

1. Improve **infrastructure and supply chains**
2. Enhance **skill development and training**
3. Provide **greater support to MSMEs**

4. Ensure **quality certification for exports**
5. Promote **cluster-based development**

Conclusion

PLISFPI is emerging as a **key driver of growth in India's food processing sector**. With better implementation and inclusivity, it can significantly boost **value addition, exports, and farmer incomes**.

9. Scorching Futures: Extreme Heat and Food Security

Context

A joint report by the Food and Agriculture Organization and World Meteorological Organization highlights that **extreme heat is severely threatening global and Indian agrifood systems**, pushing them towards crisis.

Q1. What are the key findings of the FAO-WMO report on extreme heat impacts on agriculture and food systems?

1. The report warns that **rising heatwaves are destabilising agrifood systems globally**, affecting both production and livelihoods.
2. Extreme heat is increasing **climate stress on crops, livestock, and agricultural workers**.
3. The impact is multidimensional - covering **food security, labour productivity, and ecosystem sustainability**.
4. It signals that without urgent action, **food systems may become highly vulnerable and less resilient**.

Q2. How is extreme heat affecting food security and agricultural productivity in India?

1. **Rice and wheat production** are highly vulnerable, especially in the **Ganga and Indus river basins**.
2. Yields of **fruits, vegetables, dairy, and poultry** are expected to decline.
3. Rising heat leads to:
 - a. Increase in **pests and disease outbreaks**
 - b. **Water stress and rainfall deficits**
4. Overall, this threatens **India's food security and rural livelihoods**.

Q3. What risks does extreme heat pose to agricultural workers and labour productivity?

1. High temperatures combined with humidity reduce human work capacity.
2. By the end of the 21st century, **work capacity may**



- decline by up to 40% under high-emission scenarios.
- This is linked to rising **wet-bulb temperatures** (combined heat + humidity).
 - Reduced labour productivity** can lead to **lower agricultural output** and **increased economic vulnerability** of farm workers.

Q4. What is wet-bulb temperature and why is it significant for agriculture & human survival?

- Wet-bulb temperature** measures the lowest temperature achievable through evaporation (heat + humidity combined).
- It indicates **how effectively the human body can cool through sweating**.
- High wet-bulb temperatures can make outdoor work **dangerous or even life-threatening**.
- It is crucial for assessing **climate risks to labour-intensive sectors like agriculture**.

Q5. What adaptation strategies does the report recommend to address extreme heat impacts on agriculture?

- On-Farm Adaptation**
 - Development of **heat-resistant crop varieties and livestock breeds**
 - Adjusting **cropping patterns and planting schedules**
 - Improving **irrigation systems and shading practices**
- Early Warning Systems**
 - Use of **seasonal forecasts and climate advisories**
 - Helps farmers **anticipate heatwaves and take preventive measures**
- Financial Protection Measures**
 - Access to **crop insurance, cash transfers, and social protection schemes**
 - Supports farmers in **recovering from climate shocks**

Q6. Why is climate change mitigation essential for protecting global food systems?

- Extreme heat is driven by **high greenhouse gas emissions**.
- Without mitigation, climate impacts will intensify, causing:
 - Severe **crop losses**
 - Increased **food insecurity**
- Transitioning to a **low-emission development pathway** is necessary for long-term sustainability.

Q7. What roles do FAO & WMO play in addressing climate & agricultural challenges globally?

- Food and Agriculture Organization**
 - Established in **1945**; headquarters in **Rome**
 - Leads global efforts to **eliminate hunger and improve food systems**
 - Publishes key reports like **State of Food and Agriculture**
- World Meteorological Organization**
 - Established in **1950**; headquarters in **Geneva**
 - Focuses on **weather, climate and hydrology cooperation**
 - Co-founded the **Intergovernmental Panel on Climate Change** with UNEP

Conclusion

The report clearly shows that **extreme heat** is a **growing threat** to **agriculture & livelihoods**. Strengthening adaptation measures alongside **urgent climate mitigation** is essential to secure future food systems.

10. Women's Workforce Participation Gap

Context

The delay in implementing the **Women's Reservation Act** has renewed focus on **low female workforce participation and leadership gaps** across India's economy, academia, and corporate sector.

Q1. What is the Female Labour Force Participation Rate (LFPR)?

- Female LFPR** refers to the **percentage of working-age women (15–64 years)** who are either **employed or actively seeking employment**.
- It is a key indicator of how effectively a country utilises its **female human capital**.
- A low LFPR indicates that a large number of women remain **outside the workforce**, reducing overall economic productivity.

Q2. Why does women's economic participation matter for growth and development?

- Higher participation is essential for achieving **high economic growth (around 8% for Viksit Bharat 2047)**.
- It improves **household incomes, poverty reduction, and social welfare**.



- Evidence shows that **women's leadership improves economic outcomes** at the constituency level.
- It enhances **diversity, innovation, and decision-making quality** in institutions.
- Overall, it is critical for **inclusive and sustainable development**.

Q3. What is India's current position?

- India's female LFPR has increased from **33.9% (2022) to about 40% (2025)**.
- Despite improvement, it remains **below the global average (~49%)**.
- India lags behind emerging economies like **Brazil (~53%) and Vietnam (~69%)**.
- This indicates a **persistent gap in women's economic participation**.

Q4. Why is female LFPR low in India, particularly from a demand-side perspective?

- The issue is largely **demand-side**, not just supply-side.
- In a **labour-abundant economy**, increasing labour supply without job creation may **depress wages**.
- Lack of **labour-intensive industries and quality jobs** limits opportunities for women.
- Patriarchal norms and social barriers** restrict mobility and employment choices.
- Limited access to **high-productivity sectors and formal jobs**.
- Underrepresentation in **decision-making roles** further reduces participation incentives.

Q5. What is the status of women in academia?

- Women remain **underrepresented in senior academic positions**.
- Professor-level representation increased slightly to **~29.5% (2021–22)**.
- In premier institutions:
 - IITs:** Around **14% female faculty**, with slow improvement.
 - IIMs:** Range between **~19% to 31%**, varying across institutes.
- Some institutions have even seen **stagnation or decline**, indicating structural barriers.

Q6. What is the status of women in corporate leadership and business sectors?

- Entrepreneurship:** Only **~27% of proprietary enterprises** are female-owned.
- Senior management:** Only **13 women for every 100**

men in top roles.

3. Corporate boards:

- Most firms have at least one woman director, but **77% have only 1–2 women**.
 - Only **7% (BSE 200)** and **5% (NSE 500)** board chairpersons are women.
- The **“one-woman director” rule** is often treated as compliance, not inclusion.
 - Research suggests at least **30% representation (“critical mass”)** is needed for real impact.

Q7. What is the way forward?

- Promote **labour-intensive industries** to increase demand for female workers.
- Improve access to **education, skills, and formal employment opportunities**.
- Address **social norms and institutional barriers** restricting women's participation.
- Strengthen **representation in leadership roles** across sectors.
- Ensure **effective implementation of gender-related policies and reforms**.
- Move from **token representation to meaningful inclusion**, especially in governance and corporate boards.

Conclusion

While India has improved female participation, **structural and leadership gaps persist**. Achieving inclusive growth requires both **higher participation and meaningful representation of women across all sectors**.

11. Global Tensions Impact on India's Economy

Context

Rising geopolitical instability in West Asia is exerting pressure on India's economy through **higher crude oil prices, rupee depreciation, and fiscal stress**. Given India's heavy dependence on energy imports, global conflicts are directly affecting **inflation, external stability, and household consumption patterns**.

Q1. Why do global tensions affect India's economy?

- India imports **85–87% of its crude oil**
- West Asia** is a key global energy supplier
- Impact channels:** Oil prices, exchange rates and capital flows.
- Result:** High exposure to external shocks



Q2. What are the key channels of transmission?

- Energy Prices**
 - Indian crude basket reached **\$156/barrel**.
 - Impact:** Higher transport and production costs leading to increase in inflation.
 - Effect:** Wider Current Account Deficit (CAD).
- Exchange Rate Pressure**
 - Rupee depreciated to around **₹95/\$**.
 - Consequences:** Costlier imports and imported inflation
 - Response:** RBI intervention using forex reserves
- External Sector Stress**
 - Forex reserves - around **\$709 billion**.
 - Trends:** FPI outflows increasing
 - Impact:** Weakening external stability

Q3. How do oil prices affect India's fiscal position?

- Structural dependence** on oil imports. **Key impacts:**
 - Increased subsidies for LPG and fertilisers.
 - Reduced tax revenue due to fuel tax cuts to control inflation.
- Outcome:** Higher fiscal deficit risk
- Past trend:** Revenue loss due to excise duty cuts

Q4. How is India's revenue structure changing?

- Growing reliance on **GST (transaction-based tax)**. GST collections - ₹22.8 lakh crore.
- Issue:** Revenue depends on consumption levels.
- Risk:** During crises lower consumption → lower revenue.

Q5. What is the impact on households?

- Private consumption: **~61.4% of GDP**
- Household debt: **>41% of GDP**
- Effects of rising prices:** Increased fuel and LPG costs leads to reduced disposable income.
- Outcome:** Weak consumption demand and higher financial vulnerability.

Q6. What are the trends in industry and investment?

- Industrial Trends**
 - Strong:** Capital-intensive manufacturing.
 - Weak:** Labour-intensive sectors.
- Investment Trends**
 - Private investment:** Remains subdued.

- Issues:** Low project completion rates.
- Vulnerable sectors:** MSMEs and informal sector.

Q7. What is the macroeconomic contradiction in India?

- Positive Indicators**
 - GDP growth: **~8.1%**
 - High government capital expenditure
- Negative Indicators**
 - Weak income growth
 - Rising household debt
 - External vulnerabilities
- Insight: Growth is **infrastructure-led**, not consumption-led

Q8. What are the benefits and concerns arising from this situation?

- Opportunities / Strengths**
 - Strong GDP growth
 - Rising GST collections
 - Public investment momentum
- Concerns**
 - High oil dependency
 - Fiscal stress due to subsidies
 - External sector vulnerability
 - Weak household demand
 - Uneven industrial growth

Q9. What is the way forward for India?

- Energy Security:** Diversify energy sources to renewables and strategic reserves.
- Economic Strategy:** Promote employment generation & wage growth to strengthen domestic demand.
- Fiscal Reforms:** Broaden tax base and reduce overdependence on GST.
- External Stability:** Maintain adequate forex reserves to manage capital flows.
- Resilience Building:** Support MSMEs and strengthen supply chains.

Conclusion

Global tensions highlight India's **structural vulnerabilities to external shocks**, especially through energy dependence and capital flows. A balanced approach focusing on **energy diversification, income-led growth, and fiscal resilience** is essential to ensure long-term economic stability in an uncertain global environment.





SCIENCE AND TECHNOLOGY

1. Artemis II Mission

Context

The **Artemis II** set a new milestone as astronauts travelled about **406,771 km from Earth**, making it the **farthest human spaceflight**. This surpassed the earlier record of **Apollo 13**, though in Artemis II the distance is part of a **planned trajectory**, not an emergency deviation.

Q1. What is Artemis II and its mission objective?

1. Artemis II is a **crewed lunar flyby mission**, not a landing mission.
2. It uses the **Orion** spacecraft.
3. The main aim is to **test life-support systems and spacecraft performance in deep space**.
4. The record distance achieved is a **result of its mission path**, not the primary goal.

Q2. What is the Free-Return Trajectory used in Artemis II?

1. Artemis II follows an **elliptical free-return trajectory**, unlike earlier missions (e.g., Apollo 8) that used circular lunar orbits.
2. This path uses the **Moon's gravity to automatically bring the spacecraft back to Earth**.
3. It **reduces dependence on engine burns**, making the mission safer and more efficient.

Q3. How does the Artemis II trajectory work?

1. **High Earth Orbit Phase**
 - a. Orion first enters an **elliptical Earth orbit** reaching ~74,000 km.
 - b. A **~42-hour testing window** allows astronauts to check critical systems (life support, environment).
 - c. If issues arise, the mission can be **aborted safely within Earth's gravity**.
2. **Translunar Slingshot Phase**
 - a. After system checks, Orion travels toward the Moon, reaching about **10,300 km beyond its far side**.
 - b. The Moon's gravity **slingshots the spacecraft back toward Earth**, without additional propulsion.

Q4. Why is the Free-Return Trajectory important?

1. **Built-in safety:** Ensures return to Earth even if engines fail.
2. **Fuel efficiency:** Avoids heavy braking and acceleration needed for lunar orbit.
3. **Lower launch weight:** Less fuel requirement reduces payload burden.
4. **Emergency readiness:** Saves fuel for contingencies.

Q5. What are the next steps in the Artemis programme?

1. Artemis II is a **10-day mission** focused on validating **crew safety and deep-space capability**.
2. It will generate critical data on:
 - a. **Life-support systems**
 - b. **Spacecraft performance**
3. These findings will support future missions aimed at:
 - a. **Human return to the Moon**
 - b. Establishing a **long-term lunar base**

Conclusion

Artemis II demonstrates a **safe and fuel-efficient deep-space mission design**, marking a key step toward **sustainable human exploration of the Moon and beyond**.

2. Antariksh Venture Capital Fund

Context

The **Antariksh Venture Capital Fund** is set to begin investments from FY2027, marking a major push to support India's **private space sector startups**.

Q1: What is the Antariksh Venture Capital Fund?

1. It is a **close-ended fund** registered with **SEBI** as a **Category II Alternative Investment Fund (AIF)**.
2. It is designed specifically to **invest in India's space sector companies**.
3. The fund focuses on **startups and enterprises working on space technologies**.
4. It aims to strengthen India's **commercial space ecosystem and innovation capacity**.



Q2: What are the key features of the Fund?

- Key Investor:** Indian National Space Promotion and Authorization Centre (IN-SPACe) under the Department of Space.
- Sponsor:** SIDBI Venture Capital Limited.
- It will invest in companies with **Technology Readiness Level (TRL) 4 and above** (i.e., technologies beyond initial concept stage).
- It is a **sector-specific fund**, focusing only on **space-related businesses**.

Q3: What is the objective of the Fund?

- To provide **capital support to space startups at various stages**.
- To enable **scaling up of operations and commercialization of technologies**.
- To promote **innovation and private sector participation** in the space domain.
- To contribute to India's **long-term space ambitions and global competitiveness**.

Q4: What is IN-SPACe and its role?

- IN-SPACe** (Indian National Space Promotion and Authorization Centre) is an **autonomous agency** under the **Department of Space**.
- It acts as a **single-window nodal agency** for private participation in the space sector.
- Key Functions:**
 - Promotes and authorises private players** in space activities
 - Facilitates **access to ISRO infrastructure and resources**
 - Acts as a **bridge between ISRO and private entities**
 - Encourages development of **launch vehicles, satellites, and space-based services**
 - It operates through **three directorates:**
 - Promotion Directorate
 - Technical Directorate
 - Programme Management and Authorization Directorate

Q5: Why is this Fund significant?

- It supports India's transition from a **government-dominated space sector to a mixed ecosystem**.
- It boosts **startup innovation in high-tech areas like satellites, launch systems, and space applications**.
- It reduces dependence on **public funding alone**.
- It strengthens India's position in the **global space**

economy.

- It aligns with broader reforms to **liberalise and commercialise the space sector**.

Q6: What are the challenges and way forward?

Challenges	Way Forward
1. High risk and long gestation in space startups	Provide patient capital and policy support
2. Limited private investment ecosystem	Encourage more venture capital participation
3. Technology and regulatory hurdles	Simplify approvals through IN-SPACe
4. Global competition in space sector	Promote innovation and international collaboration

Conclusion

The Antariksh Venture Capital Fund represents a key step towards **building a vibrant private space ecosystem**, enabling India to emerge as a **global space innovation hub**.

3. Fast Breeder Reactor at Kalpakkam

Context

India's **Prototype Fast Breeder Reactor (PFBR)** at Kalpakkam has achieved **criticality**, marking a major milestone in advancing the country's nuclear energy programme and long-term fuel sustainability.

Q1. What is a Fast Breeder Reactor (FBR), and how does it function in the nuclear energy cycle?

- A **Fast Breeder Reactor (FBR)** is a nuclear reactor that produces **more fissile material than it consumes**.
- Unlike conventional reactors that use **slow (thermal) neutrons**, FBRs use **fast neutrons** to sustain nuclear fission.
- It typically uses **Mixed Oxide (MOX) fuel**, composed of **plutonium-239 and uranium-238**.
- The key feature is the **“breeding process”**, where **fertile material (U-238)** absorbs neutrons and converts into **fissile material (Pu-239)**.
- This allows **continuous fuel generation**, improving efficiency and sustainability.
- FBRs are especially important for countries like India with **limited uranium but abundant thorium resources**.

Q2. What is meant by ‘criticality’ in a nuclear reactor, and why is it a significant milestone?

- Criticality** refers to the stage where a **self-sustaining**



nuclear chain reaction is achieved.

- At this point, each fission reaction produces enough neutrons to **maintain a stable reaction** without external input.
- There are three states:
 - Subcritical:** Reaction slows down and stops
 - Critical:** Stable and controlled reaction
 - Supercritical:** Reaction increases rapidly
- Achieving controlled criticality indicates that the **reactor core is functioning correctly**.
- It is a crucial step before **full-scale power generation**, ensuring both **efficiency and safety**.

Q3. What are the key features and technical specifications of India's PFBR at Kalpakkam?

- The PFBR is a **500 MWe sodium-cooled, pool-type fast breeder reactor** located at **Kalpakkam (Tamil Nadu)**.
- It is developed at the **Indira Gandhi Centre for Atomic Research (IGCAR)** and operated by **BHAVINI** under the Department of Atomic Energy.
- The reactor uses **MOX fuel (uranium-238 + plutonium-239)**.
- It is designed to **generate more fissile material than it consumes**, enhancing fuel sustainability.
- It incorporates safety features such as a **negative void coefficient**, which reduces reaction intensity during overheating.
- Achieving criticality confirms that the reactor is **ready to progress toward electricity generation**.

Q4. How does the PFBR fit into India's three-stage nuclear power programme?

- The PFBR is a central element of India's **three-stage nuclear programme**:
 - Stage 1:** Pressurised Heavy Water Reactors (PHWRs) use natural uranium to produce **plutonium**.
 - Stage 2:** Fast Breeder Reactors like PFBR use this plutonium to **generate more fissile material**.
 - Stage 3:** Thorium-based reactors convert thorium into **uranium-233** for long-term energy.
- Thus, PFBR acts as a **bridge between uranium-based and thorium-based energy systems**.
- It enables India to move toward a **closed nuclear fuel cycle**, maximising resource utilisation.

Q5. What is the significance of fast breeder

reactors for India's energy security and nuclear strategy?

- FBRs improve **fuel efficiency** by extracting more energy from limited uranium reserves.
- They help reduce dependence on **imported uranium**, enhancing **energy security**.
- They enable utilisation of **thorium reserves**, where India has a global advantage.
- FBRs reduce **nuclear waste** by converting unused materials into useful fuel.
- The development of PFBR places India among **advanced nuclear technology nations**, with only a few countries having such capability.

Q6. What are the safety features and challenges associated with fast breeder reactors?

- Key safety features include the **negative void coefficient**, which automatically reduces reactivity during overheating.
- Use of **liquid sodium coolant** allows efficient heat transfer but requires careful handling due to its reactive nature.
- Controlled criticality ensures **stable and safe reactor operation**.
- However, FBRs involve **complex technology**, high costs, and require **advanced safety protocols**.
- Long gestation periods and technical challenges can affect **timely implementation**.

Q7. What is the broader significance of achieving criticality at PFBR for India's nuclear future?

- Achieving criticality marks a **decisive technological milestone** in India's nuclear journey.
- It strengthens India's capability to build a **self-reliant and sustainable nuclear energy system**.
- It accelerates progress toward a **thorium-based energy future**, crucial for long-term needs.
- It enhances India's position in the global nuclear landscape as a **technologically advanced nation**.
- It supports the goal of a **closed fuel cycle**, ensuring efficient resource utilisation and reduced waste.

Conclusion

The achievement of criticality at the PFBR represents a major leap in India's nuclear programme. It reinforces the country's path toward sustainable, secure, and self-reliant energy development.



4. Aluminium Catalysis Breakthrough

Context

Recent research shows that **aluminium**, traditionally a post-transition metal, can be engineered to behave like **transition metals** (e.g., **palladium**, **platinum**) in chemical reactions. This could transform its role in **catalysis, industry, and sustainable chemistry**.

Q1. What is aluminium?

1. **Aluminium (Al)** is a **chemical element** with atomic number **13**.
2. It is classified as a **post-transition metal** in the periodic table.
3. It is one of the **most abundant metals in the Earth's crust**, mainly obtained from **bauxite ore**.
4. Due to its properties, it is considered a **strategically important and versatile metal** in modern industries.

Q2. How is aluminium produced?

Aluminium production is a **two-stage industrial process**:

1. **Bayer Process**
 - a. Bauxite ore is **crushed and treated with sodium hydroxide**.
 - b. This separates **aluminium hydroxide**, which is then heated (calcined) to form **alumina (Al₂O₃)**.
2. **Hall-Héroult Process**
 - a. Alumina is **electrolytically reduced** to produce pure aluminium.
 - b. This step requires **very high electricity**, making aluminium production **energy-intensive**.

Q3. What are the key properties of aluminium?

1. It is a **lightweight, low-density metal** with good strength.
2. It has **high thermal and electrical conductivity**.
3. It is **highly malleable and ductile**, allowing easy shaping.
4. It shows **excellent corrosion resistance** due to a protective oxide layer.
5. It is **recyclable**, retaining properties even after reuse, and recycling uses only **about 5% of the original energy**.

Q4. What is the new scientific breakthrough?

1. Recent research shows that **aluminium can behave like transition metals** such as **palladium, rhodium, and platinum**.

2. Transition metals are known for their **catalytic properties**, which help speed up chemical reactions.
3. This discovery indicates that aluminium can **mimic similar chemical behaviour**, which was previously not associated with it.

Q5. Why is this discovery important?

1. It could allow aluminium to be used as a **low-cost alternative to expensive transition metals** like platinum.
2. This has major implications for **industrial catalysis**, reducing costs in chemical and energy sectors.
3. It enhances aluminium's role in **advanced materials and green technologies**.
4. The discovery may reduce dependence on **rare and costly metals**, improving resource sustainability.

Q6. What are the major applications of aluminium?

1. **Transport:** Used in **aircraft, automobiles, ships and railways** due to its lightweight nature.
2. **Household & Packaging:** Found in **utensils, appliances and aluminium foil**.
3. **Infrastructure:** Used in **doors, windows, roofing and cladding materials**.
4. **Electrical Sector:** Used in **power transmission lines** due to good conductivity.
5. **Strategic Uses:** Important in **defence, aerospace and nuclear industries**.

Q7. What are the future implications and challenges?

1. **Opportunities:**
 - a. Potential use in **catalysis and advanced chemical processes**.
 - b. Expansion in **green energy technologies** and sustainable materials.
 - c. Greater reliance due to **recyclability and abundance**.
2. **Challenges:**
 - a. **High energy consumption** in production remains a major concern.
 - b. Environmental issues related to **bauxite mining and waste disposal**.
 - c. Need for **technological advancements** to fully utilise new catalytic properties.
 - d. Ensuring **sustainable and efficient recycling systems**.



Conclusion

Aluminium is a versatile and widely used metal, and recent scientific advancements have further expanded its potential. However, balancing its industrial benefits with environmental sustainability remains crucial.

5. India's Leap into 3D Glass Semiconductors

Context

India has taken a major step in semiconductor advancement with the launch of its **first 3D glass chip packaging unit in Odisha** under the **India Semiconductor Mission (ISM)**.

Q1. What are semiconductors, and why are they critical for modern technology and strategic sectors?

1. **Semiconductors** are materials (mainly **silicon**) that conduct electricity under controlled conditions.
2. They form the basis of **integrated circuits (chips)** used in all electronic devices.
3. Applications include **smartphones, computers, automobiles, defence systems and satellites**.
4. Countries with semiconductor capabilities gain **technological leadership, economic strength and strategic autonomy**.

Q2. What is Moore's Law, and why is the semiconductor industry moving beyond it?

1. **Moore's Law (1965)** states that the number of transistors on a chip doubles every two years, improving performance and reducing cost.
2. It drove decades of **miniaturisation and efficiency gains** in computing.
3. However, chips are now reaching **physical and thermal limits**, making further shrinking difficult.
4. This has led to alternative approaches like **advanced packaging, chiplets, and 3D integration**.

Q3. How do traditional silicon chips differ from advanced 3D glass semiconductor chips?

1. **Traditional chips:**
 - a. Built on **flat (2D) silicon wafers**
 - b. Components arranged side-by-side
 - c. Limited by **space, heat and signal interference**
2. **3D glass chips:**
 - a. Use **vertical stacking (3D architecture)** like a skyscraper

- b. Allow **higher density and performance** within the **same area**
- c. Represent a shift from **scaling** → **integration-based innovation**

Q4. What are the key features and advantages of 3D glass semiconductor technology and 3DHI modules?

1. Uses **glass substrates instead of silicon**, improving performance.
2. **Better thermal stability** — handles heat more efficiently.
3. **Lower signal loss** — improves speed and reliability.
4. Enables **high precision and advanced chip design nodes**.
5. Supports **3D Heterogeneous Integration (3DHI)**:
 - a. Combines **logic, memory, and sensors** in one package
6. Leads to **faster AI processing, efficient data centres, and advanced defence electronics**.

Q5. What are the key features of the Odisha 3D glass semiconductor facility and its strategic significance?

1. **Location:** Bhubaneswar, Odisha
2. **Cost:** ₹1,934 crore
3. **Lead company:** 3D Glass Solutions (USA)
4. **Investors:** Intel, Lockheed Martin, and global funds
5. **Technology:** 3D glass chip packaging and 3DHI modules
6. **Applications:** AI, 5G, defence, data centres
7. It is the **only advanced packaging project** among ISM-approved units, making it **strategically unique**.

Q6. What is the India Semiconductor Mission (ISM), and what progress has been made so far?

1. **ISM (2021)** is India's initiative to build a **complete semiconductor ecosystem**.
2. **Outlay:** ₹76,000 crore
3. Covers **fabrication, packaging, testing, design, and display manufacturing**.
4. Achievements:
 - a. **10 projects approved across six states**
 - b. Investments exceeding **₹1.6 lakh crore**
 - c. Includes **Tata fabrication plant and Micron OSAT units**



5. India currently has stronger **OSAT (assembly and testing) capacity than fabrication.**

Q7. What are the future implications, challenges, and way forward for India’s semiconductor ecosystem?

1. Implications

- a. Positions India in **cutting-edge chip packaging technologies.**
- b. Reduces dependence on **imports from Taiwan and China.**
- c. Enhances **strategic autonomy and supply chain resilience.**
- d. Strengthens India’s role in **global tech and defence ecosystems.**

2. Challenges

- a. Limited **domestic fabrication capacity.**
- b. Need for **skilled workforce and advanced infrastructure.**
- c. High **capital and energy requirements.**
- d. Dependence on **global supply chains for raw materials and equipment.**

3. Way Forward

- a. Implement **ISM 2.0 with ecosystem-wide focus (~\$11 billion planned).**
- b. Invest in **skill development and innovation ecosystems.**
- c. Promote **public-private partnerships and global collaborations.**
- d. Strengthen **semiconductor supply chains and R&D capabilities.**

Conclusion

India’s entry into **3D semiconductor technology** marks a shift from basic assembly to **advanced innovation.** Sustained policy support and ecosystem development will be key to achieving **technological self-reliance and global competitiveness.**

6. Diphtheria

Context

After decades of control through vaccination, **diphtheria** is reappearing in some regions, indicating gaps in immunisation and public health systems.

Q1. What is diphtheria and what are its key characteristics?

- 1. **Diphtheria** is a **highly contagious bacterial disease** that mainly affects the **upper respiratory tract** and sometimes the skin.
- 2. It is caused by **Corynebacterium diphtheriae**, which releases a **toxin** damaging body tissues.
- 3. The infection typically develops on the **throat or skin surface**, forming characteristic lesions.
- 4. It is a **vaccine-preventable disease**, though immunity requires **multiple doses and boosters.**

Q2. What are the different types of diphtheria?

Respiratory (Classical) Diphtheria	Cutaneous (Skin) Diphtheria
1. Affects nose, throat, tonsils, or larynx	1. Causes sores, ulcers, or rashes on skin
2. Most common and severe form	2. More common in tropical regions
	3. Less severe but still infectious

Q3. How is diphtheria transmitted?

- 1. Spreads through **respiratory droplets** during coughing or sneezing.
- 2. Can also spread through **direct contact with infected skin lesions.**
- 3. Some individuals may act as **asymptomatic carriers**, transmitting the bacteria without showing symptoms.

Q4. What are the symptoms of diphtheria?

Respiratory symptoms:	Skin symptoms:
1. Sore throat, fever, fatigue	1. Painful ulcers or sores
2. Swollen lymph nodes	2. Rashes with peeling skin
3. Greyish membrane in throat	3. Swelling and discoloration
4. Difficulty in breathing or swallowing	

Q5. What complications can arise from diphtheria?

- 1. **Airway blockage**, leading to suffocation
- 2. **Heart damage (myocarditis)** and possible failure
- 3. **Nerve damage**, affecting body functions
- 4. **Kidney failure**
- 5. Can be **fatal (around 30% in untreated cases)**, especially in children

Q6. What is the treatment for diphtheria?



1. Use of **Diphtheria Antitoxin (DAT)** to neutralise toxins
2. **Antibiotics** to stop bacterial growth and **supportive medical care** for complications
3. Early treatment is crucial to prevent **permanent organ damage**

Q7. How can diphtheria be prevented and why is it still a concern?

1. Prevented through **vaccination with booster doses**
2. Requires **high immunisation coverage** to maintain herd immunity
3. Re-emergence shows **gaps in vaccination and surveillance systems**
4. Continued vigilance is needed to avoid outbreaks and protect vulnerable populations

Conclusion

Diphtheria is preventable but still dangerous if neglected. Strengthening vaccination and surveillance is essential to prevent its resurgence.

7. Sustainable Aviation Fuel

Context

India has amended the ATF Control Order to include **Sustainable Aviation Fuel (SAF)**, signalling a major step towards **decarbonising the aviation sector** and aligning with global climate commitments.

Q1. What is Sustainable Aviation Fuel (SAF), and how does it differ from conventional aviation turbine fuel (ATF)?

1. It is a **bio-based or synthetic aviation fuel** made from renewable sources.
2. It consists of **aviation-grade hydrocarbons chemically similar to ATF**, ensuring compatibility.
3. Unlike conventional ATF (derived from crude oil), SAF is produced from **biomass, waste, or captured carbon**. It does not compromise **engine performance, safety, or fuel efficiency**.
4. Key difference lies in **lower greenhouse gas emissions and sustainable origin**.

Q2. What are the sources and production processes of Sustainable Aviation Fuel (SAF)?

1. **Sources (Feedstock):** Used cooking oil, animal fats, agricultural residues, non-food crops, municipal solid waste and green waste.

2. Production Methods

- a. **Bio-refining processes** converting biomass into jet fuel
 - b. **Co-processing in petroleum refineries** with conventional fuel
 - c. **Synthetic fuel production** using carbon capture technologies
3. These methods ensure SAF can **replicate the performance of fossil-based jet fuel**.

Q3. What is the significance of bringing SAF-blended fuel under the ATF Control Order, 2001?

1. Expands the definition of ATF to include **SAF blends meeting BIS standards**.
2. Provides **regulatory clarity for production, marketing, and usage**.
3. Enables India to **integrate into the global SAF supply chain**.
4. Facilitates **implementation of blending targets** for cleaner aviation fuel.
5. Acts as a key **policy step towards energy transition in aviation**.

Q4. What role do global frameworks like ICAO and CORSIA play in promoting SAF adoption?

1. The International Civil Aviation Organization sets global aviation standards and approves SAF after rigorous testing. ICAO's **CORSIA (Carbon Offsetting and Reduction Scheme for International Aviation)** aims to control emissions from international flights.
2. From 2027, airlines must **offset emissions above baseline levels**.
3. SAF use helps airlines **reduce offsetting obligations** by lowering emissions.
4. SAF must meet both **technical standards and sustainability criteria** to qualify.

Q5. What are India's SAF blending targets and how do they compare globally?

1. **India's Targets:** 1% blending by 2027, 2% by 2028 and 5% by 2030.
2. **Global Trends**
 - a. **European Union:** 2% (2025) → 6% (2030) → 70% (2050)
 - b. **United Kingdom:** 2% (2025) → 10% (2030)
 - c. **Japan:** 10% by 2030



- d. **Singapore:** 1% (2026) → 3–5% (2030)
- e. **United States:** Focus on **production incentives**

Q6. What are the key challenges in scaling up SAF adoption in India?

1. **High production costs** compared to conventional ATF
2. Limited **feedstock availability** and **supply chain constraints**
3. Need for **advanced refining** and **technological capacity**
4. Requirement of **large-scale investment** and **policy support**
5. Ensuring **compliance** with **global sustainability standards**

Conclusion

The inclusion of SAF under the ATF framework marks a crucial step in India's **green aviation transition**. However, scaling it effectively will require **technological innovation, policy support** and **global alignment**.

8. Curiosity Rover

Context

NASA's Mars Science Laboratory mission rover **Curiosity** has recently detected **organic molecules on Mars**, indicating important clues about past conditions.

About Curiosity Rover

1. The **Curiosity Rover** is a **robotic exploration vehicle developed by NASA** to study the **Martian surface and environment** in detail.
2. It was launched on **November 26, 2011**, aboard the Atlas V rocket from Florida and successfully landed on Mars on **August 5, 2012**.
3. Since landing, the rover has been exploring the **Gale Crater** and the slopes of **Mount Sharp**, studying rock formations and surface features.
4. The mission introduced an innovative landing technique where the spacecraft used a **parachute followed by a rocket-powered "sky crane" system** to gently lower the rover onto the Martian surface.
5. In terms of design, the rover is about **3 metres in length and weighs around 900 kg**, and it generates power using a **radioisotope thermoelectric generator** that converts heat from radioactive decay into electricity.
6. The rover's scientific objectives include determining whether **Mars ever supported life**, understanding its **climate history**, analysing its **geological structure**,

and collecting insights to support **future human missions**.

Conclusion

Through continuous exploration and data collection, Curiosity contributes to expanding knowledge about **Mars' habitability and evolution**, making it a key mission in planetary science.

9. Haemophilia

Context

The World Health Organization has recently moved forward a resolution to improve **equitable access to care for people with haemophilia**.

About Haemophilia

1. **Haemophilia** is a rare **inherited bleeding disorder** in which the blood fails to clot effectively, leading to prolonged or uncontrolled bleeding.
2. The condition occurs due to deficiency of **clotting factors**, mainly **factor VIII in Haemophilia A** and **factor IX in Haemophilia B**, which are essential for normal blood coagulation.
3. It follows an **X-linked recessive inheritance pattern**, meaning it primarily affects **males**, while females generally act as **carriers** of the defective gene.
4. In some cases, the disorder can arise **without any family history** due to **spontaneous genetic mutations**, accounting for a significant proportion of cases.
5. India has the **world's second largest hemophilia burden** with **over 80% of cases in India remain undiagnosed**.
6. **Symptoms:**
 - a. The severity of symptoms varies, with severe cases showing **frequent spontaneous bleeding**, while milder forms usually present symptoms after **injury, surgery, or dental procedures**.
 - b. Common symptoms include **prolonged bleeding, easy bruising, and frequent nosebleeds**, and in severe situations, bleeding may occur in **vital organs such as the brain**, posing serious risks.
7. **Treatment:**
 - a. **Clotting factor replacement therapy** is the standard treatment used to control bleeding and for preventive care.
 - b. **Comprehensive care through specialized centres** involving doctors, physiotherapists, and support staff helps manage complications and



improve quality of life.

- c. **Prophylactic treatment (regular infusions)** significantly reduces bleeding episodes and prevents long-term joint damage, especially when started early.
- d. **Desmopressin and antifibrinolytic drugs** are used in specific cases, particularly in mild haemophilia.
- e. **Non-factor therapies (e.g., emicizumab)** offer newer treatment options that reduce bleeding frequency and treatment burden.
- f. **Gene therapy** shows promising potential by enabling the body to produce clotting factors, possibly reducing the need for repeated treatment.
- g. Despite advancements, **limited access to diagnosis and treatment** remains a challenge in many regions, and there is a need to strengthen **health systems, supply chains, and universal healthcare coverage** for effective management.

10. Scarlet Fever

Context

Recent research has shown that the bacteria causing scarlet fever existed in the Americas even before European

contact, based on DNA evidence from ancient remains.

About Scarlet Fever

1. Also called **scarlatina**, it is a **bacterial infection** caused by **group A streptococci**, the same organisms responsible for **strep throat** and **certain skin infections**.
2. **Vulnerable Group:** Children between 5-15 years of age, making it a common childhood illness.
3. **Main Symptoms:** Characteristic **red rash**, along with **sore throat** and **high fever**.
4. **Other symptoms:** Strawberry-like tongue, headache, abdominal pain, nausea, vomiting, swollen glands, and muscle aches, making the condition visibly and physically severe. If not treated in time, it can lead to serious complications affecting the heart, kidneys, and other organs.
5. **Highly Contagious:** Can spread via **respiratory droplets** from coughing or sneezing, and individuals can get infected more than once as there is no vaccine available.
6. **Treatment** involves **antibiotics** such as **penicillin**, which reduce symptoms quickly, but completing the full course is essential to eliminate the infection completely.

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GEOGRAPHY AND ENVIRONMENT

1. India's Nationally Determined Contributions

Context

India's updated **Nationally Determined Contributions (NDCs)** reflect a cautious and balanced approach, aiming to advance climate action while safeguarding developmental priorities.

Q1. What are India's updated NDC targets under the Paris Agreement?

1. India has revised its **climate targets** with a **gradual and realistic approach** rather than drastic changes.
2. Key targets include:
 - a. **Emissions intensity reduction:** Reduce by **47% below 2005 levels by 2035** (earlier 45% by 2030).
 - b. **Clean energy capacity:** Achieve **60% of installed power capacity from non-fossil fuel sources**.
 - c. **Carbon sink expansion:** Create an additional **3.5-4 billion tonnes of CO₂ equivalent** through increased forest and tree cover.
3. These targets reflect India's commitment to **climate responsibility** aligned with **development needs**.

Q2. What factors shape India's climate policy and NDC commitments?

1. India's policy is influenced by its status as a **lower middle-income developing country**, limiting aggressive commitments.
2. It follows the principles of **climate justice and equity** under the global climate framework.
3. Structural constraints such as **energy demand, poverty reduction, and industrial growth** shape decision-making.
4. The **Paris Agreement's periodic update requirement** pushes countries to adjust targets based on changing realities.
5. A **worsening global climate situation** also influences policy direction.

Q3. What are the major initiatives undertaken by India to achieve its climate goals?

1. Promotion of **renewable energy expansion**, including solar and wind power.
2. Rapid push for **electric vehicles (EVs)** to reduce transport emissions.
3. Focus on **energy efficiency measures** across industries.
4. Development of **green hydrogen** as a future clean fuel.
5. Investment in **carbon capture and storage technologies**.
6. These initiatives reflect **strong policy commitment**, even if not all are formally included in NDC targets.

Q4. Why is there debate regarding the adequacy of India's NDC targets?

1. Some critics argue that targets are **insufficient to meet the global 1.5°C temperature goal**.
2. Others claim the targets are **easily achievable**, questioning their ambition.
3. There is debate over whether **installed capacity** is the right metric instead of actual renewable energy generation.
4. Even supporters are uncertain if the targets represent **India's maximum possible effort**.
5. This reflects a broader tension between **global expectations and national capabilities**.

Q5. What are the key economic and structural challenges in India's climate transition?

1. India's heavy reliance on **coal** makes emission reduction a **non-natural and costly transition**.
2. Expanding renewable energy requires **reducing cheaper coal-based generation**, increasing costs.
3. Large investments are needed for **battery storage and grid infrastructure**, running into **trillions of rupees**.
4. Limited options like **pumped hydropower** face environmental and regulatory constraints.
5. Renewable energy variability leads to **curtailment & inefficiencies**, increasing operational costs.
6. Overall, the transition imposes **significant economic burdens** across sectors.

Q6. What issues exist regarding climate finance



and cost assessment in India?

1. There is **insufficient international climate finance support**, despite global commitments.
2. A significant share of investment is being borne **domestically by India**.
3. The **total cost of mitigation efforts remains unclear**, creating a major policy gap.
4. Lack of financial clarity makes it difficult to **plan long-term strategies effectively**.
5. This highlights inequities in the **global climate finance architecture**.

Q7. How should India balance climate commitments with developmental priorities?

1. Climate policy must ensure **space for industrial growth, urbanisation, and economic expansion**.
2. India cannot strictly align with global targets like **1.5°C**, given its limited historical emissions and capacity.
3. There is a need to maintain a **strategic and context-based approach** to commitments.
4. Policies should balance **environmental sustainability with socio-economic development**.
5. Greater emphasis should be placed on **equitable global responsibility and fair burden-sharing**.

Conclusion

India's NDCs reflect a pragmatic balance between climate responsibility and development needs. Sustained progress will depend on global cooperation, adequate finance, and context-sensitive policymaking.

2. Arogya Van Initiative by NHAI

Context

The National Highways Authority of India has launched the '**Arogya Van**' initiative, focusing on **medicinal tree plantations along National Highways**. The initiative integrates **biodiversity conservation with infrastructure development**, promoting ecological sustainability and traditional knowledge systems.

Q1. What is the Arogya Van initiative?

1. Thematic plantation of **Medicinal trees along highways**
2. **Objective:**
 - a. Enhance biodiversity
 - b. Promote ecological sustainability
3. **Approach:** Use of vacant land parcels along highways

4. **Focus:** Ecosystem restoration + public awareness

Q2. What are the key features of the initiative?

1. Phase I coverage: **17 land parcels** with area coverage ~ **62.8 hectares**
2. Plantation target: ~**67,462 medicinal trees**
3. **States covered:** MP, Haryana, Delhi-NCR, Gujarat, Karnataka, Tamil Nadu, etc.
4. **Species:** ~36 medicinal plants like Neem, Amla, Jamun, Imli, Lemon, Gular, etc.

Q3. How is the implementation planned?

1. Site selection: Toll plazas, Wayside amenities, Interchanges and junctions.
2. Criteria: Agro-climatic suitability
3. Timeline: Plantation during **monsoon season**
4. Guidelines: As per Government landscaping norms

Q4. How does this initiative support biodiversity?

1. Promotes pollinators (bees, butterflies), birds and microfauna.
2. Enhances ecosystem resilience
3. Creates green corridors along highways
4. Improves habitat connectivity

Q5. What is its link with traditional medicine systems?

1. Supports **Ayurveda and indigenous medicine**
2. Conserves medicinal plant diversity
3. Acts as living repository of knowledge
4. Promotes public awareness of traditional practices

Q6. What are the benefits of the initiative?

1. **Environmental:** Increased green cover and climate resilience
2. **Economic:** Potential for medicinal plant value chains
3. **Social:** Awareness about sustainable living and traditional knowledge
4. **Infrastructure:** Integrates ecology with development

Q7. What are the challenges and way forward?

1. **Challenges**
 - a. Maintenance of plantations
 - b. Survival rates of saplings
 - c. Coordination across states
2. **Way Forward**
 - a. Community participation



- b. Regular monitoring and maintenance
- c. Expansion to more highway stretches
- d. Integration with climate action strategies

Conclusion

The Arogya Van initiative reflects a shift toward **eco-sensitive infrastructure development**, combining biodiversity conservation with cultural awareness. If implemented effectively, it can create **sustainable green corridors while preserving India's medicinal plant heritage**.

3. Marine Spatial Planning in Odisha

Context

Odisha has become the **first Indian state to implement Marine Spatial Planning (MSP)** under the Indo-Norway initiative, marking a shift towards **scientific, data-driven coastal management**.

Q1. What is Marine Spatial Planning (MSP), and how does it support sustainable ocean resource management?

1. **Marine Spatial Planning (MSP)** is a **strategic, science-based framework** for managing marine and coastal resources in an integrated manner.
2. It involves **mapping and zoning marine areas** for different activities such as **fisheries, tourism, energy and conservation**.
3. MSP aims to balance **economic development (blue economy)** with **environmental protection and social needs**.
4. It promotes **efficient use of ocean space**, reduces conflicts among stakeholders, and enhances **climate resilience**.

Q2. How did Marine Spatial Planning evolve in India, and what is the role of the Indo-Norway initiative?

1. MSP in India began in **2019 through the Indo-Norway Integrated Ocean Initiative**.
2. The **first phase** focused on **Union Territories like Puducherry and Lakshadweep**.
3. Odisha's initiative represents the **second phase**, expanding MSP to state-level implementation.
4. The programme aligns with India's focus on the **blue economy as a growth driver**.

Q3. What is the role and significance of the National Centre for Coastal Research (NCCR)

in MSP implementation?

1. The **National Centre for Coastal Research (NCCR)**, established in **1998 under the Ministry of Earth Sciences**, supports scientific coastal management.
2. It was earlier known as the **Integrated Coastal and Marine Area Management Project Directorate (ICMAM-PD)**.
3. Key functions include:
 - a. **Shoreline monitoring** using satellite and field data
 - b. **Pollution and water quality assessment**, including microplastics and heavy metals
 - c. **Hazard mitigation tools** like flood and shoreline warning systems
 - d. **Ecosystem research** for sustainable resource use
 - e. **Capacity building and awareness programmes**
4. NCCR provides the **scientific foundation and technical support** for MSP.

Q4. Why is Odisha a suitable state for implementing Marine Spatial Planning, and what are its coastal features?

1. Odisha has a **long coastline of over 550 km**, making it suitable for MSP implementation.
2. The coast includes **lagoons, mangroves, estuaries, and diverse ecosystems**.
3. These ecosystems support **biodiversity, fisheries, and livelihoods**.
4. Increasing **developmental pressures and environmental risks** make scientific planning essential.
5. Thus, MSP helps manage **both ecological and economic priorities** in the region.

Q5. What are the key components of scientific mapping and data-driven planning under MSP in Odisha?

1. MSP involves detailed **scientific studies and mapping of marine ecosystems**.
2. Key parameters include:
 - a. **Water characteristics** such as salinity and temperature
 - b. **Benthic mapping** (underwater vegetation and seabed features)
3. Identification of suitable zones for:
 - a. **Tourism**
 - b. **Fisheries and aquaculture**



- c. **Seagrass and seaweed cultivation**
 - d. **Other economic activities**
4. This enables **evidence-based policymaking and efficient resource allocation**.

Q6. How does Marine Spatial Planning contribute to coastal economy, livelihoods, and ecosystem sustainability?

1. MSP supports sectors like **fisheries, ports, tourism, and marine industries**.
2. It improves **livelihood opportunities** for coastal communities.
3. Helps reduce conflicts between **economic activities and environmental conservation**.
4. Ensures **long-term sustainability** by protecting marine ecosystems.
5. Strengthens the **blue economy while maintaining ecological balance**.

Q7. What is the significance of the Odisha Marine Biotechnology Corridor (OMBRIC) in supporting MSP?

1. The **Odisha Marine Biotechnology Research and Innovation Corridor (OMBRIC)** was launched in **2025**.
2. It focuses on **marine biotechnology research and innovation**.
3. Key objectives include:
 - a. Supporting **startups and enterprises** in marine sectors
 - b. Enhancing **marine conservation efforts**
 - c. Promoting **scientific tourism**
 - d. Improving **livelihood opportunities**
4. OMBRIC complements MSP by integrating **science, innovation, and sustainable coastal management**.

Conclusion

Marine Spatial Planning in Odisha marks a significant step towards **integrated coastal governance and sustainable blue economy development**. Its success will depend on **scientific planning, stakeholder participation, and effective implementation**.

4. Tuvalu Climate Crisis Threat

Context

The Pacific island nation **Tuvalu** faces an existential threat from **rising sea levels**, with projections suggesting

that large parts of the country may be submerged by the end of this century. This has intensified global attention on **climate vulnerability, displacement, and adaptation strategies**.

Q1. Where is Tuvalu located and what are its key features?

1. Location: West-central Pacific Ocean between Australia and Hawaii
2. Neighbours: Kiribati (north), Fiji (south)
3. Size: ~26 sq. km (4th smallest country)
4. Composition: 9 islands - 5 coral atolls + 4 reef islands
5. Capital: Funafuti

Q2. Why is Tuvalu highly vulnerable to climate change?

1. Elevation: Maximum height - ~4.5 metres above sea level
2. Geography: Low-lying coral atolls
3. Absence of rivers or natural elevation barriers
4. Result: Extremely sensitive to sea-level rise and storm surges

Q3. What are the impacts of rising sea levels on Tuvalu?

1. **Environmental**
 - a. Land submergence
 - b. Coastal erosion
 - c. Salinisation of freshwater
2. **Economic**
 - a. Loss of Agriculture (subsistence farming)
 - b. Increased dependence on imports and aid
3. **Social**
 - a. Risk of climate-induced displacement
 - b. Threat to cultural identity and heritage

Q4. What is Tuvalu's political and administrative system?

1. System: Parliamentary democracy
2. Structure: Constitutional monarchy
3. Head of State: Charles III
4. Representation: Governor-General
5. Unique feature: No political parties

Q5. What are the key features of Tuvalu's economy?



1. Nature: Small, aid-dependent economy
2. Activities:
 - a. Subsistence farming
 - b. Copra production
3. Revenue sources:
 - a. Fishing licences
 - b. Stamp sales
 - c. Remittances
4. Imports: Food, fuel, manufactured goods

Q6. What strategies is Tuvalu adopting to address the crisis?

1. Adaptation to coastal protection measures
2. International advocacy: Highlighting climate justice
3. Migration planning: Preparing for relocation scenarios
4. Digital initiatives: Preserving national identity

Q7. Why is Tuvalu important in global climate discourse?

1. Symbol of climate vulnerability
2. Raises issues of:
 - a. Climate refugees
 - b. Loss of sovereignty
3. Highlights inequity between low emitters vs high emitters

Conclusion

Tuvalu represents the **frontline of the global climate crisis**, where environmental change threatens national survival. Its situation underscores the urgent need for **global climate action, adaptation support, and legal frameworks for climate displacement**, balancing sustainability with human dignity.

5. Honey Badger Sighting in Kheoni Wildlife Sanctuary

Context

The recent sighting of the **honey badger** in Kheoni Wildlife Sanctuary highlights the presence of this elusive and resilient mammal in central India.

Q1. What is a honey badger?

1. The **honey badger (ratel)** is a **small but extremely powerful mammal** known for its **strength, aggression, and survival abilities**.
2. Scientific name: *Mellivora capensis*

3. It belongs to the **weasel family (Mustelidae)**, which also includes skunks and otters.
4. **Geographical distribution:**
 - a. Widely distributed across **Sub-Saharan Africa**, parts of **North Africa**, **West Asia**, **Arabian Peninsula**, **Iran**, and **Indian subcontinent**.
 - b. In India, found in **various dry and semi-arid regions**.
5. **Habitat:** Habitat includes **dry areas, grasslands, and forests**. They live in **burrows dug using strong forelimbs**.
6. **Conservation Status:** 'Least Concern' under the IUCN Red List

Q2. What are the key physical features and behavioural traits of the honey badger?

1. **Medium-sized animal:** Body length around **24–30 inches** and tail around **8–12 inches**.
2. Distinct appearance: **White upper body and black lower body**
3. Unique adaptations: **Thick, loose skin** helps escape predators. **Poorly developed ears** for protection
4. **Behaviour:** **Nocturnal** and **highly aggressive**. Emits **strong foul-smelling secretions** for defence.
5. One of the most formidable small mammals as:
 - a. Possesses **sharp claws (~4 cm)** and **powerful jaws** - can break hard shells like tortoise shells.
 - b. Known to attack animals **larger than itself**.
 - c. Highly adaptable diet: Eats **rodents, reptiles, birds, fruits, and roots**
 - d. Its **fearless behaviour and defensive mechanisms** make it a tough predator

Q3. What are the ecological features and significance of Kheoni Wildlife Sanctuary?

1. Located in **Madhya Pradesh**, spread over **132 sq. km**
2. Connected to Ratapani Tiger Reserve through wildlife corridors
3. Vegetation: **Dry deciduous forests** with teak, tendu, and bamboo
4. Fauna includes: **Leopards, sloth bears, hyenas, jackals, nilgai, and diverse bird species**
5. Acts as an important **habitat corridor and biodiversity zone**

Q4. Why is the recent sighting of the honey badger significant for conservation?

1. Confirms **species presence in central Indian forests**,



expanding known distribution

2. Indicates **healthy ecosystem and biodiversity richness**
3. Helps in **strengthening conservation planning and monitoring**
4. Raises awareness about **lesser-known but ecologically important species**

Conclusion

The honey badger's presence in Kheoni highlights the importance of **habitat conservation and wildlife corridors**, ensuring protection of even lesser-known yet ecologically significant species.

6. Shekha Jheel Bird Sanctuary

Context

Shekha Jheel Bird Sanctuary has been designated as a **Ramsar Site**, increasing India's total to **99 wetlands of international importance**.

What are Ramsar Sites?

1. **Ramsar Sites** are wetlands recognised under the Ramsar Convention for their **international ecological importance**, especially in conserving biodiversity.
2. These wetlands play vital roles in **groundwater recharge, flood control, climate regulation**, and support **livelihoods like fishing and agriculture**, making them crucial for both ecology and human sustenance.

About Shekha Jheel Bird Sanctuary

1. The sanctuary is located in Uttar Pradesh and represents a **typical monsoonal wetland of the Gangetic plains**.
2. It is a **freshwater perennial wetland** formed after the construction of the **Upper Ganges Canal (1852)**, which flows adjacent to it.
3. The site serves as an important **stopover for migratory birds along the Central Asian Flyway**, enhancing its ecological significance.
4. Its vegetation includes **submerged plants** like *Hydrilla*, *Ceratophyllum*, *Vallisneria*, *Potamogeton*, and *Najas*, along with **floating species** such as *Salvinia*, *Azolla*, and *Eichhornia*, and **rooted floating plants** like *Nymphoides*.
5. The sanctuary supports diverse fauna, especially **migratory birds** such as the **Bar-headed Goose, Painted Stork, and various duck species**, particularly during winter.

7. Olive Ridley Turtles

Context

Olive Ridley turtles nesting along the Tamil Nadu coast have recently begun migrating toward the Sri Lanka Dome, a relatively lesser-known yet highly productive marine region, drawing attention to its ecological significance in the context of the latest developments.

About Olive Ridley Turtles

1. **Olive Ridley Turtle (*Lepidochelys olivacea*):** A marine reptile belonging to the class **Reptilia**, it is among the smallest sea turtle species, identified by its olive-green to greyish shell and a distinct heart-shaped carapace.
2. **Feeding and Behavior:** These turtles are **omnivorous** and are well known for **arribada**—a synchronized mass nesting phenomenon where thousands of females come ashore to lay eggs simultaneously.
3. **Migration and Reproduction:**
 - a. Olive Ridelys undertake long-distance migrations of up to around 9,000 km, travelling from the Pacific Ocean to Indian waters.
 - b. They typically nest between December and March, laying eggs 1–3 times per season, with each clutch containing roughly 100 eggs.
4. **Key Nesting Locations:** The coasts of **Gahirmatha** and **Rushikulya** in Odisha rank among the largest nesting grounds globally.
5. **Major Threats:**
 - a. Olive Ridley populations face risks from accidental capture in fishing nets (bycatch), illegal hunting, destruction of nesting habitats, and marine plastic pollution.
 - b. Climate change further impacts them by altering nesting conditions and affecting food availability due to rising sea levels and temperatures.
6. **Protection Status:**
 - a. Olive Ridley turtles are granted the highest level of legal protection under **Schedule I of the Wildlife Protection Act, 1972**.
 - b. They are listed as **Vulnerable on the IUCN Red List**.
 - c. They are included in **Appendix I of CITES**, which prohibits international trade in the species.



Sri Lanka Dome

1. It is a relatively lesser-known but highly productive marine region in the Indian Ocean, known for



supporting rich biodiversity.

- 2. Formation process:** It develops due to seasonal upwelling, where cooler, nutrient-rich waters rise to the surface, leading to plankton blooms that attract diverse marine life such as turtles, fish, whales, and seabirds.
- 3. Seasonal pattern:** This process generally begins in May, peaks around July, and declines by September, after which marine species disperse and begin their return migrations.

8. *Limnonectes motijheel*

Context

A new frog species, *Limnonectes motijheel*, has been discovered in **Namdapha Tiger Reserve**, highlighting the region's rich amphibian biodiversity.

About *Limnonectes motijheel*

1. It is a **newly identified frog species** belonging to the genus *Limnonectes*.
2. Discovered in **Namdapha Tiger Reserve, Arunachal Pradesh**.
3. Named after **Motijheel Lake**, known for high amphibian diversity.
4. It is part of the **"fanged frogs" group**, characterised by small **fang-like projections in males**.
5. With this discovery, the genus *Limnonectes* now **includes six species in India**.
6. **Distinctive Morphology of the Species**
 - a. Displays a **dark-brown stripe between the eyes**.
 - b. Has a distinct **inverted "V"-shaped ridge along the back**.
 - c. Features **broken folds along the sides of the body**.
 - d. Adult size ranges between **2.3 to 3.5 cm**, typical of medium-sized frogs in this group.
 - e. The **fang-like structures in males** may assist in **feeding or territorial behaviour**.
7. **Breeding Behaviour:**
 - a. Unlike most frogs that lay eggs in **water or on vegetation**, this species constructs **mud nests beneath leaf litter on the forest floor**.
 - b. This behaviour is **previously unrecorded for this group in India**.
 - c. Indicates **adaptation to forest floor ecosystems** and specific ecological niches.
8. **Broader Distribution and Ecological Significance:**

- a. Fanged frogs (genus *Limnonectes*) are distributed across **South and Southeast Asia**.
- b. Known for **unique reproductive strategies and ecological adaptations**.
- c. Play an important role in **forest ecosystems**, contributing to **insect population control, food chains and biodiversity balance**.
- d. Their diversity reflects the **health of tropical forest ecosystems**.

About Namdapha Tiger Reserve

1. **Landscape of Namdapha Tiger Reserve**
 - a. Located in **Changlang district, Arunachal Pradesh**, along the **India–Myanmar border**.
 - b. Lies at the junction of **Indian and Indo-China biogeographic regions**.
 - c. Surrounded by **Mishmi Hills (Dapha Bum ridge)** and **Patkai ranges**.
 - d. The **Namdapha River** flows north to south through the reserve.
 - e. It shares a boundary with **Kamlang Wildlife Sanctuary**.
2. **Vegetation types:** Tropical evergreen forests, Moist deciduous forests, Temperate forests and Alpine scrub.
3. **Flora:**
 - a. Unique species like **Pinus merkusii** and **Abies delavayi**
 - b. Rare orchid **Blue Vanda**
 - c. Medicinal plant **Mishimi Teeta (Coptis teeta)**
4. **Fauna:** Elephants, Himalayan black bear, sun bear, hoolock gibbon (India's only ape), slow loris
5. **Unique feature:** Only park globally with **four big cats**: Tiger, Leopard, Snow Leopard, and Clouded Leopard

Conclusion

The discovery of *Limnonectes motijheel* underscores the ecological richness of Northeast India. Protecting such habitats is essential for **biodiversity conservation and scientific advancement**.

9. *Stauranthera aureoglossa*

Context

A new plant species, *Stauranthera aureoglossa*, has been discovered by botanists in the **Himalayan region**, noted for its unique **"golden tongue" feature**.

About *Stauranthera aureoglossa*



1. This species was identified in the **mid-elevation evergreen forests** of Arunachal Pradesh, specifically in the **Kamle and Upper Subansiri districts**.
2. It is a **perennial herb** that grows on **moist rocks and soil near streams and rivulets**, indicating its dependence on fragile streamside ecosystems.
3. The plant is distinguished by its **bell-shaped bluish-purple flowers**, setting it apart from closely related species.
4. Unlike similar plants, it **does not have a tubular spur at the base of the flower**, which is usually a common feature.
5. Instead, it has a **raised, textured yellow patch inside the lower petal**, resembling a **tongue-like structure**, which inspired the name “**aureoglossa**” (**golden tongue**).
6. Its leaves are typically **diamond-shaped or spear-shaped**, adding to its distinct botanical characteristics.
7. Due to threats like **logging, landslides, and road construction**, its habitat is under pressure, and it has been **provisionally classified as an endangered species**.

10. Mookambika Wildlife Sanctuary

Context

Pollution from **tourism-related sewage in Kollur** is threatening the Mookambika Wildlife Sanctuary, with the **Souparnika river carrying waste into its core area** during summer.

About Mookambika Wildlife Sanctuary

1. The sanctuary is located in the **Udupi district of Karnataka** and lies within the ecologically rich **Western Ghats**.
2. It spans an area of about **370 sq. km** and is named after the deity of the **Kollur Mookambika Temple**, which is situated within the sanctuary.
3. The sanctuary serves as an important **ecological corridor**, connecting Someshwara Wildlife Sanctuary in the south and Sharavathi Wildlife Sanctuary in the north.
4. A key geographical feature is the **Kodachadri Peak**, often described as a **botanical hotspot** due to its rich biodiversity.
5. The sanctuary is drained by two major rivers — **Chakra and Souparnika**, and also contains scenic waterfalls like **Koosalli and Belkal Theertha**.
6. Its vegetation includes a mix of **evergreen, semi-evergreen, and moist deciduous forests**, typical

of the Western Ghats, with notable flora such as **Dipterocarpus indicus, Calophyllum tomentosum, Hopea parviflora**, and the rare climber **Coscinium fenestratum**, along with some teak plantations.

7. The sanctuary supports diverse wildlife, including rare species like the **slender loris and lion-tailed macaque**, as well as larger animals such as **tiger, leopard, sloth bear, sambar, chital, gaur, and otter**, reflecting its rich faunal diversity.

11. Jamun

Context

A recent study indicates that **Jamun originated much earlier than previously thought**, with India playing a key role in its evolutionary history.

About Jamun

1. Jamun is an **indigenous minor fruit crop of commercial importance**, widely cultivated and consumed in India.
2. It is commonly known by various names such as **black plum, Indian black cherry, and Ram jamun** across different regions.
3. **Distribution:** India (**primary centre of origin**), Thailand, the Philippines and Madagascar.
 - a. Within India, Jamun grows widely across **tropical and subtropical regions**, including the **lower Himalayas up to 1,300 metres** and **Kumaon hills up to 1,600 metres**.
4. **Adaptability:** It grows best in **deep loamy and well-drained soils**, although it is tolerant to **salinity and waterlogged conditions**, making it adaptable to varied environments.
5. **Climatic Conditions:** The crop thrives in a **tropical and subtropical climate**, requiring **dry conditions** during **flowering and fruit setting**, while **early rainfall in subtropical regions** helps in **proper fruit development**.
6. These favourable conditions ensure better **size, colour and taste** of the fruit, contributing to its agricultural and economic value.

12. Santiaguito Volcano

Context

The recent eruption of Santiaguito Volcano forced hikers to flee, highlighting its status as one of the **most active volcanic systems globally**.

About Santiaguito Volcano



1. Location and Physical Setting:

- a. It is one of the **youngest active lava dome systems** in the world.
- b. Located in **western Guatemala**, near the city of **Quetzaltenango**.
- c. Part of a **volcanic region along the Pacific Ring of Fire**.
- d. Stands at an elevation of about **2,500 metres (8,202 feet)**.
- e. It appears as a **multi-peaked rocky dome complex**, unlike typical cone-shaped volcanoes.

2. Origin and Formation:

- a. Formed after the **massive eruption of Santa María Volcano in 1902**.
- b. The **1902 eruption**:
 - i. Destroyed the original summit
 - ii. Caused around **5,000 deaths**
 - iii. Was among the **largest eruptions of the 20th century**
- c. The eruption created a **large crater**, within which new lava domes began forming.
- d. **Santiaguito emerged around 1922** as one of these domes.

3. Structural Features:

- a. It is a **lava dome complex**, not a single volcanic cone.
- b. Composed of **multiple domes formed by slow**

lava extrusion.

- c. Contains **four craters**, with at least one currently active.
- d. The structure resembles a **cluster of rocky peaks rather than a typical volcano**.
- e. The dome has been **continuously growing since its formation**.

4. Volcanic Activity:

- a. Characterised by **frequent minor explosions**.
- b. Regularly emits **ash and smoke plumes**.
- c. Occasionally produces **lava flows and pyroclastic flows (hot gas and volcanic debris)**.
- d. Considered one of the **most persistently active volcanic systems in the world**.

5. Major Eruption Events:

- a. **1929 eruption**: Deadliest event, causing **over 2,500 deaths**
- b. **2010 eruption**: Killed **10 people due to falling volcanic rocks**
- c. **Recent eruption (2026)**: Forced evacuation of hikers due to **rock ejections and ash activity**

Conclusion

Santiaguito Volcano exemplifies a **highly active lava dome system with persistent hazards**. Continuous monitoring and preparedness are essential to minimise risks in such dynamic volcanic regions.





SOCIETY AND CULTURE

1. B'nei Menashe Migration and Identity Debate

Context

The recent relocation of members of the Bnei Menashe from Northeast India to Israel under a state-supported programme has brought renewed attention to questions of identity, migration policy, and cultural legitimacy.

Q1. Who are the B'nei Menashe and what is their historical claim?

- Identity:** A community mainly from Manipur and Mizoram. Belong largely to Mizo and Kuki-Chin tribal groups.
- Core claim:** They claim descent from tribe of Manasseh, one of the “Ten Lost Tribes of Israel.”
- Historical background:** The lost tribes are believed to have dispersed after the Assyrian conquest (722 BCE). Their exact locations remain historically uncertain.
- Migration narrative (community belief):** Movement from ancient Israel through Persia and Afghanistan to Northeast India. Based largely on oral traditions rather than verified historical evidence.

Q2. How did the B'nei Menashe identity evolve over time?

- Pre-colonial belief systems:** Indigenous tribal faiths with animistic and messianic elements.
- Colonial phase transformation:** Exposure to Christianity through 19th-century missionaries. Introduction to Biblical narratives.
- Turning point (mid-20th century):** Vision claimed by a local leader linking tribes to Israelite ancestry. Triggered reinterpretation of identity.
- Shift to Judaism:** From the 1970s, organised efforts to adopt Jewish practices. Gradual religious transformation supported by external organisations.

Q3. What role has Israel played in recognising and relocating the community?

- Recognition**
 - In 2005, Israel's religious authorities acknowledged them as “Lost Seed of Israel.”
 - Recognition was based partly on cultural and oral

evidence.

2. Migration policy

- Gradual relocation in batches since the 1990s.
- The recent state-backed programme marks a more formal approach.

3. Institutional involvement

- Support from Israeli organisations for conversion and resettlement.
- Requirement of formal religious conversion before migration.

4. Strategic dimension

- Strengthens Israel's global Jewish identity framework.
- Reflects demographic and cultural policy considerations.

Q4. What are the challenges in establishing the authenticity of their claim?

- Scientific limitations:** Genetic studies remain inconclusive. No definitive biological linkage established.
- Historical gaps:** Lack of written historical records and reliance on oral traditions.
- Anthropological complexity:** Cultural similarities may arise independently. Identity shaped by recent reinterpretations.
- Debate among scholars:** Some view it as genuine identity revival. Others see it as constructed or influenced by external factors.

Q5. What are the broader implications of this migration?

- Administrative and Governance Implications:** Need for coordination between Indian and Israeli authorities on documentation, citizenship, and migration procedures.
- International Relations:** Adds a socio-cultural dimension to India-Israel ties. Raises questions about transnational identity claims.
- Security and Social Stability:** Migration from sensitive border regions (Northeast India). Potential demographic and socio-political implications locally.
- Ethical and Identity Concerns:** Questions of authenticity versus aspiration. Right to self-identification versus historical verification.



Q6. What are the benefits and concerns associated with such relocations?

1. Benefits

- Opportunity for cultural and religious self-expression.
- Improved economic prospects for migrants.
- Strengthening of diaspora and identity networks.

2. Concerns

- Cultural dislocation and integration challenges in Israel.
- Reports of discrimination and social exclusion.
- Risk of identity politics influencing migration claims.
- Possible depopulation effects in source regions.

Q7. What safeguards and policy considerations are necessary?

1. Legal safeguards

- Transparent criteria for recognition and migration.
- Protection of migrant rights in the destination country.

2. Institutional mechanisms

- Bilateral coordination between India and Israel.
- Monitoring welfare of relocated individuals.

3. Social safeguards

- Integration programmes to reduce discrimination.
- Cultural sensitisation initiatives.

4. Ethical safeguards

- Avoid politicisation of identity claims.
- Respect for diversity within local communities.

Conclusion

The B'nei Menashe issue highlights the complex interplay between history, identity, and modern state policies. While migration offers opportunities for cultural reconnection, it also raises questions about authenticity, integration, and governance. A balanced approach—grounded in evidence, inclusivity, and human dignity—is essential to manage such transnational identity movements effectively.

2. CBSE AI Curriculum Rollout

Context

The Central Board of Secondary Education has introduced a **Computational Thinking (CT) and AI curriculum for Classes 3–8**, to be implemented from the 2026–27 academic session. The initiative aims to build **future-ready skills**, but raises concerns regarding **foundational**

literacy readiness.

Q1. What is the CBSE AI & Computational Thinking curriculum?

- It is introduced for Classes **3 to 8**.
- The focus is on logical reasoning, problem-solving and pattern recognition.
- Approach: Integrated across subjects (not standalone)
- Objective:
 - Introduce AI concepts in everyday context
 - Build early computational skills

Q2. Why are LSRW skills critical for CT learning?

- LSRW** = Listening, Speaking, Reading, Writing
- Role:** Foundation of all learning
- CT dependency:** Requires:
 - Reading instructions
 - Interpreting problems
 - Expressing solutions
- Activities:** Puzzles, case studies, group tasks
- Issue:** Weak literacy → CT becomes **reading challenge, not thinking exercise**

Q3. What do learning outcome data reveal?

- Annual Status of Education Report 2024**
 - 50% Class 5 students cannot read Class 2 text
 - Persistent since 2006
- PARAKH 2024**
 - Urban private schools underperform at early grades
 - Government schools perform better in some areas
- Key insight: Literacy deficit is **system-wide**

Q4. What is the gap between policy goals and reality?

- NIPUN Bharat Mission (2021)** - Target is Foundational literacy by **2026–27**
- Current status:** Significant improvement, but gaps persist
- Issue:** CT curriculum launched **before literacy goals achieved**
- Result:** Policy sequencing mismatch

Q5. What does the CT curriculum assume?

- It assumes that students have **basic comprehension ability**.



- The **focus** is on higher-order thinking like analytical reasoning and problem-solving.
- From Class 6**, the focus is on projects, journals and AI concepts.
- Risk:** Weak literacy → early learning breakdown
- Assessment issue:** Measures literacy instead of CT ability

Q6. What is the core policy dilemma?

- Two parallel priorities:
 - Foundational literacy** (LSRW)
 - Advanced skills** (CT & AI)
- Problem:** Literacy gaps remain unresolved
- Result:** CT may not deliver intended outcomes
- Insight:** Foundation missing → superstructure weak

Q7. What is the way forward?

- Strengthen Foundations First** - Achieve universal literacy (Grade 3 level)
- Phased Implementation** - Introduce CT after literacy benchmarks
- Global Lessons** - Countries like Finland and Singapore focus on literacy first and then on AI education.
- Curriculum Integration** - Align CT with language development
- Teacher Capacity** - Train teachers for dual focus (literacy + CT)

Conclusion

The CBSE AI curriculum is a **forward-looking reform**, but its success depends on **strong foundational literacy**. Without addressing LSRW gaps, the initiative risks becoming ineffective, highlighting the need for **proper sequencing between basic learning and advanced skills development**.

3. Truck Mounted Attenuators

Context

The Ministry of Road Transport and Highways has introduced **Truck Mounted Attenuators (TMAs)** to enhance **road safety in construction and maintenance zones**.

Q1. What is a Truck Mounted Attenuator (TMA), and what is its primary purpose in road safety management?

- A **Truck Mounted Attenuator (TMA)** is a **safety device attached to the rear of a truck**.

- It is designed to **absorb impact during collisions**, especially in road work zones.
- Its main purpose is to **protect workers and motorists** by reducing accident severity.
- It is widely used in **highway construction, maintenance and repair operations**.

Q2. How does a Truck Mounted Attenuator function to absorb impact and reduce accident severity?

- TMAs work by **absorbing and dissipating kinetic energy** during a collision.
- They reduce the **force transferred to vehicles and individuals** involved.
- This helps:
 - Prevent severe damage to the **impacting vehicle**
 - Protect **road workers positioned ahead**
- The system acts as a **buffer between moving traffic and work zones**.

Q3. What are the key safety features of TMAs, including warning systems and visibility enhancements?

- Equipped with **high-intensity wig-wag warning lights**.
- Lights flash in **alternating patterns forming directional arrows**.
- Provide **clear visual signals** to approaching drivers.
- Effective during:
 - Night-time operations**
 - Foggy or low-visibility conditions**
- These features ensure **early detection and response by drivers**.

Q4. How do TMAs help in preventing accidents in highway construction and maintenance zones?

- Provide **advance warning** to drivers about ongoing work zones.
- Reduce the likelihood of **rear-end collisions**.
- Act as a **protective barrier**, absorbing crash impact if accidents occur.
- Improve **traffic management and driver awareness** in high-speed corridors.
- Thus, they contribute to both **accident prevention and damage reduction**.



Q5. What is the significance of introducing TMAs in India's road safety and infrastructure framework?

1. Enhances **worker safety** in hazardous road construction zones.
2. Reduces **fatalities and injuries** on highways.
3. Aligns with global best practices in **traffic and construction safety**.
4. Supports government efforts towards **safer highways and infrastructure development**.

Q6. What are the broader benefits of TMAs for road users and highway management systems?

1. Improves **overall traffic safety and efficiency**.
2. Reduces **economic losses from accidents and disruptions**.
3. Ensures smoother **maintenance operations without compromising safety**.
4. Builds **public confidence in road infrastructure systems**.

Q7. What challenges and measures are required for effective implementation of TMAs in India?

1. Challenges:

- a. High initial cost of deployment
- b. Need for **training and awareness among operators**
- c. Limited adoption across all regions

2. Measures:

- a. Mandate use in **all major highway projects**
- b. Provide **training and guidelines for usage**
- c. Integrate TMAs into **road safety policies and standards**

Conclusion

Truck Mounted Attenuators are a crucial innovation in **road safety management**, reducing risks in high-speed work zones. Their effective implementation can significantly improve **highway safety outcomes in India**.

4. Abhilekh Patal Portal

Context

In the context of promoting awareness and public engagement with India's historical records, the Prime Minister of India recently urged citizens to explore the 'Abhilekh Patal' portal to gain a deeper understanding of the country's archival and historical legacy.

About Abhilekh Patal Portal

1. **Abhilekh Patal** is an online portal that provides access to the digitised archival collections and reference materials of the National Archives of India.
2. It is developed and maintained by the **National Archives of India (NAI)** under the **Ministry of Culture**, and is continuously being expanded with new data.
3. The portal aims to **preserve India's historical records and make them easily accessible**, including around **7 million archival documents** being digitised over time.
4. It is designed to support **researchers, students, and general users** in studying original historical sources related to people, events, and social changes.
5. Users can search an index of records through **reference tools**, and request access using services like **Page on Demand (POD)** for digitised records.
6. For documents not yet digitised, users can request conversion through the **Digitise on Demand (DOD)** service, or seek assistance from the NAI research room.
7. The portal includes a wide range of materials such as **government records, private papers of notable individuals, photographs, maps, microfilms, and rare historical documents**.

National Archives of India (NAI)

1. The **National Archives of India** preserves government records that have long-term historical and administrative importance. It is the largest archival repository in South Asia.
2. It was set up on **11th March 1891 in Kolkata (then Calcutta)** as the **Imperial Records Department**.
3. It functions under the **Ministry of Culture**.
4. Its **head office is in New Delhi**, with a **regional office in Bhopal**.
5. It also operates **record centres in Bhubaneswar, Jaipur, and Puducherry** for storing and managing archival materials.
6. The archives hold a wide range of documents, including **government records, private papers, oriental manuscripts, maps, photographs, and microfilms**, which are important for researchers and administrators.
7. The institution is headed by the **Director General of Archives**, who is responsible for implementing the **Public Records Act, 1993** and related rules (1997) for proper management and preservation of government records across Central Government ministries, departments, and public sector units.



5. Thrissur Pooram

Context

In the context of a recent fireworks unit explosion that led to the death of around 15 people, the celebrations of Thrissur Pooram were scaled down. Despite this, thousands of people still gathered at the Vadakkunnathan Temple grounds in Thrissur to witness the festival.

Thrissur Pooram

1. Thrissur Pooram is a major festival in Kerala that reflects the state's rich cultural traditions and spiritual practices.
2. It takes place every year in **Medam (April–May)** at **Thekkinkadu Maidan in Thrissur** and is widely regarded as the most important among all pooram festivals.
3. The modern form of the festival was established by **Sakthan Thampuran (Raja Rama Varma), the Maharaja of Cochin (1790–1805)**, who brought together **10 temples** for the celebration.
4. The festival is known for its **grand elephant processions decorated in traditional ornaments** and **powerful performances of classical temple music ensembles**.

5. Before Thrissur Pooram became prominent, the **Arattupuzha Pooram** was considered the largest temple festival in Kerala.

Major Highlights of the festival

1. One of the most popular features is **Kudamattom**, where colourful umbrellas are rapidly exchanged atop elephants in a rhythmic display.
2. The festival also showcases **Ilanjithara Melam**, a large traditional musical performance involving hundreds of artists using classical percussion and wind instruments.
3. The celebrations start with a **flag hoisting ceremony (Kodiyettam)** that officially marks the beginning of the festival.
4. Deities from participating temples are taken out in **ornate elephant processions accompanied by traditional orchestra performances**.
5. It ends with a **grand fireworks display** followed by the **ceremonial conclusion the next morning**.
6. An associated **public exhibition** is also **conducted**, featuring trade, cultural displays, and public engagement activities.

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HISTORY

1. Samprati and the Spread of Jainism

Context

On Mahavir Jayanti, the inauguration of the Samrat Samprati Museum highlighted the historical contributions of Samprati in spreading Jainism across regions.

Q1. How does the recent recognition of Samprati reflect the broader historical role of Jainism during the Mauryan period beyond the dominance of Ashoka?

1. The Mauryan period is often associated primarily with the spread of Buddhism.
2. But Jainism also maintained a strong presence during this era as royal patronage existed for multiple religions simultaneously.
3. Samprati's recognition highlights Jain contributions often overlooked.
4. It reflects the pluralistic nature of ancient Indian society.

Q2. In what ways did Jainism coexist and evolve alongside Buddhism within the Mauryan Empire, and what evidence supports its continuity?

1. Jainism continued to flourish despite Buddhist prominence.
2. Several members of the Mauryan family were linked to Jainism. Chandragupta Maurya is believed to have adopted Jainism. Ashoka's wife Padmavati is associated with Jain traditions.
3. Jain monks & institutions remained active as religious tolerance allowed multiple traditions to grow. Textual traditions preserved Jain historical narratives.

Q3. How is Samprati portrayed in Jain traditions, and why is he often considered the Jain counterpart to Ashoka in terms of religious patronage?

1. He is depicted as devoted follower of Jainism & recognised as major royal patron of religion.
2. His role is comparable to Ashoka's support for Buddhism.
3. Jain texts emphasise his spiritual commitment. He

actively promoted Jain teachings & practices.

4. His legacy was expanded in later medieval literature.

Q4. What were the methods and strategies adopted by Samprati to expand Jainism across different regions of India and beyond?

1. Samprati sent Jain monks to distant regions. He encouraged missionary activities for the spread of teachings and establishment of religious networks.
2. He supported the installation of Jain icons and promoted religious practices among lay followers.
3. Expansion covered multiple regions like southern & western India & central & northern regions.
4. Some traditions suggest expansion beyond India.
5. His approach combined spiritual outreach with institutional support.
6. These strategies ensured long-term consolidation of Jainism.

Q5. How did temple construction and icon installation under Samprati contribute to the institutionalisation of Jain religious practices?

1. Samprati emphasised building religious infrastructure.
2. Large-scale temple construction was undertaken & existing temples were renovated & expanded
3. Installation of icons standardised worship practices which promoted idol worship and strengthened ritual traditions.
4. Charitable centres were also established. These efforts created organised religious spaces.
5. Institutionalisation helped sustain Jain practices over time.

Q6. What are the historical sources that document Samprati's life, and how reliable are these accounts in reconstructing early Jain history?

1. Samprati's life is recorded in Jain literary sources. Examples: Sampratikatha, Parishistaparva and Prabhavakcharita. These texts were written in later periods.
2. They combine history with religious narratives.
3. Some accounts may include exaggerations. However,



they provide valuable cultural insights.

4. They help reconstruct the spread of Jainism in ancient India.

Q7. How does Samprati's legacy shape our understanding of state patronage and religious expansion in ancient India?

1. Samprati's rule highlights the role of kings in religion.
2. State support was crucial for religious expansion.
3. His policies promoted organised religious growth.
4. He demonstrated that religion and governance were interconnected.
5. His legacy shows parallel religious developments in India.
6. It reflects the importance of infrastructure in spreading faith.
7. His example broadens understanding beyond Ashoka-centric narratives.
8. It underscores the diversity of ancient Indian religious history.

Conclusion

The legacy of Samrat Samprati reveals that the Mauryan period was not solely defined by Buddhist expansion but also witnessed **significant Jain growth through royal patronage, institutional development, and cultural integration**, making it a crucial phase in India's religious history.

2. Áspero

Context

Archaeologists in Peru have discovered a structure at Áspero that was likely used for **astronomical observations**, revealing early scientific practices in the **Caral civilisation**.

About Áspero

1. Áspero is a **late preceramic archaeological site** linked to the **Norte Chico (Caral-Supe) civilisation**, one of the **oldest known civilisations in the Americas**.
2. It is situated on the **right bank of the Supe River**, close to the **Pacific Ocean**, highlighting its strategic coastal location.
3. The settlement was inhabited from **before 3000 BC to around 1800 BC**, making it part of the **Late Archaic period**.
4. It functioned as a **major urban and fishing centre**, supplying marine resources to inland settlements like Caral.
5. The site features **monumental architecture**, including **platform mounds and sunken circular plazas**, indicating advanced planning and social organisation.
6. Archaeological evidence of **25 architectural complexes** and elite burials (such as the **Lady of the Four Tupus**) points to a **stratified society with trade networks** connecting coast, highlands, and forests.
7. Beyond economic activity, Áspero served as a centre for **ritual and scientific knowledge**, where **astronomical observations** helped inhabitants understand environmental patterns and manage resources effectively.

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SCHEMES IN NEWS

1. NAMASTE Scheme

Context

The **NAMASTE Scheme** reflects India's shift towards **mechanised sanitation and dignity for sanitation workers**, with measurable improvements in safety, health, and livelihoods.

Q1. What is the NAMASTE Scheme, and what are its objectives?

- NAMASTE (National Action for Mechanised Sanitation Ecosystem)** is a flagship initiative aimed at **ending hazardous manual sanitation practices**.
- It focuses on **Sewer and Septic Tank Workers (SSWs)**.
- Core objectives** include:
 - Achieving **zero fatalities in sanitation work**
 - Eliminating **direct human contact with waste**
 - Ensuring **mechanised cleaning using safety equipment**
 - Promoting **dignity, safety, and sustainable livelihoods**
- Jointly implemented by the **Ministry of Social Justice and Empowerment (MoSJE)** and **Ministry of Housing and Urban Affairs (MoHUA)**. Duration: **FY 2023–24 to FY 2025–26**
- Executed through **National Safai Karmacharis Finance Development Corporation**

Q2. What are the key components and interventions under the NAMASTE Scheme?

- Safety and Mechanisation**
 - Provision of **Personal Protective Equipment (PPE)**
 - Promotion of **mechanised cleaning technologies**
 - Deployment of **safety devices and vehicles**
- Health and Social Security**
 - Coverage under **health insurance schemes**
 - Access to **Ayushman cards and welfare benefits**
- Livelihood and Empowerment**
 - Formation of **Self-Help Groups (SHGs)**
 - Support for **sanitation entrepreneurship**

(Sanipreneurs)

- Capital subsidies under **Swachhata Udyami Yojana (SUY)**

4. Institutional Support

- Strengthening **Emergency Response Sanitation Units (ERSUs)**
- Conducting **training and awareness workshops**

Q3. What recent enhancements have been introduced in the NAMASTE Scheme?

- Increased subsidy limits under **SUY**:
 - Individual projects: ₹5 lakh → ₹7.5 lakh
 - Group projects: ₹18.75 lakh → ₹25 lakh
- New provision for **Private Sanitation Service Organisations (PSSOs)** - 25% capital subsidy for mechanised equipment
- Increased support to **Sanipreneurs**, promoting private sector participation

Q4. What are the challenges in achieving the goals of the NAMASTE Scheme?

- Persistence of **manual practices in smaller towns and informal sectors**
- Limited **availability of mechanised infrastructure in all regions**
- Need for **continuous training and behavioural change**
- Ensuring **effective coordination between agencies and local bodies**
- Financial and technological barriers in **scaling up mechanisation**

Conclusion

The NAMASTE Scheme marks a **transformative shift from welfare to empowerment**, aiming to eliminate hazardous sanitation practices while ensuring **dignity, safety, and sustainable livelihoods** for workers.

2. SMILE Scheme

Context

The government has allocated **₹390 crore for the period 2021–2026** under the **SMILE Scheme**, indicating continued support for marginalised groups.



About SMILE Scheme

1. The **Support for Marginalized Individuals for Livelihood and Enterprise (SMILE) Scheme** is a **central sector scheme launched on 12 February 2022** to promote inclusion and rehabilitation.
 2. It consists of two sub-schemes: one focused on the **comprehensive welfare of transgender persons**, and the other on the **rehabilitation of persons engaged in begging**.
 3. The scheme adopts an **integrated approach**, combining welfare, livelihood support, and social protection measures for both target groups.
 4. It provides **scholarships for transgender students from Class IX up to post-graduation**, helping them continue education.
 5. Under livelihood support, it offers **skill development and employment opportunities** through schemes like PM-DAKSH.
 6. It ensures **comprehensive healthcare support**, including assistance for **gender-affirmation procedures**, through convergence with Ayushman Bharat - PM-JAY.
 7. Additional provisions include **Garima Greh shelter homes, Transgender Protection Cells for legal support**, and a **National Portal and Helpline** to provide information, grievance redressal, and assistance.
5. The scheme promotes the integration of **Indian telecom innovations into global standards**, helping improve **market access, intellectual property creation, export potential, and global competitiveness** of domestic technologies.
 6. The revised guidelines expand the scheme's scope to include **startups, MSMEs, academia, research institutions, telecom service providers, and industry stakeholders**, encouraging **wider ecosystem participation and collaborative innovation**.
 7. It also supports **pilot projects, proof-of-concept initiatives, and technology demonstrations**, enabling a smooth transition from **research to real-world deployment** and strengthening the innovation pipeline.
 8. The scheme will be **implemented through institutions** such as the Telecommunications Standards Development Society, India, Telecom Centres of Excellence, India, and Telecommunications Consultants India Limited, which will facilitate **coordination, capacity building, and effective engagement** with global telecom ecosystems.

3. Technology Development and Investment Promotion (TDIP) Scheme

Context

The Union Communications Minister Jyotiraditya M. Scindia released revised guidelines for the **TDIP Scheme** to strengthen India's **global telecom presence**.

About TDIP Scheme

1. **Aim:**
 - a. To **boost** India's role in **global telecom standardization**.
 - b. To **accelerate development** of indigenous telecom technologies.
2. **Financial outlay: ₹203 crore** (period 2026–31).
3. Designed as a **comprehensive support framework** to promote innovation and improve competitiveness in **next-generation telecom technologies** such as **5G Advanced and 6G**.
4. It seeks to enhance India's participation and influence in key global bodies like the International





ETHICS

1. Royal Heritage and Democratic Ethics

Context

- Ongoing debates on the role of former royal families highlight tensions between **democratic equality and cultural preservation**.
- Concerns are rising about whether showcasing royal heritage reinforces inequality or sustains valuable traditions.
- The issue reflects a broader ethical dilemma: balancing **social reform with preservation of lived cultural heritage**.

Ethical Issues Involved

1. Equality vs Cultural Continuity

- Democratic values demand removal of **hierarchical privilege and inherited status**.
- However, abrupt rejection of traditional structures risks **loss of cultural identity and continuity**.
- Raises conflict between **Rawls' justice (fair equality)** and preservation of tradition.
- Reflects tension between **modernity and tradition** in a plural society.
- Ethical dilemma: reforming inequality without causing **cultural erosion**.

2. Power and Representation in Cultural Narratives

- Culture is not neutral; it reflects **power structures and dominant voices**.
- Former elites may overshadow **artisans, local communities, and marginalized groups**.
- Risks creating a **skewed national identity narrative**.
- Violates principles of **inclusive representation and participatory justice**.
- Aligns with **Amartya Sen's capability approach** - all groups should have the freedom to express identity.

3. Aestheticisation of Inequality

- Royal symbols (palaces, ceremonies, fashion) may **romanticize historical inequality**.
- Can desensitize society to structural injustices.

- Raises concern under **utilitarian ethics** - whether such representation maximizes collective welfare.
- Ethical risk of turning oppression into **spectacle or cultural capital**.
- Undermines sensitivity toward **historical injustices and social struggles**.

4. Responsibility of Cultural Stewardship

- Former royals act as custodians of **heritage, crafts, and traditions**.
- Ethical duty to preserve culture for **future generations** (intergenerational justice).
- Reflects **trusteeship principle of Mahatma Gandhi** - wealth and privilege must serve society.
- Raises question: Is stewardship inclusive or exclusive?
- Balancing **ownership vs collective cultural rights**.

5. Preservation of Lived Heritage vs Superficial Conservation

- Distinction between **tangible (monuments) and intangible (rituals, crafts) heritage**.
- "Lived heritage" depends on **context, community, and continuity**, not just documentation.
- Disrupting traditional frameworks may turn culture into **mere performance**.
- Aligns with **virtue ethics** - preserving practices that sustain meaning and identity.
- Ethical challenge: maintaining authenticity while enabling reform.

Course of Action

1. Balance Reform with Cultural Preservation

- Promote **gradual and inclusive reform**, not abrupt dismantling of traditions.
- Protect cultural systems while eliminating **exploitative elements**.
- Follow **Gandhian trusteeship** - privilege aligned with public welfare.
- Encourage policies integrating **heritage conservation with social justice**.
- Ensure continuity without legitimizing inequality.

2. Democratize Cultural Representation



- a. Empower artisans, local communities, and marginalized voices in **cultural discourse**.
 - b. Promote **community-led heritage initiatives**.
 - c. Ensure equitable recognition and economic benefits to **traditional knowledge holders**.
 - d. Reflect **participatory governance principles**.
 - e. Use platforms like GI tagging and cultural missions for inclusivity.
- 3. Ethical Stewardship by Influential Actors**
- a. Encourage custodians of heritage to act as **facilitators, not gatekeepers**.
 - b. Promote transparency and inclusiveness in preservation efforts.
 - c. **Examples:** Civil servants like **Armstrong Pame (Manipur)** mobilizing communities for development show ethical leadership beyond authority.
 - d. Link cultural preservation with **livelihood generation** for artisans.
 - e. Embed accountability in heritage management.
- 4. Integrate Heritage with Modern Development**
- a. Use technology and innovation to preserve and promote **living traditions**.
 - b. Encourage **sustainable tourism models** benefiting local communities.
- c. Align with **UNESCO principles of intangible cultural heritage protection**.
 - d. Combine **economic growth with cultural sustainability**.
 - e. Prevent commercialization from distorting authenticity.
- 5. Promote Ethical Awareness and Dialogue**
- a. Encourage public discourse on **history, privilege, and identity**.
 - b. Integrate ethics and cultural sensitivity into **education systems**.
 - c. Promote critical thinking - neither blind glorification nor outright rejection.
 - d. Foster **respect for diversity and pluralism** (constitutional morality).
 - e. Ensure culture evolves through **dialogue, not domination**.

Conclusion

A just society must balance equality with cultural continuity. Ethical progress lies not in rejecting the past, but in reforming it with sensitivity, ensuring that heritage becomes inclusive, dynamic, and aligned with the values of justice, dignity, and collective identity.

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PLACES IN NEWS

Place	Context	Key Highlights
1. Bulgaria	Bulgaria is holding parliamentary elections for the eighth time in five years , reflecting a prolonged political deadlock.	<ol style="list-style-type: none"> 1. Bulgaria is located in southeastern Europe, occupying the eastern part of the Balkan Peninsula. 2. It shares land borders with Romania (north), Turkey and Greece (south), North Macedonia (southwest), and Serbia (west), while its eastern boundary is along the Black Sea. 3. Capital city: Sofia. 4. Climate: Moderate continental climate, with Mediterranean influences in the southern regions. 5. Mountains: The Balkan Mountains across the centre and the Rhodope Mountains in the south near Greece. 6. The highest peak is Mount Musala (9,594 ft) located in the Rila Mountains, which is also the highest point in the Balkans. 7. Bulgaria has several important rivers including the Danube, Iskur, Maritsa, Struma, Tundzha, and Yantra, and is rich in natural resources like bauxite, copper, lead, zinc, and coal.
2. Germany	India has called for stronger defence industrial cooperation with Germany during discussions with German parliamentarians in Berlin.	<ol style="list-style-type: none"> 1. Location: Central Europe 2. Capital: Berlin 3. Borders: <ol style="list-style-type: none"> a. North: Denmark b. East: Poland and Czech Republic c. South: Austria and Switzerland d. West: France, Luxembourg, Belgium, and the Netherlands e. North-west: North Sea and North-East: Baltic Sea 4. Climate: Temperate climate. 5. Physical geography: Alps and Bavarian Highlands in the south, and major rivers such as the Rhine, Elbe, and Danube, along with Lake Constance, the largest freshwater lake shared with Austria and Switzerland. 6. Natural resources: Lignite, coal, natural gas, iron ore, copper, nickel, potash and uranium, supporting Germany's industrial economy.
3. Mali	India has advised its citizens in Mali to remain cautious due to rising security threats , following coordinated attacks by separatist groups in multiple regions.	<ol style="list-style-type: none"> 1. Landlock country in West Africa. 2. Located in the Saharan and Sahelian zones. 3. Borders: <ol style="list-style-type: none"> a. North: Algeria b. East: Niger and Burkina Faso c. West: Senegal and Mauritania d. South: Côte d'Ivoire and Guinea 4. Capital: Bamako (along banks of Niger River) 5. Major River: Niger and Sénégal 6. Highest point: Hombori Tondo 7. Climate influenced by seasonal winds - the Alizé (trade winds) and the Harmattan, a dry and dusty wind blowing from the Sahara. 8. Mali is rich in mineral resources, with gold as its main export, along with deposits of iron, bauxite, manganese, and lithium.



<p>4. Egypt</p>	<p>India and Egypt recently strengthened their defence cooperation during the 11th Joint Defence Committee (JDC) meeting held in Cairo.</p>	<ol style="list-style-type: none"> 1. It is a transcontinental country located at the junction of north-east Africa and southwest Asia, with the Sinai Peninsula acting as a land bridge between the two continents. 2. Capital: Cairo 3. Land Borders: <ol style="list-style-type: none"> a. South: Sudan b. West: Libya c. North East: Israel and Gaza Strip 4. Maritime Borders: <ol style="list-style-type: none"> a. North: Mediterranean Sea b. East: Red Sea and Gulf of Aqaba 5. Egypt experiences a tropical climate with high temperatures, and its landscape shows a sharp contrast between arid deserts and the fertile Nile River valley. 6. A large portion of the country, nearly two-thirds, is covered by the Western Desert, highlighting its predominantly desert geography. 7. The Nile River flows from south to north through Egypt, supporting agriculture and settlement; the country's highest point is Mount Catherine (2,642 m), and it is rich in natural resources such as petroleum, natural gas, phosphates, and iron ore.
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ENSURE





PLACES IN NEWS

1. The Empires of the Futures will be the Empires of the Mind

The year was 1943, and the world stood at a crossroads. As Winston Churchill addressed the Harvard University audience, his words carried the weight of a civilization grappling with unprecedented destruction. “Empires of the future will be empires of the mind,” he declared, envisioning a world where intellectual prowess would supersede territorial conquest. Yet, eight decades later, as we witness the rise of **Silicon Valley titans**, the dominance of **artificial intelligence**, and the fierce competition for **technological supremacy** between nations, Churchill’s prophecy appears both prophetic and incomplete.

The concept of **mental empires** transcends the traditional understanding of geopolitical dominance rooted in military might and territorial expansion. In its literal sense, it speaks to the ascendancy of **knowledge-based economies**, where nations and organizations derive power from their intellectual capital, technological innovation, and capacity for creative problem-solving. However, the metaphorical dimensions reveal deeper truths about human civilization’s evolution—from the age of physical conquest to an era where **ideas, algorithms, and intellectual frameworks shape global hierarchies**.

This transformation reflects humanity’s gradual recognition that sustainable power lies not in controlling land or resources, but in **controlling narratives, technologies, and the very frameworks through which we understand reality**. The empires of the mind represent both liberation from traditional constraints and the emergence of new forms of dominance that are simultaneously more subtle and more pervasive than their predecessors.

The Architecture of Intellectual Dominance

The foundation of modern **mental empires** rests upon three interconnected pillars: **technological innovation, educational excellence, and cultural influence**. Unlike traditional empires that required vast armies and extensive bureaucracies, these new dominions operate through **networks of knowledge creation and dissemination** that transcend geographical boundaries.

Consider the remarkable ascendancy of **South Korea** from a war-torn nation in the 1950s to a global cultural and technological powerhouse today. The Korean government’s strategic investment in education, research

and development, and digital infrastructure created what economists term the **“Miracle on the Han River.”** Today, Korean technology companies like Samsung and LG compete globally, while **K-pop and Korean cinema** have created soft power influence that extends far beyond Asia. This transformation exemplifies how nations can build empires of the mind through systematic cultivation of intellectual and creative capabilities.

The **Indian IT revolution** presents another compelling case study. Beginning in the 1990s, India leveraged its English-speaking population and strong mathematical traditions to become the world’s back office. Cities like Bangalore and Hyderabad transformed into global technology hubs, with Indian engineers and entrepreneurs establishing a significant presence in Silicon Valley. Companies like **Infosys, TCS, and Wipro** didn’t just provide services; they created new models of global knowledge work that influenced how the entire world approaches software development and business process management.

However, the most profound example of mental empire-building lies in the realm of **digital platforms and artificial intelligence**. Companies like Google, Amazon, and Facebook have created ecosystems that shape how billions of people access information, conduct commerce, and maintain social relationships. Their algorithms don’t just process data; they **influence human behavior, political opinions, and cultural trends** on a global scale. When Google’s search algorithm changes, it affects the visibility of businesses worldwide. When Facebook modifies its news feed, it impacts political discourse across continents.

The Paradox of Liberation and Control

While empires of the mind promise liberation from traditional forms of domination, they simultaneously create new mechanisms of control that are often more sophisticated and pervasive than their predecessors. The **democratization of information** through the internet has empowered individuals and communities previously marginalized by geographical or economic constraints. A brilliant programmer in rural India can now contribute to global software projects, while a creative artist in Africa can reach worldwide audiences through digital platforms.

Yet this apparent liberation comes with hidden costs. The **digital divide** creates new forms of inequality, where access to high-speed internet, quality education, and technological literacy determines one’s participation in



the global knowledge economy. Nations and communities lacking these resources find themselves relegated to the periphery of mental empires, consuming rather than creating the intellectual products that drive modern prosperity.

The phenomenon of **algorithmic bias** reveals how mental empires can perpetuate and amplify existing inequalities. When artificial intelligence systems trained on biased data make decisions about hiring, lending, or criminal justice, they embed discriminatory patterns into seemingly objective technological processes. The **Cambridge Analytica scandal** demonstrated how data analytics could be weaponized to manipulate democratic processes, showing that empires of the mind can threaten the very foundations of free society.

However, critics argue that this perspective overemphasizes the negative aspects while underestimating the genuine democratizing potential of knowledge-based power structures. The **open-source movement** exemplifies how mental empires can operate on principles of collaboration rather than domination. Projects like **Linux, Wikipedia, and the Human Genome Project** demonstrate that intellectual empire-building can serve collective rather than narrow interests. The COVID-19 pandemic showcased unprecedented global scientific collaboration, with researchers sharing data and insights across national boundaries to develop vaccines in record time.

Nevertheless, the concentration of technological power in the hands of a few multinational corporations raises legitimate concerns about the democratic governance of mental empires. When a handful of companies control the infrastructure through which most human knowledge flows, questions of accountability, transparency, and public interest become paramount.

The Cognitive Battlefield: Narratives and Worldviews

The most subtle yet powerful dimension of mental empires lies in their capacity to shape **collective consciousness and worldviews**. Unlike traditional empires that imposed their will through force, mental empires operate by influencing how people think, what they value, and how they interpret reality. This represents a fundamental shift from controlling bodies to **controlling minds**.

The global dominance of **Hollywood cinema** illustrates this phenomenon perfectly. American movies don't just entertain; they propagate particular visions of heroism, success, relationships, and social organization. When audiences worldwide consume these narratives, they internalize American cultural values and perspectives, creating what scholars term "**cultural imperialism**." The Marvel Cinematic Universe, with its emphasis on

individual heroism and technological solutions to complex problems, has shaped how millions of people conceptualize conflict resolution and social change.

Similarly, the **English language** has become the lingua franca of global intellectual discourse, giving native English speakers and English-speaking nations significant advantages in international communication, scientific publication, and cultural exchange. This linguistic dominance shapes not just communication but thought itself, as language influences how we categorize experience and understand relationships between concepts.

The rise of **social media platforms** has created new battlegrounds for narrative control. The ability to trend hashtags, viral content, and shape online conversations has become a form of soft power that influences political movements, consumer behavior, and social norms. The **Arab Spring** demonstrated how digital platforms could facilitate political mobilization, while recent concerns about **misinformation and fake news** highlight how the same tools can be used to manipulate public opinion and undermine democratic institutions.

China's Belt and Road Initiative represents a fascinating hybrid of traditional and mental empire-building. While involving significant infrastructure investment, the initiative also promotes Chinese technological standards, educational exchanges, and cultural programs that extend Chinese influence through intellectual and cultural channels. The establishment of **Confucius Institutes** worldwide exemplifies how nations can build mental empires through educational and cultural programming.

Sustainable Architectures for Intellectual Prosperity

The challenge for contemporary civilization lies in harnessing the transformative potential of mental empires while mitigating their risks of creating new forms of domination and inequality. This requires developing **governance frameworks, ethical guidelines, and institutional mechanisms** that ensure intellectual power serves collective human flourishing rather than narrow interests.

Digital literacy and critical thinking education must become universal priorities, enabling all individuals to participate meaningfully in knowledge-based economies while maintaining the capacity to evaluate and critique the information they encounter. Finland's education system, which emphasizes **media literacy, collaborative problem-solving, and creative thinking** over standardized testing, offers a model for preparing citizens for the age of mental empires.

The development of **open-source alternatives** to

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proprietary platforms can help democratize access to digital tools and prevent excessive concentration of technological power. India's **Unified Payments Interface (UPI)** demonstrates how nations can create public digital infrastructure that serves broad social interests while fostering innovation and competition.

International cooperation frameworks must evolve to address the global nature of mental empires. Just as the **World Trade Organization** governs international commerce, new institutions may be needed to ensure that intellectual property regimes, data governance policies, and artificial intelligence development serve global rather than narrow interests. The **European Union's General Data Protection Regulation (GDPR)** represents an early attempt to assert democratic control over digital technologies.

The future of mental empires will likely depend on our collective ability to balance **innovation with equity, efficiency with democracy, and global integration with local autonomy**. This requires moving beyond zero-sum thinking toward collaborative models that recognize intellectual development as a shared human endeavor rather than a competitive struggle for dominance.

As we stand at the threshold of an age where **artificial intelligence, quantum computing, and biotechnology**

promise to reshape the very foundations of human existence, Churchill's vision of mental empires takes on new urgency and complexity. The question is no longer whether empires of the mind will dominate the future, but whether they will serve as instruments of human liberation or new forms of sophisticated control.

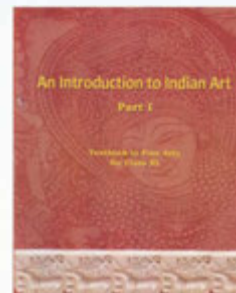
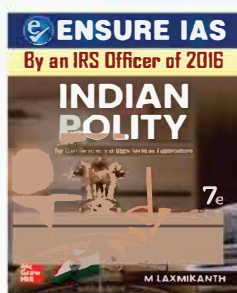
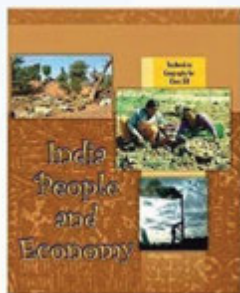
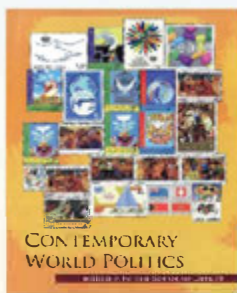
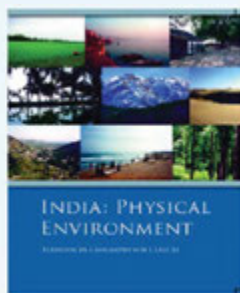
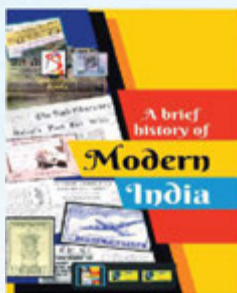
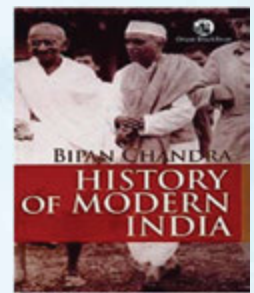
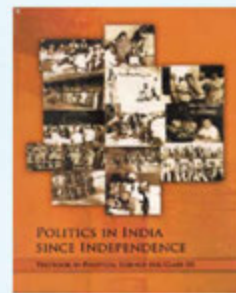
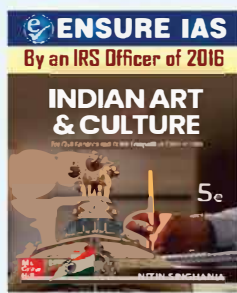
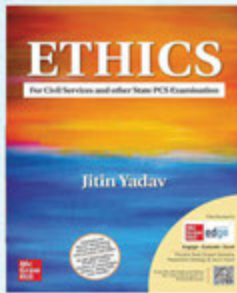
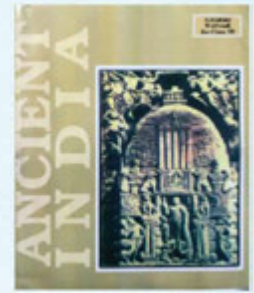
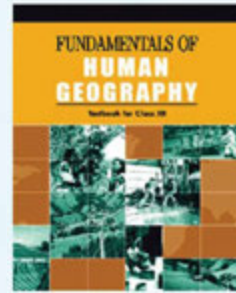
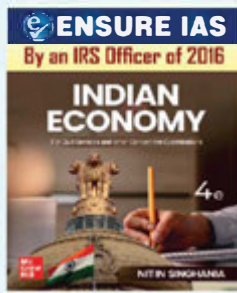
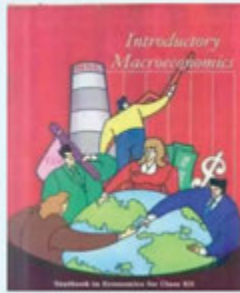
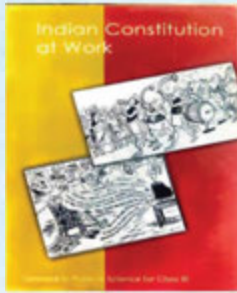
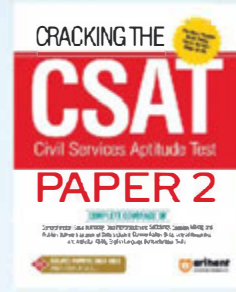
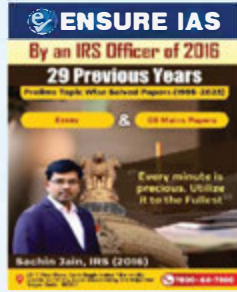
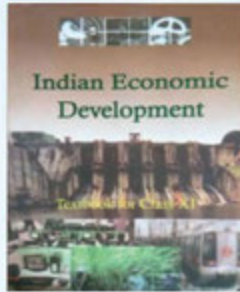
The empires of the future will indeed be empires of the mind, but their character—whether liberating or oppressive, inclusive or exclusive, collaborative or competitive—remains to be determined by the choices we make today. The true test of these mental empires will not be their capacity to accumulate power, but their ability to enhance human dignity, foster creativity, and solve the collective challenges that face our species.

In the words of **Rabindranath Tagore**, "*Where the mind is without fear and the head is held high... into that heaven of freedom, my Father, let my country awake.*" The empires of the mind must ultimately serve this vision—creating spaces where human intelligence can flourish freely, where knowledge serves wisdom, and where the power of ideas enhances rather than diminishes our shared humanity. Only then will Churchill's prophecy fulfill its highest potential, transforming the concept of empire from domination to collaboration, from conquest to collective flourishing.

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