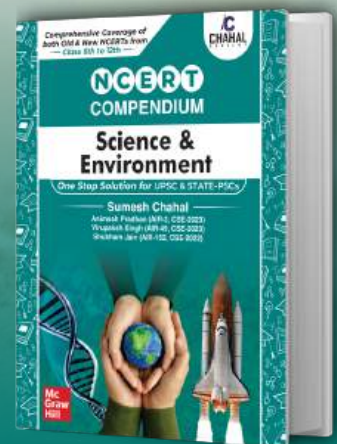
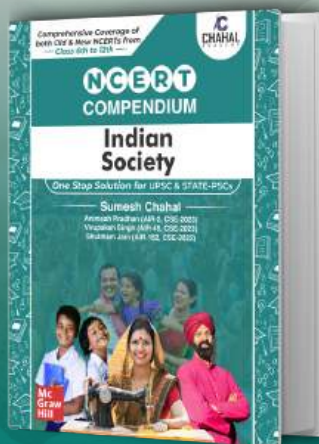
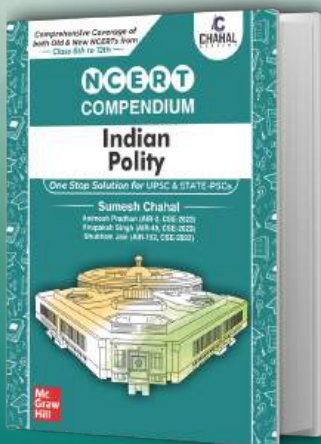
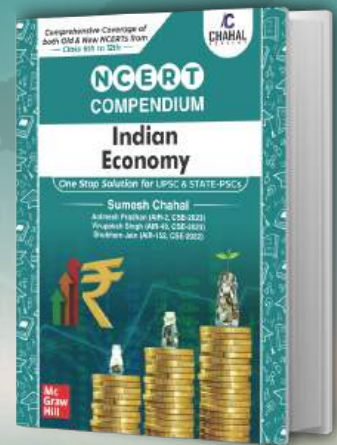
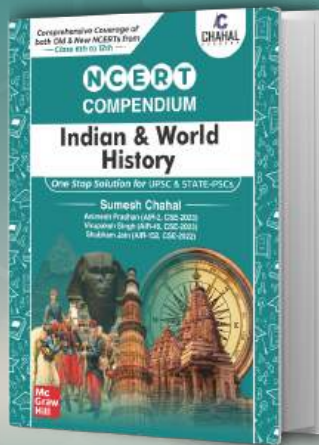
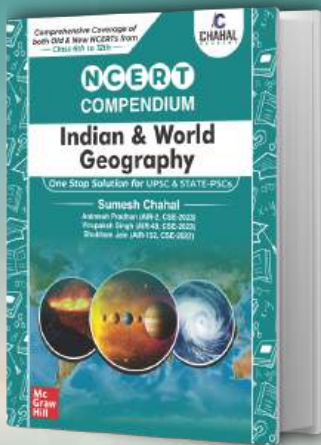


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VIKSIT BHARAT–GUARANTEE FOR ROZGAR AND AJEEVIKA MISSION (GRAMIN) BILL

Why in News: The Union government has proposed a major overhaul of the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), 2005 through the **Viksit Bharat–Guarantee for Rozgar and Ajeevika Mission (Gramin) Bill (VB-G RAM G)**. The Bill aims to align rural employment with the vision of **Viksit Bharat @2047** and shifts the framework from a **rights-based, demand-driven system** to a **centrally controlled, supply-driven scheme**.

Background: MGNREGA at a Glance

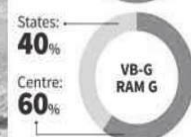
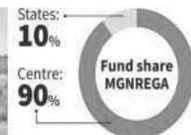
- MGNREGS is the world's largest social security programme aimed at enhancing livelihood security and reducing rural poverty.
- It is implemented under the **Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), 2005**.
- The Act recognises **employment as a statutory right**, marking a shift from a negative right under Article 21 of the Constitution to a **positive statutory obligation** on the government to provide work on demand.
- The scheme guarantees **100 days of employment per year** to rural households whose adult members volunteer to perform **unskilled manual work**.
- The Act provides that work must be offered within **15 days of a demand**, thereby functioning as a **social safety net** during times of economic distress.
- At least **one-third of beneficiaries must be women**, ensuring gender-inclusive access to work.
- Section 3(1) of MGNREGA provides for “not less than 100 days” of work per household per year, which has become a **de facto upper limit** due to software restrictions.
- The government can allow additional 50 days of work under special conditions, for example, for Scheduled Tribe households in forest areas or during droughts and natural calamities under Section 3(4).

Framework change

The government has circulated the VB-G RAM G Bill to MPs, framing it as legislation to 'establish a rural development framework aligned with the national vision of Viksit Bharat @2047'

Shifts from MGNREGA to VB-G RAM G Bill

- Rights-based employment guarantee → **Supply-driven employment and livelihood scheme**
- 100 days of wage employment → **125 days**
- Flexible budget → **Budget cap**
- Year-round → **Seasonal pause allowed**



*North-Eastern, Himalayan States, and J&K retain 90:10 ratio

Key Features of the (VB-G RAM G) Bill

1. Increase in Guaranteed Workdays

- The Bill proposes to increase the guaranteed employment days from **100 to 125 per rural household** per year.
- However, historical data indicates that the **average employment provided per household is only around 50 days**, raising questions about the effective impact of the increase.

2. Shift from Demand-driven to Supply-driven Model

- MGNREGA provides employment on demand, ensuring the legal right to work. The VB-G RAM G Bill introduces normative allocation, where the Centre decides State-wise budgets in advance.
- Any expenditure incurred by a State beyond the allocated budget will have to be borne entirely by the State, which effectively weakens the right to work.

3. Increased Financial Burden on States

- The new fund-sharing pattern requires 90:10 contribution from North-Eastern and Himalayan States and 60:40 contribution from all other States and Union Territories with legislatures. Previously, States bore only about 10% of the cost.
- The proposed funding pattern is expected to impose an additional fiscal burden of around ₹30,000 crore annually on States.

4. Centralisation of Control

- The Bill empowers the Centre to decide which rural areas will receive employment under the scheme.
- It also allows the Centre to determine where and how the

funds will be spent, thereby reducing the autonomy of States and the role of Panchayati Raj institutions.

5. Pause During Peak Agricultural Seasons

- The VB-G RAM G Bill allows the scheme to be **paused for 60 days during sowing and harvesting**.
- The pause is intended to ensure the **availability of agricultural labour** during critical periods.
- However, this provision may **reduce the effective window** for rural households to access the 125-day employment guarantee.

6. Technological Codification

- Technological measures such as **Aadhaar-based payment systems, mobile app-based attendance, and geotagging of worksites** are now **legally mandated**.
- These interventions aim to improve transparency, but they also **pose a risk of exclusion** for certain beneficiaries.

7. Replacement of Job Cards

- The Bill replaces existing job cards with **Gramin Rozgar Guarantee Cards**, which will be valid for **three years**.
- It also introduces **Special Gramin Rozgar Guarantee Cards** for vulnerable groups, including **single women, persons with disabilities, elderly persons, released bonded labourers, Particularly Vulnerable Tribal Groups, and transgender persons**.

8. Wage and Budget Provisions

- The Bill proposes a **minimum wage of ₹240 per day**, which is still below the statutory minimum wage in several States.
- The **estimated annual requirement for the scheme is ₹1.51 lakh crore**, including the State share, with the Centre's contribution projected at **₹95,692 crore**.

Key Concerns and Criticism

- Critics argue that the Bill **erodes the right to work** by replacing a rights-based guarantee with a capped allocation system.
- The shift from demand-driven employment to normative allocation **reduces worker agency and accountability**.
- The increased **financial burden on States** is concerning, particularly given shrinking fiscal space and rising debt levels.
- The enhanced **centralisation of control** undermines **cooperative federalism** and diminishes the role of local governments.
- Mandatory **Aadhaar-based payment systems** may lead to the **exclusion of genuine beneficiaries**.
- The provision for a 60-day pause during agricultural seasons may **disproportionately affect regions with diverse cropping calendars**, limiting access to employment.

Conclusion

It is important to **retain the demand-driven character** of rural employment schemes to protect the legal right to work. The Centre should continue to **bear the primary responsibility for wage payments** to reduce fiscal stress on States. Wage rates should be **aligned with statutory minimum wages** to ensure equity. Technological interventions should be used as **enablers of efficiency, not barriers** to inclusion. Planning and implementation should be **strengthened at the Gram Panchayat level** to ensure that local development priorities are met effectively.

EXPECTED QUESTION FOR UPSC CSE

Descriptive Question

- Q. What are the major changes proposed under the Viksit Bharat–Guarantee for Rozgar and Aajeevika Mission (Gramin) Bill compared to MGNREGA? Discuss their likely implications for rural employment. (150 words) (10 marks)

SANCHAR SAATHI AND THE DEBATE ON CYBERSECURITY VERSUS SURVEILLANCE

Why in News: The central government revoked its order to mobile phone manufacturers to install 'Sanchar Saathi', a government app, with effect from 2026. The rollback came in 48 hours following widespread concerns raised by most stakeholders about ambiguous data collection methods, the lack of consent, surveillance and unlimited data storage.



What is Sanchar Saathi

- Sanchar Saathi is a **government-run cybersecurity platform** developed by the Department of Telecommunications.
- It is available both as a **mobile application and a web portal**, and aims to empower mobile users by helping them combat fraud, impersonation, and phone theft.
- The initiative is designed in the context of India having **over 1.2 billion mobile subscribers**, making telecom-related crimes a major governance challenge.

Key Features of Sanchar Saathi

1. Chakshu Feature

- The Chakshu feature enables users to **report suspicious calls, SMS messages, or WhatsApp communications** that may be linked to fraud, impersonation, or scams.
- It allows reporting of messages falsely claiming to be from authorities such as the DoT, TRAI, or law enforcement agencies.

- The feature does not replace the cybercrime reporting mechanism, and users are still required to report financial frauds through the 1930 helpline or cybercrime.gov.in.

2. Blocking of Lost or Stolen Phones

- The platform allows users to **block lost or stolen mobile phones** from accessing Indian telecom networks within 24 hours.
- Once the phone becomes traceable, the system generates a report that is shared with the user and the local police to facilitate recovery.
- According to Government data, **over seven lakh stolen phones have been recovered** using this system.

3. Tracking Mobile Connections

- Sanchar Saathi enables users to **check the number of mobile connections registered in their name**.
- This helps identify unauthorised SIM cards issued without user consent and ensures compliance with limits on the number of connections per individual.
- The app also allows verification of a phone's **IMEI number**, helping users detect counterfeit or cloned devices.

Key Challenges and Concerns

1. Privacy and User Consent

- Mandatory pre-installation undermines the principle of informed and voluntary user consent.
- System-level access increases the risk of apps bypassing standard permission safeguards.
- Exemptions granted to government agencies under data protection laws heighten concerns of unchecked state surveillance.

2. Scope of Data Access

- On Android devices, the app seeks permissions to manage phone calls, send SMS, access call and message logs, read files and photos, and use the camera.
- Such broad permissions raise concerns about excessive data collection and potential misuse.
- On iOS devices, access is more limited due to stricter platform-level privacy controls, resulting in unequal user protection.

3. Deficiencies in Privacy Policy

- The app's privacy policy does not clearly provide users with rights to correct or delete their personal data.
- There is no explicit disclosure regarding data retention periods or deletion timelines.
- The absence of opt-out or uninstall mechanisms weakens user autonomy.
- App store disclosures claiming no data collection contradict the app's actual permissions and functionality.

4. Industry and Security Implications

- Smartphone manufacturers expressed concerns that compliance would require deep operating system modifications.
- Such modifications could increase security vulnerabilities and compromise device integrity.
- The directive could impose additional compliance costs and fragment security standards.

5. Democratic and International Concerns

- Mandatory pre-installation of government applications is uncommon in liberal democratic systems.
- Similar practices are more frequently observed in authoritarian regimes such as Russia.
- These comparisons raise apprehensions about the future direction of India's digital governance framework.

Constitutional and Policy Implications

- The controversy engages Article 21 of the Constitution, which protects the right to privacy as recognised in *Puttaswamy v. Union of India*.
- Mandatory installation without meaningful consent raises concerns about proportionality, necessity, and procedural safeguards.
- The episode also revives debates around mission creep, where telecom laws are used to regulate broader aspects of the digital ecosystem.

Conclusion

Sanchar Saathi represents a genuine attempt to address growing telecom-related fraud and mobile theft in a highly connected society. However, the initial directive mandating its non-removable installation exposed serious governance gaps in transparency, consent, and privacy protection. The subsequent clarification making the app optional highlights the need for trust-based digital governance rather than coercive compliance. Going forward, strengthening cybersecurity must be balanced with robust data protection norms, clear legal oversight, and respect for fundamental rights, to ensure that public interest does not become indistinguishable from state surveillance.

EXPECTED QUESTION FOR UPSC CSE

Descriptive Question

- Q. Examine the concerns related to privacy and surveillance arising from the Sanchar Saathi initiative while highlighting its objectives in strengthening cybersecurity. (150 words) (10 marks)

KARNATAKA'S HATE SPEECH AND HATE CRIMES (PREVENTION) BILL, 2025

Why in News: Karnataka has become the **first Indian state to introduce a dedicated legislation targeting hate speech** through the *Karnataka Hate Speech and Hate Crimes (Prevention) Bill, 2025*. The legislation seeks to curb rising communal discord and regulate hate-driven expression, particularly in the digital sphere, through **stringent penal provisions and preventive powers**.

Existing Legal Framework on Hate Speech in India

- India currently does not have a standalone law defining or penalising hate speech as a distinct offence.
- Law enforcement agencies rely on a **cluster of provisions under the Bharatiya Nyaya Sanhita (BNS)**, which are primarily aimed at maintaining public order rather than protecting dignity or equality.

Key provisions include:

- **Section 196 of the BNS**, which penalises promoting enmity between groups on grounds such as religion, race, language, or place of birth.
- **Section 299 of the BNS**, which criminalises deliberate and malicious acts intended to outrage religious feelings.
- **Section 353 of the BNS**, which penalises statements or false information that may incite offences or disturb public order.

Each of these offences is cognizable and carries a **maximum punishment of three years' imprisonment**.

Data from the National Crime Records Bureau indicate that **conviction rates under such provisions remain low**, highlighting enforcement and evidentiary challenges rather than the absence of law.

Supreme Court's Engagement with Hate Speech

- The Supreme Court of India has repeatedly expressed concern over the growing prevalence of hate speech.
- In **October 2022**, the Court observed that a "climate of hate prevails" and directed police authorities to take **suo motu action** against hate speech without waiting for complaints.
- These directions were extended to all States and Union Territories in **April 2023**.
- However, in later judgments, the Court clarified that it **cannot monitor every instance of hate speech**, and that responsibility lies with police authorities and High Courts, as reiterated with reference to the *Tehseen Poonawalla* guidelines.

Attempts to Define Hate Speech at the National Level

- The **Law Commission of India**, in its **267th Report (2017)**, recommended the insertion of new sections to specifically criminalise incitement to hatred and violence.

- In **2022**, a Private Member's Bill titled *The Hate Speech and Hate Crimes (Prevention) Bill* was introduced in the Rajya Sabha, proposing a comprehensive definition of hate speech and hate crime.
- Neither of these initiatives culminated in enacted legislation, leaving the legal position unchanged at the national level.

Key Features of the Karnataka Hate Speech Bill

1. Definition of Hate Speech and Hate Crime

- The Bill defines hate speech as **any expression made publicly, through words, signs, visual representations, or electronic communication**, with the intention to cause injury, disharmony, hatred, enmity, or ill-will.
- It introduces "hate crime" as a **distinct offence**, defined as the communication, promotion, abetment, or attempt to disseminate hate speech.
- The definition of "prejudicial interest" includes bias based on **religion, caste, race, gender, sexual orientation, disability, language, tribe, place of birth, or residence**.

2. Exemptions

- The Bill exempts **bona fide artistic expression, academic or scientific inquiry, fair and accurate reporting, and proselytisation**, recognising the need to protect legitimate free expression.

3. Punishments

- The Bill prescribes a **mandatory minimum punishment of one year**, extendable up to seven years, along with a fine of ₹50,000 for first-time offenders.
- For repeat offences, the punishment ranges from **two to ten years of imprisonment** with a fine of ₹1 lakh.
- These punishments are significantly higher than those under the BNS, which generally cap imprisonment at three years.

4. Collective and Institutional Liability

- The Bill introduces the concept of **collective liability**, whereby organisations and institutions can be held criminally responsible for hate crimes.
- Office-bearers and persons in charge are deemed guilty unless they can prove lack of knowledge or due diligence.
- This provision shifts the **burden of proof onto the accused**, raising procedural fairness concerns.

5. Government Takedown Powers

- The Bill empowers the State government to **block or remove online content** deemed to constitute hate crime material.
- A designated officer may direct intermediaries and service providers to remove such content, adding to executive discretion in regulating speech.

Constitutional and Legal Concerns

- The Bill raises concerns under **Article 19(1)(a)** of the Constitution, which guarantees freedom of speech and expression.
- Overbroad and vague definitions risk violating the **reasonable restrictions clause under Article 19(2)**.
- The Supreme Court's judgment in *Shreya Singhal v. Union of India (2015)* held that vague penal provisions regulating speech are unconstitutional.
- The enhanced punishments may also dilute the **"bail, not jail" principle**, as articulated in the *Arnesh Kumar* guidelines.
- There is apprehension that the law could be **selectively enforced**, given past misuse of special laws such as sedition and UAPA.

Federal and Policy Implications

- The Bill explicitly states that it will operate **in addition to existing laws**, thereby increasing criminalisation rather than reforming enforcement.
- Other States have addressed hate speech through **existing penal provisions or by invoking national security laws**, raising questions about uniformity.
- The Karnataka law could set a precedent for similar State-level legislations, potentially leading to **fragmented free speech standards across India**.

Broader Social Context

- Hate speech in India is closely linked to **social polarisation, political mobilisation, and digital amplification**.
- Criminal law can act only as a **deterrent**, and cannot address the deeper socio-political roots of prejudice.
- Long-term solutions require **education, dialogue, community engagement, and political accountability**, alongside legal safeguards.

Conclusion

The Karnataka Hate Speech and Hate Crimes (Prevention) Bill, 2025 seeks to curb hate speech and protect vulnerable groups, signaling strong deterrence. However, its **broad definitions, harsh punishments, collective liability, and executive takedown powers** raise constitutional concerns. In a plural democracy like India, **striking a balance between social harmony and fundamental freedoms** is essential, as overly broad laws risk suppressing dissent instead of addressing hate.

EXPECTED QUESTION FOR UPSC CSE

Descriptive Question

Q. How does hate speech affect social harmony in India? Examine in the context of recent legislative measures taken by States. (150 Words) (10 marks)

GOVERNMENT GUIDELINES ON ONLINE OBSCENITY AND VULGARITY

Why in News: The Government of India has stepped up efforts to create a **safe, trusted, and accountable digital ecosystem**, particularly for **women and children**. Concerns over **obscene content, misinformation, cyber offences, and harmful material on social media and OTT platforms** prompted advisories and regulatory measures. Platforms with more than **50 lakh users** are now mandated to appoint **local compliance officers**, remove unlawful content promptly, and publish compliance reports.

Legal Framework

1. Information Technology (IT) Act, 2000

- Penalises privacy violations (Section 66E) and transmission of obscene content (Sections 67, 67A, 67B).
- Empowers authorities to investigate cyber offences and conduct searches (Sections 78, 80).

2. IT (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021

- Imposes **due diligence obligations** on intermediaries.
- Restricts content that is obscene, pornographic, harmful to children, misleading, impersonative, or threatening national security.
- Requires grievance redressal officers to remove unlawful content **within 72 hours** (24 hours for privacy/nudity complaints).
- Mandates **traceability, automated content detection, compliance reports, and local offices** for significant social media intermediaries (SSMIs).

3. Bharatiya Nyaya Sanhita (BNS), 2023

- Strengthens punishments for online obscenity, cyber-enabled offences, and misinformation.

4. OTT Platform Regulations

- Part-III of IT Rules, 2021 provides a **Code of Ethics**.
- Over 40 OTT platforms have been blocked for non-compliance with obscenity laws.

Need for Measures

- **Protecting Vulnerable Users:** Safeguard women and children from harassment and sexual exploitation.
- **Combating Misinformation:** Prevent social unrest and protect public order.
- **Ensuring Accountability:** Make intermediaries legally responsible for unlawful content.
- **Upholding Ethics:** Maintain decency and morality on digital platforms.
- **National Security:** Prevent dissemination of content that could threaten public safety.

Challenges

- **Volume of Content:** Billions of daily posts make monitoring difficult.
- **Freedom of Expression:** Balancing regulation with constitutional rights.
- **Global Platforms:** Enforcement against foreign-owned platforms remains a challenge.
- **Technology Limitations:** Deepfakes, AI-generated content, and encrypted messaging complicate moderation.
- **User Awareness:** Many users unknowingly share unlawful or harmful content.

Recent Government Actions

- Advisories for social media and OTT platforms to **take down obscene or pornographic content**.
- Directed platforms to **review compliance frameworks** and strengthen content moderation.
- Proposed amendments to **IT Rules, 2021** to include defamatory, anti-national, or morally harmful content.
- Loss of **safe harbour under Section 79** for non-compliant intermediaries.

Way Forward

- **Technological Enforcement:** Use AI and automated tools for content detection and removal.
- **Transparency and Accountability:** Platforms must maintain grievance redressal systems and compliance reports.
- **Legal Clarity:** Strengthen prosecution mechanisms for cyber offences and online obscenity.
- **Public Awareness:** Educate users on responsible online behaviour.
- **Balanced Regulation:** Ensure freedom of speech while preventing harmful or unlawful content.

Conclusion

India's multi-layered regulatory framework seeks to **balance digital freedom with social responsibility**, creating a **safe, accountable, and ethical online ecosystem**. Enforcement through IT Act, IT Rules 2021, BNS 2023, and oversight on OTT platforms ensures that **large digital intermediaries cannot operate without responsibility**, protecting citizens and societal norms.

SIM BINDING IN APP-BASED COMMUNICATION SERVICES

Why in News: The Department of Telecommunications (DoT) has recently issued directions to major app-based communication services (ABCS) such as **WhatsApp, Telegram, Signal, Snapchat, Arattai, ShareChat, JioChat, and Josh**, mandating **SIM binding** and **periodic logout from web services** to prevent misuse of telecommunication

identifiers. This step is part of the government's effort to strengthen **telecom cyber security** under the **Telecom Cyber Security Rules, 2024 (amended in 2025)**.

What is SIM Binding?

- SIM binding ensures that a messaging or communication app functions **only if the device contains the original SIM card** used during registration.
- If the SIM card is **removed, replaced, or inactive**, the app will stop functioning.
- Currently, apps verify identity via OTPs or QR codes, allowing continued usage even without the SIM—this has been exploited for cyber fraud.

Rationale Behind SIM Binding

1. **Prevent Cyber Frauds:** Accounts operating without the original SIM are used in **cross-border scams**, including phishing, digital arrest frauds, investment frauds, and impersonation.
2. **Ensure Traceability:** Continuous SIM linkage helps authorities **trace the origin of cyber crimes**, addressing challenges in monitoring anonymous accounts.
3. **Mitigate Remote Account Misuse:** Long-lived web sessions allow fraudsters to control accounts from abroad; automatic logout every **6 hours** forces re-authentication, reducing account takeover.
4. **Align with Banking Security:** Banking and UPI apps already use SIM-device binding to prevent unauthorized access.

Key Directions Issued by DoT

- **Continuous SIM Linkage:** The app must remain connected to the SIM card used during user registration.
- **Periodic Web Logout:** Web instances of apps must log out **every 6 hours**, requiring re-linking via QR code.
- **Implementation Timeline:**
 - **90 days** to implement the directive.
 - **120 days** to submit a compliance report to DoT.

Impact on Users and Industry

Positive Effects:

- Increased **security and accountability** in app-based communication.
- Reduced scope for **fraud and impersonation**, enhancing citizen trust in digital platforms.

Challenges / Concerns:

- **Technical Feasibility:** iOS and Android systems do not naturally support strict SIM binding; implementation may require cooperation with telecom operators for IMSI/ICCID verification.
- **Privacy Concerns:** Binding identity to a SIM could reduce anonymity, affecting journalists, whistle-blowers, and vulnerable groups.

- **Multi-device Access:** Users with multiple devices (laptops, tablets, eSIMs) may face repeated logins, causing **workflow disruption**, especially in professional setups.
- **Travel and Roaming:** Users switching SIMs internationally may encounter service interruptions.
- **Fraud Persistence:** Fraudsters using forged IDs or mule accounts may bypass SIM binding, limiting effectiveness.

Government and Industry Standpoint

- **DoT:** SIM binding is a proportionate response to ₹22,800 crore losses due to cyber fraud in 2024.
- **COAI (Telecom Operators):** Supportive, highlighting the role of SIM binding in **traceability and national security**.
- **App Companies:** Mixed reactions; challenges in balancing compliance with **user convenience** and global operations.

Conclusion

SIM binding represents a **significant step in telecom cyber security**, aiming to curb cross-border fraud and ensure accountability in app-based communication. While technically and operationally challenging, the move aligns messaging apps with security practices already present in the banking sector. The success of this directive will depend on **industry collaboration, technical implementation, and balancing user privacy with national security concerns**.

ASSAM ST STATUS CONTROVERSY: PROTESTS AND GOVERNMENT RECOMMENDATIONS

Why in News: The Assam government's Group of Ministers (GoM) recently tabled a report in the state Assembly recommending the grant of Scheduled Tribe (ST) status to six communities: Tai Ahoms, Tea Tribes (Adivasis), Moran, Motok, Chutia, and Koch-Rajbongshi.

Purpose of the GoM Report

The GoM was constituted to:

- Examine the demand for ST status by the six communities.
- Protect the rights, socio-economic and educational interests of existing STs in Assam.
- Suggest revised reservation arrangements for OBCs in light of the creation of a new ST category.
- Recommend measures to safeguard existing tribal communities while accommodating new inclusions.

Key Recommendations of the Report

- A **three-tier classification** of STs is proposed: ST (Plains), ST (Hills), and a new ST (Valley) category.
- The **ST (Valley) category** will include Ahom, Chutia, Tea Tribes, and Koch-Rajbongshis (excluding those in undivided Goalpara).
- **Morans, Motoks, and Koch-Rajbongshis** in undivided

Goalpara may be included in the ST (Plains) category, subject to a No Objection Certificate from the BTC.

- ST(Valley) communities will have **separate reservation quotas** for state government jobs and educational institutions.
- Existing ST(P) and ST(H) quotas will remain **fully protected** at the state level.
- For **central government reservations**, all these communities will compete under the **common national ST pool**.
- Lok Sabha constituencies covering Sixth Schedule areas—Kokrajhar (ST(P)) and Diphu (ST(H))—will remain reserved. Additional seats will be reserved for ST(Valley) through a constitutional amendment.

Interim Measures Proposed

- Existing OBCs will be sub-categorised into seven groups to ensure **pro-rata reservation**.
- A **comprehensive socio-economic survey** will be conducted for accurate allocation of reservation benefits.
- OBC communities will also receive reservations in **local bodies** including panchayats and urban local bodies.
- Legislation is recommended to prevent **transfer of tribal land** to non-tribal communities.

Reactions and Concerns

- Existing ST communities, including Bodos, Rabhas, and Misings, have opposed the move, arguing that it could **dilute their reservation benefits** and socio-economic safeguards.
- Organisations like the All Assam Tribal Students' Union (AATSU) have petitioned the President, stating that the six communities **do not meet criteria** laid down by the Lokur Committee for ST inclusion.
- Protests and agitation, including road and railway blockades, are anticipated if the government proceeds without addressing tribal concerns.

Significance

- The report attempts to **balance inclusion and protection**, highlighting the complexities of ethnic representation in Assam.
- It underscores the challenge of managing **reservation politics, socio-economic equity, and electoral pressures** in a diverse state.
- The issue reflects a broader **national debate on ST and OBC categorisation**, highlighting the need for evidence-based, transparent policymaking.

Way Forward:

- The government must ensure **consultations with all stakeholders**, including existing ST communities.
- A **comprehensive socio-economic and anthropological study** should precede any constitutional amendment.
- Clear guidelines and protections should be enacted to

safeguard the **rights, culture, and land of existing tribal communities.**

RIGHT TO DISCONNECT BILL, 2025

Why in News: A private member's Bill titled "**Right to Disconnect Bill, 2025**" was introduced in the Lok Sabha. The Bill aims to grant employees the statutory right to disconnect from work-related communications outside their official working hours and on holidays, establishing an **Employees' Welfare Authority** to oversee its implementation.

What is the Right to Disconnect?

The Bill defines the **Right to Disconnect** as the ability of an employee to abstain from responding to calls, emails, or other work-related communications after official working hours. While employers may initiate contact, employees are **not obliged** to respond and cannot face disciplinary action for exercising this right.

Rationale Behind the Bill

- **Protect Work-Life Balance:** Long hours of digital engagement affect physical and mental health, leading to burnout and reduced productivity.
- **Ensure Employee Welfare:** Institutionalises employee well-being by making after-hours availability optional rather than mandatory.
- **Align with Global Practices:** Similar laws in Europe treat after-hours employer control as working time, ensuring regulated rest periods.
- **Constitutional Linkage:** Supports Article 21 (Right to Life with Dignity) by protecting personal autonomy in the digital age.

Key Provisions of the Bill

- **Applicability:** Covers all employees engaged in roles that require constant digital availability.
- **Exemption from Disciplinary Action:** Employees cannot face dismissal, demotion, or withholding of benefits for exercising the right.
- **Employees' Welfare Authority:** A central body tasked with drafting national guidelines, monitoring implementation, and promoting employee welfare.
- **Individual Charters/Policies:** Companies with more than 10 employees must negotiate and implement policies specifying permissible out-of-work communication. Remote and teleworking employees are included.
- **Overtime Payment:** Employees volunteering to work beyond hours are entitled to overtime at **normal wage rate** (though this contradicts current labour codes requiring double wage for overtime).
- **Employee Welfare Committees & Digital Detox Centres:** Companies must facilitate awareness sessions, counselling, and annual reporting on after-hours practices.

- **Penalties:** Non-compliance may attract a penalty of **1% of total employee remuneration.**

Comparative Perspective

- **Kerala Bill:** Broader definition covering communications from employer's delegates and explicit disciplinary actions.
- **France & Belgium:** Only applicable to companies above certain size thresholds; after-hours availability under employer control is considered working time.
- **Germany:** Strict regulations on working hours and rest periods, including standby time.

Challenges/Concerns

- **Uniform Applicability:** Sectors like healthcare, media, emergency services may require round-the-clock availability.
- **Small Organisations:** Blanket rules may burden small businesses with lean teams.
- **Overtime Conflicts:** Paying at normal wage contradicts existing labour codes.
- **Practical Implementation:** Lacks clarity on grievance redressal, negotiation procedures, multi-timezone operations, and definition of 'work' in a digital context.
- **Constitutional Ambiguity:** Connection to Article 21 is evident but not explicitly defined.

Government and Industry Standpoint:

- **Government:** Sees the Bill as a step towards employee welfare and digital-age labour reform.
- **Industry:** Mixed reactions; concerns over operational feasibility, penalties, and global workforce compliance.

Conclusion

The Right to Disconnect Bill recognises the need to separate work from personal life in an increasingly digital workplace. While it aligns with global trends and promotes employee welfare, gaps in applicability, definitions, and enforcement need to be addressed. The Bill serves as a **starting point for India's broader conversation on digital labour, work-life balance, and constitutional rights**, potentially shaping the future of labour law in the country.

PRISON AUTHORITIES TO BE PENALISED FOR ABUSING DISABLED PRISONERS UNDER RPWD ACT

Why in News: The Supreme Court of India, in a landmark order dated **December 2, 2025**, held that prison authorities who abuse or neglect prisoners with disabilities will be penalised under the **Rights of Persons with Disabilities (RPwD) Act, 2016**. The order was passed in response to a **PIL filed by Sathyan Naravoor**, highlighting the deaths of **Professor G.N. Saibaba** and **Stan Swamy**, both of whom

suffered due to inhumane prison conditions and lack of disability accommodations.

Key Directions of the Supreme Court

- **Grievance Redressal:**
 - Every State and Union Territory must establish an **independent and accessible grievance redressal mechanism** for disabled prisoners.
 - The mechanism must ensure **prompt registration, monitoring, and timely resolution** of complaints regarding neglect or abuse.
- **Assistive Devices and Accessibility:**
 - Prison authorities must provide **mobility aids, assistive devices, and other disability-support equipment**.
 - Prisons must be retrofitted to include **wheelchair-friendly spaces, accessible toilets, ramps, and sensory-safe environments**.
- **Inclusive Education:**
 - Disabled prisoners cannot be denied **educational opportunities** solely due to disability.
 - Prisons must create facilities enabling **meaningful access to inclusive education**.
- **Enhanced Visitation Rights:**
 - Prisoners with benchmark disabilities are entitled to **enhanced family visitation** for emotional support and monitoring of their special needs.
 - States must frame **modalities for such visitations**.
- **Penal Provisions:**
 - Under **Section 89 of the RPwD Act**, prison officers violating the Act may be fined:
 - ◆ ₹10,000 for the first offence
 - ◆ ₹50,000 to ₹5 lakh for subsequent offences
- **Compliance Reporting:**
 - States and Union Territories must submit a **comprehensive report within four months**, outlining the measures taken to implement the Court's directions and maintain assistive devices.
- **Extension of Earlier Guidelines:**
 - Directions from **L. Muruganatham v. Tamil Nadu (2025)**, which framed prison accessibility guidelines in Tamil Nadu, are now applicable **nationwide**.

Significance

- **Human Rights Protection:** Reaffirms that prisoners with disabilities are entitled to **dignity, accessibility, and non-discrimination**, even while incarcerated.
- **Judicial Activism:** Demonstrates proactive judicial intervention in safeguarding **fundamental rights under the RPwD Act**.
- **Universal Accessibility:** Reinforces that accessibility is a **constitutional right**, not optional, applicable across all public institutions.

- **Prevention of Tragedies:** Aims to prevent **repetition of cases like Saibaba and Swamy**, where lack of disability accommodations had fatal consequences.

Challenges/Concerns

- Retrofitting old prisons and maintaining continuous access to assistive devices may require significant resources.
- Monitoring compliance across all States and Union Territories could be administratively challenging.
- Ensuring awareness among prison staff and enforcement of penalties may face institutional resistance.

Conclusion

The Supreme Court has set a historic precedent by extending statutory protections under the RPwD Act to prisoners, ensuring that incarceration does not strip individuals of their rights to dignity, education, and accessibility. The judgment underscores that accessibility is a fundamental right, and institutions must proactively accommodate persons with disabilities rather than treating it as optional.

SABKA BIMA SABKI RAKSHA (AMENDMENT OF INSURANCE LAWS) BILL, 2025

Why in News: Recently, the **Sabka Bima Sabki Raksha (Amendment of Insurance Laws) Bill, 2025** was passed by **Parliament**. The Bill amends three key legislations: the **Insurance Act, 1938**, the **Life Insurance Corporation (LIC) Act, 1956**, and the **Insurance Regulatory and Development Authority (IRDAI) Act, 1999**.

Its primary objective is to **modernise India's insurance framework, deepen coverage, improve regulatory oversight, and promote ease of doing business** in the sector.

Key Highlights

1. Accelerated Growth and Foreign Investment

- The Bill allows up to 100% Foreign Direct Investment (FDI) in Indian insurance companies, up from the previous 74% limit.
- This is expected to attract stable, long-term investment, facilitate technology transfer, and introduce global best practices.
- The move will also increase competition, spur product innovation, and improve efficiency in services for citizens.
- Net Owned Fund (NOF) requirement for foreign reinsurers is reduced from ₹5,000 crore to ₹1,000 crore, encouraging more reinsurers to enter India.

2. Ease of Doing Business

- Insurance intermediaries will now have a one-time licensing system and can have their licenses suspended instead of outright cancellation, reducing compliance burdens.

- Insurers no longer require prior approval for equity transfers up to 5% (earlier 1%), facilitating smoother operations.
 - LIC is granted autonomy to open zonal offices in India and align its foreign offices with local laws and regulations, enhancing operational efficiency.
- ### 3. Enhanced Policyholder Protection
- The Policyholders' Education and Protection Fund (PEPF) will be established to spread awareness about insurance among citizens.
 - Insurers and intermediaries must ensure data security, confidentiality, and accuracy in line with the DPDP Act, 2023.
 - IRDAI is empowered to issue directions in public interest, including disgorging wrongful gains from insurers or intermediaries.
 - Penalties are rationalised, with the maximum penalty increased to ₹10 crore, and criteria for penalty imposition clearly defined.
- ### 4. Operational and Regulatory Reforms
- Standard Operating Procedures (SOPs) for regulation-making are introduced to ensure transparency and consultative processes.
 - Online premium payments are now legally recognised for assuming risk.
 - IRDAI is empowered to approve mergers and amalgamations, and define eligibility criteria, powers, and functions of actuaries.
 - Definitions of key insurance terms, such as health insurance and insurance business, are updated to reflect modern practices.

Missed Opportunities

1. Absence of Composite Insurance Licence

- The Bill does not introduce composite licences, which would have allowed insurers to operate across life and non-life segments.
- The absence of this provision maintains the sector's siloed structure, limiting product integration, customer convenience, and cross-selling opportunities.

2. No Reduction in Minimum Capital Requirements for New Entrants

- Current capital thresholds (₹100 crore for insurers, ₹200 crore for reinsurers) remain unchanged.
- High entry barriers prevent smaller, specialised, or regional insurers from entering the market, limiting innovation, financial inclusion, and coverage in underserved areas.

3. Other Omissions

- Provisions for insurers to distribute other financial products, such as mutual funds, loans, and credit cards, are not included.

- The Bill does not permit captive insurance entities for large corporations, which could have modernised corporate risk management in India.

Implications

- **FDI liberalisation** and easier entry for foreign re-insurers are likely to enhance capital inflows, technology adoption, and global best practices.
- Regulatory reforms strengthen **policyholder protection, accountability, and transparency**.
- LIC's operational freedom and simplified licensing for intermediaries improve **efficiency and service delivery**.
- The absence of composite licensing and reduced capital norms **limits innovation, competition, and financial inclusion**, leaving structural issues unaddressed.

Conclusion

The Sabka Bima Sabki Raksha (Amendment of Insurance Laws) Bill, 2025 represents a **major step in modernising India's insurance sector**.

While the Bill strengthens **regulatory oversight, policyholder protection, and operational efficiency**, the **exclusion of composite licences and high capital thresholds** indicates that deeper structural reforms are still pending.

The successful implementation of these measures can help India build a **competitive, inclusive, and technologically advanced insurance ecosystem**, increasing coverage, efficiency, and resilience of the financial sector.

SUSTAINABLE HARNESSING AND ADVANCEMENT OF NUCLEAR ENERGY FOR TRANSFORMING INDIA (SHANTI) BILL, 2025

Why in News: The Government of India has introduced the **Sustainable Harnessing and Advancement of Nuclear Energy for Transforming India (SHANTI) Bill, 2025** in Parliament. The Bill seeks to **replace the Atomic Energy Act, 1962 and the Civil Liability for Nuclear Damage Act, 2010**. Its primary objective is to enable **limited private participation** in India's tightly regulated nuclear power sector and support the national goal of achieving **100 GW of nuclear power capacity by 2047**.

Current Status of Nuclear Energy in India

- Nuclear power contributes **around 3% of India's total electricity generation** (2024–25).
- India's **installed nuclear capacity** stands at about **8.78 GW**.
- Capacity is projected to increase to **22.38 GW by 2031–32** with ongoing reactor projects.
- The government has announced a **Nuclear Energy Mission** to achieve **100 GW by 2047**, including deployment of **indigenous Small Modular Reactors (SMRs)** by 2033.

Need for the SHANTI Bill

- India's growing energy demand, data centres, AI, quantum computing and semiconductor manufacturing require **reliable, round-the-clock clean power**.
- Existing laws restricted nuclear power activities largely to the **Central government**, limiting capital mobilisation and speed of expansion.
- Private participation is considered essential to **share construction risk, reduce timelines, and scale capacity**.
- A unified and modern legal framework was required to **reduce regulatory ambiguity**, improve safety governance and attract investment.

Key Provisions of the SHANTI Bill

- The Bill allows **public and private companies**, as well as joint ventures, to **build and operate nuclear power plants** under licensing conditions.
- Private entities are permitted to engage in **transport, storage, import and export of nuclear fuel, technology, equipment and minerals**, subject to approval.
- All nuclear activities require **mandatory safety authorisation** from the **Atomic Energy Regulatory Board (AERB)**.
- The Bill grants **statutory status to the AERB**, strengthening its legal authority as a nuclear safety regulator.
- Certain **critical and sensitive activities** such as enrichment, isotopic separation, spent fuel reprocessing, high-level waste management and heavy water production remain **exclusively under Central government control**.

Liability and Accountability Framework

- The Bill removes the earlier provision allowing automatic **operator recourse against suppliers** for defective equipment or sub-standard services.
- Operator liability is now **graded based on reactor size**, replacing the earlier flat cap:
 - Up to ₹3,000 crore for reactors above 3,600 MWe.
 - ₹1,500 crore for reactors between 1,500–3,600 MWe.
 - ₹750 crore for reactors between 750–1,500 MWe.
 - ₹300 crore for reactors between 150–750 MWe.
 - ₹100 crore for small reactors, fuel cycle facilities (excluding reprocessing plants), and transport of nuclear material.
- The Central government is liable beyond the operator's cap and may assume full liability for non-government installations in public interest.
- Private operators are required to maintain **insurance or financial security**, while Central government installations are exempted.

Institutional and Dispute Resolution Measures

- The Bill provides for the establishment of an **Atomic Energy Redressal Advisory Council** to address grievances and review government orders.

- It creates a **Nuclear Damage Claims Commission** for cases involving severe nuclear damage.
- **Claims Commissioners** will adjudicate compensation claims related to nuclear incidents.
- The **Appellate Tribunal for Electricity** is designated as the appellate authority under the Bill.
- The Central government is empowered to establish a **Nuclear Liability Fund** to meet its liability obligations.

Significance of the Bill

- The Bill modernises India's nuclear legal framework and aligns it with **clean energy and decarbonisation goals**.
- It expands the pool of potential nuclear operators, enabling **large-scale capital mobilisation**.
- It seeks to balance **private participation with strategic state control** over sensitive nuclear domains.
- By consolidating safety, liability and dispute mechanisms, it aims to **reduce project delays and transaction costs**.

Concerns and Challenges

- The **capped operator liability** raises concerns about adequacy of compensation for victims and environmental remediation.
- Removal of supplier liability may weaken **supplier accountability** and shift risk disproportionately to the public sector.
- Despite statutory status, **regulatory independence of AERB** remains a concern due to continued influence of the Central government.
- Transparency issues arise due to exemptions from **RTI provisions** for certain nuclear activities.

Way Forward

- Strengthening the **functional and financial independence of the AERB** is essential to build public trust.
- Clear and transparent rules for **private and foreign investment** should be notified to reduce uncertainty.
- Robust **insurance and compensation mechanisms** must ensure adequate protection for citizens and the environment.
- Greater parliamentary oversight and public communication are needed to enhance **accountability and transparency**.
- Continued focus on **indigenous reactor design and SMRs** can help India emerge as a leader in advanced nuclear technology.

Conclusion

The **SHANTI Bill, 2025** marks a significant shift in India's nuclear governance by opening the sector to regulated private participation while retaining strategic state control. If implemented with strong regulatory oversight and transparent governance, the Bill can play a crucial role in achieving **India's long-term clean energy and energy security goals**, especially the target of **100 GW nuclear capacity by 2047**.

VIKSIT BHARAT SHIKSHA ADHISHTHAN (VBSA) BILL, 2025

Why in News: The Viksit Bharat Shiksha Adhishthan (VBSA) Bill, 2025 was introduced in the Lok Sabha in December 2025. Following strong objections from the Opposition, the government referred the Bill to a **Joint Parliamentary Committee (JPC)** for detailed examination. The Bill seeks to **overhaul India's higher education regulatory framework** in line with the **National Education Policy (NEP), 2020**.

Objective of the Bill

- To address **over-regulation, duplication of control, and multiplicity of regulators** in higher education.
- To establish a **"light but tight" regulatory framework** that promotes autonomy, transparency, accountability, and innovation.
- To align India's higher education governance with the **aspirational goals of a Viksit Bharat** in the 21st century.

Key Provisions

- The Bill proposes to **repeal three existing laws**:
 - University Grants Commission (UGC) Act, 1956
 - All India Council for Technical Education (AICTE) Act, 1987
 - National Council for Teacher Education (NCTE) Act, 1993
- It establishes an apex umbrella body called the **Viksit Bharat Shiksha Adhishthan (VBSA)**.
- The VBSA will function through **three councils**:
 - **Viksit Bharat Shiksha Viniyaman Parishad** (Regulatory Council)
 - **Viksit Bharat Shiksha Manak Parishad** (Standards Council)
 - **Viksit Bharat Shiksha Gunvatta Parishad** (Accreditation Council)

Functions of the Three Councils

- The **Regulatory Council** will authorise institutions to grant degrees and enforce compliance.
- The **Standards Council** will prescribe learning outcomes, curriculum frameworks, and faculty qualifications.
- The **Accreditation Council** will develop and oversee a uniform accreditation framework for higher education institutions.

Coverage and Scope

- The Bill applies to:**
 - **Institutions of National Importance (INIs)** such as IITs, IIMs, NITs, IISERs
 - Central universities, state universities, and deemed-to-be universities
 - Technical and teacher education institutions

- It **excludes** medical, legal, dental, pharmaceutical, and veterinary institutions, which are regulated by separate statutory bodies.

Appointments and Governance Structure

- The VBSA will consist of a **Chairperson and 12 members**, all appointed by the **President of India** on the recommendation of the Central government.
- Each council will have **14 members**, also appointed through a centralised process.
- The regulatory and standards councils will include **one State/UT nominee on a rotational basis**.

Funding and Grants

- Unlike the existing UGC, the **VBSA will not have the power to disburse grants**.
- Grant allocation will be handled by **mechanisms devised by the Ministry of Education**.
- The Bill creates a dedicated **Viksit Bharat Shiksha Adhishthan Fund**, funded primarily by the Union government.

Powers, Penalties and Enforcement

- The Regulatory Council can impose **heavy penalties ranging from ₹10 lakh to ₹2 crore**, significantly higher than existing UGC penalties.
- The Bill empowers the **Union government to issue binding policy directions** to the VBSA and its councils.
- The Centre can **supersede the Commission or councils** in case of non-compliance with its directions.

How It Differs from the Existing System

- Currently, **UGC, AICTE, and NCTE function independently**, often leading to overlap and conflicting regulations.
- Accreditation is fragmented between **NAAC and NBA**, and several elite institutions remain outside accreditation.
- The Bill brings **regulation, standards, and accreditation under a single umbrella**, aiming for uniformity and clarity.

Arguments in Favour

- The Bill simplifies regulation and reduces **overlapping approvals and inspections**.
- It creates **uniform academic standards and accreditation norms** across institutions.
- Separation of regulation and funding avoids **conflict of interest**.
- Experts argue it can improve **efficiency, predictability, and policy coherence** in higher education governance.

Concerns and Criticisms

- Opposition parties allege **excessive centralisation** and erosion of **federalism**.
- Direct control of funding by the Ministry may undermine **university autonomy**.

- Bringing INIs under a common regulator may dilute their statutory autonomy.
- The extensive use of **Hindi nomenclature** has raised concerns of linguistic imposition.
- Key aspects such as accreditation frameworks, penalties, and autonomy are left to **future rules and executive directions**.

Federalism and Autonomy Issues

- State governments fear loss of control over universities established under **State laws**.
- Teacher and student associations argue the Bill could lead to **bureaucratic and political interference**.
- Critics point out that the **composition and appointments** are entirely Centre-driven.

Way Forward

- Clear safeguards are needed to protect **institutional autonomy and academic freedom**.
- Greater representation of **States, teachers, and academics** in governance structures can improve legitimacy.
- Transparent and objective funding mechanisms should be evolved to avoid politicisation.
- The JPC process should be used to address concerns on **federal balance, language inclusivity, and regulatory independence**.

Conclusion

The **VBSA Bill, 2025** represents a major attempt to restructure India's higher education regulation in line with NEP 2020. While it promises simplification, uniformity, and efficiency, its success will depend on **how centralised powers are exercised and how autonomy is protected**. The Bill marks a critical juncture in India's higher education reforms, with long-term implications for **federalism, academic freedom, and quality of education**.

FREE SPEECH IN INDIA

Why in News: Recently, in **Ranveer Allahbadia vs Union of India (2025)**, the Supreme Court suggested the creation of **neutral and autonomous regulatory bodies** for online content. The Court also recommended that the **Government publish draft regulatory guidelines** and invite public comments. These observations have triggered a debate on whether courts should **protect free speech** or risk **inadvertently regulating it**.

What is Freedom of Speech?

- Freedom of speech and expression refers to the right to **express ideas, opinions, beliefs, and information** through speech, writing, art, or digital platforms without undue interference.
- It is a **cornerstone of democracy**, enabling dissent, accountability, informed decision-making, and the free exchange of ideas.

Constitutional Framework for Free Speech

- **Article 19(1)(a)** guarantees freedom of speech and expression to all citizens.
- **Article 19(2)** permits reasonable restrictions only on specific grounds such as:
 - Sovereignty and integrity of India
 - Security of the State
 - Public order
 - Decency or morality
 - Defamation
 - Contempt of court
 - Incitement to an offence
- The grounds under Article 19(2) are **exhaustive and not illustrative**, as affirmed by the Supreme Court.

Existing Legal and Regulatory Framework

- **Information Technology Act, 2000:**
 - Section 67 penalises obscenity.
 - Sections 66, 66E, and 66F deal with hacking, privacy violations, and cyber terrorism.
- **Bharatiya Nyaya Sanhita (BNS):**
 - Sections 294, 295, and 296 address obscene and offensive acts.
- **IT (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021:**
 - Provide an oversight mechanism under the Central Government.
 - Impose obligations on publishers and intermediaries, including **prior restraint**, which has attracted criticism.

Role of Courts in Protecting Free Speech

- **Constitutional umpire:** Courts are meant to examine whether restrictions on speech are reasonable and constitutionally valid.
- **Guardian against prior restraint:** Judicial scrutiny must prevent pre-censorship and blanket prohibitions.
- **Doctrine of separation of powers:** Law-making and policy formulation fall within the domain of the legislature and executive, not the judiciary.
- **Rights balancing within Article 19(2):** Courts may balance competing rights only within the explicitly stated constitutional grounds.

Concerns Arising from Judicial Expansion into Regulation

1. Jurisdictional Overreach

- In the Ranveer Allahbadia case, the Court expanded the scope of proceedings beyond the original issue of FIRs.
- Content regulation is primarily a **legislative function**, requiring policy deliberation and technical expertise.

- The legislation obliges platforms to prevent underage users from opening new accounts and from bypassing restrictions through technical workarounds.
- Platforms must establish grievance and correction mechanisms to ensure that accounts are not unfairly removed.
- Parents are not allowed to override the restriction by giving consent for children under 16 to access social media platforms.
- Non-compliance can attract penalties of up to **USD 33 million**.

Platforms Covered Under the Ban

- The ban applies to platforms such as Facebook, Instagram, YouTube, TikTok, Snapchat, X, Reddit, Twitch, Threads, and Kick.
- The Australian government has stated that the list of covered platforms may be revised if children migrate to other services.
- Dating platforms, gaming services, and AI chatbots have been excluded from the scope of the law.

Rationale Behind the Social Media Ban for Children (Australia)

- **Child Protection:** The ban aims to protect children from online pressures and risks.
- **Exposure to Harm:** Social media platforms expose children to cyberbullying, grooming, stalking, and harmful content.
- **Prevalence of Cyberbullying:** Government surveys show that over 50% of young Australians have experienced cyberbullying on social media.
- **Mental Health Risks:** Algorithm-driven platform features encourage excessive screen time, negatively affecting mental health.
- **YouTube Exemption Revoked:** YouTube was found to be the most cited platform for exposing children to harmful content, leading to the removal of its exemption.

Response of Technology Companies

- Major technology companies have publicly opposed the law while confirming that they will comply with its requirements.
- Meta has reportedly begun deactivating accounts of users below the age of 16 in Australia.
- YouTube has argued that requiring children to use the platform without accounts removes parental controls and safety filters.
- Snap has stated that cutting teenagers off from social networks may push them towards less safe and less regulated platforms.
- X has raised concerns that the law could adversely affect children's freedom of expression and access to information.

Implementation Challenges

- Age verification has emerged as the most significant challenge in implementing the ban.
- Government reports have found that facial recognition-based age estimation systems show unacceptably high false rejection rates.
- There are widespread concerns about privacy, surveillance, and the use of biometric data for verifying children's ages.
- Platforms have indicated that users who are wrongly flagged may verify their age through government-issued identification or third-party tools.

Global Implications

- Australia's decision is likely to serve as a template for other countries seeking to regulate children's access to social media.
- Several governments, particularly in Europe, have indicated that they will study Australia's policy before adopting similar measures.
- The ban signals the end of the internet's "free-range" era and reflects increasing state intervention in digital governance.

Comparison with India

- India does not currently impose a direct ban on children's access to social media platforms.
- Under the **Digital Personal Data Protection Act, 2023**, platforms must obtain verifiable parental consent before processing the personal data of children.
- Indian law prohibits behavioural tracking and targeted advertising directed at children.
- Unlike Australia's access-based restriction, India's framework focuses on data protection and consent.
- The Indian provisions have been notified but are yet to be implemented.

Ethical and Policy Debate

- Supporters argue that the ban prioritises child safety and forces platforms to take responsibility for online harms.
- Critics contend that a blanket ban may curtail children's freedom of expression and digital participation.
- There are concerns that strict regulation may push young users towards unregulated or unsafe online spaces.

Conclusion

Australia's social media ban for users under 16 represents a landmark intervention in digital governance. The law has shifted responsibility for child safety from families to platforms and the state. Its long-term success will depend on balancing child protection with privacy, proportionality, and fundamental rights.

INTERNATIONAL RELATIONS

INDIA-RUSSIA TIES

Why in News: Russian President Vladimir Putin's visit to India, his first since the Ukraine war, took place amid Western sanctions on Russia, strained India–U.S. trade ties, and ongoing negotiations on a U.S.–India Free Trade Agreement.

What did the visit achieve?

- The visit reaffirmed the India–Russia Special and Privileged Strategic Partnership despite global geopolitical pressures.
- It signalled India's unwillingness to abandon Russia under pressure from the U.S. and EU.
- The summit focused more on symbolism and continuity than on major new agreements.

Agreements and Areas of Cooperation

- India and Russia agreed to advance the 2030 Roadmap for Strategic Economic Cooperation.
- A Labour Mobility Agreement was announced to enable Indian skilled workers to work in Russia amid its labour shortages.
- An MoU between Indian and Russian fertiliser companies was signed to set up a urea plant in Russia.
- Agreements were concluded on maritime cooperation, ports, and customs.
- Both sides committed to improving connectivity through the Chennai–Vladivostok Eastern Maritime Corridor and the International North–South Transport Corridor (INSTC).
- India and Russia agreed to continue efforts toward settlement of bilateral trade in national currencies.

India–Russia Reciprocal Exchange of Logistics Support Agreement

- The agreement allows India and Russia to provide mutual logistical support such as refuelling, repairs, and maintenance to each other's armed forces.
- It permits the use of each other's airspace, ports, and designated military bases by warships and military aircraft.
- The agreement applies during joint military exercises, training programmes, and humanitarian assistance and disaster relief operations.
- It provides India with access to Russian military bases ranging from Vladivostok in the Pacific region to Murmansk in the Arctic region.

- The agreement enhances the operational reach, endurance, and preparedness of the Indian Navy and the Indian Air Force.
- It supports the maintenance and servicing of defence platforms of Russian origin operated by India.
- The agreement strengthens India's policy of strategic autonomy in a multipolar world order.
- It is similar to India's logistics agreements with the United States but is customised to suit the India–Russia bilateral defence relationship.

What was missing?

- No major announcements were made on defence procurement, space cooperation, or nuclear energy projects.
- There were no fresh commitments on oil purchases, despite oil dominating bilateral trade.
- Expected deals on air defence systems, aircraft, drones, and missiles did not materialise.

Ukraine War and India's Position

- Prime Minister Narendra Modi reiterated that "India is not neutral, but on the side of peace."
- President Putin expressed openness to peace efforts, including the U.S.-led peace proposal.
- Western sanctions and tariffs have imposed economic costs on India, leading to a sharp decline in Russian oil imports in 2025.
- India appears to have avoided sensitive announcements to reduce risks under CAATSA sanctions.

Strategic Significance of the Visit

- The visit allowed India to balance ties with Russia without provoking the West at a sensitive diplomatic moment.
- It reinforced India's ability to maintain relations with competing power blocs simultaneously.
- The timing was crucial as India prepares for EU leaders' visits, an EU–India Summit, and progress on trade agreements with the U.S. and EU.

India–Russia Relations: Where They Stand

- Political and strategic ties remain strong and stable, rooted in mutual trust.
- Economic relations remain skewed, with trade dominated by Russian crude oil exports and limited Indian exports.
- Defence cooperation remains robust but constrained, due to sanctions, delays, and India's diversification strategy.

- Both countries share a vision of a multipolar world order, promoted through BRICS, SCO, and G20.

Way Forward

- India seeks an end to the Ukraine conflict to ease strategic and economic pressures.
- The challenge ahead is to deepen economic and technological cooperation without jeopardising ties with the West.
- Putin's visit helped India achieve a "win-win balance", reaffirming ties with Russia while preserving strategic autonomy.

Conclusion

Putin's 2025 visit achieved diplomatic reassurance rather than transformational outcomes, underscoring that India–Russia relations are driven by long-term strategic calculations, not short-term geopolitical pressure.

INDIA – NEW ZEALAND FREE TRADE AGREEMENT

Why in News: The India–New Zealand Free Trade Agreement was concluded in December 2025, making it one of India's fastest-negotiated FTAs, completed within nine months of announcement.

Key Bargains under the Agreement

Market Access and Tariff Commitments

- New Zealand will provide zero-duty market access for 100% of India's exports from the date of entry into force.
- India will relax tariffs on 95% of imports from New Zealand, with 57% of tariff lines becoming duty-free immediately.
- India has retained phased tariff elimination and safeguards for sensitive sectors to ensure domestic industry protection.

Investment Commitments

- New Zealand has committed to invest USD 20 billion in India over a 15-year period.
- The agreement incorporates clawback mechanisms to ensure accountability if investment targets are not met within stipulated timelines.
- The investment focus includes services, skill development, employment generation, and growth across 118 sectors.

Services, Skill Mobility, and Traditional Knowledge

- The FTA includes a dedicated annex on health and traditional medicine services, marking the first such commitment by New Zealand.
- The agreement facilitates trade in Ayurveda, Yoga, AYUSH services, wellness tourism, and traditional medicine practitioners.

- Indian professionals such as IT specialists, engineers, healthcare workers, yoga instructors, chefs, and music teachers will benefit from improved mobility provisions.

Education and People-to-People Mobility

- Indian students will be permitted to work up to 20 hours per week while studying in New Zealand.
- Extended post-study work visas have been introduced, with up to three years for STEM graduates and four years for doctoral graduates.
- The agreement provides for a quota of 5,000 skilled visas annually for Indian professionals and 1,000 working holiday visas for Indian youth.

Benefits to MSMEs and Labour-Intensive Sectors

- The FTA offers significant opportunities for labour-intensive sectors such as textiles, apparel, leather, footwear, gems and jewellery, engineering goods, and processed foods.
- MSMEs are supported through capacity building, technology transfer, simplified customs procedures, and improved market access.
- The agreement aims to enhance employment generation and inclusive growth within India.

Sectors Kept Outside the Agreement

- India has excluded dairy and key agricultural products such as milk, cheese, butter, yogurt, onions, sugar, edible oils, spices, and rubber from tariff concessions.
- These exclusions are aimed at protecting Indian farmers, small producers, and domestic agri-based industries.
- New Zealand, despite being a major dairy exporter, accepted these exclusions, making this its first FTA without dairy access.

Agricultural Cooperation Framework

- The agreement provides for focused agri-technology action plans for apples, kiwifruit, and honey.
- These initiatives aim to improve productivity, quality standards, planting material, orchard management, post-harvest practices, and food safety.
- Centres of excellence and capacity-building programmes will support Indian farmers' integration into global value chains.

Strategic Importance of the FTA

Trade Diversification and Economic Strategy

- The FTA strengthens India's presence in Oceania and Pacific Island markets, where New Zealand serves as a strategic gateway.
- India's bilateral trade with New Zealand currently stands at USD 1.3 billion, with the agreement targeting a doubling of trade within five years.
- The agreement supports India's effort to reduce over-dependence on the U.S. market amid tariff uncertainties and stalled Indo-U.S. trade negotiations.

Diaspora and Soft Power

- The Indian diaspora constitutes nearly 5% of New Zealand's population, amounting to around 300,000 people.
- Enhanced mobility and services trade strengthen cultural ties and expand India's soft power diplomacy.

Gender Dimension

- The FTA is notable for being negotiated and concluded by a Indian delegation predominant by women, reflecting inclusivity in India's trade diplomacy.

Why India is Accelerating FTAs

- India is pursuing FTAs to secure strategic geopolitical alliances through economic engagement.
- FTAs allow India to negotiate WTO-plus commitments in services, digital trade, investment, and mobility.
- The agreements align with national initiatives such as Make in India, Production Linked Incentive schemes, and global value chain integration.

Strategic and Economic Significance

- The FTA strengthens India's presence in the Oceania and Indo-Pacific region.
- It complements India's recent FTAs with UAE, Australia, UK, Oman, and EFTA.
- The agreement enhances export diversification, services dominance, and skilled mobility.
- It reinforces India's image as a rules-based, reliable trade partner.

Challenges

- India already enjoys low tariffs in New Zealand, limiting immediate export gains.
- The asymmetry in tariff levels could result in higher goods trade gains for New Zealand.
- Real benefits depend on effective implementation, regulatory cooperation, and private sector engagement.

Way Forward

- India must strengthen domestic competitiveness through investment in research and development, quality standards, and technology adoption.
- Strong rules of origin, anti-dumping safeguards, and effective dispute resolution mechanisms must be ensured.
- MSMEs and sensitive sectors should be aligned with global markets through training, infrastructure support, and market intelligence.
- Continuous monitoring and institutional cooperation are essential to ensure the agreement delivers long-term gains.

Conclusion

The India–New Zealand FTA represents a strategic shift from transactional trade deals to long-term economic alliances. By combining market access, investment, services trade, mobility,

and agricultural cooperation, the agreement strengthens India's global economic footprint. If implemented effectively, the FTA can contribute meaningfully to employment generation, export growth, and India's vision of **Viksit Bharat 2047**.

EXPECTED QUESTION FOR UPSC CSE

Mains Practice Question

- Q. Assess the potential of the India–New Zealand Free Trade Agreement to contribute to India's employment generation, MSME growth, and services-led exports while safeguarding domestic agriculture and manufacturing. Discuss the implementation challenges that may affect the realisation of these gains. (250 words) (15 marks)

BRICS PRESIDENCY TRANSITION

Why in News: Brazil handed over the **BRICS presidency to India** after completing its term amid global instability marked by wars, trade protectionism and weakening multilateral institutions. The symbolic transfer of a **gavel made from recycled Amazon wood** highlighted Brazil's focus on sustainability and continuity in BRICS priorities.

What is BRICS?

- BRICS is a group of 11 emerging economies: Brazil, Russia, India, China, South Africa, Saudi Arabia, Egypt, UAE, Ethiopia, Indonesia, and Iran.
- Functions as a political and diplomatic forum for the Global South, promoting cooperation in economics, politics, technology, and social development.
- **Objectives:**
 - Strengthen economic, political, and social cooperation among members.
 - Increase influence of Global South countries in international governance.
 - Reform institutions like the UN, IMF, World Bank, and WTO for equity and legitimacy.
 - Promote sustainable social and economic development and social inclusion.
- **Origin:**
 - BRIC concept coined in 2001; formal ministerial cooperation began in 2006.
 - South Africa joined in 2011; major expansion occurred in 2023–25.
- **Nature:**
 - Informal coordination mechanism.
 - Rotational presidency; decisions taken by consensus.
 - Activities revolve around three pillars: politics & security, economy & finance, and people-to-people (P2P) cooperation.

Key Achievements of Brazil's BRICS Presidency

1. Emphasis on Sustainability and Inclusive Development

- Brazil prioritised development outcomes that directly affect people's lives rather than limiting BRICS to high-level diplomacy.
- Three major declarations were adopted at the Rio Summit (2025):
 - Governance of Artificial Intelligence to ensure ethical and inclusive use.
 - Climate finance framework to support developing countries.
 - Health cooperation to eliminate socially determined diseases.

2. Reinforcing Multilateralism

- Brazil used BRICS to counter rising mistrust in global multilateral institutions.
- The summit reaffirmed collective commitment to reforming IMF, World Bank and global financial governance.
- President Lula criticised the existing system as a "reversed Marshall Plan" where developing countries finance developed nations.

3. Economic Autonomy and Development Finance

- Strengthening the role of the New Development Bank (NDB) to fund infrastructure and sustainability projects.
- Emphasis on development financing without political conditionalities.
- Promotion of South-South cooperation as an alternative development model.

4. Managing External Pressure

- BRICS faced direct pressure from the U.S., including tariff threats and warnings against weakening the U.S. dollar.
- Despite this, Brazil ensured unity and expansion of BRICS without dilution of its core principles.

Significance of BRICS for India

1. Strategic Autonomy

- BRICS enables India to maintain independent foreign policy choices amid great-power rivalry.
- Provides a multilateral platform to engage Russia and China without formal alliances.

2. Strengthening India's Global South Leadership

- Aligns with India's vision of representing developing countries in global governance.
- Reinforces India's role as a bridge between developed and developing worlds.
- Complements India's advocacy for reforms in the UN, IMF and World Bank.

3. Economic and Developmental Gains

- Access to alternative sources of development finance through NDB.
- Supports India's infrastructure, climate and innovation goals.
- Reduces over-dependence on Western-dominated financial institutions.

4. Technology and AI Governance

- BRICS provides India a platform to shape inclusive and ethical AI norms.
- Prevents concentration of emerging technologies in a few advanced countries.
- Supports India's digital public infrastructure model.

India's BRICS Presidency (2026): Key Priorities

- India will focus on four pillars:
 1. Resilience – economic stability and supply-chain security.
 2. Innovation – cooperation in AI, science and technology.
 3. Cooperation – strengthening South-South collaboration and integrating new members.
 4. Sustainability – climate action, green finance and health cooperation.
- India aims to balance expansion with effectiveness, ensuring consensus-based decision-making.

Challenges Ahead

- Managing diversity and differing interests of an expanded BRICS.
- External geopolitical pressure and trade restrictions.
- Ensuring BRICS delivers concrete outcomes, not just declarations.

Conclusion

The transition from Brazil to India marks continuity with consolidation in BRICS. India's presidency offers an opportunity to strengthen multilateralism, amplify the Global South's voice, and promote sustainable development amid a fragmented global order.

EXPECTED QUESTION FOR UPSC CSE

Descriptive Question

- Q. Discuss the relevance of BRICS for India's strategic autonomy and leadership of the Global South. How can India utilise its 2026 BRICS presidency to translate this relevance into concrete outcomes? (250 Words) (15 Marks)

RECENT DEVELOPMENT ON INDIA BANGLADESH RELATIONS

Why in News: A Parliamentary Committee report states that recent developments in Bangladesh pose India's biggest strategic challenge since the 1971 Liberation War.

Bangladesh occupies a pivotal position in India's neighbourhood policy and eastern strategic calculus. Sharing a 4,096 km long border, deep historical ties, cultural linkages, and economic interdependence, India–Bangladesh relations have traditionally been among the most stable in South Asia.

Why Bangladesh is Strategically Significant for India

1. Geostrategic Location

- Bangladesh lies at the crossroads of **South Asia, Southeast Asia, and the Bay of Bengal**.
- It is crucial for India's **Act East Policy** and **BIMSTEC-led regional integration**.
- Provides the **shortest transit routes** to India's landlocked Northeast, bypassing the vulnerable Siliguri Corridor.

2. Connectivity and Economic Integration

- Access to **Chattogram and Mongla ports** enhances economic prospects of India's Northeast.
- Rail, road, inland waterways, and coastal shipping agreements made Bangladesh India's most important eastern connectivity partner.
- India is Bangladesh's **second-largest trading partner**.

3. Security and Internal Stability

- Cooperation under Sheikh Hasina helped eliminate **anti-India insurgent groups** operating from Bangladeshi soil.
- Stability in Bangladesh directly impacts border security, migration management, and counter-terrorism in eastern India.

4. Shared History and Cultural Bonds

- India's role in the **1971 Liberation War** underpins moral and historical ties.
- Shared linguistic, cultural, and civilisational linkages distinguish Bangladesh from other neighbours.

Recent Developments and Emerging Challenges

1. Political Transition and Strategic Uncertainty

- The **ouster of Sheikh Hasina in August 2024**, her shelter in India, and the rise of an interim government led by Muhammad Yunus disrupted long-standing strategic continuity.
- Ban on Awami League activities and exclusion from the February 2026 elections raise concerns about **democratic legitimacy and inclusiveness**.

2. Rise of Religious Extremism

- Return of **Jamaat-e-Islami**, attacks on syncretic cultural

institutions, and growing intolerance against minorities signal a retreat from Bangladesh's secular foundations.

- Increasing fundamentalism has regional spillover risks for India.

3. Expanding China–Pakistan Footprint

- China's role has expanded from infrastructure to **defence and strategic partnerships**.
- Improving Dhaka–Islamabad ties aim at **rewriting Bangladesh's national narrative**, diluting the legacy of 1971.
- Potential China–Pakistan–Bangladesh alignment threatens India's **eastern maritime and security interests**.

4. Erosion of Connectivity Gains

- Suspension of passenger rail services, stalled port access, and declining trade reflect diplomatic strain.
- Connectivity—once the backbone of bilateral ties—has become the first casualty of political distrust.

5. Water and Border Sensitivities

- Delay in initiating talks on the **Ganga Water Treaty renewal (due 2026)** risks creating a diplomatic vacuum.
- Border trade disruptions are impacting livelihoods in border regions.

Measures Taken by India

• Measured Diplomatic Approach

- India has reiterated that it has **not allowed its territory to be used for political activities** against Bangladesh.
- Shelter to Sheikh Hasina framed as a humanitarian decision, not political endorsement.

• Strategic Signalling

- Revocation of Bangladesh's **third-country transshipment facility** through Indian ports as a calibrated response.
- Continued allowance of transit through Northeast to signal regional responsibility towards Nepal and Bhutan.

• Diversification of Connectivity

- Accelerating **Shillong–Silchar Corridor** and **Kaladan Multimodal Transit Transport Project** to reduce dependence on Bangladesh.
- Strengthening maritime and land connectivity via Myanmar.

• Parliamentary Oversight

- Standing Committee has urged early bilateral engagement on water sharing and strategic recalibration.

Way Forward

1. Strategic Recalibration, Not Alienation

- India must engage **all political and social stakeholders** in Bangladesh, not just regime-centric diplomacy.

- Youth-centric outreach is essential to counter rising anti-India sentiment.

2. Issue-Based Engagement

- Fast-track discussions on **water-sharing treaties**, trade facilitation, and border management to prevent diplomatic vacuums.
- Separate humanitarian, democratic, and strategic concerns to avoid zero-sum perceptions.

3. Countering External Influence

- Offer **transparent, sustainable alternatives** to Chinese infrastructure financing.
- Deepen cooperation with ASEAN, Japan, and Bay of Bengal littorals to avoid strategic isolation.

4. Strengthening Regional Architecture

- Revitalise **BIMSTEC** as a functional alternative to SAARC.
- Use sub-regional frameworks to anchor Bangladesh within cooperative regional norms.

5. Security Preparedness with Diplomatic Prudence

- Enhance border intelligence and maritime surveillance in the eastern theatre.
- Aim not necessarily for a “friendly regime,” but to **neutralise Bangladesh’s capacity to harm India’s interests**, as the Parliamentary panel cautioned.

Conclusion

Bangladesh’s current transition represents a critical inflection point for India’s neighbourhood policy. Geography ensures interdependence, but **political alignment determines cooperation**. India cannot afford strategic paralysis in its eastern neighbourhood. While respecting Bangladesh’s sovereignty and democratic processes, New Delhi must act with clarity, confidence, and creativity to protect its long-term strategic interests. The challenge today is not war—but **irrelevance**, and that is a risk India must decisively avoid.

INDIA-JORDAN TIES

Why in News: India’s Prime Minister paid an official bilateral visit to Jordan and held wide-ranging discussions with King Abdullah II. The visit coincided with the **75th anniversary of the establishment of diplomatic relations** between India and Jordan. This visit was part of a **three-nation tour**, also covering **Ethiopia and Oman**, aimed at strengthening India’s diplomatic and economic ties in West Asia and Africa.

Key Outcomes of the Visit

- Agreements and MoUs
 - Five MoUs were signed during the visit, covering areas of renewable energy, water resource management, digital transformation, cultural exchange, and a twinning arrangement between Petra (Jordan) and Ellora (India).

- These agreements are aimed at deepening cooperation across economic, technological, and cultural domains.

• Trade and Economic Cooperation

- India is currently Jordan’s third-largest trading partner, with bilateral trade reaching USD 2.875 billion in 2023–24.
- Jordan is a leading supplier of phosphates and potash fertilizers for India, which is crucial for India’s food security and agricultural growth.
- Both countries aim to enhance bilateral trade to USD 5 billion over the next five years.
- A key initiative is the Jordan India Fertiliser Company (JIFCO), a joint venture with Indian Farmers Fertiliser Cooperative (IFFCO) and Jordan Phosphate Mines Company (JPMC), producing phosphoric acid for India, originally valued at USD 860 million.
- More than 15 Indian-owned garment companies operate in Jordan’s Qualified Industrial Zones (QIZs), with a cumulative investment of USD 500 million, exporting goods under the Jordan-USA FTA framework.

• Defence and Security Cooperation

- India and Jordan signed a **Defence Cooperation MoU in 2018**, and the countries regularly conduct **joint military delegations and exchanges**.
- Both nations **share a common stance against terrorism** and coordinate efforts to maintain **regional stability**, particularly in **West Asia and Gaza**.

• Science, Technology, and Innovation

- The **India-Jordan Center of Excellence in IT (IJCOEIT)** at Al-Hussein Technical University, fully funded by India, trains **Jordanian professionals in emerging technologies** such as **Cybersecurity, Web Development, Machine Learning, and Big Data Analytics**.
- The goal is to **nurture 3,000 Jordanian IT experts**, fostering **technological cooperation and skill development** between the two countries.

• Education and People-to-People Relations

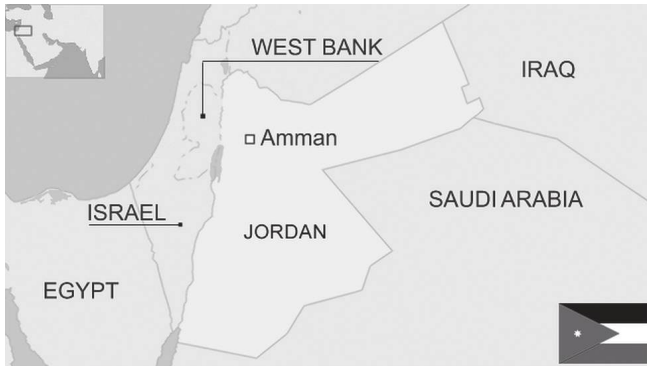
- India is a popular study destination for Jordanian students, with over 2,500 graduates from Indian universities.
- India provides ITEC slots, ICCR scholarships, and executive training programs for Jordanians.
- Approximately 17,500 Indians live and work in Jordan, primarily in textiles, construction, manufacturing, healthcare, IT, and education sectors.
- India and Jordan have direct flight connectivity (Amman-Mumbai), and Jordan offers Visa on Arrival (since 2009) and e-Visa facilities (since 2023).

• Cultural Exchanges

- India and Jordan maintain **strong cultural ties**, with

exchanges in **dance, music, Bollywood films, and Yoga events.**

- Example: In July 2024, an **Assamese folk dance troupe performed at the 38th Jerash Festival**, one of Jordan's largest cultural events.



Significance of the Visit

- **Diplomatic**
 - Strengthens **long-standing bilateral relations**, reflecting 75 years of diplomatic ties.
 - Highlights India's role as a **reliable partner in West Asia**, promoting regional stability and peace.
- **Economic**
 - Secures India's **fertilizer supplies**, crucial for **agriculture and food security**.
 - Expands cooperation in **trade, investment, and digital infrastructure**.
- **Strategic**
 - Reinforces **counter-terrorism cooperation** and a shared **commitment to combat extremism and radicalization**.
 - Promotes **defense, renewable energy, IT, and critical minerals cooperation**.
- **Cultural and People-to-People**
 - Strengthens **educational, professional, and cultural ties**, fostering goodwill and mutual understanding between the two nations' populations.

Conclusion:

PM Modi's visit demonstrates that **sustained political engagement** strengthens **economic, strategic, and cultural partnerships**. The visit consolidates India-Jordan ties, highlighting Jordan as a **trustworthy economic and political partner in West Asia**, while creating new avenues for **trade, technology, and people-to-people cooperation**.

INDIA-OMAN TIES

Why in News: Prime Minister Narendra Modi visited Oman to reaffirm Oman's strategic importance in India's Gulf policy, highlighting the Sultanate as a key partner in West Asia. The visit also marked the signing of the India-Oman

Comprehensive Economic Partnership Agreement (CEPA), aimed at enhancing trade, investment, and long-term strategic cooperation between the two nations.

Oman

- Oman is located in the **Arabian Peninsula** of Western Asia.
- It shares land borders with the **United Arab Emirates (northwest), Saudi Arabia (west), and Yemen (southwest)**.
- Oman has maritime boundaries along the **Arabian Sea (south and east)** and the **Gulf of Oman (northeast)**.
- It is strategically situated at the **mouth of the Persian Gulf** in the southeastern part of the Arabian Peninsula.
- The **capital city** of Oman is **Muscat**.



Key Features of the India-Oman Comprehensive Economic Partnership Agreement (CEPA)

- **Trade and Market Access**
 - Oman has provided **tariff-free access on 98.08% of its tariff lines**, which covers **99.38% of India's exports to Oman**, providing unprecedented opportunities for Indian exporters.
 - India offers **duty-free access to 77.79% of its tariff lines**, covering **94.81% of imports from Oman**, while sensitive products are excluded or subject to controlled tariff-rate quotas to protect domestic industries.
 - The agreement ensures that both countries can enhance market access while safeguarding their national economic interests, making CEPA a balanced and forward-looking trade framework.

- **Labour-Intensive and Strategic Sectors**
 - Full tariff elimination is offered for labour-intensive sectors such as textiles, leather, footwear, gems and jewellery, engineering products, plastics, furniture, agricultural products, pharmaceuticals, medical devices, and automobiles.
 - This provision is expected to **boost employment opportunities**, support MSMEs, empower women-led enterprises, and strengthen artisans' participation in international trade.
 - **Services and Professional Mobility**
 - Oman has committed to liberalising 127 service sub-sectors, including IT-related services, business and professional services, audiovisual and media services, research and development, education, and healthcare.
 - Indian professionals will benefit from **enhanced mobility under Mode 4**, including intra-corporate transferees, contractual service suppliers, and independent professionals, with extended durations of stay and liberalised entry conditions.
 - Skilled professionals in accountancy, taxation, architecture, medical, and allied sectors will now enjoy easier access to the Omani market, strengthening bilateral talent exchange.
 - **Investment and Future Cooperation**
 - The agreement allows **100% FDI for Indian companies** in major Omani service sectors, creating avenues for Indian businesses to expand in the Gulf region.
 - Both countries have agreed to discuss **social security coverage for Indian professionals** in Oman once the Sultanate's contributory social security system is implemented, reflecting a forward-looking approach to labour mobility.
 - **Traditional Medicine and Healthcare**
 - Oman has extended the **first-ever comprehensive commitment on traditional medicine across all modes**, opening significant opportunities for India's AYUSH and wellness sectors.
 - The agreement also promotes **medical value travel**, enhances India's soft power, and strengthens collaboration in modern and traditional healthcare systems.
- India-Oman Relations**
- **Strategic and Defence Cooperation**
 - Defence cooperation includes joint exercises, training of military personnel, and potential collaboration in defence manufacturing, aligned with India's goal of becoming a defence manufacturing hub.
 - Maritime cooperation focuses on **regional maritime security, blue economy, and sustainable utilisation of ocean resources**, which are vital for safeguarding trade routes.
 - Coastal security collaboration addresses piracy, organised crime, and smuggling, enhancing mutual security in shared maritime zones.
 - **Economic and Cultural Ties**
 - Bilateral trade in 2024–25 stood at **USD 10.6 billion**, supported by over **6,000 Indian enterprises** operating across sectors in Oman.
 - Cultural, educational, and maritime heritage cooperation includes agreements on museums, agriculture (including millet cultivation), higher education, and technology partnerships, strengthening people-to-people and institutional ties.
 - **Healthcare and Soft Power**
 - Cooperation in both traditional and modern healthcare includes establishing an **Ayush Chair** and an information cell in Oman to promote India's traditional medicine and wellness practices.
 - Joint collaboration during the COVID-19 pandemic enhanced India's global image as a healthcare leader and a reliable partner for the Global South.
 - **Regional Diplomacy and Security**
 - Oman plays the role of a **regional arbiter**, contributing to peace and stability in West Asia, which is vital for India's strategic interests.
 - Both nations share a strong stance on **combating terrorism, radicalism, and extremism**, and jointly support the establishment of a sovereign Palestinian state.
 - Humanitarian cooperation, including support for civilian aid in Gaza, reflects shared values and commitment to regional stability.
- During the visit, PM Modi was conferred the **Order of Oman (First Class)** by Sultan Haitham bin Tarik in recognition of his significant contributions to strengthening India-Oman relations.
- Challenges**
- The successful implementation of CEPA requires **active utilisation by businesses and the private sector** in both countries.
 - Exclusion of sensitive sectors by India may **limit the full potential of trade expansion**.
 - Regional instability and geopolitical tensions in West Asia could **affect strategic, defence, and trade cooperation**.
 - Long-term alignment of Oman Vision 2040 and India's Viksit Bharat 2047 goals requires **careful planning and sustained coordination**.
- Way Forward**
- Indian and Omani businesses should be encouraged to **maximise CEPA benefits** in both goods and services sectors.

- India and Oman should strengthen **maritime and defence cooperation** through joint exercises, training, and infrastructure development.
- **Cultural, educational, and healthcare partnerships** should be further promoted to enhance India’s soft power.
- Oman’s role as a **regional arbiter** should be leveraged to promote peace and stability in West Asia.
- Collaboration in **technology, agriculture, renewable energy, and sustainable development** should be expanded for mutual growth.

Conclusion

Oman remains a **key strategic partner** for India in the Gulf, acting as a gateway to West Asia and Africa. The India–Oman CEPA not only strengthens trade and investment but also consolidates defence, maritime, and cultural cooperation, reflecting India’s evolving Gulf policy and proactive engagement in the region.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

Q. Consider the following statements regarding Oman:

1. Oman shares a land border with Saudi Arabia and Yemen.
2. The Gulf of Oman lies to the northeast of Oman.
3. Oman is strategically located at the mouth of the Persian Gulf.

Which of the statements given above are correct?

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

Answer: (d) 1, 2 and 3

INDIA ETHIOPIA TIES

Why in News: Prime Minister Narendra Modi visited Ethiopia strengthening India’s strategic engagement with the Middle East and Africa. It marked his first full-fledged bilateral visit to Ethiopia and resulted in the upgradation of India–Ethiopia relations to a Strategic Partnership.

Domestic and Regional Significance of India–Ethiopia Relations

- Strategic geography: Ethiopia sits at the crossroads of the Horn of Africa and hosts the African Union headquarters, making it central to African diplomacy.
- India’s Indian Ocean role: India’s maritime centrality complements Ethiopia’s continental influence, enabling cooperation in regional peace, security, and connectivity.
- Anchor of stability: Despite internal challenges, Ethiopia

retains a strong military and regional diplomatic relevance.

- BRICS and Global South convergence: Ethiopia’s BRICS membership and India’s leadership in G20 and Voice of the Global South platforms reinforce shared multilateral priorities.



Key Pillars of the Strategic Partnership

1. Defence and Security Cooperation

- Signing of a Defence Cooperation Agreement covering:
 - Military training and capacity building
 - Cybersecurity collaboration
 - Defence industry cooperation and joint research
- India offers Ethiopia an alternative, non-intrusive security partnership amid competing Gulf and regional influences.
- India’s defence platforms provide a cost-effective option for modernising Ethiopia’s armed forces.

2. Economic and Investment Engagement

- Indian companies have invested over USD 5 billion, creating more than 75,000 jobs.
- India is Ethiopia’s largest source of FDI, with over 600 Indian firms operating there.
- High potential sectors:
 - Mining (gold, rare earths, critical minerals)
 - Pharmaceuticals
 - Agro-processing and manufacturing
 - Clean and renewable energy

• Ethiopia can act as a gateway to East Africa under the African Continental Free Trade Area (AfCFTA).

3. Education, Capacity Building and Technology

- Ethiopia sends one of the largest numbers of African students to India, including the highest PhD cohort.
- **Expansion of:**
 - ICCR scholarships (doubled)

- ITEC training programmes
- AI-focused short-term courses
- Strong legacy of Indian educators shaping Ethiopia's academic institutions.
- Cooperation in digital health, agri-technology, natural farming, and digital public infrastructure.

Diplomatic and Symbolic Dimensions

- Exceptional personal diplomacy (“car diplomacy”) showcased trust and warmth.
- Modi’s address to Ethiopian Parliament received a standing ovation, reflecting revived goodwill.
- Award of Ethiopia’s highest civilian honour — Nishan of Ethiopia — underscores mutual respect.
- **Symbolic gestures such as:**
 - Participation in traditional coffee ceremony
 - Sapling plantation under *Ek Ped Maa Ke Naam*
 - Wreath at Adwa Victory Monument

Challenges and Missed Opportunities

- Absence of a formal business delegation during the visit, despite Ethiopia’s expectation.
- **Investor concerns remain regarding:**
 - Foreign exchange availability
 - Taxation and regulatory consistency
- IMF conditionalities constrain Ethiopia’s fiscal flexibility, making private investment crucial.
- Regional risks persist, including Ethiopia’s pursuit of Red Sea access via sensitive routes.

Measures Needed to Deepen the Partnership

- **Update bilateral frameworks such as:**
 - Double Taxation Avoidance Agreement (DTAA)
 - Bilateral Investment Treaty
- Encourage Indian SMEs to invest using Ethiopia as a regional manufacturing hub.
- Establish Indian-supported educational institutions in Ethiopia for scalable human capital development.
- Expand defence Lines of Credit within IMF norms.
- Leverage platforms like BRICS, G20, and India–Africa Forum Summit IV for institutional follow-up.

Conclusion

The elevation of India–Ethiopia ties to a Strategic Partnership reflects India’s Africa policy rooted in respect, development partnership, and strategic autonomy. Ethiopia gains diplomatic legitimacy, diversified partnerships, and development support, while India strengthens its footprint in a geopolitically sensitive region. Converting strong political goodwill into sustained economic and strategic outcomes now depends on institutional follow-through, private-sector engagement, and long-term capacity building — making this partnership a potential cornerstone of India–Africa relations in the coming decade.

INDIA AND THE MODERNISATION OF THE BIOLOGICAL WEAPONS CONVENTION (BWC)

Why in News: Affairs Minister S. Jaishankar highlighted the concerns related to bioterrorism while addressing a conference marking 50 years of the Biological Weapons Convention (BWC). The appeal reflects growing global anxiety over bioterrorism, dual-use technologies, and the limitations of existing international biosecurity frameworks.

Rising Threat of Bioterrorism

- Bioterrorism refers to the intentional release of biological agents or toxins to harm humans, animals, or plants for political or social objectives.
- The spread of infectious or toxic agents can occur without warning and can cause widespread illness, death, panic, and transnational instability.
- Non-state actors gaining access to biological materials and expertise has made bioterrorism a realistic and immediate threat rather than a distant possibility.
- Advances in biotechnology, artificial intelligence, and synthetic biology have lowered barriers to misuse of life science research.

Biological Weapons Convention: Role and Gaps

- The BWC is the first multilateral treaty to ban an entire category of weapons of mass destruction.
- It prohibits the development, production, acquisition, stockpiling, transfer, and use of biological weapons.
- Despite its normative strength, the BWC lacks a formal compliance and verification mechanism.
- The convention does not have a permanent technical body or an institutional system to track emerging scientific and technological developments.
- Confidence-Building Measures (CBMs), though useful, remain politically binding and insufficient to address modern dual-use risks.

Dual-Use Dilemma and Scientific Advances

- Dual-use research refers to scientific work intended for peaceful purposes that can be misused deliberately or accidentally to cause harm.
- Technologies such as gene editing, synthetic biology, and AI-enabled research increase both medical benefits and security risks.
- The post-Covid expansion of high-containment laboratories has intensified concerns about uneven biosafety standards across countries.
- Fragmented global oversight has weakened the ability to regulate and monitor dual-use research effectively.

India's Position on Strengthening the BWC

- India has consistently advocated stronger compliance and verification measures within the BWC framework.
- It has supported the creation of mechanisms suited to contemporary scientific and security realities.
- India has emphasised the need for systematic reviews of scientific and technological developments to ensure governance keeps pace with innovation.
- New Delhi has reaffirmed its commitment to international cooperation and assistance for peaceful exchange of biological materials and technologies.

India's Credibility and Global South Trust

- India is widely regarded as a responsible international actor with a strong non-proliferation record.
- Its membership in the Australia Group since 2018 has enhanced confidence in its commitment to preventing misuse of sensitive biological materials.
- India's consistent diplomatic support for the BWC has earned it trust among countries of the Global South.
- Although India faces domestic biosecurity coordination challenges, it enjoys significant international legitimacy.

Why the Global South Needs a Modern BWC

- The Global South faces disproportionate biological risks due to climate change, emerging infectious diseases, and limited health infrastructure.
- Weak biosafety and biosecurity frameworks increase vulnerability to accidental releases and deliberate biological attacks.
- Existing global governance structures often do not adequately reflect the developmental and capacity constraints of developing countries.
- A modernised BWC is essential to ensure equitable protection, preparedness, and capacity-building.

India's Potential Leadership Role

- India can lead South-South capacity-building initiatives focused on biosafety and biosecurity standards.
- It can share regulatory and technical experience gained through its engagement with the Australia Group.
- India can promote science diplomacy by advocating institutional scientific advisory mechanisms within the BWC.
- New Delhi can convene regional and multilateral dialogues to rebuild trust and depoliticise biological weapons governance.

Conclusion

The BWC remains the cornerstone of global efforts to prevent the use of biological weapons. Strengthening its institutional structures is critical to addressing emerging bioterror and dual-use challenges. India is uniquely positioned to act as a bridge between advanced scientific governance and the diverse needs of the Global South. By transforming its

regulatory gaps into diplomatic leadership, India can emerge as a leading voice for a modern, resilient, and inclusive BWC.

EXPECTED QUESTION FOR UPSC CSE

Descriptive Question

- Q. Examine India's role in strengthening the Biological Weapons Convention. How can India leverage its credibility and Global South leadership to promote a modern and inclusive biosecurity regime? (250 words) (15 marks)

INDIA'S RECONSTRUCTION PACKAGE FOR SRI LANKA

Why in News: India announced a \$450-million reconstruction package for Sri Lanka in the aftermath of Cyclone Ditwah marks a significant moment in regional cooperation and humanitarian diplomacy.

Background: Cyclone Ditwah and Sri Lanka's Vulnerability

- Cyclone Ditwah struck Sri Lanka at a fragile moment when the country was recovering from its worst economic crisis since independence. According to World Bank estimates, the cyclone caused direct physical damage of \$4.1 billion, nearly 4% of Sri Lanka's GDP, impacting lives, infrastructure, agriculture, fisheries, and livelihoods. Experts suggest the recovery challenge may be more complex than the 2004 Indian Ocean tsunami, due to existing fiscal stress and austerity under the IMF programme.

India's Assistance and 'Operation Sagar Bandhu'

India's response has been swift and comprehensive:

- A \$450-million reconstruction package aimed at long-term recovery.
- Under Operation Sagar Bandhu, India provided humanitarian relief, medical assistance, and essential supplies.
- The Indian Army established a field hospital near Kandy, treating over 8,000 people with a medical team of 85 personnel.
- This builds on India's earlier \$4 billion assistance during Sri Lanka's 2022 economic collapse, including lines of credit, currency swaps, and deferred liabilities.

This approach reflects India's Neighbourhood First Policy and its emphasis on Humanitarian Assistance and Disaster Relief (HADR) as a core foreign policy tool.

Strategic and Diplomatic Significance

1. **Strengthening Bilateral Relations:** Sri Lankan leadership described India's gesture as opening a "new chapter" in bilateral ties, reinforcing political trust.
2. **Countering External Influence:** Sustained Indian support helps balance external strategic pressures in Sri Lanka,

especially in the context of great power competition in the IOR.

3. **Soft Power and Moral Leadership:** India's compassionate response enhances its credibility as a responsible regional power.

India–Sri Lanka Relations

Trade, Investment and Economic Cooperation

- India is among Sri Lanka's **largest trading partners**.
- **Bilateral trade** stood at **USD 5.54 billion (FY 2023–24)**.
- Negotiations on the **Economic and Technology Cooperation Agreement (ETCA)** resumed in 2023 after a five-year gap.
- India is a major source of **FDI**, with cumulative investment of **USD 2.25 billion**, especially in **energy, telecom, banking, hospitality, manufacturing, and real estate**.

Connectivity and Tourism

Connectivity has emerged as a **key pillar** of bilateral relations:

- Ferry services: **Nagapattinam–Kankesanthurai** (operational) and **Rameswaram–Talaimannar** (under discussion).
- Air connectivity: **Chennai–Jaffna flights** resumed.
- Digital connectivity: **UPI QR-based payments** launched in Sri Lanka (2024).
- Strategic projects under discussion include **power grid interconnection, multi-product petroleum pipeline, and Economic Land Corridor**.
- India remains the **largest tourist source**, contributing ~20% of Sri Lanka's tourist arrivals in 2023 and 2024.

Development Cooperation

India is Sri Lanka's **largest development partner**:

- Total credit assistance exceeds **USD 7 billion**.
- Grant assistance stands at around **USD 780 million**.
- Flagship projects include:
 - **60,000 houses** under Indian Housing Project
 - **Suwa Seriya Emergency Ambulance Service**
 - Railway modernization and port development
 - Renewable energy projects in Jaffna islands
 - Digital Identity Project (INR 300 crore)
- India provided **~USD 4 billion assistance during Sri Lanka's 2022 economic crisis**, including currency swaps, credit lines, and humanitarian aid.

Defence and Security Cooperation

Security cooperation is robust and institutionalized:

- Regular **Service Chiefs' visits** and **Annual Defence Dialogue**.
- Joint military exercises: **SLINEX (Navy)** and **MITRA SHAKTI (Army)**.

- Installation of **Maritime Rescue Coordination Centre (MRCC)** under Indian grant.
- India has acted as **first responder** in maritime disasters (MV XPress Pearl, MT New Diamond).
- **Colombo Security Conclave** has emerged as a key regional security platform.

Cultural and People-to-People Relations

- Deep Buddhist and cultural ties: **Kapilavastu Relics**, Buddhist Museum Gallery in Kandy, restoration of temples.
- Educational and cultural initiatives:
 - ICCR Chairs for Hindi
 - Centre for Contemporary Indian Studies at Colombo University
 - Publication of Pali and Sinhala texts by India
- Inauguration of **Colombo–Kushinagar Buddhist circuit flight**.

Capacity Building and Education

- **710 scholarships annually** for Sri Lankan students.
- **ITEC Programme** offers 402 training slots per year.
- Training of **1,500 Sri Lankan civil servants** under National Centre for Good Governance.
- Teacher training, diplomatic courses, and STEM capacity building initiatives.

Indian Community in Sri Lanka

- **Indian Origin Tamils (IOTs)** (~1.6 million) primarily engaged in plantation economy.
- **People of Indian Origin (PIOs)** (~10,000) engaged in business and trade.
- Around **7,500 NRIs** working in professional sectors.

Way Forward

- **Climate-Responsive Financing:** International financial institutions must integrate climate vulnerability into debt sustainability frameworks.
- **Debt Relief and Fiscal Space:** Recovery efforts should prioritise human welfare over rigid debt servicing.
- **Regional Cooperation:** India and Sri Lanka can collaborate on **disaster-resilient infrastructure, early warning systems, and climate adaptation**.
- **Sustainable Development Focus:** Reconstruction must align with long-term economic resilience rather than debt-driven growth.

Conclusion

India's reconstruction assistance to Sri Lanka after Cyclone Ditwah goes beyond humanitarian relief—it is a strategic investment in **regional stability, climate resilience, and people-centric diplomacy**. As climate-induced disasters become more frequent, such cooperative frameworks will be crucial for ensuring sustainable recovery and reinforcing India's leadership role in South Asia.

ECONOMY & AGRICULTURE

INDIA'S CAPITAL MARKETS: ANCHORED BY DOMESTIC SAVINGS

Why in News: India's capital markets are undergoing a structural shift as **domestic household savings increasingly replace foreign portfolio investment (FPI)**. This transition reduces exposure to volatile global capital flows and enhances financial stability. However, as India advances towards **Viksit Bharat 2047**, concerns remain over whether this stability—driven by uneven retail participation and limited financial capability—can deliver **inclusive and sustainable growth**.

Domestic Money Shaping Indian Capital Markets

- **Declining FPI influence:** FPI ownership in Indian equities has fallen to a multi-month low, signalling reduced dependence on foreign capital.
- **Rising domestic participation:** Mutual funds and retail investors now account for nearly one-fifth of market ownership, the highest in over two decades.
- **SIP-led stability:** Record SIP inflows have made domestic investors the market's anchor, dampening volatility during global uncertainty.
- **Policy flexibility:** Lower reliance on foreign inflows has expanded the RBI's monetary policy space, allowing greater focus on credit growth rather than currency defence.
- **Primary market expansion:** Strong IPO activity and rising private investment indicate growing confidence in India's long-term growth story.

Key Challenges from India's Shift to Domestic-Led Capital Markets

- **Unequal participation:** Equity and MF investments are concentrated among higher-income, urban households, risking widening wealth inequality.
- **Retail investor vulnerability:** New investors often lack financial literacy, making them susceptible to valuation excesses and market corrections.
- **Performance problem:** Most active fund managers fail to consistently outperform markets after fees, limiting wealth creation for small investors.
- **Valuation exuberance:** High-priced IPOs and premium valuations raise concerns about fundamentals versus speculation.

- **Chilling impact of losses:** Market downturns disproportionately affecting first-time investors may weaken long-term trust in capital markets.
- **Corporate governance risks:** Falling promoter shareholding may reflect healthy capital raising, but also risks opportunistic exits if oversight is weak.

Measures Needed to Strengthen India's Capital Markets

- **Enhance financial literacy:** Treat investor education as economic infrastructure, focusing on long-term risk-adjusted returns.
- **Promote low-cost investing:** Encourage passive funds and lower expense ratios to address cost-driven underperformance.
- **Strengthen investor protection:** Shift from mere disclosure to fiduciary-oriented regulation that actively safeguards retail interests.
- **Deepen governance standards:** Ensure transparency, accountability, and minority shareholder protection amid declining promoter holdings.
- **Data-driven inclusion:** Use gender- and location-specific data to expand participation among under-represented groups.
- **Stability with inclusiveness:** Align market development with inclusive growth objectives to sustain household confidence.

Conclusion

The rise of domestic capital has enhanced India's market resilience and reduced vulnerability to external shocks. However, stability built on unequal participation is fragile. For India's capital markets to truly support Viksit Bharat 2047, policy must focus not only on mobilising savings but also on broadening access, protecting investors, and strengthening institutional integrity.

EXPECTED QUESTION FOR UPSC CSE

Descriptive Question

- Q. How has the increasing role of domestic household savings in India's capital markets reduced dependence on foreign portfolio investment? What challenges does this shift create for inclusive and sustainable growth? (250 Words) (15 Marks)

SMALL-VALUE RETAIL DIGITAL PAYMENTS ON THE RISE

Why in News: The Reserve Bank of India (RBI) has reported that small-value digital payments in India are increasing at a faster pace than high-value transactions. The growth reflects the expanding adoption of digital payment methods across retail and low-value segments of the economy.

Growth of Digital Payments

- During 2024-25, the total value of digital payments grew by **17.9%**, accounting for **97.6% of India's total payments**, while paper-based instruments such as cheques declined to only 2.4% of total payments.
- In terms of transaction volume, digital payments grew **35%**, indicating that more small-value transactions are being conducted digitally.
- The average value of retail digital payments decreased from **₹4,382 in 2023-24 to ₹3,830 in 2024-25**, reflecting the increasing use of digital payments for small-value transactions.
- The **Unified Payments Interface (UPI)** accounted for the majority share of digital transaction volumes, while **RTGS** retained the largest share in value terms.
- Usage of debit cards has declined slightly, whereas credit card payments have continued to increase during recent periods.

Decline in ATM Usage

- The growth of seamless and convenient UPI-based payments has led to a **moderate reduction in ATM usage** during 2024-25.
- The total number of ATMs declined slightly, primarily due to a reduction in off-site ATMs, although on-site ATMs increased.
- Public Sector Banks (PSBs) accounted for the highest share of ATMs, followed by Private Sector Banks (PVBs) and white-label ATMs, which are operated by non-bank entities.
- PSBs maintained a relatively even distribution of ATMs across population groups, whereas PVBs focused more on metropolitan, urban, and semi-urban centers.
- Nearly **79.4% of white-label ATMs were located in rural and semi-urban areas** at the end of March 2025.

AI in the Financial Sector

- The RBI has cautioned regulated entities about the **incremental risks and opportunities posed by Artificial Intelligence (AI)** in the financial sector.
- AI can enhance credit risk assessment and scoring by using alternative data, enabling lenders to provide credit to customers without traditional credit histories.
- Continuous learning capabilities of AI can improve real-time detection of fraud and mule accounts while enabling hyper-personalized loan solutions tailored to borrower needs.

- Automation of credit appraisal and Know Your Customer (KYC) processes through AI reduces costs, accelerates disbursement, and facilitates small loans in remote areas.
- AI can also streamline grievance redressal processes, making complaint resolution more efficient and data-driven.
- However, AI carries risks such as **poor model explainability, data drift, automation complacency, skill gaps in oversight, algorithmic bias, and privacy concerns** that could affect credit assessments and system stability.

Microfinance Sector Monitoring

- The RBI has highlighted that the **microfinance sector is experiencing stress**, with many lenders, except NBFC-MFIs, reporting a contraction in credit as of March 2025.
- Regulated entities are advised to closely monitor the build-up of stress in the microfinance segment to prevent systemic risks.
- Regulatory measures, including restoring lower risk weights for bank lending to NBFCs and easing of monetary policy, are expected to help NBFCs expand their lending footprint.

UPI Lite and Offline Payments

- The RBI has amended its framework for **small-value digital payments in offline mode**, particularly for the UPI Lite payment system.
- The per-transaction limit under UPI Lite has been increased from **₹500 to ₹1,000**, and the total limit per payment instrument has been raised from **₹2,000 to ₹5,000**.
- These changes aim to enhance the utility of UPI Lite, especially in areas with limited or no internet connectivity, and to facilitate the wider adoption of offline digital payments.
- The amendments are issued under **Section 18, read with Section 10(2) of the Payment and Settlement Systems Act, 2007**, which empowers the RBI to regulate and promote safe, efficient, and accessible payment systems.
- The enhanced limits are expected to benefit sectors such as **retail, transportation, and local services**, where small-value payments dominate.
- This initiative demonstrates the RBI's commitment to fostering a **secure, inclusive, and digitally empowered payment ecosystem**.

Conclusion

The RBI report highlights the **rapid growth of small-value digital payments**, the shift away from ATMs, and the increasing adoption of offline payment solutions like UPI Lite. The integration of AI in financial services, coupled with close monitoring of microfinance stress, reflects a **forward-looking approach to innovation, risk management, and financial inclusion**. These developments align with India's broader objective of achieving a **digitally empowered and cashless economy**.

INDIA BECOMES THE FOURTH LARGEST ECONOMY IN THE WORLD

Why in News: India has surpassed Japan to become the world's fourth-largest economy with a GDP of USD 4.18 trillion. The government has stated that India is poised to overtake Germany to become the third-largest economy by 2030, with a projected GDP of USD 7.3 trillion. Alongside this, India continues to be the fastest-growing major economy in the world, reflecting strong domestic and structural economic fundamentals.

Economic Growth Trends

India's real GDP grew 8.2% in Q2 of FY 2025–26, up from 7.8% in Q1 and 7.4% in Q4 of FY 2024–25. This expansion marks a six-quarter high, demonstrating India's resilience amid global trade uncertainties.

The government highlighted that robust private consumption was the key domestic driver behind this growth. Other contributing factors include:

- Strong industrial and services sector performance.
- Continued structural reforms in taxation, labour, and investment policies.
- Supportive monetary and financial conditions ensuring liquidity and credit flow.

Global Recognition and Outlook

International agencies have echoed the optimism regarding India's growth trajectory:

- World Bank projects 6.5% growth in 2026.
- Moody's expects India to remain the fastest-growing G20 economy with growth of 6.4% in 2026 and 6.5% in 2027.
- International Monetary Fund (IMF) raised its projection to 6.6% for 2025 and 6.2% for 2026.
- OECD forecasts 6.7% growth in 2025 and 6.2% in 2026.
- S&P anticipates growth of 6.5% in the current fiscal and 6.7% in the next.
- Asian Development Bank (ADB) raised its 2025 forecast to 7.2%, and Fitch increased its FY26 projection to 7.4%.

These projections reflect broad international confidence in India's domestic demand, investment climate, and structural reforms.

Macroeconomic Stability

The government's release highlighted that:

- Inflation remains below the lower tolerance threshold, providing a stable price environment.
- Unemployment is declining, indicating improved labour absorption.
- Exports continue to show positive performance, reflecting competitiveness in global markets.

- Financial conditions remain benign, with strong credit flows to the commercial sector.
- Urban consumption is strengthening, supporting domestic demand.

This combination of high growth and macroeconomic stability forms a solid foundation for India's future economic trajectory.

Way Forward

- Strengthening manufacturing and export competitiveness to maintain growth momentum.
- Expanding skill development programs to enhance employability among youth.
- Continuing structural reforms in labour, taxation, and financial sectors to sustain macroeconomic stability.
- Promoting green and digital economy initiatives to align growth with sustainability and innovation.

Conclusion

India's overtaking of Japan as the fourth-largest economy in 2025 reflects a rare "Goldilocks period" of high growth, low inflation, and macroeconomic stability. With ongoing reforms, robust domestic demand, and global recognition, India is well-positioned to achieve its long-term development goals, including attaining high-middle-income status by 2047, the centenary year of independence.

EXPECTED QUESTION FOR UPSC CSE

Mains Practice Question

Q. India's emergence as the world's fourth-largest economy reflects a phase of high growth combined with macroeconomic stability. Discuss the key domestic and structural factors behind this achievement and analyse the challenges India must address to sustain its growth trajectory towards becoming the third-largest economy by 2030. (250 Words) (15 Marks)

ELECTRIFICATION OF SAKLESHPUR-SUBRAHMANYA GHAT SECTION

Why in News: Indian Railways has successfully completed the electrification of the Sakleshpur–Subrahmanya Ghat Section in Karnataka, a 55 km stretch traversing the Western Ghats, one of the most technically challenging terrains on the network.

Historical Journey

- 1925: India's first electric train ran on the 1500 Volt DC system between Bombay Victoria Terminus and Kurla Harbour.
- At Independence: Only 388 Route Kilometers (RKMs) were electrified; diesel and coal locomotives dominated.
- 2004–2014: Electrification progressed at 1.42 km/day.

- **2019–2025:** Accelerated to **over 15 km/day**, reflecting a decisive push toward modernization.

Milestone Achievement: As of November 2025, **69,427 RKM**s of broad-gauge routes (99.2% of the network) are electrified, with 46,900 RKM completed between 2014–2025.

State-wise Electrification Status

- **Fully Electrified (25 States/UTs):** 100% BG routes electrified.
- Remaining Work (5 States, 0.8% of network):
 - Rajasthan: 93 RKM pending
 - Tamil Nadu: 117 RKM pending
 - Karnataka: 151 RKM pending
 - Assam: 197 RKM pending
 - Goa: 16 RKM pending

Strategic and Economic Significance

- **Operational Efficiency:** Faster, safer, and more reliable train operations.
- **Environmental Benefits:** Reduction in **carbon emissions**, supporting India’s climate goals.
- **Energy Security:** Decreased dependence on diesel, with growing integration of renewable energy.
- **Economic Development:** Electrified corridors stimulate industrial, rural, and urban growth.
- **Global Benchmarking:** India’s **99.2% electrification** surpasses most major economies:
 - Switzerland: 100%
 - China: 82%
 - Japan: 64%
 - Russia: 52%
 - UK: 39%

Renewable Energy Integration

- **Solar Capacity (2025):** 898 MW at 2,626 stations (up from 3.68 MW in 2014).
 - **Traction Use:** 629 MW (70%) powers electric trains.
 - **Non-Traction Use:** 269 MW powers stations, workshops, and quarters.
- Solar integration **reduces grid dependence**, electricity costs, and carbon footprint.

Technological Advancements in Electrification

- **Cylindrical Mechanised Foundations:** Reduces manual effort, speeds up construction.
- **Automatic Wiring Trains:** Install catenary and contact wires simultaneously with precise tension control, accelerating project timelines.

Broader Implications for Indian Railways

- Since 2014, over **46,900 km** of railway routes have been electrified, almost **doubling the pace** compared to the six decades prior.

- Electrification enhances **energy security, operational reliability, and sustainability**, supporting India’s commitment to **clean and efficient rail transport**.
- Completion of remaining sections by 2026 will make India’s network **one of the largest fully electrified rail systems in the world**.

Conclusion

Railway electrification in India is more than a **technical upgrade**; it is a **national movement** toward sustainability, efficiency, and modernization. From a diesel-driven network to a near-complete electrified system, India is setting global benchmarks in **clean, fast, and reliable rail transport**. This transformation not only reduces environmental impact but also strengthens connectivity, energy security, and economic growth across the country.

MASALA BONDS

Why in News: The Enforcement Directorate (ED) issued show-cause notices to Kerala’s Chief Minister Pinarayi Vijayan, former Finance Minister T.M. Thomas Isaac, and KIIFB CEO K.M. Abraham. The notices cited alleged violations of the Foreign Exchange Management Act (FEMA) and Reserve Bank of India (RBI) directions.

KIIFB Masala Bond Issuance

- KIIFB raised **₹2,150 crore** through a **Masala Bond issued in March 2019**.
- The bond was issued during the 2016–2021 CPI(M)-led Left Democratic Front (LDF) government when T.M. Thomas Isaac was Finance Minister.
- The bonds were listed on the London Stock Exchange (LSE) and the Singapore Stock Exchange (SGX).
- In July 2024, Kerala’s Finance Minister K.N. Balagopal informed the Kerala Legislative Assembly that the bond amount was fully repaid in March 2024.

ED Probe and CAG Observations

- The ED probe focuses on alleged **contravention of FEMA regulations, RBI directions, and the end-use of funds**.
- The **Comptroller and Auditor General (CAG)**, in its **State Finances Audit Report (March 2019)**, questioned the **RBI’s approval** for the bond.
- The CAG observed that the approval appeared to be in **violation of the Constitution** and an **encroachment on the powers of the Centre**.

Off-Budget Borrowings Issue

- The Masala Bond controversy is linked to the wider debate on **off-budget borrowings by KIIFB**.
- The **Centre treats KIIFB borrowings as direct liabilities of the State**, affecting Kerala’s **borrowing limits**.
- The **Kerala government** has argued that these borrowings should be treated as **contingent liabilities**, but this demand has not been accepted.

Interest Rate Controversy

- The Congress-led United Democratic Front (UDF) criticised the interest rate of 9.723%, calling it exorbitant.
- The Kerala government defended the rate, stating it was the best available at the time.
- The internal bond market rate then stood at 10.15%.
- The Andhra Pradesh Capital Region Development Authority’s Masala Bond carried an interest rate of 10.72%.

What are Masala Bonds?

- Masala Bonds were introduced in India in 2014 by the International Finance Corporation (IFC).
- The International Finance Corporation issued the first Masala Bonds to fund infrastructure projects in India.
- Indian entities or companies issue Masala Bonds outside India to raise funds from foreign investors.
- Masala Bonds are issued in Indian currency (INR) rather than in foreign currency.
- If the Indian rupee depreciates, the exchange rate risk is borne by the investor.

Characteristics of Masala Bonds

- Masala Bonds are rupee-denominated bonds issued outside India by Indian entities.
- Masala Bonds are debt instruments that help Indian entities raise local currency funds from foreign investors.
- Government entities and private sector companies are permitted to issue Masala Bonds.
- Foreign investors seeking exposure to Indian assets can subscribe to Masala Bonds.
- Investors must be residents of countries that are members of the Financial Action Task Force (FATF).
- The securities market regulator of the investor’s country must be a member of the International Organization of Securities Commissions (IOSCO).

Benefits of Masala Bonds

- Multilateral and Regional Financial Institutions, of which India is a member, are eligible to invest in Masala Bonds.

RBI Guidelines on Maturity and Conversion

- According to the Reserve Bank of India (RBI), Masala Bonds raised up to the rupee equivalent of USD 50 million in a financial year must have a minimum maturity of three years.
- Masala Bonds raised above the rupee equivalent of USD 50 million in a financial year must have a minimum maturity of five years.
- The conversion of principal and interest takes place at the market exchange rate on the date of settlement of transactions related to issuance and servicing of the bonds.

Permitted Uses of Proceeds

- The proceeds from Masala Bonds can be used for refinancing rupee loans and non-convertible debentures (NCDs).
- The proceeds can be used for the development of integrated townships and affordable housing projects.
- The proceeds can be used to meet the working capital requirements of corporates.

Prohibited Uses of Proceeds

- The proceeds from Masala Bonds cannot be used for real estate activities, except integrated townships and affordable housing.
- The proceeds cannot be used for activities prohibited under Foreign Direct Investment (FDI) guidelines.
- The proceeds cannot be invested in capital markets or used for domestic equity investment.
- The proceeds cannot be used for the purchase of land.
- The proceeds cannot be on-lent to other entities for any prohibited purposes.

Benefits of Masala Bonds

Benefits for Investors	Benefits for Borrowers
 Higher interest rates for investors	 Eliminates currency risk for borrowers
 Builds foreign investors' confidence in the Indian economy	 Protection from rupee depreciation
 Strengthens foreign investment inflows in rupees	 Mobilisation of large funds from global markets
 Capital gains exempt from tax	 Diversifies borrowing portfolio
 Additional returns if rupee appreciates at maturity	 Lower offshore borrowing costs (<7%)
	 Access to a vast global investor base

Demand-Side Weakness

- Nearly **70% of India’s GDP** is driven by domestic consumption, making demand crucial for investment.
- **Weak and uneven income growth** has constrained mass consumption.
- **High income and wealth inequality** has limited the purchasing power of the majority.
- The **top 1% owns over 40% of national wealth**, while the **bottom 50% owns only about 3%**, restricting broad-based demand.

Why Fiscal Relief Has Limited Impact

- **Personal income tax relief** and **GST rate rationalisation** have increased disposable income at the margin.
- However, these measures have **limited impact** because a large section of the population lacks **adequate income to spend**.
- Without **inclusive income growth**, tax relief alone cannot create sufficient demand to spur investment.

Structural and Policy Factors

- Several sectors suffer from **high market concentration and monopolistic structures**, such as **telecom, aviation, ports, and metals**.
- **High tariffs, licensing requirements, and regulatory barriers** reduce competition and keep prices high.
- **High fuel taxation** raises logistics costs, affecting industrial competitiveness.
- **Power sector inefficiencies** and cross-subsidisation increase costs for MSMEs.

Failure of the ‘Crowding-In’ Effect

- Public investment was expected to **crowd in private investment** through a **multiplier effect**.
- While infrastructure sectors like **steel and cement** benefited marginally, the impact has **not spread across industries**.
- Public investment has **not sufficiently translated into income growth** for the private sector.

Why Private Investment Lag is a Drag on Growth

- Weak private investment limits **job creation**, especially in manufacturing.
- It increases **dependence on government spending**, which is fiscally unsustainable in the long run.
- It constrains **productivity growth, export competitiveness, and inclusive development**.

Conclusion

Sustained high growth in India is not possible without private sector leadership in investment. Boosting private capex requires strong demand, fair competition, inclusive income growth, and policy certainty. Without addressing inequality, structural bottlenecks, and corporate risk aversion, private investment will continue to lag, acting as a drag on India’s long-term growth trajectory.

UPI RECOGNISED AS THE WORLD’S LARGEST REAL-TIME PAYMENT SYSTEM

Why in News: India’s Unified Payments Interface (UPI) has been recognised by the International Monetary Fund (IMF) as the world’s largest retail fast-payment system (FPS) by transaction volume. According to the IMF report titled ‘*Growing Retail Digital Payments: The Value of Interoperability*’ (June 2025), UPI leads all global real-time payment platforms. As per ACI Worldwide’s report ‘*Prime Time for Real-Time*’ (2024), UPI accounts for around 49% of global real-time payment transactions.

What is UPI?

- UPI is a **real-time payment system** developed by the **National Payments Corporation of India (NPCI)** under the regulatory oversight of the **Reserve Bank of India (RBI)**.
- It enables the **integration of multiple bank accounts into a single mobile application**, simplifying banking operations for users.
- UPI merges several banking features such as **fund transfers, bill payments, and merchant payments** into one unified platform.
- The system allows **instant, 24x7 interbank transactions**, including on **holidays and weekends**, unlike traditional banking channels.
- UPI has been **widely adopted across India**, with **more than 100 banks offering UPI-based services**.

Global Comparison and Scale

- India recorded **129.3 billion real-time digital payment transactions** through UPI in **June 2025**, making it the **largest contributor globally**.
- This volume is significantly higher than other major systems such as **Brazil (37.4 billion)**, **Thailand (20.4 billion)**, **China (17.2 billion)**, and **South Korea (9.1 billion)**.
- The data highlights India’s **dominance in global digital payments**, driven by **interoperability, scale, and low-cost access**.

Countries	Transaction Volume (in Billions)	% Share of Global real-time payment platform
India	129.3	49%
Brazil	37.4	14%
Thailand	20.4	8%
China	17.2	6%
South Korea	9.1	3%
Others	52.8	20%
Total	266.2	100%

Key Reasons for UPI’s Global Leadership

- UPI is built on a strong **Digital Public Infrastructure (DPI)** framework.

- The platform ensures **interoperability across banks, fintechs, and payment service providers**, unlike many closed-loop systems globally.
- A **supportive regulatory ecosystem** led by the Reserve Bank of India (RBI) and implemented by the National Payments Corporation of India (NPCI) has enabled rapid expansion.
- UPI allows **instant, low-cost, and secure transactions**, making it suitable for **high-volume, low-value payments**.

Government and Institutional Support

- The **Government of India, RBI, and NPCI** have taken **targeted policy measures** to deepen digital payment adoption.
- An **incentive scheme for low-value BHIM-UPI transactions** has encouraged both users and merchants to adopt UPI for everyday payments.
- The **Payments Infrastructure Development Fund (PIDF)** provides **grant support to banks and fintech companies** for deploying POS terminals and QR codes, especially in underserved regions.

Expansion in Rural and Semi-Urban Areas

- The PIDF focuses on **Tier-3 to Tier-6 centres**, ensuring **financial inclusion and last-mile connectivity**.
- As of **October 31, 2025**, around **5.45 crore digital touchpoints** have been deployed through the PIDF.
- By FY 2024–25, nearly **56.86 crore QR codes** had been deployed to about **6.5 crore merchants**, significantly expanding merchant acceptance of digital payments.

Integration Across Sectors

- The Government, RBI, and NPCI have promoted the **deepening of RuPay and UPI usage** across:
 - **Public service delivery systems,**
 - **Transport and mobility platforms, and**
 - **E-commerce ecosystems.**
- This has helped mainstream **cashless transactions** across daily economic activities.

Significance for India

- UPI's global leadership strengthens India's position as a **technology-driven financial powerhouse**.
- It enhances **financial inclusion**, especially for **small merchants and informal sector participants**.
- UPI supports **formalisation of the economy**, improves **tax compliance**, and reduces **cash dependency**.
- India's UPI model is increasingly viewed as a **global best practice** for other countries developing **real-time payment systems**.

Conclusion

The recognition of UPI as the world's largest real-time payment system by the IMF underscores India's success

in building a **scalable, inclusive, and interoperable digital payments ecosystem**. Continued policy support, infrastructure expansion, and innovation will further consolidate India's leadership in **global digital public infrastructure**.

NATIONAL FARMERS DAY (KISAN DIWAS) AND SUSTAINABLE AGRICULTURE

Why in News: National Farmers Day (Kisan Diwas) is observed every year on December 23 in India. The day honours Indian farmers, who are regarded as the backbone of the nation.

What is Sustainable Agriculture?

- **Sustainable agriculture** is a farming system that meets **present food and production needs** without compromising the **ability of future generations** to meet their own needs.
- It integrates **ecological stability, economic viability, and socio-cultural continuity** while ensuring the **conservation of natural resources**.
- Sustainable agriculture is **central to India's economic policy** and plays a crucial role in addressing **climate change**.
- It supports India's commitment to achieving **net-zero carbon emissions by 2070**.

Sustainable Agriculture and UN Sustainable Development Goals (SDGs)

- Sustainable agriculture contributes to **12 United Nations Sustainable Development Goals (SDGs)** across multiple dimensions.

Environmental Impact

- **SDG 6** – Clean Water and Sanitation
- **SDG 13** – Climate Action
- **SDG 14** – Life Below Water
- **SDG 15** – Life on Land

Social Impact

- **SDG 1** – No Poverty
- **SDG 2** – Zero Hunger
- **SDG 3** – Good Health and Well-Being
- **SDG 5** – Gender Equality

Economic Impact

- **SDG 8** – Decent Work and Economic Growth
- **SDG 12** – Responsible Consumption and Production

Governance Impact

- **SDG 11** – Sustainable Cities and Communities
- **SDG 16** – Peace, Justice and Strong Institutions

Methods of Sustainable Agriculture

1. **Organic Farming**
 - **Organic farming** emphasises **ecological balance** and

relies on **natural inputs**, eliminating the use of **synthetic fertilisers and pesticides**.

- It promotes **soil health** through practices such as **crop rotation, manure, and compost application**.
- Organic farming reduces **environmental pollution and health risks** while supporting **rural livelihoods**.
- Although yields may be **lower compared to conventional farming**, its **long-term benefits** include **improved soil fertility, reduced environmental damage, and greater resilience**.

2. Agroforestry

- **Agroforestry** involves the **integration of trees into crop and livestock farming systems**, creating **diverse and resilient agricultural landscapes**.
- It enhances **farmers' income** through additional outputs such as **timber, fruits, and tree-based products**.
- Agroforestry promotes **biodiversity conservation** by providing habitats for **beneficial organisms**, including natural pest controllers.

3. Zero Tillage (No-Till Farming)

- **Zero tillage** refers to cultivating crops **without disturbing soil layers** through conventional ploughing.
- Seeds are sown directly into the soil using **specialised equipment**, preserving **soil structure and fertility**.
- This method significantly reduces **soil erosion** and improves **water retention capacity**, resulting in both **environmental and economic benefits**.

4. Integrated Pest Management (IPM)

- **IPM** is an **ecosystem-based approach** that minimises pesticide use while effectively managing pests.
- It combines **biological control, cultural practices, habitat modification, and judicious chemical use**.
- IPM aims to keep pest populations **below economically damaging levels** rather than eliminating all insects, thereby preserving **ecological balance**.

5. Crop Rotation

- **Crop rotation** involves growing **different crops sequentially** on the same land across seasons.
- It enhances **soil fertility**, breaks **pest and disease cycles**, and reduces dependency on **chemical inputs**.

6. Hydroponics

- **Hydroponics** is a method of growing plants in a **nutrient-rich water solution** without using soil.
- It is a **highly water-efficient technique**, requiring significantly **less water** than traditional farming.
- Controlled conditions reduce **land degradation** and minimise the **need for pesticides**.

7. Aquaponics

- **Aquaponics** combines **hydroponics** with **aquaculture** in a **symbiotic system**.

- **Fish waste** provides organic nutrients for plants, while plants **purify water** for fish, enhancing **resource efficiency**.

8. Agrivoltaic Farming

- **Agrivoltaic farming** involves cultivating crops **beneath solar panels**.
- It improves **land-use efficiency** by allowing **solar energy generation and agriculture** to coexist.
- Crops benefit from **partial shading**, moisture retention, and continued access to **farm machinery**.

National Mission for Sustainable Agriculture (NMSA)

About NMSA

- The National Mission for Sustainable Agriculture (NMSA) is one of the eight missions under the National Action Plan on Climate Change (NAPCC).
- The mission aims to make agriculture more productive, sustainable, remunerative, and climate-resilient through location-specific integrated farming systems.

Key Focus Areas (10 Dimensions)

- Improved crop seeds
- Livestock and fish cultures
- Water-use efficiency
- Pest management
- Improved farm practices
- Nutrient management
- Agricultural insurance
- Credit support
- Markets
- Access to information and livelihood diversification

Conclusion

National Farmers Day underscores the importance of farmers in ensuring food security and economic stability. Sustainable agriculture provides a comprehensive solution to climate challenges, resource depletion, and rural distress, making it a cornerstone of India's long-term development strategy.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

Q. Match the following:

	SDG 3	Gender Equality
	SDG 5	Good Health and Well-Being
	SDG 12	Responsible Consumption and Production

How many of the above pair/s is/are correctly matched?

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

Answer: (d) only

SUPREME COURT ON ARAVALLI HILLS

Why in News: Following public protests and expert criticism, the Supreme Court stayed its **judgment on Aravalli hills** that accepted a **100-metre height-based definition of the Aravalli hills**, and decided to reconsider the issue in light of **scientific, ecological, and legal concerns**.

Ecological and Strategic Importance of the Aravallis



The Aravalli range, nearly **two billion years old**, is India's oldest mountain system, stretching about **650 km from Delhi to Gujarat**. Its significance includes:

- **Barrier against desertification:** Prevents the eastward spread of the Thar Desert into Haryana, Rajasthan, and western Uttar Pradesh.
- **Climate regulation and air quality:** Acts as the "green lungs" of Delhi-NCR.
- **Groundwater recharge:** Supports aquifers and river systems such as the Luni, Sabarmati, and Chambal.
- **Biodiversity habitat:** Provides ecological connectivity across hills, slopes, and valleys.
- **International commitments:** India is obligated under the **UN Convention to Combat Desertification (UNCCD)** to protect vulnerable ecosystems like the Aravallis.

Unregulated and illegal mining over the past decades has severely degraded these functions, prompting sustained judicial intervention.

Operational Definitions

1. Aravalli Hills

- Any landform in Aravalli districts **≥100 metres above local relief**, including the **hill, slopes, and associated landforms**.
- **Local relief** is measured relative to the **lowest contour line encircling the landform**.
- Ensures **comprehensive inclusion**, preventing exploitation of foothills or slopes vital for soil stability, water recharge, and vegetation cover.

2. Aravalli Range

- Two or more Aravalli Hills located within **500 metres of each other**.
- Includes **valleys, intervening slopes, hillocks, and supporting features**, preserving ecological connectivity and wildlife corridors.
- Boundaries are mapped on **official Survey of India toposheets**, ensuring **objective, enforceable, and transparent regulation**.

Supreme Court's Intervention

A bench led by Chief Justice **Surya Kant** stayed the definition and directed the formation of a **High-Powered Expert Committee** to critically reassess the previous report. The Court emphasized the need for a **fair, impartial, and independent expert opinion** before any new administrative or ecological measures are implemented.

The committee is tasked to:

1. Enumerate the **specific regions covered** by the definition.
2. Identify territories that would be **excluded**.
3. Assess whether **regulated or sustainable mining** in covered areas could lead to **adverse ecological consequences**.
4. Evaluate **short-term and long-term environmental impacts** of the proposed definition.
5. Address **regulatory gaps** and ambiguities that might undermine ecological integrity.

Interim Measures

- Until the new committee submits its findings, the Court has mandated adherence to the **Forest Survey of India (FSI) 2010 definition**, which defines Aravallis as **hills**

with gentle slopes of three degrees or more, with a 100-metre buffer around the slope's lower side.

- The Supreme Court has also involved **Amicus Curiae K. Parameshwar** and the **Central Empowered Committee** to assist in the review.

Significance

This intervention underscores the importance of **scientific, transparent, and enforceable frameworks** for ecological conservation. By reassessing the definition, the Court aims to:

- Ensure the **ecological integrity** of the Aravalli range.
- Protect groundwater recharge zones, biodiversity habitats, and climate-regulating green belts.
- Prevent unregulated mining and environmental degradation.
- Balance **developmental needs with conservation priorities**.

Conclusion

The Supreme Court's stay and the formation of an expert committee highlight India's commitment to **evidence-based ecological governance**. Protecting the Aravalli Hills is crucial, not only as a **natural heritage** but also as a **lifeline for environmental sustainability** in northwestern India. The Court's actions reflect a **judicious approach**, ensuring that conservation efforts are guided by **scientific assessment, public interest, and long-term sustainability**.

ARCTIC THAW: CLIMATE CONCERNS AND INDIA'S STRATEGIC INTERESTS

Why in News: The Arctic region is warming at more than twice the global average, a phenomenon known as **Arctic amplification**.



Why in News: According to the **Arctic Report Card 2025 (NOAA)**, the Arctic experienced its **highest recorded air temperatures in 125 years**, with dramatic declines in the **oldest and thickest sea ice** (over 95% since the 1980s) and a 50% reduction in **June snow cover compared to the 1960s**.

The warming Arctic is causing

- **Permafrost thaw**, releasing toxic metals into rivers.
- **Atlantification**, altering ocean circulation and ecosystems.
- **Higher phytoplankton productivity**, reshaping fisheries and food security.
- **Impact on global climate**, including increased variability of the **Indian summer monsoon**.

While these changes intensify climate risks, they are also creating **economic and strategic opportunities** by opening **new maritime routes** and unlocking **natural resources** in the Arctic.

Geopolitical Significance of the Arctic

The Arctic is governed by the **Arctic Council** (8 circumpolar states), but rising global interest has made it a **centre of geopolitical competition**:

1. **Resource access:** Rich in **minerals, oil, and gas**, the Arctic is becoming economically valuable.
2. **Maritime trade:** The **Northern Sea Route (NSR)** cuts travel between Europe and Eastern Asia by ~40% versus the Suez Canal.
3. **Strategic partnerships:** Non-Arctic states like **China and India** seek influence through trade, investments, and scientific cooperation.
4. **Political fragmentation:** Russian isolation post-Ukraine war, and NATO expansion (Finland 2023, Sweden 2024), have increased uncertainties in Arctic governance.

India's Arctic Policy and Interests: India has been **engaged in the Arctic since 2007**, establishing the **Himadri research station in Svalbard** (2008) and acquiring **observer status in the Arctic Council** (2013). Its **Arctic Policy (2022)** is structured around six pillars:

1. Scientific research & cooperation
2. Climate & environmental protection
3. Economic & human development
4. Transportation & connectivity
5. Governance & international cooperation
6. National capacity building

Key initiatives

- Supporting NSR infrastructure development with Russia since 2021.
- Operationalizing the **Chennai-Vladivostok route** (2024) to reduce India-Europe trade time by ~2 weeks.

- Researching Arctic warming's impact on Indian monsoon (NCPOR, 2024).

Challenges

- Rapid **sea ice loss** and accelerating **permafrost thaw** are severely threatening **Arctic ecosystems** and indigenous ways of life.
- The intensification of **climate feedback loops**, such as reduced albedo, has the potential to **destabilise global climate systems** and weather patterns.
- Growing **geopolitical competition** in the Arctic is driven by **China's Polar Silk Road** ambitions and **Russia's search for new investment partners**.
- The presence of **fragmented governance structures** and **overlapping territorial claims** increases strategic uncertainty and conflict risks.
- Expanding access to **shipping routes, minerals, and energy resources** raises concerns about **environmental degradation** and unsustainable exploitation.

Measures Needed

- India should **strengthen scientific research and climate monitoring** in the Arctic by leveraging its experience in the **Antarctic and Himalayan regions**.
- Greater emphasis must be placed on **cryosphere studies**, biodiversity assessment, and long-term **climate modelling** to support evidence-based policymaking.
- India should pursue **active diplomatic engagement** with both **Arctic and non-Arctic states** to promote cooperation and confidence-building.
- Advocacy for **internationalised Arctic governance**, adherence to **UNCLOS**, and **resource-sharing norms** is essential to ensure stability.
- Strategic investments in **infrastructure, technology, and international partnerships** are required to enable **sustainable and secure economic engagement** in the Arctic region.

Way Forward

- **Scientific leadership:** Expand India's presence in Arctic research to influence policy and monitor climate impacts on South Asia.
- **Strategic diplomacy:** Strengthen bilateral cooperation with Russia and multilateral engagement via the Arctic Council.
- **Sustainable development:** Promote **environmentally responsible economic activities**, avoiding unregulated exploitation.
- **Climate adaptation:** Integrate Arctic research with **Indian monsoon forecasting** to mitigate risks to agriculture and water resources.

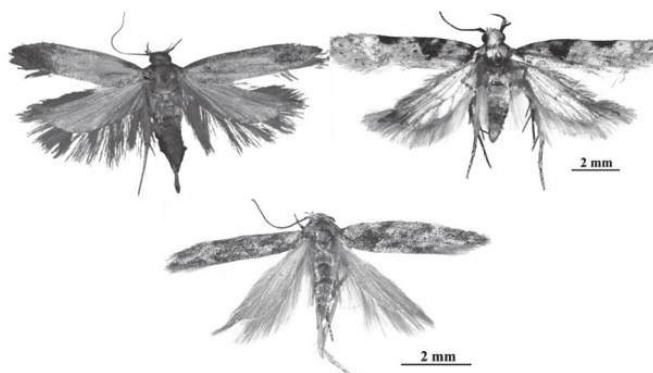
Conclusion

India's Arctic engagement represents a **blend of science diplomacy, climate security, and economic strategy**, essential

for safeguarding national interests in a rapidly warming and geopolitically contested region.

THREE MOTH SPECIES DISCOVERED

Why in News: Researchers from the ICAR-Indian Agricultural Research Institute (ICAR-IARI) have discovered **three new species of moths** in the **Indian Himalayan region**.



Newly Discovered Moth Species

- The three newly discovered species are **Gelechia adi sp. nov.**, **Gelechia bilobuncusa sp. nov.**, and **Istrianis ladakhensis sp. nov.**
- Each species is **endemic to the Indian Himalayas**, meaning they are found nowhere else in the world.

Geographical Locations of Discovery

- **Gelechia adi** was discovered in the **Ramsing area of Arunachal Pradesh**, located in the **Upper Siang district**.
- **Gelechia bilobuncusa** was identified in **Himachal Pradesh**.
- **Istrianis ladakhensis** was discovered in the **Union Territory of Ladakh**, a region characterised by **extreme cold and high altitude**.

Methods Used in the Discovery

- The researchers used **mercury-vapour lamps** at night to attract **nocturnal moths**, a standard technique in entomological surveys.
- Collected specimens were analysed using **DNA barcoding**, which helps identify species based on genetic markers.
- The team also conducted **detailed morphological analysis**, examining **wing patterns** and **reproductive organs** under high-powered microscopes to confirm that these moths were previously unknown.

Distinctive Features of the New Species

- **Gelechia adi** is visually distinctive with **ivory-white forewings**, a **bold black streak at the base**, and **triangular black spots**.
- **Gelechia bilobuncusa** has **pale brown wings** with

irregular black scales and is named after the bilobed shape of its uncus, a male reproductive structure.

- *Istrianis ladakhensis* shows adaptations to **high-altitude conditions**, with **light brown wings** mottled with **dark grey, white, and orange scales**.

Cultural and Scientific Significance of Naming

- *Gelechia adi* is named in honour of the **Adi tribe** of Arunachal Pradesh, reflecting respect for **local indigenous communities**.
- *Gelechia bilobuncusa* derives its name from a **distinct anatomical feature**, following classical taxonomic tradition. *Istrianis ladakhensis* is named after its **type locality**, Ladakh, linking the species to its geographical origin.

Ecological and Scientific Importance

- The discovery improves understanding of the **Gelechiidae family**, which plays varied roles in **ecosystem functioning**, including plant–insect interactions.
- India is already home to **over 13,000 species of butterflies and moths**, and such findings suggest that **many species remain undocumented**.
- Continuous taxonomic research is essential for **biodiversity conservation, climate change studies, and ecosystem management**.

Preservation and Future Research

- The **type specimens** of all three moth species have been deposited at the **National Pusa Collection, New Delhi**.
- This ensures **long-term preservation, verification, and availability for future scientific research**.
- Further studies may help assess the **ecological roles and conservation status** of these species.

TRAIN–ELEPHANT COLLISIONS IN INDIA

Why in News: The **Delhi-bound Rajdhani Express** collided with a **herd of elephants in Assam's Hojai district**, killing seven elephants and derailing coaches, though no passengers were injured.



Key Facts

- India is home to **over half of the world's 52,000 Asian elephants (*Elephas maximus*)**.
- Between 2010 and 2020, **1,160 elephants died due to non-natural causes** in India (MoEFCC data).
- **Electrocution (741 deaths)** was the leading cause, followed by **train collisions (186 deaths)**.
- Train-related electrocution often occurs due to **high-voltage overhead railway lines**.

Why Train–Elephant Collisions Occur

- **Railway lines cut through elephant habitats and migration corridors**, increasing encounter risks.
- Linear transport infrastructure can **fragment habitats**, trapping herds in small forest patches with limited food and water.
- Elephants are often **reluctant to cross rail tracks**, leading to hesitation and higher collision risk.
- A **2017 study** found collisions occur **more frequently at night**, with **male elephants disproportionately affected** due to crop-raiding behaviour during harvest season.

Guidelines for Mitigation

- The **IUCN Asian Elephant Transport Working Group (2023)** released the *Handbook to Mitigate the Impacts of Roads and Railways on Asian Elephants*.
- The handbook prioritises **avoidance**, meaning infrastructure should **not pass through elephant habitats or migration paths** wherever possible.
- Where avoidance is unfeasible, **mitigation measures must be adopted comprehensively**.

Structural Mitigation Measures

- **Wildlife crossing structures** are the most effective mitigation tools.
- These include **underpasses** (under bridges or flyovers) and **overpasses** (over tunnels or corridors).
- When combined with **wildlife fencing**, crossing structures can reduce wildlife mortality by **up to 98%**.
- For elephants, crossings must be **open and spacious** to avoid a sense of confinement.
- The handbook recommends a **minimum height of 6–7 metres** for elephant crossings.
- Placement of crossings should be based on **scientific studies of elephant movement**, using **camera traps and GPS telemetry**.
- Fencing should guide elephants **towards designated crossings** rather than block movement entirely.

Technology-Based Solutions

- **Early warning systems** are emerging as effective non-structural measures.
- **Locomotive-based systems** use **Forward Looking Infrared (FLIR) cameras**, detecting obstacles up to **750 metres**, even at night or in fog.

- **Ground-based systems** include cameras and **acoustic or seismic sensors** installed at frequent crossing zones.
- **Artificial Intelligence and Machine Learning** help distinguish real threats from false alarms, improving reliability.

Indian Railways Initiatives

- Indian Railways has deployed **AI-based early warning systems** in select locations.
- In 2023, the **Northeast Frontier Railway (NFR)** began using AI to monitor elephant movement.
- A similar system was introduced along the **Kerala–Tamil Nadu border in 2024**.
- Early results from these initiatives have been **promising**, though wider adoption is still needed.

Conclusion

Train–elephant collisions are a **serious conservation and infrastructure governance issue**. **Avoidance of habitats**, scientifically designed **crossing structures**, and **technology-driven early warnings** together offer the most effective solution. Strengthening coordination between **Railways, forest departments, and conservation bodies** is essential for sustainable development.

EXPECTED QUESTION FOR UPSC CSE

Descriptive Question

Q. Linear infrastructure such as railways has emerged as a major driver of human–wildlife conflict in India. In this context, discuss the causes of train–elephant collisions and examine how institutional coordination, scientific planning, and technology-based interventions can ensure wildlife conservation without compromising infrastructure development. (150 Words) (10 Marks)

DEHORNING RHINOS

Context: Rhinos, the world’s second-largest land mammals, face severe threats from poaching due to the high value of their horns. Rhino horns, composed of **keratin**, are coveted as status symbols and in traditional medicine, despite no scientific evidence of medicinal properties. Globally, rhino poaching has led to a **dramatic decline in populations**, with fewer than 28,000 rhinos remaining as of 2024.



Poaching Crisis

- **Greater Kruger Reserve (South Africa)** lost 1,985 rhinos between 2017–2023 (~6.5% annually).
- Poaching persists despite **\$74 million invested** in anti-poaching strategies like ranger patrols, AI surveillance, and tracking dogs.
- High demand in **Asia (Vietnam, China)** and poverty in local communities fuel poaching.

Dehorning as a Strategy

- Involves **sedating rhinos** and removing **90–93% of the horn**, leaving the germinal layer intact for regrowth.
- Conducted carefully to minimize stress: animals are **blindfolded, fitted with earplugs**, and the horn stump is coated to prevent infection.

Impact of Dehorning

- Study across **11 reserves in Greater Kruger (2017–2023)** showed:
 - **75% drop** in poaching in dehorned reserves.
 - **78% reduction** where dehorning was abrupt (1–2 months).
 - **Individual rhinos** faced **95% lower poaching risk**.
- Dehorning is cost-effective, achieving results with only **1.2% of the anti-poaching budget**.

Challenges

- Arresting poachers is less effective due to **systemic corruption** and **weak justice systems**.
- Community engagement and ranger welfare are critical: **Kaziranga National Park** shows minimal rhino loss due to active local participation and smart patrolling.
- Dehorning is **not a silver bullet**; small horn remnants may still attract poachers, but it is a promising **long-term deterrent**.

Global Rhino Status

- **Rhinos** once roamed **Europe, Asia, and Africa**, but today only around **27,000** remain in the wild.
- **Poaching** and **habitat loss** are the main threats to their survival.
- Three species—the **black, Javan, and Sumatran rhinos**—are **critically endangered**.
- The **Javan rhino** survives only in one **national park in Java, Indonesia**, while a mainland subspecies is **extinct**.
- **Greater one-horned (Indian) rhinos** have increased from around **200** in the 20th century to **4,000** today.
- In **Africa**, the **southern white rhino** is now **near threatened**, but the **western black rhino** and **northern white rhino** are **extinct in the wild**.

Indian Rhinoceros (*Rhinoceros unicornis*)

- Found in the **Indo-Nepal Terai, northern West Bengal, and Assam**.

- The largest of **Asian rhinos**, with **one horn** in both sexes.
- **Height:** 1.7 m, **Length:** 3.5 m, **Weight:** 1,800–2,800 kg.
- Excellent **swimmer**, strong **hearing and smell**, poor **eyesight**, and can run up to **55 km/hr**.
- **Solitary** in nature; **breeds year-round** with **gestation** of 16 months.
- **Females mature** at 5–6 years, **males** at 7–10 years.

Habitat & Protected Areas

- Prefers **grasslands** and **wetlands** in the **Himalayan foothills** and **Ganges-Brahmaputra valleys**.
- **Current distribution:** small patches in **Indo-Nepal Terai**, **Assam**, and **West Bengal**.
- Major protected areas in India: **Kaziranga NP**, **Pobitora WLS**, **Orang NP**, **Manas NP** (Assam); **Jaldapara NP**, **Gorumara NP** (West Bengal); **Dudhwa NP** (Uttar Pradesh).
- **Transient populations** observed in **Katerniaghat WLS** (UP) and **Valmiki TR** (Bihar).

Conclusion

Dehorning, alongside community engagement, AI surveillance, and ranger support, offers a **holistic approach to rhino conservation**. It highlights the importance of **evidence-based interventions**, cost-effective strategies, and **frontline conservationists** in wildlife protection.

AFRICA HEADING FOR CONTINENTAL BREAKUP

Why in News: Africa is undergoing a major geological transformation that could eventually split the continent into two landmasses. New magnetic data reveals slow but persistent tearing of the Earth’s crust, which may form a new ocean basin in the next 5–10 million years.

Key Scientific Findings

- The continental separation is progressing from the **northeast to the south**, described by scientists as “like the zip on a jacket.”
- The process is accompanied by **intense volcanic activity** and **frequent seismic events**.
- The **rate of movement** in the northern rift segment is approximately **5–16 millimetres per year**.
- Though changes are **not visible in human timescales**, they are **geologically significant**.

Future Geography of Africa

- After the breakup, Africa will exist as **two distinct landmasses**.
- The **western landmass** will include **Egypt, Algeria, Nigeria, Ghana, and Namibia**.
- The **eastern landmass** will include **Somalia, Kenya, Tanzania, Mozambique, and parts of Ethiopia**.

- A **new ocean basin** is expected to form between these two regions.

Role of Plate Tectonics

- The projection is based on the **theory of plate tectonics**, which states that **continents are dynamic and constantly moving**.
- Over millions of years, **tectonic plates fracture and drift apart**, forming **new oceanic crust** through **seafloor spreading**.
- Africa’s breakup represents an **active example of continental rifting**.

East African Rift System (EARS)

- The **East African Rift** is a massive tectonic fissure stretching nearly **4,000 miles** from **Jordan to Mozambique**.
- It is approximately **30–40 miles wide** and marks a zone where the **continental crust is thinning and weakening**.
- Over time, the rift is expected to cut through **Lake Malawi** and **Lake Turkana**.

Afar Region: Epicentre of the Breakup



- The **Afar region** lies at the junction of the **Red Sea, Gulf of Aden, and East African Rift**.
- It represents a **triple junction**, where three rift systems converge:
 - Main Ethiopian Rift
 - Red Sea Rift
 - Gulf of Aden Rift
- Scientists regard Afar as the area showing the **earliest and clearest signs of continental breakup**.

Magnetic Evidence and Seafloor Spreading

- Researchers analysed **airborne magnetic data** collected during **1968–69 surveys**.
- These data record **ancient magnetic field reversals**, similar to **tree rings or barcodes**.

- The magnetic signatures provide **clear evidence of seafloor spreading** between **Africa and Arabia** tens of millions of years ago.
- This confirms that the crust is **stretching, thinning, and gradually rupturing**.

Earth's Interior

- The Earth consists of **three concentric layers: crust, mantle, and core**.
- The **lithosphere** (crust + upper mantle) is rigid and broken into **tectonic plates**.
- These plates float over the **asthenosphere**, a **semi-molten, ductile layer**.
- Plate movements are driven by **mantle convection currents**.

Types of Plate Boundaries

- **Convergent boundaries** involve plate collision and **subduction**, forming **trenches and mountains**.
- **Divergent boundaries** involve plates moving apart, forming **new crust**, as seen in rift zones.
- **Transform boundaries** involve plates sliding past each other, causing **earthquakes**.
- Africa's breakup is occurring at a **divergent boundary**.

Continental Drift and Plate Tectonics

- In **1912**, **Alfred Wegener** proposed the **continental drift theory**, stating continents were once joined.
- **Arthur Holmes** later explained movement through **mantle convection currents**.
- In the **1960s**, **Harry Hess** proposed **seafloor spreading** based on **palaeomagnetic evidence**.
- In **1967**, **McKenzie, Parker, and Morgan** integrated these ideas into the **plate tectonics theory**.

Breakup of Supercontinent Pangaea

- Around **300–200 million years ago**, all continents formed **Pangaea**, surrounded by **Panthalassa**.
- Pangaea later split into **Laurasia** and **Gondwanaland**, separated by the **Tethys Sea**.
- **Africa and South America** separated during the **Cretaceous period**, forming the **Atlantic Ocean**.
- The present African rifting mirrors **earlier continental breakup processes**.

EXPECTED QUESTION FOR UPSC CSE

Prelims Practice Question

Q. With reference to the East African Rift System (EARS), consider the following statements:

1. It represents a zone where continental crust is thinning due to divergent plate movement.
2. It extends from Jordan in West Asia to Mozambique in southern Africa.

3. Over geological time, it is expected to evolve into an oceanic basin.
4. It is associated mainly with transform plate boundaries.

Which of the statements given above are correct?

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

Answer: (a)

GEMINIDS METEOR SHOWER

Why in News: The **Geminids meteor shower** is considered one of the **strongest and most reliable annual meteor showers** observed from Earth. It occurs every year in **mid-December** and is most prominent in the **Northern Hemisphere**. The Geminids are unique because their **origin is not a comet** but an **asteroid-like body**.



Duration and Peak

- The Geminids meteor shower remains **active from December four to December twenty** every year.
- The **peak occurs on December thirteen and December fourteen**, which are the best nights for observation.
- Under ideal conditions, observers can witness **sixty to one hundred twenty meteors per hour**.

Comparison with the Ursids Meteor Shower

- The **Ursids meteor shower** follows the Geminids in the Northern Hemisphere.
- The Ursids remain active from **December 17 to December 26** and peak around **December 21 to December 22**.
- The Ursids are comparatively weaker, with only **five to ten meteors per hour**.

What Are Meteor Showers

- **Meteors** are fragments of **rock and ice** originating from **comets or asteroids**.
- A **meteor shower occurs when Earth passes through debris trails** left by these celestial bodies.

- As meteors enter the Earth's atmosphere at high speed, friction causes them to glow and produce visible streaks of light.
- According to the National Aeronautics and Space Administration, more than thirty meteor showers occur annually.

Origin of the Geminids

- The Geminids originate from the asteroid three two zero zero Phaethon, not from a comet.
- The asteroid was discovered on October 11, 1983.
- It is over five kilometres in diameter and is named after Phaethon from Greek mythology.
- Scientists believe it may be an extinct comet or rock comet.

Orbital Characteristics of Three Two Zero Zero Phaethon

- The asteroid follows a highly elongated orbit around the Sun.
- Its orbit takes it closer than Mercury and farther than Mars.
- It completes one revolution around the Sun in about one point four years.
- Extreme temperature variations cause surface rocks to crack and release debris into space.
- This debris forms a dense stream, which Earth crosses every December.

Speed and Brightness

- Geminid meteors travel at approximately 35 kilometres per second.
- This speed is much faster than a cheetah, racing car, or speeding bullet.
- The Geminids are known for bright fireballs and long-lasting trails, making them easy to observe.

Naming of the Geminids

- The meteor shower is named after the Gemini constellation.
- The meteors appear to radiate from Gemini, though the constellation is not the actual source.
- Geminids can be seen across the entire night sky.

Viewing Conditions

- The meteor shower is best observed under clear skies and low moonlight.
- Viewing improves in areas with minimal light and air pollution.
- No special equipment is required for observation.
- Observers should allow thirty minutes for eye adjustment and avoid bright screens.

Scientific Significance

- The Geminids challenge the belief that meteor showers originate only from comets.

- They highlight the importance of near-Earth asteroids in space studies.
- The phenomenon contributes to research on asteroid behaviour, space debris, and planetary defence.

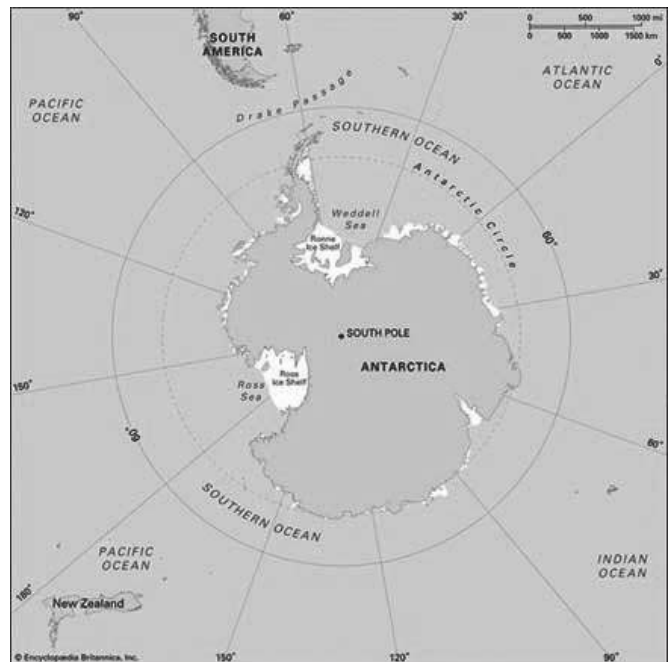
Conclusion

The Geminids meteor shower stands out due to its asteroid origin, high meteor rate, brightness, and consistency. It is both a spectacular astronomical event and a valuable subject for scientific study.

SOUTHERN OCEAN CARBON 'ANOMALY'

Why in News: The Southern Ocean, encircling Antarctica, plays a disproportionately large role in regulating Earth's climate. Though it covers only 25–30% of the global ocean area, it absorbs nearly 40% of the carbon dioxide taken up by oceans. Recent observations have revealed a carbon uptake anomaly—contrary to long-standing climate model predictions—raising important questions about the limitations of climate modelling and the future of global carbon sinks.

Importance of the Southern Ocean



- The Southern Ocean functions as a major global carbon sink by absorbing large amounts of human-emitted carbon dioxide from the atmosphere.
- The presence of cold and relatively fresh surface waters creates a stratified ocean structure that limits the release of carbon dioxide from deeper layers.
- Even minor changes in stratification, ocean circulation, wind patterns, or freshwater input can significantly alter whether the ocean acts as a carbon sink or carbon source.

Climate Model Predictions

- **Climate models** predicted that rising **greenhouse gas concentrations** and **ozone depletion** would strengthen **westerly winds in the Southern Hemisphere**.
- Stronger westerly winds were expected to intensify **upwelling of carbon-rich deep waters** in the Southern Ocean.
- Increased **ocean-atmosphere contact** of deep waters was projected to cause greater **carbon dioxide outgassing**.
- Consequently, models suggested a **weakening of the Southern Ocean carbon sink**, potentially **amplifying global warming**.

Observed Carbon Uptake Anomaly

- **Observational data since the early 2000s** shows that the Southern Ocean has **absorbed more carbon dioxide**, contrary to model expectations.
- **Hydrographic measurements** reveal that **Circumpolar Deep Water** has risen by approximately **40 metres since the 1990s**.
- The upward movement of deep waters has increased **subsurface CO₂ pressure by about 10 microatmospheres**.
- Despite these changes, there has been **no proportional increase in atmospheric CO₂ emissions** from the ocean surface.

Processes Missing in Climate Models

- The anomaly has been explained by the formation of a **thin freshwater layer** at the ocean surface.
- Increased **rainfall, sea-ice transport, and Antarctic glacial melt** have caused **surface freshening** in the Southern Ocean.
- Fresher surface waters are **less dense**, which strengthens **vertical stratification** and restricts **vertical mixing**.
- As a result, **carbon-rich deep waters** remain trapped at depths of **100–200 metres**, preventing **CO₂ release into the atmosphere**.
- Climate models struggle to simulate this process due to the complexity of **mesoscale eddies** and **ice-shelf cavity dynamics**.
- The **lack of continuous, year-round observations** further reduces model accuracy.

Temporary Nature of the Anomaly

- Recent observations indicate that **surface stratification has begun to weaken** since the **early 2010s**.
- Rising **surface salinity** in parts of the Southern Ocean suggests that the **freshwater “lid” is eroding**.
- **Strong westerly winds** may soon penetrate deeper layers and mix **warm, saline, carbon-rich waters** with the surface.
- If this mixing occurs, the Southern Ocean could **transition from a carbon sink to a carbon source**.

Significance for Climate Science and Policy

- These findings do not invalidate **climate models** but highlight the need for **improved representation of oceanic processes**.
- Climate models remain essential for identifying **systemic vulnerabilities** and guiding **policy-relevant climate projections**.
- The interaction between **model projections and real-world observations** is critical for refining future climate predictions.
- Sustained **Southern Ocean monitoring** is necessary to understand long-term changes in the **global carbon cycle**.

Conclusion

The Southern Ocean carbon anomaly demonstrates how **complex feedback mechanisms** can temporarily mask underlying **climate vulnerabilities**. While models correctly predicted **deep-water upwelling**, they underestimated the role of **freshwater-driven stratification**. As this stabilising layer weakens, the **anticipated decline in carbon sink strength** may re-emerge, with significant implications for **global climate stability**.

SUBANSIRI LOWER HYDROELECTRIC PROJECT

Why in News: The Union Minister of Power, Housing & Urban Affairs, Shri Manohar Lal, inaugurated the commercial operation of Unit-2 (250 MW) of the 2000 MW Subansiri Lower Hydroelectric Project, marking a major milestone in India's renewable energy expansion, North-East development, and progress towards Net Zero targets. The project is being implemented by NHPC Limited and is India's largest hydropower project.

About the Subansiri Lower Hydroelectric Project

- The **Subansiri Lower Hydroelectric Project** has a total installed capacity of **2000 MW**, consisting of **8 units of 250 MW each**.
- It is designed as a **Run-of-the-River (RoR) scheme** with **small pondage**, ensuring minimal submergence while enabling power generation.
- The project is located on the **Subansiri River**, a major tributary of the **Brahmaputra**, spanning **Arunachal Pradesh and Assam**.
- Upon full commissioning, the project will generate approximately **7,422 million units (MU) of renewable electricity annually**.

Significance for Clean Energy and Climate Goals

- The project strengthens **India's clean and sustainable energy portfolio** by increasing **renewable energy capacity**.
- It supports India's commitment to **Net Zero emissions** by reducing dependence on **fossil fuel-based power generation**.

- The hydropower project contributes to **grid stability** by providing **reliable base-load renewable energy**.
- It enhances **energy security** by diversifying India's energy mix.

Engineering and Technical Features

- The project features the **largest dam in North-East India**, a **116-metre-high concrete gravity dam**.
- It uses **eight Head Race Tunnels (HRTs)** to divert water for electricity generation.
- The project includes **India's heaviest hydro generator rotors, largest stators, and biggest main inlet valves**.
- It introduced innovations such as **India's largest aggregate processing plant, highest-capacity batching plant, and the first-ever use of Rotec's Tower Belt for dam concreting**.

Flood Moderation and Water Management

- The Subansiri Lower Project is the **first cascaded dam on the Subansiri River**.
- It provides a **flood cushion of 442 million cubic metres**, helping moderate floods downstream.
- The dam has a **gross reservoir storage of 1,365 million cubic metres**, with nearly **one-third kept empty during floods** to absorb excess water.
- These features enhance **flood control, water regulation, and river basin management**.

Socio-Economic Benefits for the North-East

- The project strengthens **power availability in the North-East**, with **1,000 MW allocated to the region**.
- It provides **free power allocations to Arunachal Pradesh and Assam**.
- During construction, the project engaged around **7,000 local people daily**, generating significant **employment opportunities**.
- The availability of reliable power is expected to promote **small-scale industries**, reduce **outmigration**, and boost **regional economic growth**.
- The project is also expected to enhance **tourism** and improve **river navigation**.

River Protection and Environmental Measures

- NHPC has undertaken extensive **riverbank protection and erosion control works** along the Subansiri River.
- Protection measures have been completed up to **30 km downstream** and extended up to **60 km**, with an investment of about **₹522 crore**.

- These measures have successfully stabilized riverbanks for more than **five years**, ensuring **environmental sustainability** and **community safety**.

Community Development and CSR Initiatives

- NHPC has invested approximately **₹155 crore** in **Corporate Social Responsibility (CSR)** activities in **Arunachal Pradesh and Assam**.
- Key initiatives include the construction of **3,129 toilets** under **Swachh Vidyalaya Abhiyaan**.
- A **Vivekananda Kendra Vidyalaya** has been established at **Dollungmukh**, benefiting **250 students**.
- Safe drinking water facilities have been provided at **1,841 locations**, along with **RO water and sanitation facilities**.
- Livelihood programmes in **piggery, sericulture, and handloom**, developed with **IRMA**, benefit around **5,000 women farmers**.

Power Distribution and National Grid Impact

- Electricity from the project will be supplied to **16 beneficiary states across India**.
- The project will significantly enhance **national grid resilience and inter-regional power transfer capability**.
- It supports balanced regional development by integrating the **North-East with the national power grid**.

NHPC's Role in India's Energy Transition

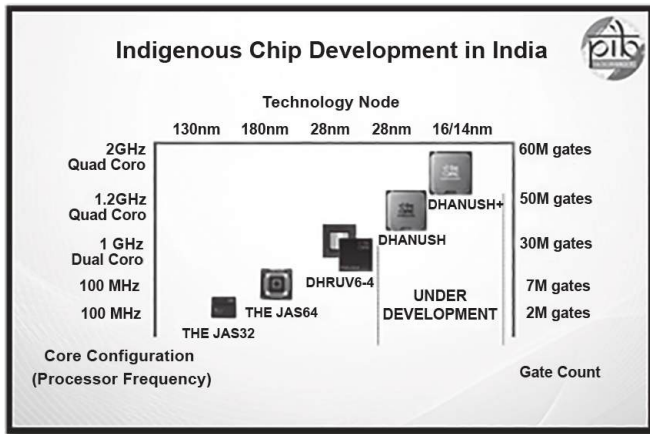
- NHPC has an installed capacity of **8,333 MW** from **30 power stations**.
- It has **14 projects (9,704 MW)** currently under construction.
- NHPC has diversified into **solar, wind, and green hydrogen**, reinforcing its status as a **100% Green Energy Company**.
- The Subansiri Lower Project reflects NHPC's expertise in executing projects in **difficult and ecologically sensitive terrains**.

Conclusion

The commissioning of Unit-2 of the **Subansiri Lower Hydroelectric Project** marks a critical step in strengthening **India's renewable energy capacity, North-East development, and climate commitments**. By combining **clean power generation, flood moderation, and inclusive socio-economic development**, the project exemplifies a holistic model of **sustainable infrastructure development** aligned with India's long-term energy and environmental goals.

DHRUV64

Why in News: The Ministry of Electronics and Information Technology (MEITY) has announced the launch of DHRUV64, an indigenous microprocessor.



What is DHRUV64?

- DHRUV64 is a fully indigenous microprocessor developed by the Centre for Development of Advanced Computing (C-DAC) under MEITY's Microprocessor Development Programme.
- It is designed as a general-purpose processor capable of supporting applications ranging from consumer electronics to industrial automation.
- The processor is positioned as a key component in strengthening India's indigenous processor ecosystem.

Key Technical Specifications of DHRUV64

- DHRUV64 is a 64-bit, dual-core processor operating at a clock speed of 1 GHz.
- The processor is sufficiently powerful to run operating systems while remaining efficient for embedded system deployment.
- Its architecture places it above simple control chips but below high-end consumer processors used in smartphones and laptops.

Significance of 64-bit Architecture

- A 64-bit processor design allows support for modern operating systems and contemporary software stacks.
- Such processors are typically required for applications involving multitasking, memory-intensive operations, and long-term software support.

- DHRUV64, therefore, targets industrial-grade and infrastructure-oriented applications rather than consumer flagship devices.

How Does DHRUV64 Compare Globally?

- The performance of DHRUV64 is modest compared to global top-tier processors, which feature higher clock speeds, multiple cores, and specialised units like GPUs and AI accelerators.
- However, many critical sectors such as telecommunications, industrial controllers, routers, and automotive electronics prioritise reliability, stability, and hardware-software integration over peak performance.
- These sectors represent the primary target market for DHRUV64.

Strategic Importance of Indigenous Processors

- Processors form the core of digital infrastructure, ranging from telecom networks to industrial control systems.
- Control over processor design, toolchains, and update mechanisms directly affects national security and resilience during export restrictions or geopolitical disruptions.
- DHRUV64 contributes to India's goal of strategic autonomy in electronics and semiconductors.

India's Indigenous Processor Ecosystem

- DHRUV64 is part of a broader Indian processor ecosystem supported by MEITY.
- Other indigenous processors include SHAKTI (IIT Madras), AJIT (IIT Bombay), VIKRAM (ISRO-SCL), and THEJAS64 (C-DAC).
- These processors address needs in strategic systems, space applications, factory automation, and critical infrastructure.

Digital India RISC-V (DIR-V) Programme

- DHRUV64 is developed under the Digital India RISC-V (DIR-V) programme, which aims to build a portfolio of RISC-V-based processors.
- THEJAS32 was the first DIR-V chip fabricated abroad, while THEJAS64 was manufactured at SCL Mohali.
- DHRUV64 is the third processor in this series, although details regarding its fabrication location have not been disclosed.

What is RISC-V and Why It Matters?

- RISC-V is an **open-source instruction set architecture (ISA)** that defines how processors execute commands.
- Unlike proprietary ISAs, RISC-V does not require **licence fees**, making it attractive for **governments, academia, and startups**.
- Its **modular design** allows customisation for different use cases while maintaining a **common base architecture**.
- This openness supports **innovation, cost reduction, and long-term sovereignty**.

Future Roadmap: DHANUSH and DHANUSH+

- C-DAC is developing next-generation processors named **DHANUSH** and **DHANUSH+**.
- **DHANUSH** is expected to be a **1.2 GHz quad-core processor**, while **DHANUSH+** is projected to operate at **2 GHz with four cores**.
- Reports suggest that **DHANUSH** may use a **28 nm process node**, while **DHANUSH+** could move to **14 or 16 nm technology**.
- However, **MEITY** has not officially detailed how these processors will improve upon **DHRUV64**.

Supporting Semiconductor Ecosystem Initiatives

- India has launched multiple schemes to support semiconductor design and innovation.
- The **Chips to Startup (C2S) Programme** aims to train talent with an outlay of **₹250 crore over five years**.
- The **Design Linked Incentive (DLI) Scheme** supports domestic chip design companies.
- The **INUP-i2i initiative** improves access to nanofabrication facilities.
- Under the **India Semiconductor Mission**, **10 projects across six States** have been approved with investments of **₹1.6 lakh crore**.

Way Forward

- The government's strategy for **DHRUV64** focuses on building **system-on-chip families**, improving **software ecosystems**, and ensuring **domestic manufacturing and testing capacity**.
- The long-term objective is to enable **Indian consumers and industries** to adopt Indian chips without facing **excessive costs or technological risks**.
- **DHRUV64** represents an **important foundational step**, but sustained progress will depend on **ecosystem development, transparency, and market adoption**.

DOPPLER WEATHER RADARS (DWRs)

Why in News: India is witnessing an increase in the **frequency and intensity of extreme weather events** such as **cyclones, cloudbursts, heavy rainfall, snowfall, and thunderstorms**. In this context, the **Minister of State for Earth Sciences**,

informed Parliament during the **Winter Session** that India currently has **47 Doppler Weather Radars (DWRs)**, covering **87% of the country's geographical area**.

Current Status of Doppler Weather Radars in India

- India currently operates **47 Doppler Weather Radars (DWRs)** for **weather surveillance and forecasting**.
- These radars are managed primarily by the **India Meteorological Department (IMD)**.
- The government has announced plans to install **additional DWRs** to achieve **complete national coverage**.

Strengthening Monitoring in Hilly and Himalayan Regions

- The observational and monitoring network in **hilly and mountainous regions** has been significantly strengthened in recent years.
- In the **Western Himalayan States**, **10 Doppler Weather Radars** have been installed at **Srinagar, Jammu, Banihal Top, Mukteshwar, Surkanda Devi, Lansdowne, Leh, Kufri, Jot, and Murari Devi**.
- These radars are fully **operational** and support **real-time monitoring and nowcasting**, which refers to **short-range forecasts covering a few hours**.
- They play a critical role in tracking **heavy rainfall, snowfall, cloudbursts, and other extreme weather events**.

What are Doppler Weather Radars (DWRs)?

- Doppler Weather Radars are **advanced meteorological instruments** used to detect and track **precipitation, cloud movement, and storm systems**.
- They emit **radio waves** from an antenna, which scatter when they strike objects such as **raindrops, snowflakes, or hail** in the atmosphere.
- A portion of this energy is reflected back to the radar, allowing meteorologists to analyse atmospheric conditions.

Basic Working Principle of Weather Radars

- The radar measures the **time taken** for the radio wave to travel to an object and return, which helps determine the **distance of precipitation** from the radar.
- The **strength of the returned signal** depends on the **size and density of the objects**, enabling estimation of **rainfall intensity**.
- This allows forecasters to **"see" precipitation patterns** within the atmosphere.

What Makes Doppler Weather Radars Special?

- Doppler Weather Radars can detect not only the **location** of weather systems but also their **movement and speed**.
- They achieve this by analysing the **phase shift** between the transmitted radio wave and the received echo.
- By measuring this phase change, computers can determine whether precipitation is **moving towards or away from the radar**.

- This capability is essential for identifying **storm direction, wind patterns, and potential severity.**

Doppler Effect and Its Role

- The working of Doppler Weather Radars is based on the **Doppler Effect**, first explained by **Christian Doppler**, a 19th-century Austrian physicist.
- The Doppler Effect describes how the **frequency or phase of waves changes** when the source or observer is moving.
- An approaching object compresses waves, increasing frequency, while a receding object stretches waves, reducing frequency.
- This same principle is used by DWRs to calculate the **velocity of raindrops and storm systems.**

Types of Doppler Weather Radars Used in India

- India uses **S-band, C-band, and X-band Doppler Weather Radars**, depending on monitoring needs.
- **S-band radars** are used for **long-range weather surveillance** and are effective for tracking large-scale systems.
- **C-band radars** are commonly used for **cyclone monitoring and rainfall estimation.**
- **X-band radars** are high-resolution systems used to detect **thunderstorms, lightning, and short-duration extreme events.**

Coverage and Update Frequency

- A single Doppler Weather Radar can cover an area of up to **500 km radius**, depending on terrain and frequency band.
- Radar observations are typically updated every **10 minutes**, enabling meteorologists to monitor **rapidly evolving weather systems.**
- This frequent updating is crucial during **cyclones, flash floods, and severe thunderstorms.**

Importance of DWRs in Disaster Management

- Doppler Weather Radars play a vital role in **early warning systems** for disasters.
- They help in **accurate short-term forecasting**, reducing loss of life and property during extreme weather events.
- DWRs support sectors such as **aviation, agriculture, urban flood management, and disaster response planning.**

Way Forward

- The government aims to achieve **100% radar coverage** across India by installing DWRs in uncovered regions.
- Further integration of DWR data with **satellite observations, numerical weather models, and AI-based forecasting tools** is expected.
- Strengthening radar infrastructure will enhance India's capacity for **climate resilience, disaster preparedness, and public safety.**

BLUEBIRD BLOCK-2 COMMUNICATION SATELLITE

Why in News: The Indian Space Research Organisation (ISRO) successfully launched the LVM3-M6 mission, placing the **BlueBird Block-2 communication satellite** into **Low Earth Orbit (LEO)**. This mission marked a **major milestone** for India's space programme as it involved the **heaviest satellite ever launched from Indian soil** and strengthened India's position in the **global commercial launch market**, while also supporting future missions such as **Gaganyaan** and the **Bharatiya Antariksh Station.**

About the LVM3-M6 Mission

- The LVM3 (Launch Vehicle Mark-3), also known as **Gaganyaan-class launch vehicle**, lifted off from the **Second Launch Pad of Satish Dhawan Space Centre, Sriharikota.**
- The rocket successfully injected the **BlueBird Block-2 satellite** into an orbit of around **520 km**, approximately **15 minutes after launch.**
- This was the **ninth successful mission** of LVM3 and the **104th launch from Sriharikota.**

Key Features of Blue Bird Block-2 Satellite

- The **Blue Bird Block-2 satellite**, weighing nearly **6,100 kg**, is the **heaviest payload** launched by ISRO to date.
- It has been developed by **AST SpaceMobile (USA)** and is part of a **global Low Earth Orbit (LEO) constellation.**
- The satellite features a **223 square metre phased-array antenna**, making it the **largest commercial communications satellite ever deployed in LEO.**

Direct-to-Mobile Connectivity: Why It Matters

- Unlike traditional satellites that rely on **ground stations**, the **BlueBird Block-2 constellation** enables **direct-to-mobile connectivity.**
- It allows **standard smartphones** to directly connect to satellites without specialised hardware.
- The constellation will support **4G and 5G voice calls, video calls, text messages, data services, and streaming**, ensuring connectivity **"for everyone, everywhere, at all times."**

Significance of the Mission for ISRO

- This mission represents ISRO's **third commercial heavy-lift mission** using LVM3, following the **OneWeb satellite launches** in 2022 and 2023.
- It demonstrates ISRO's ability to conduct **heavy satellite launches at competitive costs**, offering an alternative to **SpaceX's Falcon-9** and **ESA's Ariane** series.
- The mission also highlights ISRO's capability for **rapid mission turnaround**, with two LVM3 launches occurring within a **52-day gap.**

Record-Breaking Achievements

- The mission set multiple records for India's space programme.
- It placed the **largest commercial communications satellite** into LEO.
- It marked the **heaviest satellite ever launched by an Indian launch vehicle from Indian soil**.
- ISRO also achieved **orbit accuracy within less than two kilometres**, one of the **best performances globally**.

Role of LVM3 in India's Human Spaceflight Programme

- The LVM3 was originally designed for **geosynchronous missions** but has been upgraded for **LEO and human spaceflight missions**.
- It is the designated launch vehicle for the **Gaganyaan human spaceflight mission**.
- The vehicle is being further optimised to support **crew safety, redundancy systems, and higher payload capacities**.

Engine Optimisation and Future Upgrades

- ISRO is working on increasing the thrust of the **cryogenic upper stage (C25)**, which currently produces **20 tonnes of thrust** using **28,000 kg of propellant**.
- A new **C32 cryogenic stage** is under development, capable of carrying **32,000 kg of fuel** and producing **22 tonnes of thrust**.
- The agency is also developing a **semi-cryogenic engine** using **refined kerosene and liquid oxygen**, which would replace the current liquid-propellant second stage.

Bootstrap Reignition Technology

- ISRO is developing **bootstrap reignition capability** for cryogenic engines.
- This technology allows the **upper stage engine to restart without external gases like helium**.
- It improves **fuel efficiency**, reduces vehicle weight, and enhances the capability to deploy **multiple satellites into different orbits**, especially useful for **LEO constellations**.

Commercial and Strategic Importance

- This was the **first dedicated commercial launch for a US customer using LVM3**.
- With this mission, ISRO has launched **434 satellites for 34 countries**, strengthening India's role in **space diplomacy and commercial space services**.
- The mission aligns with India's goals of **self-reliance (Atmanirbhar Bharat)** and expanding its share in the **global space economy**.

Way Forward

- LVM3 will play a central role in upcoming missions including **uncrewed and crewed Gaganyaan missions**, deployment of modules for the **Bharatiya Antariksh Station**, and expanded **commercial satellite launches**.

- Ongoing engine upgrades and increased payload capacity will make India a **competitive heavy-lift launch service provider globally**.
- The mission underscores India's transition from a **regional space power to a global space leader**.

ALAKNANDA GALAXY

Why in News: Indian astronomers have discovered Alaknanda, one of the **earliest and farthest known spiral galaxies**, using the **James Webb Space Telescope (JWST)**. The galaxy existed when the **universe was only about 1.5 billion years old**, a period when galaxies were expected to be **chaotic, turbulent, and poorly structured**.

Discovery of Alaknanda

- The galaxy was identified during the analysis of **public JWST data** from the **UNCOVER survey**, which contains nearly **70,000 celestial objects**.
- Alaknanda stood out because it displayed **two perfectly symmetrical spiral arms**, a feature rarely expected in such an early universe.
- The discovery was **serendipitous**, highlighting the power of **high-resolution JWST data** combined with **careful morphological analysis**.

Key Physical Features of Alaknanda

- Alaknanda has a **well-defined disk**, **two clear spiral arms**, and a **small central bulge**.
- The galaxy spans approximately **30,000 light-years in diameter**, comparable in structure to the **Milky Way**.
- Star formation is actively occurring along its spiral arms at a rate equivalent to **60 solar masses per year**, confirming that it is a **fully developed spiral galaxy**.

Why Alaknanda Challenges Existing Galaxy Formation Models

- Current cosmological models suggest that **stable rotating disks** and **spiral arms** require **several billion years** to form.
- However, Alaknanda formed when the universe was only **1.5 billion years old**, corresponding to a **redshift of $z \approx 4$** .
- This contradicts simulations, which do not typically produce **highly structured spiral galaxies** at such early epochs.

Possible Explanations for Alaknanda's Early Formation

- One explanation is that Alaknanda **grew steadily by accreting cold gas**, allowing it to settle into a **stable rotating disk** where **density waves** formed spiral arms.
- Another possibility is that the galaxy **interacted or merged with a smaller companion galaxy**, triggering the formation of spiral arms.
- Astronomers believe that **unknown accelerating factors** may have influenced the rapid development of its structure.

Scientific Importance of Redshift ($z \approx 4$)

- The **redshift (z)** measures how much the wavelength of light has been stretched due to the **expansion of the universe**.
- A redshift of $z \approx 4$ indicates that the galaxy is observed as it existed **over 12 billion years ago**.
- Such observations allow scientists to study **early galaxy evolution** and test **cosmological simulations**.

Methodology Used in the Study

- The researchers relied on **photometric analysis**, measuring the galaxy's brightness across different wavelengths.
- Using this data, they reconstructed the galaxy's **energy distribution**, allowing estimates of **redshift, stellar mass, and star-formation history**.
- The findings are considered **robust** because the team performed **three independent redshift measurements**.

Need for Further Observations

- Experts have suggested the use of **spectroscopic data**, such as JWST's **Integral Field Unit (IFU)** observations, to confirm the spiral nature of Alaknanda.
- Future observations using **JWST** or the **Atacama Large Millimeter/submillimeter Array (ALMA)** may help determine the exact mechanism behind its spiral arms.
- Such studies could refine **galaxy formation models**.

Significance for Indian Astronomy

- The discovery represents a **major contribution by Indian scientists** to cutting-edge global astronomy.
- India's participation in major discoveries has been limited due to **smaller research workforce, lower funding, and fewer large-scale collaborations**.
- To address this, India is pursuing a **two-pronged strategy** involving the development of **domestic facilities** like the proposed **10-metre optical telescope at Hanle**, and participation in global projects such as **SKA** and **LIGO**.

James Webb Space Telescope (JWST): Key Facts

- The **JWST** was launched on **December 25, 2021**, and is jointly developed by **NASA, ESA, and the Canadian Space Agency**.
- It studies the universe from the **Big Bang** to the **formation of galaxies, stars, and planetary systems**. JWST has already transformed our understanding by detecting **some of the oldest galaxies ever observed**.

Way Forward

- The discovery of Alaknanda provides valuable insights into **early universe dynamics** and **spiral galaxy evolution**.
- Discrepancies between observations and simulations will help scientists **refine cosmological models**. Alaknanda reinforces India's growing role in **frontline astronomical research**.

SPONGE-ASSOCIATED MICROBES

Why in News: Freshwater sponges, among the earliest multicellular organisms, play a crucial role in aquatic ecosystem health. Recent research by scientists at the **Bose Institute** highlights their potential to act as both **bioindicators** and **bioremediators** for toxic metals such as **arsenic, lead, and cadmium**, especially in pollution-prone areas like the **Sundarban delta**.

Key Findings

- **Bioaccumulation of Metals:**
 - Sponges were found to accumulate significantly higher concentrations of toxic metals than surrounding water.
 - Their ability to retain heavy metals makes them effective **biological filters** in contaminated freshwater systems.
- **Role of Microbial Symbionts:**
 - Sponge-associated microbial communities are **functionally enriched** with genes for:
 - ◆ Metal ion transport
 - ◆ Metal resistance
 - ◆ Antimicrobial resistance
 - These microbes actively **detoxify water** and help sponges survive in **metal-contaminated habitats**.
- **Distinct Microbial Diversity:**
 - The bacterial communities in sponges were **different from the surrounding water**, shaped by **sponge species and habitat**.
 - This is the **first report on bacterial diversity of freshwater sponges in Sundarbans**, providing new ecological insights.
- **Ecological and Practical Significance:**
 - Sponges can serve as **bioindicators**, monitoring **water quality** and **pollution levels**.
 - They offer a **promising, sustainable solution for bioremediation**, especially in metal-polluted rivers of the **Gangetic plain**.

Conclusion

This study underscores the **ecological importance of sponge-microbe consortia** in maintaining water quality and combating pollution. By harnessing the **bioaccumulation and detoxification potential** of sponges, sustainable strategies for **water management and bioremediation** can be developed.

DIEBACK

Why in News: A widespread dieback of neem trees (*Azadirachta indica*) has been reported across Hyderabad and multiple districts of Telangana.



What is Neem Dieback

- Neem dieback is a plant disease characterised by the drying of upper branches, canopy thinning, and reduced flowering and fruiting.
- The infection begins at the top of the tree and progresses downward, becoming visible after the monsoon season.

Identified Cause

- The disease is caused by a fungal pathogen, *Phomopsis azadirachtae*.
- The fungus becomes active during the post-monsoon and winter months (October–February).

Seasonal Nature

- Most neem trees show natural recovery by March, indicating the high resilience of neem as a native species. The disease is seasonal, not permanent.

Ecological Impact

- Neem dieback leads to poor flowering and fruiting, causing a decline in seed production.
- Reduced seed availability affects bird-mediated seed dispersal, resulting in poor natural regeneration of neem trees.

Human Health Aspect

- The disease does not affect human health. Neem remains safe for medicinal and traditional use.

Resilient Neem Trees

- About 10–20% of neem trees remain unaffected.
- These trees are being studied to develop disease-resistant planting material using tissue culture and micropropagation.


Management Measures (Preventive)


- Seed treatment is necessary as the pathogen is seed-borne and seed-transmitted.
- Prophylactic fungicides or biocontrol agents (e.g., *Trichoderma*) can improve resistance.
- Pruning of infected twigs and safe disposal helps prevent further spread.

Free Initiative by Chahal Academy

Editorial Analysis of The Hindu

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EXERCISE EKUVERIN – INDIA–MALDIVES

Why in News: Exercise EKUVERIN is a bilateral military exercise conducted between the Indian Army and the Maldives National Defence Forces (MNDF). The 2025 edition concluded with a joint validation exercise at Thiruvananthapuram, marking the successful completion of two weeks of intensive training.

Key Details

- The exercise focused on **counter-insurgency and counter-terrorism operations** in sub-conventional warfare scenarios.
- Key objectives were to enhance **interoperability, operational synergy, and tactical coordination** between the two forces.
- Training included **cordon and search operations, close-quarter battle drills, small team tactics, reflex firing, and amphibious operations.**
- **Intelligence-led operations and joint mission planning** were emphasised.
- The exercise strengthened **India–Maldives defence cooperation** and contributed to **security and stability in the Indian Ocean Region.**

EXERCISE DESERT CYCLONE

Why in News: The second edition of India–UAE Joint Military Exercise DESERT CYCLONE concluded at Al-Hamra Training City, Abu Dhabi, demonstrating the deepening defence partnership between India and the UAE.

Key Details

- Exercise DESERT CYCLONE–II was conducted from **December 18 to 30, 2025**, at Al-Hamra Training City, Abu Dhabi.
- The exercise involved **45 Indian Army personnel** from the Mechanised Infantry Regiment and the **53 Mechanised Infantry Battalion of UAE Land Forces.**
- The main objective was to **enhance interoperability, mutual trust, and operational readiness** for urban and sub-conventional operations under a **UN mandate.**
- Training included **classroom instruction on urban combat, IED awareness, first aid, and mission planning,**

combined with field drills in room intervention, building clearance, heliborne operations, and air assault missions.

- The exercise enabled both armies to **standardise tactics, techniques, and procedures** while rehearsing **integrated offensive and defensive urban operations.**
- **DESERT CYCLONE–II strengthened professional bonds** between the Indian Army and UAE Land Forces and improved their ability to **conduct future multinational missions.**

INDIAN COAST GUARD SHIP SARTHAK'S FIRST-EVER PORT CALL AT CHABAHAR, IRAN

Why in News: The Indian Coast Guard (ICG) Ship Sarthak, an Offshore Patrol Vessel, recently made a **historic port call at Chabahar, Iran**, marking the first-ever visit of an Indian Coast Guard ship to this strategic port.

During the visit, ICG Ship Sarthak is conducting **courtesy calls and professional interactions** aimed at strengthening institutional linkages and enhancing mutual understanding in **maritime safety and security.** Key activities include:

- **Joint training exercises in Maritime Search and Rescue (SAR), Maritime Law Enforcement (MLE), and Marine Pollution Response (MPR).**
- A **marine pollution response demonstration** in Chabahar Harbour, addressing **oil spills and Hazardous and Noxious Substances (HNS)** incidents to showcase coordinated response mechanisms.



Community and Environmental Initiatives

The visit also integrates **community engagement and environmental awareness**, including:

- **Sports fixtures** and a **beach walkathon** involving embarked **National Cadet Corps cadets**.
- Activities aligned with India's **Puneet Sagar Abhiyan**, promoting **marine environmental awareness** and **coastal cleanliness**.

Strategic Significance

Chabahar port, situated on the **northern flank of the Gulf of Oman**, provides India a **deep-water maritime gateway** to Iran, landlocked **Afghanistan**, and **Central Asia**, bypassing traditional routes via Pakistan. The port's strategic location enables India to:

- Strengthen **economic influence** in the region.
- Secure **trade and supply lines** to Afghanistan and Central Asia.
- Promote **India's SAGAR (Security and Growth for All in the Region) and MAHASAGAR** visions, emphasizing secure and cooperative maritime engagements.

This visit follows ICG Ship Sarthak's earlier engagement in **Kuwait**, highlighting India's growing maritime presence and constructive engagement with regional partners. The Chabahar port call underlines India's **strategic naval outreach**, reinforcing its role in regional security, trade facilitation, and environmental cooperation.

INDIAN ARMY INDUCTS FINAL BATCH OF AH-64E APACHE ATTACK HELICOPTERS

Why in News: The Indian Army has received the final batch of three AH-64E Apache attack helicopters, completing its six-unit fleet at the 451 Army Aviation Squadron based in Jodhpur, Rajasthan. The helicopters were first landed at Hindon Air Force Station, Ghaziabad, before induction into the Army's operational fleet.



Background and Acquisition

The Apaches were acquired under a **\$600 million deal with the United States**, contracted in **February 2020**. The first batch of three helicopters was delivered earlier this year. The

arrival of the final tranche ensures the **full operationalisation** of India's dedicated Apache squadron, which was **raised in March 2024** to meet operational requirements on the **western front**.

Operational Significance

- The six **AH-64E helicopters** will be **stationed at Jodhpur**, enhancing **strike and reconnaissance capabilities** along the **western sector facing Pakistan**.
- Equipped with **advanced avionics, sensors, and multi-role weapon systems**, the Apache is regarded as the **world's most advanced attack helicopter**, capable of **operating in all weather and terrain conditions**.
- Their induction strengthens the Indian Army's **offensive and deterrence posture**, providing a critical capability for both **border defence and rapid response operations**.

INAS 335 (OSPREYS)

Why in News: Recently, the Indian Navy commissioned its second MH-60R helicopter squadron, INAS 335 (Ospreys) at INS Hansa, Goa, in the presence of Chief of Naval Staff Admiral Dinesh K. Tripathi. The event marks a significant step in the modernisation and capability enhancement of India's naval aviation.

About INAS 335 (Ospreys)



- INAS 335 is the second squadron of MH-60R Seahawk helicopters inducted into the Indian Navy.
- The squadron is nicknamed "Ospreys", after the fish-hunting bird of prey.
- The first MH-60R squadron, INAS 334, was commissioned at INS Garuda, Kochi, in March 2024.
- With this induction, the MH-60R helicopters have been fully integrated with fleet operations.

About MH-60R Seahawk Helicopters

- The MH-60R Seahawk is a US-origin, multi-role maritime helicopter, developed by Sikorsky (Lockheed Martin) for the US Navy.
- It is the maritime version of the Black Hawk helicopter and is distinct from the V-22 Osprey aircraft.
- India has acquired 24 MH-60R helicopters from the United States under a deal worth over ₹15,000 crore.
- These helicopters are replacing the ageing British-origin Sea King helicopters.

Key Features and Technology

- The MH-60R is equipped with advanced avionics, weapons, and sensors.
- Its digital sensor suite includes:
 - Multi-mode radar
 - Dipping sonar and sonobuoys
 - Electronic Support Measures (ESM)
 - Infrared cameras
 - Secure datalinks
 - Aircraft survivability systems
- The onboard mission system creates a real-time situational picture of surface and underwater threats.
- The helicopter can be armed with torpedoes, air-to-ground missiles, rockets, and onboard guns.

Operational Roles

- The MH-60R is capable of a wide range of missions, including:
 - Anti-Submarine Warfare (ASW)
 - Anti-Surface Warfare (ASuW)
 - Surveillance and reconnaissance
 - Search and Rescue (SAR)
 - Medical evacuation (MEDEVAC)
 - Vertical Replenishment (VERTREP) for naval logistics
- It can operate from shore bases, aircraft carriers, and other large naval platforms.

Role in Countering Threats

Conventional Threats

- Detection, tracking, and destruction of enemy submarines.
- Targeting hostile surface ships and extending the strike range of warships.
- Participation in sea denial and deep-sea blue-water operations.

Asymmetric Threats

- Countering maritime terrorism, piracy, smuggling, and sea-borne infiltration.
- Monitoring misuse of fishing or civilian vessels by non-state actors.
- Protection of ports, offshore assets, and maritime supply chains.
- Addressing emerging threats such as drones and unmanned platforms.

Strategic Significance

- The induction significantly enhances the Indian Navy's integral aviation capabilities.
- It strengthens India's blue-water navy profile by extending operational reach and endurance.
- Deployment in the Indian Ocean Region (IOR) will

reinforce India's maritime presence and act as a deterrent to potential adversaries.

- The induction aligns with the Navy's focus on adapting to asymmetric and technology-driven maritime warfare.

Sustainment and Logistics Support

- The Ministry of Defence signed five-year sustainment support agreements with the US worth approximately ₹7,995 crore.
- The package includes:
 - Spares and support equipment
 - Training and technical assistance
 - Repair and maintenance facilities in India
 - Intermediate-level component repair infrastructure
- This ensures high operational availability and long-term maintainability of the MH-60R fleet.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

- Q. The MH-60R Seahawk helicopter is best described as:
- A tilt-rotor aircraft developed jointly by the US Navy and US Air Force
 - A maritime variant of the Black Hawk helicopter
 - An unmanned anti-submarine warfare platform
 - A British-origin naval helicopter upgraded for Indian use

Answer: (b)

AKASH-NG

Why in News: The Defence Research and Development Organisation (DRDO) has successfully completed the User Evaluation Trials (UET) of the Akash-New Generation (Akash-NG) surface-to-air missile system.



Background of Akash Missile System

- The Akash missile programme was initiated in the late 1980s under the Integrated Guided Missile Development Programme (IGMDP) led by Dr A.P.J. Abdul Kalam.
- Akash is a short to medium-range surface-to-air missile (SAM) designed to protect critical installations and vulnerable areas.
- The system can engage multiple aerial targets simultaneously in both autonomous and group modes.
- It incorporates Electronic Counter-Counter Measures (ECCM) to resist enemy electronic jamming and deception.
- Akash was inducted into the IAF in 2014 and the Indian Army in 2015.
- The missile system has around 96% indigenous content.
- In December 2020, the Cabinet approved Akash for exports, with a modified export variant.

Need for Akash-NG

- The original Akash has a range of 27–30 km and an altitude capability of around 18 km.
- Emerging threats such as highly manoeuvrable aircraft and low radar cross-section (RCS) targets necessitated an upgraded system.
- Akash-NG development began in the mid-2010s, alongside the induction of the original Akash.

Key Features of Akash-NG

- Akash-NG has an enhanced operational range of up to 70 km.
- The missile has a sleeker, lighter design, improving mobility and deployment speed.
- It uses a canisterised launcher, which enhances storage life, transportation safety, and operational readiness.
- The system has a much smaller ground system footprint, improving deployability in diverse terrains.
- It is equipped with an indigenously developed Radio Frequency (RF) seeker for higher accuracy.
- The missile is capable of intercepting low RCS and high-speed aerial threats.
- Key subsystems such as launcher, multi-function radar (MFR), command, control and communication system (C3) are indigenously developed.

Akash Prime

- Akash Prime is another improved variant with the same range as the original Akash.
- It features an indigenous active RF seeker, significantly improving hit probability against aerial targets.

User Evaluation Trials (UET)

- The first test flight of Akash-NG was conducted on January 25, 2021, from the Integrated Test Range, Odisha.
- A successful test against a high-speed unmanned aerial target at low altitude was conducted on January 12, 2024.
- The UETs conducted in December 2025 met all Provisional Staff Qualitative Requirements (PSQR).
- The missile successfully intercepted targets at varied ranges and altitudes, including low-altitude near-boundary and long-range high-altitude scenarios.

Significance of Successful UET

- Successful UETs mark the final stage before induction into the armed forces.
- It enables the IAF to issue an Acceptance of Necessity (AoN) for procurement.
- The induction of Akash-NG will strengthen India’s layered air defence network.
- The project reinforces Atmanirbhar Bharat by showcasing advanced indigenous defence capabilities.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

Q. With reference to the Akash–New Generation (Akash-NG) surface-to-air missile system, consider the following features:

1. It has an operational range significantly higher than the original Akash missile.
2. It uses a canisterised launcher to improve storage life and operational readiness.
3. It is equipped with an indigenously developed Radio Frequency (RF) seeker.

Which of the statements above are correct?

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

(d) Answer

GIG WORKERS

Why in News: Gig workers of quick commerce platforms, including Swiggy, Zomato, Blinkit, Amazon, and Flipkart were on a nationwide strike on December 31.

Reasons for the Nationwide Strike

Gig and platform workers organised the strike to protest against **unsafe, low-paid, and highly exploitative working conditions** imposed by digital platforms.

- Workers protested against **declining and non-transparent wages** that failed to meet basic living costs.
- Workers opposed **arbitrary ID deactivation**, which cut off livelihoods without explanation or due process.
- Workers demanded an end to **unsafe “10-minute delivery” models** that place excessive physical risk on riders.
- Workers highlighted **excessively long working hours** and the absence of adequate rest periods.
- Workers demanded **social security, dignity, and legal recognition** as workers rather than disposable contractors.

Working Conditions

Empirical evidence from the **PAIGAM study** titled “**Prisoners on Wheels**”, which surveyed over 10,000 app-based workers, revealed systemic exploitation.

- More than **80% of workers reported working over 10 hours per day** on a regular basis.
- Over **30% of workers reported working more than 14 hours per day** to sustain their earnings.
- The majority of drivers earned **less than ₹15,000 per month**, while most delivery workers earned **below ₹10,000 per month**.
- Nearly **half of the workers were unable to take even one weekly day off** due to financial pressure.
- Over **99% of workers reported physical or mental health problems** linked to their work conditions.
- Around **50% of workers experienced workplace violence or harassment** during work.
- Nearly **90% of workers rejected 10-minute delivery models** as unsafe and inhumane.

Nature of Platform Control

- Platforms control **pricing, incentives, and order allocation** through opaque algorithms.

- Platforms impose **strict delivery timelines and penalties**, increasing accident risks.
- Platforms regulate access to work through **ratings and ID activation systems**, creating constant insecurity.
- Speed-based targets transform cities into **hazardous workplaces** exposed to traffic, pollution, and extreme weather.

Union Allegations Against Platforms

- Platforms allegedly engaged in **surveillance of striking workers** and union supporters.
- Platforms were accused of **blocking worker IDs** for participating in protests.
- Workers reported instances of **police harassment** during demonstrations.
- Platforms attempted to dilute the strike by offering **temporary incentive hikes and promotional payouts**.

Key Demands of Gig Workers (Six-Point Charter)

Gig worker unions, including the **Indian Federation of App-Based Transport Workers (IFAT)**, presented a structured set of demands.

- Workers demanded **formal regulation of platform companies under labour laws**.
- Workers called for a **complete ban on unsafe 10-minute delivery models**.
- Workers demanded an **end to arbitrary ID blocking and unjust penalties**.
- Workers sought **fair, transparent, and minimum wage guarantees**.
- Workers demanded **social security coverage**, including health insurance, accident cover, and pensions.
- Workers asserted their **right to organise, unionise, and collectively bargain**.

Legal and Policy Framework in India

Central-Level Measures

- The **Code on Social Security, 2020** formally recognised **gig and platform workers** under Indian labour law.
- The law promised access to **accident insurance, health benefits, maternity benefits, and old-age protection**.
- The **Union Budget 2025–26** announced **e-Shram registration, identity cards, and Ayushman Bharat health coverage**, but implementation is still pending.

State-Level Initiatives

- **Telangana enacted the Gig and Platform Workers Act, 2025**, providing for registration and welfare boards.
- The Act introduced **unique worker IDs and a Social Security and Welfare Fund**.
- **Karnataka promulgated the Platform-Based Gig Workers Ordinance, 2025**, creating a worker database and welfare mechanisms.
- Despite these efforts, **income security and enforceable labour standards remain inadequate**.

Way Forward

- **Legal Recognition and Protection** Gig workers should be given a **clear legal status** recognising the **control exercised by platforms**, while preserving flexibility and extending basic labour protections.
- **Mandatory Social Security Coverage** Provisions under the **Code on Social Security, 2020** must be made **mandatory and enforceable**, ensuring **health insurance, accident cover, and pensions** for all registered gig workers.
- **Fair Pay and Income Stability** Platforms should ensure **transparent pay structures**, protect workers from **arbitrary rate cuts**, and guarantee a **minimum floor-level earning** to reduce income volatility.
- **Algorithmic Transparency and Due Process** Platforms must be held accountable for **algorithm-driven decisions**, with **right to explanation, appeal mechanisms**, and safeguards against **sudden ID deactivations**.
- **Worker Safety and Humane Delivery Norms** High-pressure models like **10–20 minute delivery systems** should be regulated to prioritise **road safety, reasonable timelines, and protective gear** for workers.
- **Collective Voice and Grievance Redressal** Gig workers should be allowed to form **associations or unions**, supported by **time-bound grievance redressal mechanisms** and tripartite dialogue involving the state.
- **Diversification of Employment Opportunities** Long-term security requires **job creation in labour-intensive sectors** such as **manufacturing, construction, textiles, and agriculture**, alongside **skilling and reskilling initiatives**.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

Q. With reference to the nationwide strike by gig workers in December 2025, consider the following statements:

1. The strike involved workers from quick commerce and e-commerce platforms such as Swiggy, Zomato, Blinkit, Amazon and Flipkart.
2. One of the key demands was legal recognition of gig workers as employees under the Industrial Disputes Act, 1947.

3. Workers opposed algorithm-driven delivery timelines that increased occupational risks.

Which of the statements given above is/are correct?

(a) 1 and 3 only (b) 1 and 2 only

(c) 2 and 3 only (d) 1, 2 and 3

(a) : Answer

UNIVERSAL HEALTH COVERAGE (UHC) DAY

Why in News: December 12 is observed as **Universal Health Coverage (UHC) Day**, highlighting concerns over **rising healthcare costs** under the 2025 theme: **“Unaffordable health costs? We’re sick of it!”**

- The day underscores the need to clearly distinguish between **Universal Health Coverage** and **Universal Healthcare**.

Universal Health Coverage vs Universal Healthcare

- **Universal Health Coverage (UHC)** focuses on **financial protection** against health-related expenses, mainly through **insurance mechanisms**.
- **Universal Healthcare** goes beyond insurance and ensures **equitable access to comprehensive primary healthcare**, including **preventive, promotive, curative, rehabilitative, and palliative care**.

Global Normative Framework

- UHC is rooted in the **right to health**, recognised in **international covenants** and reaffirmed by the **WHO’s Alma-Ata Declaration (1978)**.
- The **WHO World Health Report (2010)** shifted emphasis toward **financial reform and risk protection** as the main pathway to UHC.
- UHC was later endorsed by a **UN General Assembly resolution** and incorporated into the **Sustainable Development Goals (SDGs)**.

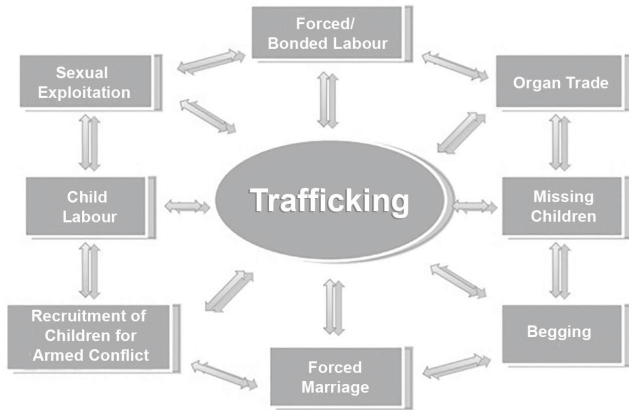
Issues with Insurance-led UHC Models

- Many countries, including **India**, prioritised **public health insurance** over **primary healthcare strengthening**.
- These schemes largely cover **hospitalisation costs** and use **disease-based packages**.
- Evidence shows continued **out-of-pocket expenditure (OOPE)** due to **excluded services, inadequate package coverage, and provider abuse**.

International Experience: East Asia

- **East Asian countries** adopted insurance-based UHC but later strengthened **primary and secondary care** as **gatekeepers**.
- **China** and **South Korea** achieved near-universal insurance coverage but faced **high fiscal costs**.

DIMENSIONS OF TRAFFICKING



Appreciation of Victim's Testimony

- The Supreme Court ruled that the **sole testimony of a trafficked minor** is sufficient to sustain a conviction if it appears **credible and convincing**.
- A **trafficked child, especially a minor, must not be treated as an accomplice**, and her testimony must be given the status of an **injured witness**.
- Courts must not reject a victim's statement due to **minor inconsistencies or delays in protest**.

Sensitivity in Judicial Evaluation

- The Court emphasised that judicial appreciation must account for the **socio-economic and cultural vulnerability** of minor victims, especially those from **marginalised or backward communities**.
- It acknowledged that recounting sexual exploitation before authorities often results in **secondary victimisation**.
- Courts were advised to adopt a **realistic, sensitive, and humane approach** while assessing such evidence.

Compliance with Legal Provisions

- The Court held that **procedural requirements under Section 15(2) of the Immoral Traffic (Prevention) Act, 1956** were substantially complied with.

- It concluded that the **trial court and High Court correctly appreciated evidence**, leaving no grounds to doubt the conviction.

Legal Provisions Involved

- The accused were convicted under **Sections 366A (procurement of a minor girl), 373 (buying a minor for prostitution), and 34 (common intention) of the IPC**, read with provisions of the **Immoral Traffic (Prevention) Act, 1956**.

Institutional Response to Child Trafficking

- The **National Commission for Protection of Child Rights (NCPCR)** reported that **964 children** have been rescued since the formation of its **Anti-Child Trafficking Cell**.
- The Commission reaffirmed its commitment to child protection under laws such as the **Juvenile Justice Act, 2015, POCSO Act, 2012, and Right to Education Act, 2009**.

Significance of the Judgment

- The judgment provides **clear judicial guidelines** for handling **child trafficking cases**.
- It strengthens **victim-centric jurisprudence** and reinforces the **constitutional obligation of the State** to protect children.
- The ruling is crucial for improving **conviction rates** and ensuring **sensitive adjudication** in cases involving trafficked minors.

EXPECTED QUESTION FOR UPSC CSE

Descriptive Question

- Q. In the light of the recent Supreme Court judgment, examine how Indian judiciary has strengthened victim-centric jurisprudence in cases of child trafficking. Discuss the challenges in adjudication and suggest measures for more sensitive and effective implementation of child protection laws. (250 Words) (15 Marks)

RUDRESWARA (RAMAPPA) TEMPLE

Why in News: Recently, the Ambassador and Permanent Representative of India to UNESCO–Paris visited the Rudreswara (Ramappa) Temple. The visit was undertaken to review the preservation and conservation efforts carried out by the Archaeological Survey of India (ASI) and the Telangana State Government.



Historical Background

- The Ramappa Temple is located near **Warangal**, at **Palampet village in Mulugu district**, Telangana.
- The temple was constructed in **1213 AD** during the reign of the **Kakatiya dynasty**.
- It was built by **Recherla Rudra Reddy**, a general under **Kakatiya ruler Ganapati Deva**.
- An inscription dates the temple to **1135 Samvat-Saka**, corresponding to **12 January 1214**.
- The temple is named after its **architect Ramappa**, which is a rare feature in Indian temple tradition.

Religious Significance

- The presiding deity of the temple is **Ramalingeswara Swamy**, a form of Lord Shiva.
- Ramappa is the **main Shiva temple** in a larger walled **temple complex**.

Architectural Layout and Design

- The temple stands on a **six-foot-high star-shaped platform**.
- The complex includes **subsidiary temples and associated structures**.
- The gateways display the **distinct Kakatiya architectural style**, unique to the Deccan region.

Construction Materials and Techniques

- The temple is built using **sandstone**, with beams and pillars of **granite and dolerite (basalt)**.
- The **lower portion** of the structure is made of **red sandstone**.
- The **white gopuram** and inner sanctum are built using **lightweight porous bricks**, some of which reportedly float on water.

Sandbox Technique

- The foundation uses the **sandbox technique**, an advanced construction method.
- The pit for the foundation was filled with **sand, lime, jaggery, and karakkaya (black myrobalan fruit)**.
- This sand-filled foundation acts as a **shock absorber during earthquakes**.
- Earthquake vibrations weaken while passing through the sand before reaching the main structure.

Sculptural and Artistic Excellence

- The temple features **intricate carvings** on walls, pillars, and ceilings.
- The **bracket figures** are especially renowned for their grace and detailed workmanship.
- The sculptures retain their **original lustre**, reflecting the skill of Kakatiya artisans.
- European travellers admired the temple, calling it the **“brightest star among medieval Deccan temples.”**

In 2021, the temple was inscribed as a UNESCO World Heritage Site as **“Kakatiya Rudreshwara (Ramappa) Temple, Telangana”**.

UNESCO World Heritage Sites

- UNESCO World Heritage Sites are landmarks or areas recognised for their outstanding cultural, historical, or natural significance.
- These sites are protected under an international treaty administered by UNESCO.
- The selection process is rigorous, ensuring that only sites of Outstanding Universal Value (OUV) are included.
- Such sites represent the shared heritage of humanity rather than belonging only to one nation.
- UNESCO World Heritage Sites may include ancient ruins, monuments, buildings, cities, forests, mountains, or wilderness areas.
- They are broadly classified into cultural, natural, and mixed sites.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

Q. The Ramappa Temple was inscribed as a UNESCO World Heritage Site primarily for its:

- (a) Association with Shaivite religious traditions
- (b) Use of earthquake-resistant construction techniques
- (c) Exemplary Kakatiya architectural and sculptural traditions
- (d) Continuous religious use since the medieval period

Answer: (c)

100 YEARS OF COMMUNIST PARTY OF INDIA (CPI)

Why in News: The Communist Party of India (CPI) completed 100 years in 2025, tracing its foundation to the Kanpur (Cawnpore) Conference on December 26, 1925. The CPI emerged as a major force in India's anti-imperialist struggle, influenced by Marxism and the Russian Revolution (1917).

Global Ideological Background

- The French Revolution (1789) laid the foundation of the Right-Left political divide in Europe.
- Karl Marx developed Communist ideology, arguing that capitalism would collapse due to internal contradictions and be replaced by socialism.
- The Russian Revolution of 1917, led by Vladimir Lenin, inspired Communist movements in colonial countries, including India.

Three Political Strands Behind CPI Formation

1. Revolutionary Diaspora Communists

- M. N. Roy played a key role in representing Indian revolutionaries at the Communist International (Comintern) in 1920.
- The Comintern advised Communists in colonies to prioritise anti-imperialist struggle.
- Indian revolutionaries were also active in Berlin, Kabul, and Central Asia.

2. Indigenous Left Groups in India

Independent Communist groups emerged in:

- Bombay (S. A. Dange)
- Calcutta (Muzaffar Ahmad)

- Madras (Singaravelu Chettiar)
- Lahore (Ghulam Hussain)

These groups sought national coordination for effective political action.

3. Workers' and Peasants' Organisations

- The formation of the All-India Trade Union Congress (AITUC) in 1920 strengthened working-class mobilisation.
- Labour and peasant movements provided a mass base for Indian Communism.

Tashkent vs Kanpur Debate

Tashkent (1920)

- An émigré Communist Party was formed in Tashkent with Comintern approval.
- However, it lacked links with mass movements inside India.

Kanpur (1925)

- The Kanpur Conference formally declared the Communist Party of India.
- The CPI aimed to establish a workers' and peasants' republic, end British rule, and socialise means of production.
- CPI considers Kanpur (1925) as its foundation, while CPI(M) considers Tashkent (1920) as the starting point.

Communists in the Anti-Imperialist Movement

- Communists actively participated in trade union and peasant struggles during the freedom movement.
- They were targeted under colonial laws, notably the Kanpur Bolshevik Conspiracy Case (1923) and the Meerut Conspiracy Case (1929).
- In the 1930s, Communists cooperated with the Congress Socialist Party (CSP) in a United Front.

Role During and After Independence

- During 1942-45, Communists prioritised the anti-Fascist global struggle over the Quit India Movement. They led major peasant movements such as:
 - Tebhaga Movement (Bengal)
 - Telangana Armed Struggle
- After Independence, the movement split between insurrectionary politics and the parliamentary democratic path.
- Communists formed elected governments in Kerala, West Bengal, and Tripura.

ARCHEOLOGISTS DISCOVERED INDIA'S LARGEST CIRCULAR LABYRINTH OF 2,000-YEAR-OLD IN SOLAPUR

Why in News: Archaeologists have discovered India's largest circular stone labyrinth in the Boramani grasslands of Solapur, Maharashtra, dating back over 2,000 years. The discovery provides new insights into ancient Indian engineering, trade networks, and cultural sophistication, particularly during the Satavahana period.

Location and Discovery

The labyrinth was found in a remote grassland ecosystem and was discovered accidentally. The site is located in the Boramani grasslands of Solapur district, Maharashtra.

Physical Features of the Labyrinth

- The structure consists of 15 concentric circular stone circuits carved with precision.
- The labyrinth measures approximately 50 feet by 50 feet, making it the largest circular labyrinth in India.
- Its perfect circular design is unique, as earlier known Indian labyrinths were square or irregular in shape.
- The stone maze has survived for over two millennia, indicating advanced construction skills.

Historical Dating and Builders

- Experts believe the labyrinth dates back to the Satavahana dynasty, which flourished around 2,000 years ago.
- The Satavahanas are known for promoting trade, urbanisation, and cultural exchange in peninsular India.

Link to Indo-Roman Trade

- The labyrinth's design resembles patterns found on ancient Roman coins, indicating Indo-Roman cultural influence.
- Archaeologists believe it may have functioned as a navigational or directional marker for Roman traders.
- The structure likely guided merchants travelling inland from India's western coastal trade routes.
- The finding strengthens evidence of active Indo-Roman trade networks in ancient India.

Archaeological and Cultural Significance

- The labyrinth highlights the engineering precision and planning abilities of ancient Indian societies.
- It suggests that ancient India possessed a high level of urban and commercial sophistication.
- The site reflects cultural exchange between India and distant civilizations, particularly the Roman world.

Conservation and Future Research

- Archaeologists are racing to document, study, and preserve the site.

- The discovery underscores the importance of protecting grassland ecosystems, which often hide archaeological treasures.
- Further research may rewrite aspects of India's ancient trade and cultural history.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

Q. Consider the following statements regarding Indo-Roman trade connections in ancient India:

1. The labyrinth's design resembles patterns found on ancient Roman coins.
2. The structure may have served as a navigational marker for Roman traders moving inland from western coastal trade routes.
3. Indo-Roman trade in ancient India was limited only to coastal regions.

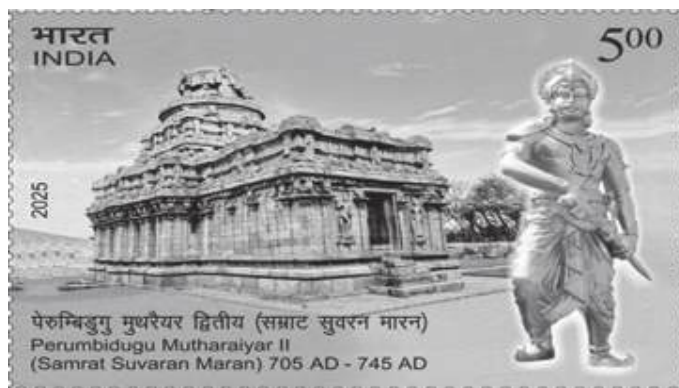
Which of the statements given above is/are correct?

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

(a) Answer

PERUMBIDUGU MUTHARAIYAR II (SUVARAN MARAN)

Why in News: Recently, Vice-President C. P. Radhakrishnan released a commemorative postage stamp in honour of Emperor Perumbidugu Mutharaiyar II (Suvaran Maran). The stamp was released at the Vice-President's Enclave in New Delhi. The initiative is part of the Centre's effort to recognise and honour unsung rulers of ancient India, particularly from Tamil Nadu.



About Perumbidugu Mutharaiyar II

- Perumbidugu Mutharaiyar II, also known as Suvaran Maran, ruled between 705 CE and 745 CE.
- He belonged to the Mutharaiyar dynasty, which ruled parts of central Tamil Nadu.

- The Mutharaiyars were feudatories of the Pallava dynasty.
- As Pallava power weakened, rulers like Perumbidugu Mutharaiyar gained greater autonomy and prominence.

Territorial Extent

- The Mutharaiyars controlled regions including Thanjavur, Pudukkottai, Perambalur, Tiruchirappalli, and areas along the Cauvery river basin.
- Perumbidugu Mutharaiyar is believed to have ruled from Tiruchirappalli for nearly four decades.

Political and Military Role

- Perumbidugu Mutharaiyar fought alongside Pallava king Nandivarman in several battles.
- He earned a reputation as a brave warrior and capable administrator.
- He was also known by the title Shatrubhayankar, meaning one who inspires fear among enemies.

Administrative and Cultural Contributions

- His reign was marked by administrative stability, territorial expansion, and military strength.
- **Inscriptions across Tamil Nadu testify to his contributions to:**
 - Temple endowments
 - Irrigation works
 - Patronage of Tamil literature
- The Mutharaiyars were prominent temple builders, contributing to the religious revival of Hinduism during Pallava times.

Religious and Intellectual Life

- The Pallava period witnessed a revival of Shaivism amid the decline of Jainism and Buddhism.
- Suvaran Maran patronised Shaivite scholars.
- A Jain monk, Vimalachandra, is recorded to have visited his court to engage in debates with Shaiva, Buddhist, Pasupata, and Kapalika scholars.
- This reflects a tradition of intellectual debate and religious tolerance.

Contribution to Temple Architecture

- The Mutharaiyars played a key role in the development of South Indian temple architecture.
- According to historian K. V. Soundara Rajan, they influenced early Chola architecture.
- Initially, they built cave temples and simple structural shrines.
- Later, they constructed complex stone temples, even before the rise of the Vijayalaya Cholas.
- They were active in temple construction up to the early 9th century CE.

Decline of Mutharaiyar Power

- The Mutharaiyars were eventually defeated by Vijayalaya Chola, who captured Thanjavur.
- This marked the rise of the Imperial Cholas in Tamil Nadu.

CONSTITUTION OF INDIA IN THE SANTHALI LANGUAGE

Why in News: The President of India, **Droupadi Murmu**, released the **Constitution of India in the Santhali language**, written in the **OI Chiki script**, marking a significant step towards linguistic and constitutional inclusion. The initiative fulfils a long-standing demand of the **Santhali and Adivasi communities** for access to the Constitution in their mother tongue. The event coincided with the **centenary of the OI Chiki script (1925–2025)**, giving it historical and cultural importance.

Key Details

- The Santhals are the **third-largest tribal community in India**, with a population of over **7 million**.
- Despite their large population, **Santhali was included in the Eighth Schedule only in 2003**.
- The inclusion of Santhali in Schedule VIII was strongly advocated by **Droupadi Murmu** during her tenure as a minister in Odisha.
- **Jaipal Singh Munda**, an Adivasi member of the Constituent Assembly, had demanded recognition of tribal languages and identities during the drafting of the Constitution.
- Publishing the Constitution in Santhali improves **constitutional literacy** and enables Santhali speakers to better understand and defend their rights.
- The step strengthens **Article 29** (protection of cultural and linguistic rights) and **Article 350A** (instruction in mother tongue).
- Recognition of the **OI Chiki script**, invented by **Raghunath Murmu in 1925**, affirms the legitimacy of tribal scripts in governance and knowledge systems.
- The initiative addresses **language hierarchies** that often marginalise tribal communities in democratic participation.
- It reinforces the idea that **language is central to identity, dignity, and access to justice**.
- The move sets a precedent for translating constitutional and legal texts into **other tribal languages and scripts**.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

Q. With reference to the Constitution of India in the Santhali language, consider the following statements:

1. Santhali was included in the Eighth Schedule of the Constitution in the year 2003.
2. The Constitution has been released in Santhali using the Devanagari script.
3. The initiative strengthens the constitutional vision under Articles 29 and 350A.

Which of the statements given above is/are correct?

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

Answer: (a)

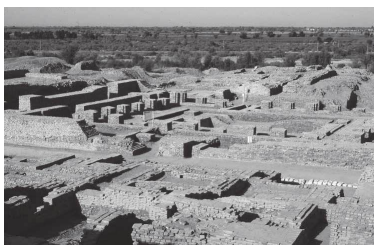
CENTRE ALLOCATES ₹500 CRORE FOR DEVELOPMENT OF HARAPPAN SITE RAKHIGARHI

Why in News: The Central Government has allocated ₹500 crore in the Union Budget for the development of Rakhigarhi, a major site of the Harappan (Indus-Saraswati) civilisation.

- Haryana Chief Minister Nayab Singh Saini announced this during the **second state-level Rakhigarhi Mahotsav**.
- The objective is to transform Rakhigarhi into a **global landmark of historical, cultural, and archaeological importance**.

Key Details

- **Rakhigarhi**, located in Haryana, is among the **largest and most advanced urban centres** of the Harappan civilisation.
- The project aims to place Rakhigarhi prominently on the **national and international tourism map**.



- Plans include the development of a **world-class archaeological museum** and a **dedicated research institute**.
- The government will also focus on **improving tourist facilities and infrastructure** around the site.
- The initiative is expected to **boost local employment** and strengthen the **regional economy**.
- The **Harappan Knowledge Centre** was inaugurated to enhance public awareness of the Indus-Saraswati civilisation.
- Excavations reveal **advanced town planning, sanitation, water management, and industrial activities** in ancient Rakhigarhi.
- Archaeological findings suggest that **women enjoyed respect and equal status** in Harappan society.
- The Haryana government announced **₹21 lakh grants each** for the development of **Rakhigarhi and Rakhi Shahpur villages**.
- Haryana has nearly **100 significant archaeological sites**, including **Farmana, Mitathal, Balu, and Banawali**.
- Efforts are underway to include **Rakhigarhi in the UNESCO World Heritage List**.
- A **modern museum costing ₹22 crore** has already been constructed at Rakhigarhi.
- The initiative aligns with India's broader focus on **civilisational heritage revival** under the leadership of Prime Minister Narendra Modi.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

Q. Consider the following statements regarding Rakhigarhi:

1. Rakhigarhi is located in Haryana and is among the largest urban centres of the Harappan civilisation.
2. Excavations at Rakhigarhi reveal evidence of advanced sanitation and water management systems.
3. Rakhigarhi is already included in the UNESCO World Heritage List.

Which of the statements given above are correct?

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

Answer: (a)

SHAKTI SCHOLARS FELLOWSHIP

Why in News: The National Commission for Women (NCW) has launched the 'SHAKTI Scholars: NCW Young Research Fellowship' to promote **policy-oriented research on women-centric issues** across India, with a focus on translating academic insights into actionable governance outcomes.

About SHAKTI Scholars Fellowship

- **Launched by:** National Commission for Women (NCW)
- **Nature:** Short-term research fellowship
- **Target Group:** Students and young researchers
- **Focus:** Multidisciplinary and policy-relevant research on women's issues

The fellowship aims to bridge the gap between **academic research and public policymaking**, particularly in areas concerning women's empowerment, safety, and rights.

Objectives of the Fellowship

- To generate **evidence-based research inputs** for policymaking related to women.
- To encourage **young scholars** to engage with real-world gender challenges.
- To strengthen **institutional research capacity** on women's issues in India.
- To support **policy innovation** in the areas of protection, participation, and empowerment of women.

Key Areas of Research

The fellowship supports research in the following domains:

Safety and Legal Empowerment

- Women's safety and dignity
- Prevention of gender-based violence
- Legal rights of women and access to justice
- Implementation of the POSH Act

Digital and Cyber Dimensions

- Cyber safety of women
- Online harassment and digital rights

Socio-Economic and Political Participation

- Women's leadership and political participation
- Labour force participation and work-life balance
- Economic empowerment and skill development

Human Development

- Women's health and nutrition
- Education and capacity building
- Socio-cultural practices impacting gender equality

Eligibility Criteria

- Must be an **Indian citizen**
- **Age:** 21 to 30 years
- **Minimum Qualification:** Graduation from a recognised institution
- **Preference:**
 - Postgraduate students
 - Research scholars
 - Candidates with prior research experience
- **Independent researchers** with proven research capability are also eligible

Fellowship Duration and Financial Support

- **Duration:** 6 months
- **Financial Assistance:**
 - Research grant of ₹1 lakh per fellow
- The grant is intended to support data collection, fieldwork, and research-related expenses.

Selection Process

- Applications will be assessed by an **Expert Committee** constituted by the NCW.
- Shortlisted candidates will be called for an **online interaction**.
- Final selection will be based on:
 - Research proposal quality
 - Policy relevance
 - Academic and research credentials

Significance of the Initiative

- Promotes **evidence-based policymaking** in women-related governance.
- Encourages **youth participation** in national gender discourse.
- Strengthens the role of NCW as a **knowledge-driven statutory body**.
- Aligns with constitutional ideals of **gender justice and equality**.

- Supports India's commitments under **SDG 5 (Gender Equality)**.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

Q. Consider the following statements with reference to the 'SHAKTI Scholars: NCW Young Research Fellowship':

1. The fellowship is launched by the National Commission for Women to promote policy-oriented research on women-related issues.
2. It provides financial assistance in the form of a monthly stipend to selected fellows for a period of one year.
3. Research areas under the fellowship include women's safety, cyber security, legal rights, and economic empowerment.

How many of the statements given above are correct?

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

Answer: (d) Only 1

ADI SANSKRITI DIGITAL PLATFORM

Why in News: The Ministry of Tribal Affairs has launched the beta version of the "Adi Sanskriti" Digital Platform, a flagship digital initiative aimed at systematic documentation, preservation, promotion, and monetisation of India's tribal art forms and living cultural traditions.

About Adi Sanskriti Digital Platform

Adi Sanskriti is an integrated digital knowledge, learning, and marketplace platform designed to bridge the gap between tribal communities and the global audience by leveraging digital technologies.



- **Nodal Ministry:** Ministry of Tribal Affairs
- **Nature:** National-level digital cultural platform

- **Target Beneficiaries:** Tribal artisans, practitioners, researchers, students, and consumers
- **Market Integration:** Linked with TRIFED (Tribal Cooperative Marketing Development Federation of India Ltd.) for branding, marketing, and fair trade

The initiative aligns with **Digital India, Aatmanirbhar Bharat, and inclusive growth frameworks.**

Objectives

- To **digitally map, document, and archive** diverse tribal art forms, crafts, oral traditions, rituals, and socio-cultural practices.
- To **prevent cultural erosion** by preserving endangered and lesser-known tribal knowledge systems.
- To create **sustainable livelihood opportunities** through direct digital market access.
- To enable **capacity building and skill transfer** via structured digital learning modules.
- To promote **ethical representation and community ownership** of tribal cultural content.
- To position India's tribal heritage as a component of **global cultural diplomacy.**

Key Components of the Platform

1. **Adi Vishwavidyalaya (Digital Academy)**
 - A dedicated **e-learning vertical** offering 45 **immersive and interactive courses.**
 - Covers tribal visual arts, handicrafts, folk music, dance forms, storytelling, and indigenous knowledge systems.
 - Supports **intergenerational knowledge transmission** within tribal communities.
 - Open-access model ensures learning opportunities for both tribal and non-tribal learner
2. **Adi Sampada (Digital Cultural Repository)**
 - A **comprehensive digital archive** hosting nearly 3,000 **curated resources.**
 - Includes manuscripts, audiovisual records, ethnographic documentation, folklore, and historical narratives.
 - Serves as a **knowledge base for academic research, policy planning, and cultural education.**
 - Helps preserve **intangible cultural heritage**, in line with UNESCO conventions.
3. **Adi Haat (Online Marketplace)**
 - An **e-commerce platform** providing **direct market linkage** to tribal artisans and Self-Help Groups.
 - Integrated with TRIFED's digital marketing ecosystem to ensure:
 - Fair pricing
 - Quality certification
 - Branding and visibility

- Reduces dependence on intermediaries, enhancing **income security and economic autonomy**.

Implementation Framework

- **Participatory and Community-Led Approach:**
 - Content creation involves **Tribal Research Institutes (TRIs)**, subject experts, and nationally recognised tribal artists.
- **Phased and Scalable Rollout:**
 - Progressive addition of learning modules, promotional content, and archival materials.
- **Authenticity and Quality Control:**
 - All content undergoes **institutional validation** by **TRIs** to maintain cultural integrity.
- **Digital Inclusion Focus:**
 - Designed to be accessible on low-bandwidth devices to maximise tribal participation.

Future Roadmap: TribalEx

- In the next phase, **Adi Sanskriti** will be upgraded and rebranded as **'TribalEx'**.
- TribalEx will function as an **advanced e-learning and cultural exchange platform**.
- Planned features include:
 - Expanded course catalogue
 - Multilingual content
 - Interactive learning tools
- Aims to institutionalise tribal knowledge within the **national digital education ecosystem**.

Significance

- Strengthens **digital preservation of indigenous and tribal knowledge systems**.
- Integrates **culture with commerce**, enabling livelihood diversification.
- Empowers tribal communities through **technology-driven inclusion**.
- Reinforces constitutional commitments under **Article 46, Fifth Schedule, and Sixth Schedule**.
- Contributes to **SDG 8 (Decent Work), SDG 10 (Reduced Inequalities), and SDG 11 (Cultural Heritage Protection)**.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

Q. Consider the following statements with reference to the 'Adi Sanskriti' Digital Platform:

1. It is an initiative of the Ministry of Tribal Affairs aimed at preserving tribal art forms and socio-cultural heritage through digital means.
2. The platform provides direct market linkage to tribal artisans by integrating with the Tribal Cooperative

Marketing Development Federation of India (TRIFED).

3. The platform is implemented as a cash-transfer welfare scheme exclusively for Scheduled Tribe households.

How many of the statements given above are correct?

(a) Only one (b) Only two

(c) All three (d) None

(Answer: b (1 and 2 only))

ASPIRE SCHEME: BOOSTING RURAL INNOVATION AND ENTREPRENEURSHIP

Why in News: The Ministry of Micro, Small and Medium Enterprises (MoMSME) is implementing the **ASPIRE Scheme (A Scheme for Promotion of Innovation, Rural Industry, and Entrepreneurship)** to strengthen **entrepreneurship, innovation, and livelihood creation in rural India**, particularly through micro-enterprises and incubation support.

About the ASPIRE Scheme

- **Full Form:** A Scheme for Promotion of Innovation, Rural Industry, and Entrepreneurship
- **Implementing Ministry:** Ministry of Micro, Small and Medium Enterprises (MoMSME)
- **Target Area:** Rural and semi-urban regions
- **Nature:** Entrepreneurship and livelihood promotion scheme



The ASPIRE Scheme aims to create an **enabling ecosystem for rural enterprise development** by integrating **innovation, skill development, and business incubation**.

Objectives of ASPIRE Scheme

- To promote **entrepreneurship and self-employment** in rural areas.
- To generate **sustainable livelihood opportunities** through micro-enterprises.
- To support **wage employment and self-employment** via rural industrial activities.
- To provide **incubation, mentoring, and handholding** to aspiring entrepreneurs.
- To strengthen **rural livelihoods** by converting skills into viable business models.

Key Features of ASPIRE Scheme

- Establishment of **Livelihood Business Incubators (LBIs)** across rural India.

- Black Money (Undisclosed Foreign Income and Assets) Act, 2015

First NUDGE Campaign (November 2024): Outcomes

The initial phase targeted taxpayers flagged under **AEOI data** for non-disclosure of overseas assets in **Assessment Year (AY) 2024–25**.

Key Results

- **24,678 taxpayers** voluntarily revised their returns
- Disclosure of **₹29,208 crore** worth of foreign assets
- Declaration of **₹1,089.88 crore** as foreign-source income

This demonstrated the effectiveness of **nudging over policing** in tax administration.

Second NUDGE Campaign (November 2025): Key Features

- **Targets taxpayers whose:**
 - Foreign assets appear in AEOI data
 - But remain undisclosed in ITRs for **AY 2025–26**
- **Taxpayers are advised to:**
 - Review and revise returns
 - Complete disclosures **on or before 31 December 2025**
- Emphasis on accurate reporting in:
 - **Schedule FA**
 - **Schedule FSI**

The approach aims to prevent penal consequences by enabling **pre-emptive compliance**.

Legal and Statutory Backing

Accurate disclosure of foreign assets and income is **mandatory** under:

- **Income-tax Act, 1961**
- **Black Money (Undisclosed Foreign Income and Assets) and Imposition of Tax Act, 2015**

Non-compliance can attract **stringent penalties and prosecution**, reinforcing the importance of the initiative.

What is Automatic Exchange of Information (AEOI)?

- A global framework for **systematic sharing of financial account data** between tax authorities
- Developed under the aegis of the **OECD**
- **Objective:**
 - Enhance **global tax transparency**
 - Combat **cross-border tax evasion**
 - Track offshore financial holdings of residents

Key AEOI Frameworks

- **Common Reporting Standard (CRS)**
 - Requires financial institutions to report foreign account details
 - Data shared annually between participating jurisdictions
- **Foreign Account Tax Compliance Act (FATCA)**
 - US-led framework for reporting financial accounts of US persons
 - Operates through inter-governmental agreements

Significance of AEOI for India

- Helps detect **undisclosed overseas assets**
- Enables recovery of **lost tax revenues**
- Strengthens **risk-based assessment** and compliance strategy
- Supports initiatives like **NUDGE** by providing reliable third-party data

Governance Significance of the NUDGE Initiative

- Reflects shift towards **technology-driven tax administration**
- Encourages **trust-based and cooperative compliance**
- Reduces litigation and administrative burden
- Aligns with India’s vision of **minimum government, maximum governance**

MINISTRY OF JAL SHAKTI RELEASES DYNAMIC GROUNDWATER RESOURCE ASSESSMENT REPORT 2025

Why in News: The Dynamic Ground Water Resources of India, 2025 assessment provides an updated picture of groundwater status, challenges, and policy responses.

Groundwater Availability and Extraction (2025)

- The **total annual groundwater recharge** in India is estimated at **448.52 Billion Cubic Metres (BCM)**.
- The **annual extractable groundwater resources** are assessed at **407.75 BCM**.
- The **total annual groundwater extraction** for all uses stands at **247.22 BCM**.
- The **Stage of Groundwater Extraction (SoE)** for the country is **60.63%**, indicating moderate national-level stress.

Categorisation of Assessment Units

- Out of **6,762 assessment units** in India, **730 units (10.80%)** are categorised as **over-exploited**, where extraction exceeds recharge.
- **201 units (2.97%)** fall under the **critical** category.
- **758 units (11.21%)** are classified as **semi-critical**.
- **4,946 units (73.14%)** remain in the **safe** category.
- **127 units (1.88%)** are affected by **salinity**.

Groundwater Quality Status

- CGWB monitoring indicates that **groundwater in India is largely potable**, with **localised contamination** in isolated pockets.
- Major contaminants identified include **arsenic, fluoride, nitrate, and heavy metals**, varying across states.
- Annual and periodic groundwater quality reports are issued to enable **timely corrective action**.

Aquifer Mapping and Scientific Studies

- Under the **National Aquifer Mapping and Management Programme (NAQUIM)**, the **entire mappable area of about 25 lakh sq. km** has been covered.
- **District-wise aquifer maps and management plans** have been prepared for **654 districts**, covering **14 principal aquifers** and **42 major aquifers**.

- These plans include both **supply-side and demand-side measures** and have been shared with State and District administrations.

Artificial Recharge and Conservation Planning

- The **Master Plan for Artificial Recharge to Groundwater-2020** proposes construction of around **1.42 crore recharge and rainwater harvesting structures**.
- The plan has the potential to **harvest about 185 BCM of water**, providing a macro-level technical roadmap for states.

Major Government Initiatives

- **Jal Shakti Abhiyan (JSA)**, implemented annually since 2019, converges funds from multiple schemes to promote **water conservation and groundwater recharge**.
- Under JSA, around **1.21 crore water conservation and recharge works** have been completed in the last four years.
- **Jal Sanchay Jan Bhagidari (JSJB)** was launched to promote **community-driven rainwater harvesting** and localised water solutions.
- **Atal Bhujal Yojana** demonstrated **participatory groundwater management** in **80 water-stressed districts across 7 states**, leading to large-scale recharge works and improved irrigation efficiency.
- **Mission Amrit Sarovar** led to the construction or rejuvenation of nearly **69,000 water bodies**, enhancing groundwater recharge.

Regulation of Groundwater Extraction

- The **Central Ground Water Authority (CGWA)** regulates groundwater extraction through **pan-India guidelines notified in 2020**.
- Measures include **mandatory NOCs, environmental compensation charges, penalties for illegal extraction, and restrictions on new industries** in over-exploited areas.

Groundwater Quality and Drinking Water Safety

- CGWB regularly issues **annual reports, half-yearly bulletins, and alerts** on groundwater quality.
- Techniques for constructing **arsenic- and fluoride-safe wells** have been developed and shared with states.
- The **Jal Jeevan Mission (JJM)** supports access to **safe and adequate drinking water** in rural areas.

Impact of Conservation Measures

- Analysis of **post-monsoon 2024 groundwater levels** shows that **54.4% of monitored wells** recorded **rising water levels** compared to the 2019–23 average.
- In **Palghar (Maharashtra)**, **80% of wells** showed rising trends.
- In **Nabarangpur (Odisha)**, **25% of wells** recorded improvement.
- In **Pali and Jodhpur districts (Rajasthan)**, **68.9% and 81.25% of wells**, respectively, showed rising groundwater levels.

Conclusion

The 2025 assessment highlights that while national groundwater stress remains moderate, regional over-exploitation and quality issues persist. Integrated planning, strong public investment, community participation, and regulation are essential for long-term groundwater sustainability in India.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

Q. With reference to the Dynamic Groundwater Resource Assessment Report, 2025, consider the following statements:

1. The total annual groundwater recharge in India is less than the annual extractable groundwater resources.
2. The Stage of Groundwater Extraction (SoE) at the national level indicates moderate groundwater stress.
3. The total annual groundwater extraction is more than half of the annual extractable groundwater resources.

Which of the statements given above are correct?

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

Answer: (b)

CLIMATE CHANGE PERFORMANCE INDEX (CCPI) 2026

Why in News: The CCPI 2026 report states that **no country is doing enough to prevent dangerous climate change**, highlighting a global governance and implementation gap. The findings were released during the **UN COP30 Climate Summit**. The **Climate Change Performance Index (CCPI) 2026** evaluates how effectively countries are mitigating **climate change** and meeting **Paris Agreement goals**.

Key Global Findings

- The **top three ranks remain vacant**, as no country achieved a “**very high**” climate performance rating.
- **Denmark** ranked **4th** with **80.52 points**, emerging as the best-performing country.
- **United Kingdom** ranked **5th** with **70.80 points**, followed closely by **Morocco** at **6th** with **70.75 points**.
- **Chile, Luxembourg, Lithuania, and the Netherlands** featured among the **top 10 performers**.
- **China and the United States** continued to be the **largest global emitters**, underlining their critical role in climate mitigation.
- **Saudi Arabia** ranked **67th (last)** with a score of **11.9**, while **Iran** ranked **66th**, reflecting weak climate performance.

India’s Performance in CCPI 2026

- **India** ranked **23rd**, falling **13 positions** from its previous **10th rank**.
- India’s overall score was **61.31**, placing it in the “**medium performer**” category.
- The report highlighted India as one of the **largest producers of coal, oil, and gas**, which negatively affected its ranking.
- India received **medium scores** in **GHG emissions, climate policy, and energy use**.
- India scored **low in renewable energy performance**, indicating the need for faster transition.

About the Climate Change Performance Index

- The **CCPI** is an **independent monitoring tool** assessing climate mitigation efforts of **63 countries and the European Union**.
- It has been **published annually since 2005**.
- The index is jointly published by **Germanwatch**, the **New Climate Institute**, and **Climate Action Network (CAN) International**.
- The CCPI evaluates countries across **four weighted indicators**:
 - Greenhouse Gas (GHG) Emissions – 40%
 - Renewable Energy – 20%
 - Energy Use – 20%
 - Climate Policy – 20%
- The index measures whether countries are taking **adequate action** to meet **Paris Agreement targets**.

Related Report: Climate Risk Index (CRI)

- The **Climate Risk Index (CRI)** was released by **Germanwatch** during **COP30**.
- The CRI assesses the **human and economic impacts of extreme weather events**.
- **India** ranked **9th** among countries **most affected by climate-related disasters** over the last **30 years (1995–2024)**.

Micro-Enterprises as an Employment Engine

- India has over six crore non-agricultural micro-enterprises, most of which are Own Account Enterprises (OAEs) employing only one person.
- Digital technology—using micro-enterprises employ 78% more workers than non-tech users.
- A 1% increase in credit access leads to a 45% increase in hired workers.
- The report stresses the importance of enabling OAEs to transition into Hired Worker Enterprises (HWEs).
- This transition requires improved access to credit, technology adoption, market linkages, and simplified compliance.

Policy Recommendations: A Dual Strategy

- The report argues that no single reform can resolve India's employment crisis.
- It recommends a dual strategy focusing on labour demand and labour supply.

On the demand side, the report recommends:

- Redirecting Production Linked Incentive (PLI) schemes towards labour-intensive sectors.
- Improving credit access for MSMEs.
- Developing industrial clusters and textile parks, drawing from Tamil Nadu's model.
- Introducing Employment Linked Incentives (ELIs) that reward not just hiring but also worker retention and performance.

On the supply side, the report recommends:

- Integrating vocational education into school curricula under NEP 2020.
- Operationalising the National Credit Framework to enable mobility between vocational and higher education.
- Modernising National Skill Training Institutes (NSTIs).
- Filling instructor vacancies and expanding apprenticeships through public-private partnerships.
- Ensuring industry participation in curriculum design and assessment.

Conclusion

The report emphasises that employment outcomes are shaped by policy choices, not demographic destiny. India still has an opportunity to convert its demographic advantage into productive employment and higher growth, but the window is closing rapidly. Without timely reforms, India risks high growth without sufficient jobs, undermining social stability and long-term development.

EXPECTED QUESTION FOR UPSC CSE

Prelims MCQ

- Q. The report recommends a “dual strategy” to address India's employment challenge. This implies focusing on:
- (a) Rural employment and urban employment separately
 - (b) Formalisation and informalisation simultaneously
 - (c) Labour demand and labour supply together
 - (d) Manufacturing and services growth exclusively

(c) Answer

10TH EDITION OF SWACHH SURVEKSHAN

Why in News: The Ministry of Housing and Urban Affairs (MoHUA) has launched the 10th edition of Swachh Survekshan (SS) 2025–26, marking a decade of the world's largest urban cleanliness survey under the Swachh Bharat Mission–Urban (SBM-U). The initiative aims to accelerate the vision of Garbage Free Cities by strengthening citizen participation, transparency, and institutional accountability.

Theme of Swachh Survekshan 2025–26

- The theme for SS 2025–26 is “Swacchata Ki Nayi Pehel – Badhayein Haath, Karein Safai Saath”, which emphasises collective responsibility and citizen-led cleanliness.

Key Features of the 10th Edition

- Swachh Survekshan has evolved from an annual ranking exercise into a continuous management and governance tool for urban cleanliness.
- The survey coverage has expanded from 73 Urban Local Bodies (ULBs) in 2016 to nearly 4,900 ULBs in 2024, reflecting its growing scale and impact.
- Citizen perception and engagement have been given significantly higher weightage in the assessment framework.

Strengthening Citizen Voice

- Citizens can now provide feedback round the year, making participation continuous rather than event-based.
- Multiple digital platforms such as the Vote For My City App and Portal, MyGov App, Swachhata App, and QR codes have been integrated.
- Citizen validation scores have been increased considerably, reinforcing people's role as key stakeholders in urban governance.

Expanded Geographic Scope

- The assessment will now include all river towns across India, expanding beyond only Ganga towns.
- A separate assessment matrix has been introduced for coastal cities, bringing them formally under the Swachh Survekshan framework.

New Award Categories and Mentorship Framework

- A new award category has been introduced for “Swachh Shehar Jodi (SSJ)”, recognising mentor–mentee city pairs.
- Under the SSJ programme, 72 mentor cities and 200 mentee cities have signed MoUs to promote peer learning and replication of best practices.
- Awards will be based on the average performance of the city pairs, across different population categories.

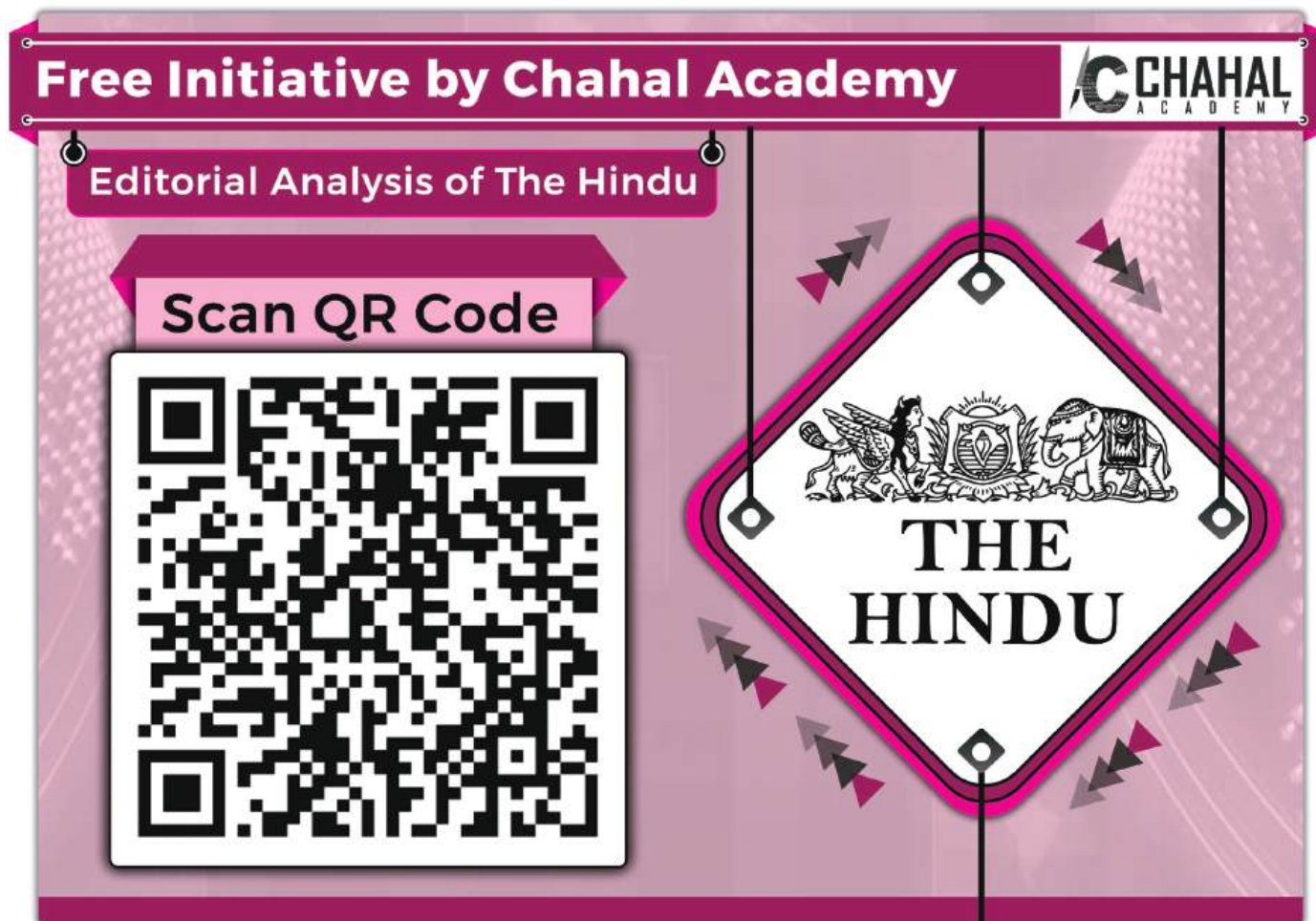
Robust and Transparent Assessment Mechanism

- A tightly monitored, protocol-driven assessment framework has been introduced to ensure quality and credibility.

- A national oversight team and a dedicated single-point-of-contact officer for each State/UT will supervise the process.
- Over 3,000 trained field assessors will conduct a 45-day, GPS-enabled, on-ground survey across all ULBs.
- The entire process is fully digital, covering evidence submission, verification, and quality checks.

Significance

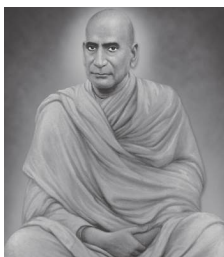
- Swachh Survekshan embodies the spirit of Jan Andolan, transforming cleanliness into a shared national aspiration.
- A strong public feedback and grievance redressal ecosystem enhances accountability and civic pride.
- The initiative reinforces “Swabhav Swachhata, Sanskaar Swachhata”, making cleanliness a sustained behavioural practice rather than a one-time campaign.



PERSONALITIES IN NEWS

SWAMI SHRADDHANAND SARASWATI

Why in News: The Union Home Minister paid tribute to Swami Shraddhanand Saraswati on his martyrdom day (23 December), recalling his role as a freedom fighter, educationist, and social reformer who seamlessly blended spirituality with nationalism.



Who was Swami Shraddhanand Saraswati?

- Swami Shraddhanand Saraswati (1856–1926) was a prominent Indian nationalist, Arya Samaj leader, and social reformer who made lasting contributions to India's freedom struggle, educational reform, and social equality.
 - **Birth:** 1856
 - **Birthplace:** Talwan village, Jalandhar district, Punjab
 - **Original Name:** Munshi Ram Vij
 - **Later Known As:** Mahatma Munshi Ram, Swami Shraddhanand Saraswati
 - **Death:** Assassinated on 23 December 1926 in Delhi

Role in Educational Reform

One of Swami Shraddhanand Saraswati's most enduring legacies lies in the field of nationalist education.

- In 1902, he established the Gurukul at Kangri, near Haridwar.
- This institution later evolved into Gurukul Kangri University, one of the earliest centres of indigenous education in modern India.
- The Gurukul model emphasised:
 - Character building
 - Moral and spiritual values
 - Physical training
 - Integration of Vedic knowledge with modern education

Social Reform and the Shuddhi Movement

- Swami Shraddhanand Saraswati played a significant role in social reform initiatives of the Arya Samaj, particularly during the early 20th century.
 - He was a leading figure in the Shuddhi Movement of the 1920s.

- The movement aimed at:
 - ◆ Re-conversion of individuals who had left Hinduism
 - ◆ Social integration and upliftment
 - ◆ Countering religious fragmentation
- His work focused on social equality, unity, and reform from within society, rather than confrontation.

Contribution to the Indian Freedom Struggle

- Swami Shraddhanand Saraswati actively participated in the anti-colonial struggle and aligned himself with the broader national movement.
 - Took part in the Rowlatt Satyagraha (1919) against repressive colonial laws.
 - Actively supported the Non-Cooperation Movement (1920–22) launched under Mahatma Gandhi.
 - Used his influence to mobilise masses through:
 - ◆ Public speeches
 - ◆ Nationalist writings
 - ◆ Constructive social work
- He believed that political freedom was inseparable from social and moral regeneration.

Martyrdom and Legacy

- Swami Shraddhanand Saraswati was assassinated on 23 December 1926 in Delhi.
- He is remembered as a karmayogi, a selfless worker who dedicated his life to:
 - National service
 - Social reform
 - Educational transformation
- His life symbolised the fusion of spirituality, nationalism, and social responsibility.

Core Values and Ideals

- Social equality and justice
- Nationalism rooted in ethical values
- Educational reform through indigenous institutions
- Harmony between religion and social progress

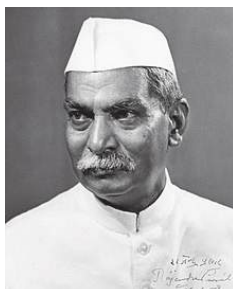
Significance

- Illustrates the role of religious reformers in the freedom struggle

- Highlights the importance of **education as a tool of nation-building**
- Demonstrates the intersection of **social reform, nationalism, and ethics**

DR. RAJENDRA PRASAD

Why in News: The Vice President of India, Shri C. P. Radhakrishnan, paid tribute to **Dr. Rajendra Prasad**, India's first President, on the occasion of his **birth anniversary (December 3)**, recalling his contributions to India's freedom struggle and constitutional governance.



Early Life and Education

- **Born:** December 3, 1884
- **Place:** Ziradei, Bihar
- Dr. Rajendra Prasad was known from an early age for his **academic brilliance and disciplined temperament**.
- He pursued higher education at the **University of Calcutta**, where he excelled in law and humanities.

Professional Career and Entry into Public Life

- Dr. Prasad began his career as a **lawyer**, earning a reputation for his **sharp legal acumen and integrity**.
- Inspired by the **Indian national movement**, he gave up a flourishing legal practice to dedicate himself fully to the cause of independence.
- His ideological alignment with **Mahatma Gandhi** shaped his commitment to **truth, simplicity, and mass mobilisation**.

Role in the Indian Freedom Struggle

- A close associate of Gandhi, Dr. Rajendra Prasad actively participated in:
 - Non-Cooperation Movement
 - Civil Disobedience Movement
- In **1906**, he played a pioneering role in establishing the **Bihari Students Conference**, which later emerged as a **crucial platform for nationalist mobilisation** in eastern India.
- He endured imprisonment multiple times, reflecting his **sacrifice and dedication** to the freedom struggle.

Leadership in the Constituent Assembly

- After Independence, Dr. Rajendra Prasad was elected as the **President of the Constituent Assembly of India**.
- As the presiding authority, he:
 - Ensured **orderly deliberations and democratic procedures**
 - Encouraged **consensus-building among diverse ideological viewpoints**

- He also served as the **Chairman of the Committee on Food and Agriculture**, contributing to early policy discussions on food security and agrarian reforms.
- His leadership played a crucial role in ensuring the **legitimacy, inclusiveness, and moral authority** of the Constitution.

First President of India (1950–1962)

- On **January 26, 1950**, Dr. Rajendra Prasad assumed office as the **first President of the Republic of India**.
- **Key Features of His Presidency:**
 - Upheld the **dignity and neutrality** of the constitutional office
 - Maintained a delicate balance between the **President and the Council of Ministers**
 - Acted as a **constitutional guardian**, not a political rival
- He is the **only President of India to have completed two full terms**.
- His **12-year tenure (1950–1962)** remains the **longest presidency** in Indian history.

Later Life and Legacy

- After demitting office, Dr. Prasad withdrew from public life and resided at **Sadaqat Ashram, Patna**.
- He passed away on **February 28, 1963**.
- His life continues to inspire values of:
 - Constitutional morality
 - Public service with humility
 - Ethical leadership

Historical and Constitutional Significance

- Symbolised the **continuity between the freedom struggle and constitutional governance**.
- Set early conventions for the **non-partisan role of the President**.
- Strengthened India's democratic foundations during a **critical phase of nation-building**.

EXPECTED QUESTIONS FOR UPSC CSE

Prelims MCQ

Q. Consider the following statements regarding Dr. Rajendra Prasad:

1. He served as the President of the Constituent Assembly of India.
2. He was the only President of India to complete two full terms in office.
3. He chaired the Drafting Committee of the Indian Constitution.

How many of the statements given above are correct?

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

Answer: (b) Only two

Descriptive Question

Q. "Dr. Rajendra Prasad played a crucial role in ensuring continuity between India's freedom struggle and its constitutional democracy." Discuss his contributions as a nationalist leader and as the first President of India. (150 Words) (10 Marks)

VINOD KUMAR SHUKLA

Why in News: Renowned Hindi writer and poet **Vinod Kumar Shukla** passed away at the age of 88 in Raipur, Chhattisgarh.



Key Details

- Vinod Kumar Shukla was born on **January 1, 1937**, in **Rajnandgaon** (now in Chhattisgarh).

- His literary career spanned **over five decades**, covering **poetry, short stories, novels, and essays**.
- His writing style focused on the **ordinary and the marginal**, giving philosophical depth to everyday experiences.
- His first poetry collection, **Lagbhag Jai Hind (1971)**, broke away from dominant nationalist rhetoric of the time.
- His novel **Naukar Ki Kameez (1979)** explored themes of **class, dignity, and social hierarchy** and was adapted into a film by **Mani Kaul**.
- His most celebrated work, **Deewar Mein Ek Khirkee Rahati Thi**, won the **Sahitya Akademi Award in 1999**.
- His works frequently used **walls, windows, rooms, and roads as metaphors** to reflect inner lives and social realities.
- Shukla's characters were usually **non-heroic**, representing endurance and quiet resistance rather than overt rebellion.
- He lived and worked largely in **Chhattisgarh**, away from major literary centres, shaping his grounded and ecological perspective.
- In 2023, he became the **first Indian writer to receive the PEN/Nabokov Lifetime Achievement Award**.

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BONDI BEACH

Why in News: Bondi Beach in Sydney, one of Australia's most iconic landmarks, became the site of a horrific attack on the first day of Hanukkah, when two gunmen opened fire on a Jewish gathering.



Key Details

- **Bondi Beach** is a world-famous ocean beach and suburb in Sydney, renowned for its surf culture, tourism, and public recreation.
- It is located 7 km east of Sydney's Central Business District, within the Waverley Council local government area.
- The beach is **crescent-shaped**, faces the **Tasman Sea**, and is popular for **surfing and swimming**.
- Bondi Beach has **cultural prominence**, being featured in global TV series such as *Bondi Rescue* and *Bondi Vet*.
- The area has a **historically multicultural population**, including a strong **Jewish community** and migrant heritage.
- It is part of the **traditional lands of the Bidjigal, Birrabirragal, and Gadigal Aboriginal peoples**.
- The name "Bondi" comes from the **Dharawal language**, meaning a loud thud, referring to **waves crashing on rocks**.

VEER BAL DIWAS

Why in News: **Veer Bal Diwas** is observed annually on **26 December** to honour the supreme sacrifice of **Sahibzada Zorawar Singh (9 years)** and **Sahibzada Fateh Singh (7 years)**, the younger sons of **Guru Gobind Singh Ji**, the tenth Sikh Guru. The Government of India declared this day in **2022** to commemorate their courage, faith, and martyrdom.

Historical Background

- In **1705**, the Mughal forces laid siege to **Anandpur Sahib**.
- **Guru Gobind Singh Ji**, along with his family and followers, was forced to leave the fort.
- During this period of chaos, his two younger sons were **captured by Mughal officials** and produced before **Wazir Khan**, the Mughal governor of Sirhind.
- The Sahibzadas were **pressured to convert to Islam**, which they **bravely refused**.

- As punishment, they were **bricked alive** at Sirhind around **26 December 1705**.
- Their martyrdom stands as one of the most powerful examples of **religious freedom, moral courage, and sacrifice**, especially at such a young age.

Significance of Veer Bal Diwas

- **Symbol of Courage and Faith:** The Sahibzadas chose martyrdom over abandoning their beliefs, inspiring generations.
- **Upholding Religious Freedom:** Highlights resistance against forced religious conversion.
- **Youth Inspiration:** Emphasises that age is no barrier to courage, integrity, and moral strength.
- **Cultural and National Integration:** Reinforces Sikh contributions to India’s freedom, values, and pluralistic ethos.

PRADHAN MANTRI RASHTRIYA BAL PURASKAR (PMRBP)

Why in News: The Pradhan Mantri Rashtriya Bal Puraskar (PMRBP) was conferred in **December 2025** by **President Droupadi Murmu** in New Delhi.

- The awards were given on the occasion of **Veer Bal Diwas (26 December)**, which honours the courage and sacrifice of Sahibzadas of Guru Gobind Singh Ji.
- The PMRBP recognises **exceptional achievements of children** who display courage, compassion, innovation, and excellence despite adverse circumstances.
- The event highlighted the role of children as **active contributors to society**, not merely beneficiaries of welfare.

Key Details

- The **Pradhan Mantri Rashtriya Bal Puraskar** is conferred **annually** to recognise outstanding achievements of children in the age group of **5–18 years**.
- The award is given across **six categories: Bravery, Social Service, Environment, Sports, Art & Culture, and Science & Technology**.
- In **2025, 20 children** from different parts of the country were honoured for exemplary achievements.
- The awards underscore the role of **children as agents of social change**, even in difficult personal and social circumstances.
- PMRBP aligns with India’s constitutional values of **dignity, equality, and human potential**, as well as child-centric governance.
- The initiative promotes a narrative of **empowerment over victimhood**, encouraging youth participation in nation-building.

PRESIDENT DROUPADI MURMU UNDERTAKES SUBMARINE SORTIE ON INS VAGHSHEER

Why in News: President **Droupadi Murmu** undertook an operational **submarine sortie onboard INS Vaghsheer** off the western coast of India. With this, she became the **second President of India** to experience a submarine voyage, after **Dr APJ Abdul Kalam** in 2006.

Key Details

- President Droupadi Murmu is the **Supreme Commander of the Indian Armed Forces**.
- She embarked on the **Kalvari-class submarine INS Vaghsheer** from the **Karwar Naval Base, Karnataka**.
- **INS Vaghsheer** is the **sixth and final submarine** inducted under the **Project-75 Scorpene programme**.
- The submarine was **commissioned into the Indian Navy in January 2025**.
- The Kalvari-class submarines are a key part of India’s **underwater warfare capability**.
- **INS Vaghsheer** is equipped with **wire-guided torpedoes, anti-ship missiles, and advanced sonar systems**.
- The Project-75 programme supports **indigenous defence manufacturing and naval modernisation**.
- The event symbolises the **strengthening of India’s maritime security and strategic deterrence**.

PUNJAB GRANTS ‘HOLY CITY’ STATUS TO AMRITSAR, ANANDPUR SAHIB AND TALWANDI SABO

Why in News: The Punjab government has granted “Holy City” status to **Amritsar, Anandpur Sahib, and Talwandi Sabo** through an official notification.

- The decision follows a **unanimous resolution passed by the Punjab Legislative Assembly** during a special session at Anandpur Sahib.
- The session marked the **350th martyrdom anniversary of Guru Tegh Bahadur**, the ninth Sikh Guru.
- The Punjab Chief Minister stated that the move aims to develop these cities as **cultural and religious centres**.

Key Details

- The three cities host **three of the five Sikh Takhts**, making them central to Sikh religious life.
- **Amritsar** houses the **Akal Takht**, the supreme Sikh temporal authority, established in **1606 by Guru Hargobind**.
- **Anandpur Sahib** is home to **Takht Keshgarh Sahib**, where **Guru Gobind Singh founded the Khalsa in 1699**.

- **Talwandi Sabo** houses **Takht Damdama Sahib**, where Guru Gobind Singh prepared the revised version of the **Guru Granth Sahib**.
- The remaining Takhts are **Takht Patna Sahib (Bihar)** and **Takht Hazur Sahib (Maharashtra)**.
- The **Holy City** status bans the sale of **liquor, tobacco, cigarettes, and meat** within specified municipal limits.

US STRIKES IN NIGERIA OVER ALLEGED PERSECUTION OF CHRISTIANS

Why in News: US President **Donald Trump** announced US airstrikes in northwest Nigeria. The strikes targeted Islamic State-linked militants (ISWAP) and were justified by allegations of persecution of Christians.

Nigeria is a **secular country**, with approximately **53% Muslims**, **45% Christians**, and a small population following traditional religions.

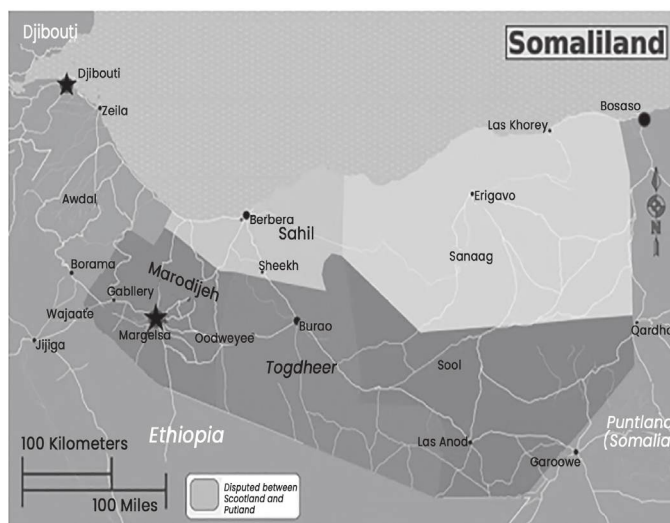


Key Details

- **Niger** is a **landlocked country** in western Africa.
- It is **bounded** by **Algeria (NW)**, **Libya (NE)**, **Chad (E)**, **Nigeria and Benin (S)**, and **Burkina Faso and Mali (W)**.
- The **capital** of Niger is **Niamey**.
- The country is named after the **Niger River**, which flows through its **southwestern territory**.

ISRAEL'S RECOGNITION OF SOMALILAND

Why in News: Israel became the **first country to formally recognise Somaliland** as an independent and sovereign state.



Key Details

- Somaliland is a **self-declared republic** that emerged after the collapse of Somalia in 1991.
- It claims continuity with **British Somaliland**, which briefly existed as an independent state in 1960 before merging with Somalia.
- Somaliland has a population of **nearly six million** and maintains its own **currency, passports, police, and administration**.
- Despite political stability compared to Somalia, it has remained **unrecognised internationally** until Israel's move.
- Israel views the recognition as aligned with the spirit of the **Abraham Accords**, which seek to normalise ties with Muslim-majority regions.
- The region's **strategic location along the Gulf of Aden** makes it geopolitically significant.
- **Berbera Port**, located near the Red Sea–Arabian Sea junction, lies on a crucial **global shipping route**.
- The UAE already operates a **military port and airstrip** in Berbera, highlighting its security importance.
- Somaliland's proximity to **Yemen and Houthi-controlled areas** makes it valuable for intelligence and security operations.
- Israeli strategic assessments suggest Somaliland could serve as a **forward base for monitoring Houthi activities** and regional maritime security.
- Recognition may also help Israel and its allies **counter China's growing influence in Africa**, especially given China's military base in Djibouti.
- Somaliland's recognition of **Taiwan** places it at odds with China's One China policy, adding to its geopolitical relevance. The decision risks **regional instability**, as Somalia considers Somaliland an integral part of its territory. The move highlights how **unrecognised states can become arenas of strategic competition** in global geopolitics.

INTERNATIONAL DAY OF PERSONS WITH DISABILITIES (IDPD) 2025

Why in News: The International Day of Persons with Disabilities (IDPD) is observed annually on December 3 to raise awareness about the challenges faced by persons with disabilities (PwDs).

Key Details

- The day was first celebrated in 1992, following **United Nations General Assembly Resolution 47/3**, reflecting the global commitment to promoting disability rights.
- The **Convention on the Rights of Persons with Disabilities (CRPD) 2006** provides an international framework for ensuring **equality, non-discrimination, and full participation** of PwDs.
- IDPD supports the implementation of the **2030 Sustainable Development Goals (SDGs)** by emphasizing inclusive, equitable, and sustainable development for all.
- In 2025, the **International Day of Persons with Disabilities falls on Wednesday, December 3**.
- The main objective of the day is to **highlight the experiences of persons with disabilities and promote their political, social, economic, and cultural inclusion**.
- The **CRPD of 2006** provides a legal and rights-based framework for the protection and empowerment of persons with disabilities.
- The **theme for 2025 is “Fostering disability-inclusive societies for advancing social progress”**, which emphasizes the integration of persons with disabilities into all aspects of society.
- The observance is significant as it **encourages awareness, policy reforms, social justice, and inclusive development** at both global and national levels.

FIVE PRODUCTS FROM TAMIL NADU GETS GI TAG

Why in News: Five products from Tamil Nadu — **Woraiyur cotton sari, Kavindapadi nattu sakkarai, Namakkal makkal pathirangal (soapstone cookware), Thooyamalli rice, and Ambasamudram choppu saman (wooden toys)** — have been granted **Geographical Indication (GI) tags**, highlighting the state’s rich **craftsmanship and agricultural heritage**. With these additions, Tamil Nadu now has a total of **74 GI-tagged products**, reflecting its **diverse traditional skills and regional specialties**.

GI tags are granted to products that have a **specific geographical origin** and possess **unique qualities, reputation, or characteristics** attributable to that location.

Key Details

- **Woraiyur Cotton Sari:** These saris are woven in **Manamedu, Tiruchi**, using **cotton yarn from Coimbatore**

and **Rajapalayam** and dyes from **Jayamkondam**. They are known for their **distinctive craftsmanship and quality**.

- **Kavindapadi Nattu Sakkarai:** This **jaggery powder from Erode district** is made by **mechanically crushing sugarcane and slowly evaporating the juice**. The region benefits from the **Lower Bhavani Project canal**, which irrigates its sugarcane fields.
- **Thooyamalli Rice:** A **traditional sambha-season rice variety**, Thooyamalli takes **135–140 days to grow**. It is recognized for its **premium quality and aroma**, with support for GI registration from **Tamil Nadu State Agricultural Marketing Board and NABARD**.
- **Namakkal Makkal Pathirangal (Soapstone Cookware):** Known locally as **kalchatti**, this **soapstone cookware** has been a **staple in South Indian kitchens for generations**. The craft traces back to ancient times, and the GI tag was obtained after applications by **Namakkal Stone Products Manufacturers and MSME Technology Development Centre**.
- **Ambasamudram Choppu Saman:** These **wooden toys**, including miniature kitchen utensils, tables, and chairs, are handcrafted in **Ambasamudram, Tirunelveli district**. The craft dates back to the **18th century**, using **indigenous woods like Manjal Kadamba, teak, and rosewood**, and promotes **creativity and imagination in children**.

100 VILLAGES TO BE TSUNAMI-READY

Why in News: India is expanding the **UNESCO–Intergovernmental Oceanographic Commission (IOC) ‘Tsunami Ready’ programme** across its coastline. The initiative aims to strengthen **community-level preparedness** against tsunamis and other coastal hazards in the **Indian Ocean region**. With this move, **India will become the first country in the Indian Ocean region to have over 100 tsunami-ready villages**.

Key Details

- **Tsunami Ready** is a **voluntary, community-based preparedness programme** coordinated by **UNESCO–IOC**.
- The programme focuses on **public awareness, hazard preparedness, evacuation planning, and early warning systems**.
- **Tsunami-ready villages are certified** based on criteria such as:
 - High community awareness about tsunami risks.
 - Hazard mapping and publicly displayed evacuation maps.
 - Functional **24-hour tsunami warning systems**.
 - Regular participation in **mock drills** and emergency response training.

- Certification is awarded by UNESCO's Intergovernmental Oceanographic Commission (IOC).
- India currently has 24 certified tsunami-ready villages across six coastal districts.
- Odisha plans to add 72 more villages, significantly increasing India's total count.
- Other coastal States and UTs such as Gujarat, Kerala, Andhra Pradesh, and Andaman & Nicobar Islands have identified villages for inclusion.
- Kerala has proposed nine coastal villages, with certification expected by March–April 2026.
- The initiative is coordinated in India by the Indian National Centre for Ocean Information Services (INCOIS), Hyderabad.
- INCOIS operates the Indian Tsunami Early Warning Centre (ITEWC), which monitors global earthquakes and issues tsunami warnings for the Indian Ocean region.
- The programme also enhances preparedness for cyclones and similar coastal hazards, not just tsunamis.
- The initiative highlights the importance of community participation and proactive involvement of State and UT governments in disaster risk reduction.

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Daily quiz of 10 MCQs from The Hindu and Indian express

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THE HINDU

The Indian EXPRESS

DECEMBER - 2025 - DAILY MCQs FROM THE HINDU & INDIAN EXPRESS

DAILY MCQs PRACTICE

Q1. Consider the following statements:

Statement 1: The post of Deputy Chief Minister is not mentioned in the Constitution of India.

Statement 2: A Deputy Chief Minister is appointed purely on political considerations, usually to maintain coalition balance or intra-party power-sharing.

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

- (a) Both statement 1 and Statement 2 are correct and statement 2 explains statement 1
- (b) Both statement 1 and Statement 2 are correct and statement 2 does not explain statement 1
- (c) Statement 1 is correct, but Statement 2 is incorrect
- (d) Statement 2 is correct, but Statement 1 is incorrect

Q2. Who appoints the Lieutenant Governor of a Union Territory?

- (a) Prime Minister
- (b) Chief Justice of India
- (c) President of India
- (d) Parliament

Q3. Consider the following regarding sectoral performance in India during Q2 of FY 2024–25:

1. Financial, real estate and professional services were the main contributors to services-sector expansion.
2. Government consumption expenditure slowed down GDP growth in the first half of the year.
3. Private consumption and investments weakened significantly during the period.

Which of the above statements is/are correct?

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

Q4. Consider the following statements:

Statement I: Antimicrobial Resistance (AMR) in India is rising mainly due to overuse and misuse of antibiotics in hospitals.

Statement II: A national survey found that nearly 75% of hospitalized patients were prescribed antibiotics, with more than half being prophylactic.

Statement III: The majority of antibiotics prescribed in Indian hospitals belong to the WHO "Access" category, which poses minimal risk for AMR.

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

- (a) Both Statement II and Statement III are correct and both of them explain Statement I
- (b) Both Statement II and Statement III are correct but only one of them explains Statement I
- (c) Only one of the Statements II and III is correct and that explains Statement I
- (d) Neither Statement II nor Statement III is correct

Q5. Which of the following statements are correct in respect of MQ-9 Reaper drone?

1. It is a medium-altitude, long-endurance (MALE) unmanned aerial vehicle primarily used for intelligence, surveillance and reconnaissance (ISR).
2. It can carry precision-guided munitions, including Hellfire missiles and laser-guided bombs.
3. It is developed by Israel Aerospace Industries (IAI).

Select the answer using the code given below:

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

Q6. Which of the following is *not* a vertical under PMAY-U?

- (a) Credit Linked Subsidy Scheme (CLSS)
- (b) Affordable Housing in Partnership (AHP)
- (c) In-situ Slum Redevelopment (ISSR)
- (d) Public Distribution System (PDS)

Q7. Which of the following statements are correct in respect of MQ-9 Reaper drone?

1. It is a medium-altitude, long-endurance (MALE) unmanned aerial vehicle primarily used for intelligence, surveillance and reconnaissance (ISR).
2. It can carry precision-guided munitions, including Hellfire missiles and laser-guided bombs.
3. It is developed by Israel Aerospace Industries (IAI).

Select the answer using the code given below:

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

Q8. Consider the following with reference to RBI's Repo Rate:

1. The repo rate is the rate at which the Reserve Bank of India lends short-term money to commercial banks.
2. An increase in the repo rate generally makes borrowing more expensive and helps reduce inflationary pressures.
3. A decrease in the repo rate leads to a reduction in the money supply in the economy.

How many of the above is/are incorrect?

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

Q9. Which of the following statements are correct in respect of K.S. Puttaswamy (2017) judgment?

1. Right to Privacy was declared a Fundamental Right under Article 21.
2. The judgment held that Aadhaar is unconstitutional and must be discontinued.
3. The Court stated that privacy includes informational, bodily, and decisional autonomy.

Select the answer using the code given below:

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

Q10. The Aravalli Range is primarily located in which Indian states?

- (a) Rajasthan, Haryana & Gujarat
 (b) Rajasthan & Madhya Pradesh
 (c) Gujarat & Maharashtra
 (d) Uttar Pradesh & Haryana

Q11. Consider the following with reference to the National Legislative Index (NLI):

1. It aims to provide a state-wise benchmarking system to evaluate legislative productivity, transparency, and innovation.
2. It prescribes the content of legislation and policy priorities for state legislatures.
3. It encourages the adoption of digital practices and participatory mechanisms in legislative functioning.
4. The NLI aligns with the vision of "One Nation, One Legislative Platform" for digital integration of legislatures.

How many of the above statements is/are incorrect?

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

Q12. Consider the following statements regarding the Rock Eagle Owl (*Bubo bengalensis*) and its conservation:

1. It is a Schedule I species under the Wildlife Protection Act, 1972.
2. It prefers nesting in rock crevices and hilly scrub forests.
3. Human intervention, such as relocating its nest, is usually discouraged as the bird may abandon the eggs.
4. The species is listed as "decreasing" on the IUCN Red List.

Which of the statements given above are correct?

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

Q13. Which of the following statements are correct in respect of Ganga River?

1. The Ganga originates from the Gangotri Glacier as the river Bhagirathi.
2. The Ganga enters the plains of North India at Rishikesh-Haridwar.
3. The Ganga forms the world's largest delta before draining into the Bay of Bengal.

Select the answer using the code given below:

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

Q14. The City Prosperity Index (CPI) was developed by UN-Habitat to:

- (a) Rank countries based on GDP
- (b) Measure the multidimensional prosperity of cities
- (c) Compare national poverty levels
- (d) Track rural development goals

Q15. Consider the following with reference to LandSpace, the Chinese private space company:

1. LandSpace was founded in 2015 and is headquartered in Beijing.
2. Its Zhuque-2 rocket was the first in the world to use methane and liquid oxygen as propellants.
3. The Zhuque-3 rocket has successfully demonstrated full reusability.

How many of the above statements is/are incorrect?

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

Q16. The Department for Promotion of Industry and Internal Trade (DPIIT) aims to:

- (a) Eliminate all regulations to ease business operations
- (b) Reduce compliance burden while ensuring orderly growth and public safety
- (c) Focus only on large enterprises for policy inputs
- (d) Implement industrial reforms without any consultative process

Q17. Which of the following statements are correct in respect of Kuno National Park?

1. The park received the status of National Park in 2018.
2. It is a crucial corridor for leopards, sloth bears, and wolves.
3. It lies close to the Ranthambore Tiger Reserve, forming a natural wildlife linkage.

Select the answer using the code given below:

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

Q18. The Central Bureau of Investigation (CBI) was originally set up under which organisation?

- (a) Special Police Establishment (SPE)
- (b) Intelligence Bureau

(c) Home Department

(d) Central Secretariat

Q19. The Stockholm Declaration on Road Safety, adopted at the 3rd Global Ministerial Conference on Road Safety in 2020, set global targets for road safety. Consider the following statements:

1. It aims to reduce road deaths and injuries by 50% by 2030.
2. It aims to achieve zero road deaths in all signatory countries by 2030.

Which of the statements given above is/are correct?

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

Q20. Which of the following statements about the recently discovered galaxy *Alaknanda* is correct?

- (a) It is a small, irregular galaxy that formed late in the universe's history.
- (b) It has a mass comparable to the Milky Way and existed when the universe was about one-fifth of its current size.
- (c) Its stars are over 10 billion years old, indicating it formed before the Big Bang.
- (d) It is completely dust-free, contrary to star formation theories.

Q21. Which of the following statements are correct in respect of Indian coal reserves?

1. Jharkhand has the largest coal reserves in India.
2. Most of India's lignite reserves are found in Tamil Nadu.
3. Gondwana coal is younger than Tertiary coal.

Select the answer using the code given below:

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

Q22. Consider the following with reference to Congo Basin:

1. The Congo Basin contains the world's second-largest rainforest after the Amazon.
2. Lake Tanganyika lies entirely inside the DRC.
3. The DRC lies within the equatorial climate zone.

How many of the above is/are correct?

(a) Only one (b) Only two

(c) All three (d) None

Q23. Consider the following statements regarding DRDO's recent fighter pilot ejection test:

1. The test used a high-speed rocket sled system to simulate emergency ejection conditions for fighter pilots.
2. It was conducted solely by DRDO, without collaboration from any other agencies.

Which of the statements given above is/are correct?

(a) 1 only (b) 2 only

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

Q24. Consider the following with reference to the RBI's recent monetary policy and the "goldilocks" phase in India:

1. The term "goldilocks" scenario refers to **low inflation and robust economic growth**.
2. The RBI reduced the repo rate to **5.25% in December 2025**, citing inflation at 2.2% and GDP growth at 8% in H1 FY26.
3. The RBI's policy stance is influenced primarily by its **inflation-targeting mandate**, while exchange rate management is not its main objective.
4. The RBI is likely to **increase the repo rate** in the near term due to the sharp depreciation of the rupee.

How many of the above is/are correct?

(a) Only one (b) Only two

(c) Only three (d) All four

Q25. Consider the following statements regarding the recent RBI monetary policy and its implications:

1. The RBI cut the policy repo rate while keeping its stance neutral, taking advantage of low inflation.
2. Inflation for FY26 is projected at 2%, with a likely rise to 4% in FY27.
3. GDP growth in Q2 FY26 was 8.2%, supported by factors such as GST rationalisation, rural demand, and front-loading of exports to the US.
4. The RBI has indicated that further rate cuts are unnecessary under any circumstances.

How many of the above is/are correct?

(a) Only one (b) Only two

(c) Only three (d) All four

Q26. Which of the following factors is primarily responsible for the recent depreciation of the Indian rupee?

(a) Widening Current Account Deficit (CAD)

(b) Drying up of foreign capital inflows, including FDI and FPI

(c) Decline in exports of software and services

(d) Persistent fiscal deficit

Q27. Which of the following statements are correct in respect of International Criminal Court (ICC) jurisdiction:

1. The ICC can exercise jurisdiction only if the accused is a national of a State Party.

2. The UN Security Council can refer cases to the ICC.

3. The ICC deals with crimes such as genocide, war crimes and crimes against humanity.

Select the answer using the code given below:

(a) 1 and 2 only (b) 2 and 3 only

(c) 1 and 3 only (d) 1, 2 & 3

Q28. Which of the following is *not* a domain of Intangible Cultural Heritage under UNESCO?

(a) Oral traditions and expressions

(b) Social practices and festivals

(c) Traditional craftsmanship

(d) Architectural conservation

Q29. Which of the following statements are correct in respect of The Citizenship Act, 1955?

1. The Act provides for acquisition of Indian citizenship by birth, descent, registration and naturalisation.

2. The Act empowers the Central Government to terminate citizenship in cases such as fraud or disloyalty.

3. The Act allows Overseas Citizens of India (OCI) to claim automatic citizenship after a fixed period of residence.

Select the answer using the code given below:

(a) 1 and 2 only (b) 2 and 3 only

(c) 1 and 3 only (d) 1, 2 & 3

Q30. The primary objective of Operation Sagar Bandhu was to provide:

(a) Military assistance

(b) Electoral support

- (c) Humanitarian aid and disaster relief (HADR)
- (d) Maritime surveillance

Q31. Consider the following statements about the Serendipity Arts Festival (SAF) in Goa:

1. SAF is held at heritage sites such as the Old GMC Complex and integrates Goa's colonial past with contemporary cultural expressions.
2. The festival exclusively features Goan artists and does not include contributions from other regions of India.

Which of the statements given above is/are correct?

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

Q32. Consider the following statements regarding Private Equity (PE) and Foreign Portfolio Investment (FPI) in India:

1. Private equity investment in India continues at around \$50 billion annually despite FPI outflows.
2. The domestic share of private equity in India has now grown to about 50% of total PE investments.
3. FPIs have pulled out funds from India due to higher returns in markets like Korea, Japan, and Mexico.

How many of the statements given above are *not* correct?

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

Q33. Which of the following statements are correct in respect of the novel Anandamath?

1. Anandamath was written by Bankim Chandra Chattopadhyay and published in the early 1880s.
2. The song Vande Mataram, featured in Anandamath, later became India's national anthem.
3. The novel is set against the backdrop of the Sannyasi Rebellion of the late 18th century.

Select the answer using the code given below:

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

Q34. Consider the following with reference to Indian National Congress (INC):

1. The INC was founded in 1885 with the objective of providing a platform for civil and political dialogue among Indians.

2. A.O. Hume, a retired British civil servant, played a key role in organising its first session.
3. The first session of the INC was presided over by W.C. Bonnerjee in Bombay.

How many of the above is/are correct?

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

Q35. Consider the following with reference to the Subansiri Lower Hydroelectric Project:

1. It is located on the Arunachal Pradesh-Assam border.
2. The project has faced a cost escalation of over 300%.
3. The Ministry of Environment recently approved NHPC's proposal to use forest land assets as collateral to raise funds for the project.

How many of the above is/are correct?

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

Q36. Consider the following statements regarding India's rice exports to the United States:

1. India exports mostly premium aromatic rice varieties like Basmati to the US, which is a small rice-importing country.
2. A potential US tariff on Indian rice is unlikely to significantly affect India's overall rice exports.
3. The US is among the largest producers of rice globally and has a significant domestic surplus.
4. The major markets for Indian Basmati rice are West Asian and African countries rather than the US.

How many of the statements given above are correct?

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

Q37. Which of the following statements are correct in respect of the Prevention of Insults to National Honour Act, 1971?

1. Desecration of the National Flag or the Constitution of India is punishable under this Act.
2. Preventing the singing of the National Anthem or causing disturbances during its singing is an offence under this Act.
3. The Act allows intentional burning of the National Flag if done as a form of protest covered under freedom of speech.

Select the answer using the code given below:

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

Q38. The Speaker of Lok Sabha vacates office when

- (a) Removed by the President
 (b) Removed by simple majority of Lok Sabha
 (c) Removed by special majority
 (d) Automatically removed when ruling party changes

Q39. Consider the following statements regarding recent discussions on migration by European nations:

1. European nations are debating ways to limit the European Court of Human Rights' influence in migration matters.
2. The European Convention on Human Rights is being amended to allow easier deportation of migrants.
3. The move comes amid a decline in illegal border crossings in Europe.

Which of the statements given above is/are correct?

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

Q40. Consider the following statements regarding UNESCO's Intangible Cultural Heritage (ICH) and India:

1. Diwali has been inscribed on UNESCO's Representative List of the Intangible Cultural Heritage of Humanity in 2025.
2. UNESCO's ICH list covers only performing arts and traditional craftsmanship.
3. With Diwali's inclusion, India now has 16 elements inscribed on the list.
4. An element can be included in the ICH list if it is inclusive, community-based, and representative.

How many of the above statements is/are correct?

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

Q41. Which of the following statements are correct in respect of 86th Constitutional Amendment, 2002?

1. It made education a Fundamental Right for children aged 6 to 14.

2. It inserted Article 21A into the Constitution.

3. It amended Article 45 to provide for early childhood care and education for children below six years.

Select the answer using the code given below:

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

Q42. Consider the following with reference to NASA:

1. NASA manages the Kennedy Space Center in Florida.
2. NASA is responsible for civilian space programs and aeronautics research.
3. NASA was created by an executive order of the U.S. President.

How many of the above is/are incorrect?

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

Q43. Which of the following statements are correct in respect of Commission for Agricultural Costs and Prices (CACP)?

1. CACP recommends MSP for major agricultural crops.
2. CACP is a statutory body under the Ministry of Agriculture.
3. CACP considers cost of cultivation while recommending MSP.

Select the answer using the code given below:

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

Q44. Consider the following statements:

Statement 1: PMGKY was launched to mitigate the economic impact of the COVID-19 pandemic on vulnerable sections.

Statement 2: It focused on providing food security, cash transfers, and social protection.

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

- (a) Both statement 1 and Statement 2 are correct and statement 2 explains statement 1
 (b) Both statement 1 and Statement 2 are correct and statement 2 does not explain statement 1
 (c) Statement 1 is correct, but Statement 2 is incorrect
 (d) Statement 2 is correct, but Statement 1 is incorrect

Q45. Consider the following statements regarding the UN's Global Environment Outlook-7 (GEO-7) report:

1. GEO-7 links climate change with human health, food and water security, and socio-economic stability.
2. The United States fully supported the report's recommendations on fossil fuel phase-out and renewable energy adoption.
3. For the first time, GEO-7 was published without a consensus summary due to disagreements among major emitters.
4. The report provides a clear roadmap to counter the impact of the US withdrawal from the Paris Agreement.

Which of the statements given above is/are correct?

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

Q46. How does the variation in public education expenditure across countries and regions influence global income and wealth inequality?

- (a) Low public education expenditure in high-income regions is the primary cause of global inequality.
- (b) Public education expenditure has little impact on income inequality; wealth redistribution through taxation is more effective
- (c) Inequality is solely determined by natural resource endowments, and public education expenditure plays no significant role
- (d) Higher public education expenditure in high-income regions reduces the income gap within those regions, while low expenditure in low-income regions perpetuates inequality

Q47. Consider the following statements regarding the recent US-Saudi relations following Crown Prince MBS's visit to Washington:

1. Saudi Arabia was designated a Major Non-NATO Ally and gained access to US military technology, including F-35 aircraft.
2. The US obtained long-term direct investments from Saudi Arabia totaling \$1 trillion.
3. Saudi Arabia secured strategic cooperation in artificial intelligence and semiconductors while agreeing to limit ties with China in this domain.
4. Normalisation with Israel was made a precondition for a full US-Saudi defence treaty.

Which of the statements given above are correct?

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

Q48. Misuse of Double Taxation Avoidance Agreement (DTAA) provisions by routing investments through low-tax jurisdictions is known as:

- (a) Transfer pricing (b) Base erosion
 (c) Treaty shopping (d) Tax cascading

Q49. Consider the following statements:

Statement 1: The freedom of speech and expression under Article 19(1)(a) is not absolute.

Statement 2: Article 19(2) allows the State to impose reasonable restrictions only on grounds explicitly mentioned in the Constitution.

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

- (a) Both statement 1 and Statement 2 are correct and statement 2 explains statement 1
- (b) Both statement 1 and Statement 2 are correct and statement 2 does not explain statement 1
- (c) Statement 1 is correct, but Statement 2 is incorrect
- (d) Statement 2 is correct, but Statement 1 is incorrect

Q50. Consider the following with reference to the Union Budget of India:

1. The Union Budget is presented under Article 112 of the Constitution of India.
2. The Railway Budget is no longer presented separately and is merged with the Union Budget.
3. The Vote on Account allows the government to incur expenditure for the entire financial year.

How many of the above is/are correct?

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

Q51. Consider the following with reference to Wholesale Price Index (WPI):

1. WPI measures price changes at the wholesale level and reflects inflation faced by producers rather than consumers.
2. Primary Articles, Fuel & Power, and Manufactured Products are the three major components of WPI.
3. WPI is used by the Reserve Bank of India as the main target for monetary policy.

How many of the above is/are correct?

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

Q52. The Hills of Kandhamal form part of which major physiographic division of India?

- (a) Western Ghats (b) Eastern Ghats
(c) Central Highlands (d) Aravalli Range

Q53. Consider the following statements regarding the Sustainable Harnessing and Advancement of Nuclear Energy for Transforming India (SHANTI) Bill, 2025:

1. It allows private companies and their joint ventures to set up nuclear power plants in India.
2. It removes the “right of recourse” provision, limiting suppliers’ liability in case of a nuclear accident.
3. It centralises all nuclear-related activities, including enrichment of radioactive substances, under exclusive Central government control.

Which of the statements given above is/are correct?

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

Q54. Which of the following statements correctly reflects the distinction between Universal Health Coverage (UHC) and Universal Health Care, and India’s challenges in achieving them?

- (a) UHC focuses on equitable access to comprehensive primary, secondary, and tertiary care, while universal health care primarily provides financial protection through insurance.
- (b) India’s public health system is strong at the primary care level, which has enabled successful implementation of health insurance schemes like Rashtriya Swasthya Bima Yojana and Ayushman Bharat.
- (c) Evidence suggests that UHC achieved solely through insurance schemes without strengthening primary care often leads to high out-of-pocket expenditure.
- (d) The Bhole Committee recommended introducing public insurance schemes before establishing robust primary healthcare.

Q55. Consider the following statements:

Statement 1: The Cuban Revolution led to the overthrow of Fulgencio Batista’s dictatorship in 1959 and the establishment of a socialist government under Fidel Castro.

Statement 2: The revolution succeeded primarily because it received direct military intervention and troops from the Soviet Union during the guerrilla phase.

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

- (a) Both statement 1 and Statement 2 are correct and statement 2 explains statement 1
(b) Both statement 1 and Statement 2 are correct and statement 2 does not explain statement 1
(c) Statement 1 is correct, but Statement 2 is incorrect
(d) Statement 2 is correct, but Statement 1 is incorrect

Q56. Which one of the following was *not* an original Bretton Woods institution?

- (a) International Monetary Fund
(b) International Bank for Reconstruction and Development
(c) World Trade Organization
(d) All were part of Bretton Woods

Q57. Consider the following statements regarding the dark-eyed junco population studied at UCLA:

1. Dark-eyed juncos that colonized urban Los Angeles developed shorter wings and stubbier beaks compared to their wildland counterparts.
2. During the COVID-19 lockdown, the beaks of urban juncos reverted temporarily to their wildland shape.
3. The observed changes in beak morphology are definitively proof of rapid, adaptive evolution.

How many of the above statements are incorrect?

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

Q58. The Ministry of Statistics and Programme Implementation (MoSPI) plans to revise India’s GDP series with base year 2022-23. Which of the following measures are part of this revision?

- (a) Eliminating the ‘discrepancies’ component between production and expenditure approaches
(b) Publishing the full GDP back series by February 2027
(c) Integrating supply and use tables to reduce errors in early estimates
(d) All of the above

Q59. Consider the following statements:

Statement 1: The Indo-Gangetic Plains are among the most fertile agricultural regions in India.

Statement 2: This high fertility is primarily due to the extensive deposition of alluvial soils by the Indus, Ganga and Brahmaputra river systems over long geological periods.

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

- (a) Both statement 1 and Statement 2 are correct and statement 2 explains statement 1
- (b) Both statement 1 and Statement 2 are correct and statement 2 does not explain statement 1
- (c) Statement 1 is correct, but Statement 2 is incorrect
- (d) Statement 2 is correct, but Statement 1 is incorrect

Q60. Which of the following elections is *not* conducted by the Election Commission of India?

- (a) Lok Sabha elections
- (b) State Legislative Assembly elections
- (c) Presidential elections
- (d) Municipal elections

Q61. With reference to Quality Control Orders (QCOs) in India, consider the following statements:

- 1. QCOs mandate compulsory certification of notified products by the Bureau of Indian Standards (BIS).
- 2. QCOs were originally introduced only for consumer-facing and safety-critical products.
- 3. Recent withdrawal of QCOs applies to certain industrial raw materials used as intermediate inputs.

Which of the statements given above is/are correct?

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

Q62. The induction of the MH-60R Seahawk helicopters into the Indian Navy primarily enhances India's capability in which of the following domains?

- (a) Strategic nuclear deterrence and ballistic missile defence
- (b) Anti-submarine warfare and blue-water maritime operations
- (c) Tactical air support for land-based military operations

(d) Space-based maritime domain awareness

Q63. Consider the following countries:

- 1. Bahrain
- 2. Oman
- 3. Qatar
- 4. Saudi Arabia

Which of the above are members of the Gulf Cooperation Council (GCC)?

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

Q64. With reference to Bharat Stage (BS) emission norms in India, consider the following statements:

- 1. All private vehicles registered on or after 1 April 2020 are BS-VI compliant.
- 2. BS-VI norms mandate lower sulphur content in fuel to enable advanced emission-control technologies.
- 3. Under BS-VI norms, nitrogen oxide (NOx) emission limits for diesel vehicles are marginally lower than BS-IV norms.

Which of the statements given above are correct?

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

Q65. Consider the following statements:

Statement 1: The G-20 is an informal forum of major economies that addresses global economic stability and development issues.

Statement 2: The G-20 was established in 1999 in response to the Asian Financial Crisis to promote international financial cooperation.

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

- (a) Both statement 1 and Statement 2 are correct and statement 2 explains statement 1
- (b) Both statement 1 and Statement 2 are correct and statement 2 does not explain statement 1
- (c) Statement 1 is correct, but Statement 2 is incorrect
- (d) Statement 2 is correct, but Statement 1 is incorrect

Q66. Consider the following with reference to the Civil Liability for Nuclear Damage Act, 2010:

- 1. The Act provides a legal framework for compensation to victims of nuclear damage in India.
- 2. It places exclusive liability on the nuclear plant operator, irrespective of fault.
- 3. The Act completely bars the operator's right of recourse against equipment suppliers.

How many of the above is/are incorrect?

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

Q67. Consider the following statements:

Statement I: Gram Panchayats are institutions of local self-government at the village level in India.

Statement II: They are constitutionally recognised under Part IX of the Constitution, introduced by the 73rd Constitutional Amendment Act, 1992.

Statement III: They are directly controlled and dissolved by the Union Government under Article 356.

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

- (a) Both Statement II and Statement III are correct and both of them explain Statement I
- (b) Both Statement II and Statement III are correct but only one of them explains Statement I
- (c) Only one of the Statements II and III is correct and that explains Statement I
- (d) Neither Statement II nor Statement III is correct

Q68. Which Indian States share a border with Bangladesh?

- (a) West Bengal, Nagaland, Meghalaya, Mizoram
- (b) West Bengal, Assam, Meghalaya, Tripura, Mizoram
- (c) West Bengal, Bihar, Assam, Tripura
- (d) Assam, Nagaland, Manipur, Arunachal Pradesh

Q69. Which of the following statements correctly describes areas affected by the chitta (synthetic drug) menace in Himachal Pradesh?

- (a) Only Shimla district has been identified as highly affected by chitta.
- (b) Around 234-gram panchayats across Himachal Pradesh, including areas bordering Punjab, are highly affected, with community-led interventions in some regions.
- (c) Bilaspur district has no recorded NDPS cases in recent years.
- (d) Drug-related issues are limited to urban areas, with no impact on rural or semi-urban areas.

Q70. Consider the following statements regarding life imprisonment in India:

1. Sessions Courts can award life imprisonment without remission in cases involving heinous crimes.
2. Only the Supreme Court and High Courts can impose life imprisonment without remission, while the power of remission or commutation under Articles 72 and 161 cannot be curtailed by any lower court.

Which of the statements given above is/are correct?

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

Q71. In India, despite robust GDP growth in recent years, private corporate investment has not grown proportionally. Consider the following statements:

1. Many firms do not invest in new physical capacity because existing production capacities are sufficient to meet demand.
2. High capacity utilisation and strong domestic demand have consistently encouraged firms to expand production capacity.

Which of the above statements is/are correct?

- (a) Only 1
- (b) Only 2
- (c) Both 1 and 2
- (d) None

Q72. Consider the following countries:

1. Lebanon
2. Syria
3. Jordan
4. Iraq
5. Egypt

How many of the above countries share a land border with Israel?

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

Q73. Consider the following statements:

Statement 1: Registration on the Udyam Portal is mandatory for enterprises to avail benefits under MSME schemes.

Statement 2: Udyam Registration is based on self-declaration and does not require uploading documents such as certificates or proofs.

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

- (a) Both statement 1 and Statement 2 are correct and statement 2 explains statement 1

- (b) Both statement 1 and Statement 2 are correct and statement 2 does not explain statement 1
- (c) Statement 1 is correct, but Statement 2 is incorrect
- (d) Statement 2 is correct, but Statement 1 is incorrect

Q74. Consider the following statements:

Statement I: The Chairman of the Rajya Sabha plays a crucial role in ensuring the orderly conduct of proceedings and the impartial functioning of the House.

Statement II: The Chairman of the Rajya Sabha is the Vice-President of India, who is not a member of the Rajya Sabha.

Statement III: The Chairman exercises powers such as presiding over sessions, maintaining discipline, and referring Bills to Parliamentary Committees.

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

- (a) Both Statement II and Statement III are correct and both of them explain Statement I
- (b) Both Statement II and Statement III are correct but only one of them explains Statement I
- (c) Only one of the Statements II and III is correct and that explains Statement I
- (d) Neither Statement II nor Statement III is correct

Q75. Consider the following statements:

Statement 1: The Great Indian Bustard is classified as Critically Endangered by the IUCN due to habitat loss, hunting, and collision with power transmission lines.

Statement 2: The grassland and semi-arid ecosystems inhabited by the Great Indian Bustard are among the most neglected and rapidly declining habitats in India.

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

- (a) Both statement 1 and Statement 2 are correct and statement 2 explains statement 1
- (b) Both statement 1 and Statement 2 are correct and statement 2 does not explain statement 1
- (c) Statement 1 is correct, but Statement 2 is incorrect
- (d) Statement 2 is correct, but Statement 1 is incorrect

Q76. Consider the following statements:

Statement I: The Fiscal Responsibility and Budget Management (FRBM) Act, 2003 was enacted to ensure fiscal discipline, macroeconomic stability, and prudent management of public finances.

Statement II: The FRBM Act mandates the Central Government to reduce fiscal deficit and eliminate revenue deficit over a specified time frame.

Statement III: The Act requires the Government to present Medium-Term Fiscal Policy Statement and Fiscal Policy Strategy Statement before Parliament.

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

- (a) Both Statement II and Statement III are correct and both of them explain Statement I
- (b) Both Statement II and Statement III are correct but only one of them explains Statement I
- (c) Only one of the Statements II and III is correct and that explains Statement I
- (d) Neither Statement II nor Statement III is correct

Q77. With reference to Transit-Oriented Development (TOD), consider the following statements:

1. TOD aims to promote compact, high-density and mixed-use urban development around public transport hubs to reduce dependence on private vehicles.
2. The revised draft TOD policy mandates the preparation of Local Area Plans (LAPs) to ensure proportional infrastructure development.
3. Under the new draft TOD policy, projects may be deemed approved if the designated committee does not decide within a fixed time frame.

How many of the above statements are correct?

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

Q78. With reference to the new definition of the Aravalli Hills approved by the Supreme Court, which of the following is *incorrect*?

- (a) Landforms rising at least 100 metres above the local relief are classified as part of the Aravalli Hills.
- (b) Intervening land between two qualifying hills less than 500 metres apart is also counted as part of the Aravalli range.
- (c) The height of Aravalli Hills is measured from a standardised baseline such as the lowest elevation of the state.
- (d) Areas notified as national parks, wildlife sanctuaries, or eco-sensitive zones remain protected irrespective of the new Aravalli definition.

Q86. Consider the following with reference to monazite:

1. The monazite mineral is an important source of rare earth elements such as cerium, lanthanum and neodymium.
2. Monazite sands in India are mainly found along the coastal regions of Kerala, Tamil Nadu and Odisha.
3. Monazite contains thorium, making its mining and processing subject to atomic energy regulations in India.

How many of the above is/are not correct?

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

Q87. Which of the following statements are correct in respect of PM MITRA Park scheme?

1. The PM MITRA Park scheme aims to create integrated textile value chains by developing world-class industrial infrastructure for the textile sector.
2. The scheme is implemented by the Ministry of Textiles with financial support shared between the Central and State Governments.
3. Each PM MITRA Park is planned to be developed as a plug-and-play facility covering spinning, weaving, processing, dyeing, and garmenting.

Select the answer using the code given below:

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

Q88. NATGRID functions under the administrative control of the

- (a) Ministry of Defence
(b) Ministry of Electronics and IT
(c) Ministry of Home Affairs
(d) Cabinet Secretariat

Q89. Consider the following statements regarding the editorial "Handing down values in a time of no hand-me-downs":

1. Traditional values like respect for elders and patience were taught mainly through the framework of scarcity.
2. The author believes that artificially depriving children of things they can afford is an effective way to teach values today.

3. Experiential learning, such as caring for pets or handling small responsibilities, is more effective than scarcity in imparting enduring values.

How many of the above statements are incorrect?

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

Q90. Consider the following statements regarding the replication of excellence in public institutions:

1. Shortages of skilled personnel and bureaucratic delays are major challenges in replicating the success of a premier institution.
2. Replicating physical infrastructure alone is sufficient to ensure the same level of institutional quality and service.

Which of the statements given above is/are correct?

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

Q91. Consider the following statements:

Statement 1: The Prevention of Child Marriage Act, 2006 declares a child marriage to be voidable at the option of the child.

Statement 2: The Act empowers the child who was married before attaining majority to seek annulment of marriage through a court.

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

- (a) Both statement 1 and Statement 2 are correct and statement 2 explains statement 1
(b) Both statement 1 and Statement 2 are correct and statement 2 does not explain statement 1
(c) Statement 1 is correct, but Statement 2 is incorrect
(d) Statement 2 is correct, but Statement 1 is incorrect

Q92. Which of the following best describes Article 48A of the Indian Constitution?

- (a) It makes environment protection a Fundamental Right enforceable by courts
(b) It directs the State to protect and improve the environment and safeguard forests and wildlife
(c) It imposes a penal obligation on citizens for environmental damage
(d) It empowers local governments exclusively to frame environmental laws

Q93. Consider the following statements regarding the Indus River system:

1. The Chenab River is a tributary of the Indus River and flows through Jammu & Kashmir before entering Pakistan.
2. The Ravi, Beas, and Sutlej rivers are under India's control as per the Indus Waters Treaty, 1960.
3. The Jhelum River is entirely controlled by India for hydropower projects under the treaty provisions.

How many of the above statements are correct?

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

Q94. Consider the following statements regarding graphite:

1. Graphite is used in lithium-ion battery anodes, industrial heat-resistant coatings, and lubricants for military vehicles.
2. The United States currently imports a significant portion of its graphite from China due to historical closure of domestic graphite mines.
3. Synthetic graphite is more expensive than natural graphite but tends to be purer and is used in a mix with natural graphite for batteries.

Which of the above statements is/are correct?

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

Q95. Which of the following statements are correct with respect to Standard Operating Procedures (SOPs) for handling mass-casualty or terror incidents?

1. SOPs aim to ensure clear command hierarchy and defined roles for responding agencies.
2. SOPs help reduce confusion and duplication of efforts during the initial response phase.
3. SOPs allow the judiciary to directly intervene in real-time operational decisions.

Select the answer using the code given below:

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

Q96. Electoral Trusts in India are primarily significant because they:

- (a) Completely anonymise corporate donations to political parties

- (b) Mandate public disclosure of donor-party linkages
(c) Serve as regulated intermediaries for corporate political funding
(d) Are administered directly by the Election Commission of India

Q97. Which of the following statements are correct in respect of INS Vagsheer?

1. It is a Kalvari-class diesel-electric attack submarine.
2. It was built under Project-75 with technology transfer from France.
3. It is powered by a nuclear propulsion system.

Select the answer using the code given below:

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

Q98. Consider the following statements:

Statement 1: The Rigveda provides evidence of early political institutions such as Sabha and Samiti.

Statement 2: These institutions indicate the presence of participatory tribal assemblies.

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

- (a) Both statement 1 and Statement 2 are correct and statement 2 explains statement 1
(b) Both statement 1 and Statement 2 are correct and statement 2 does not explain statement 1
(c) Statement 1 is correct, but Statement 2 is incorrect
(d) Statement 2 is correct, but Statement 1 is incorrect

Q99. Which of the following statements about Buddhism in Kashmir is incorrect?

- (a) Kashmir acted as a major conduit for the spread of Buddhism from India to Central Asia.
(b) Emperor Kanishka convened the Fourth Buddhist Council in Kashmir, which helped systematise Mahayana Buddhism.
(c) Buddhist engagement in Kashmir was purely devotional, with little intellectual or philosophical development.
(d) Archaeological evidence like the Zeharipora excavations confirms the historical significance of Kashmir in Buddhist studies.

Q100. Consider the following statements:

1. Industrial growth can be influenced by factors like manufacturing performance and overall sectoral output.
2. Short-term drivers such as favourable base effects, seasonal demand, and restocking can lead to temporary increases in industrial production.

Which of the statements given above is/are correct?

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

Q101. Which of the following features is not associated with the Government e-Marketplace (GeM)?

- (a) E-bidding and reverse auction
- (b) Direct online payment system
- (c) Manual tendering process
- (d) Seller rating and buyer feedback

Q102. Consider the following statements:

1. The Nigeria is drained mainly by the Niger-Benue river system, which meets at Lokoja.
2. The Niger Delta is characterised by arid climate and sparse vegetation due to low rainfall.

Which of the statements given above is/are correct?

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

Q103. Consider the following statements:

Statement I: A Free Trade Agreement (FTA) aims to promote international trade by reducing or eliminating tariffs and non-tariff barriers between participating countries.

Statement II: FTAs provide preferential market access by lowering customs duties on a mutually agreed list of goods and services among member countries

Statement III: FTAs require complete harmonisation of domestic tax policies and a common external tariff against non-member countries.

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

- (a) Both Statement II and Statement III are correct and both of them explain Statement I
- (b) Both Statement II and Statement III are correct but only one of them explains Statement

(c) Only one of the Statements II and III is correct and that explains Statement I

(d) Neither Statement II nor Statement III is correct

Q104. Which of the following is a key feature of Regional Comprehensive Economic Partnership (RCEP)?

- (a) Common external tariff
- (b) Complete labour law harmonisation
- (c) Gradual tariff reduction
- (d) Single currency

Q105. Consider the following statements regarding the development of tribal communities in India:

1. Education is a key tool for inclusive growth and social justice among tribal populations.
2. Government schemes named after Birsa Munda aim to provide basic amenities like housing, roads, schools, and drinking water to tribal communities.

Which of the statements given above is/are correct?

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

Q106. Which of the following initiatives by India reflect its strategy in a fragmented global order, as highlighted in 2025?

- (a) Promoting rupee settlement mechanisms with multiple countries to reduce dollar dependence
- (b) Diversifying defence acquisitions while leading regional security dialogues
- (c) Accelerating renewable energy capacity and leading the International Solar Alliance
- (d) All of the above



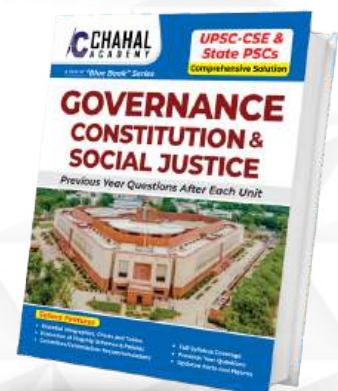
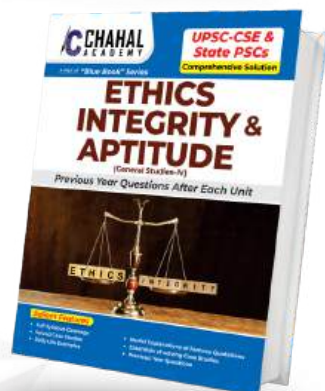
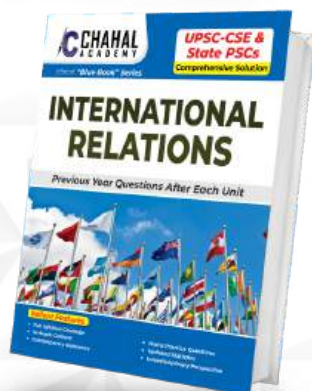
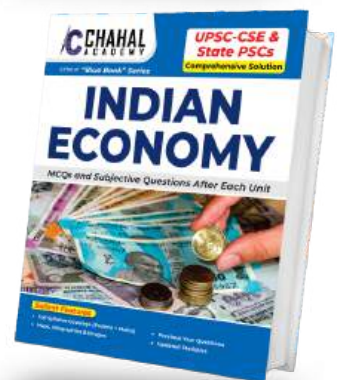
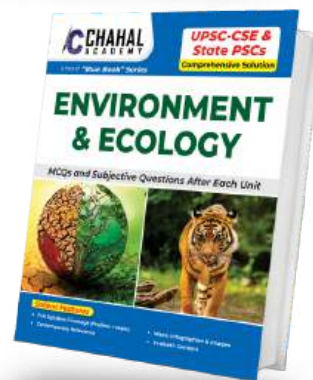
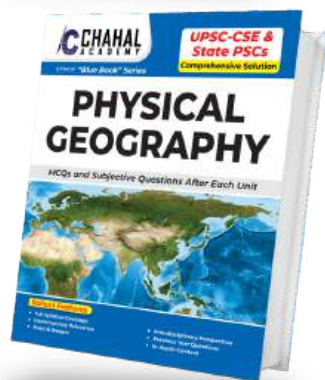
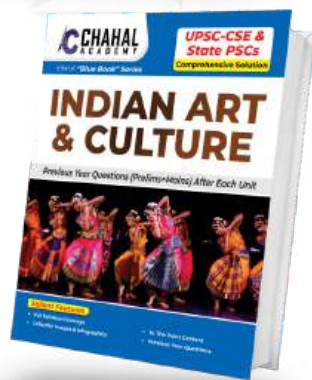
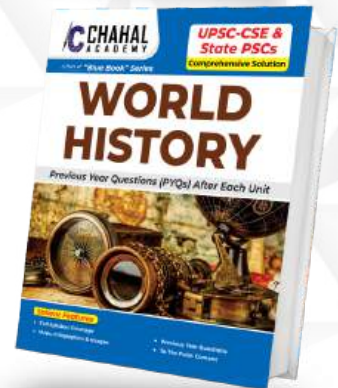
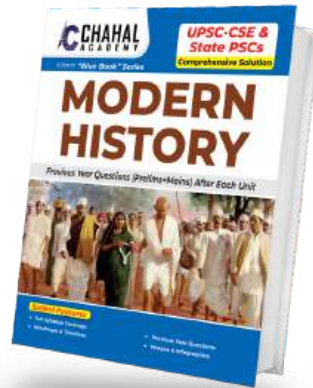
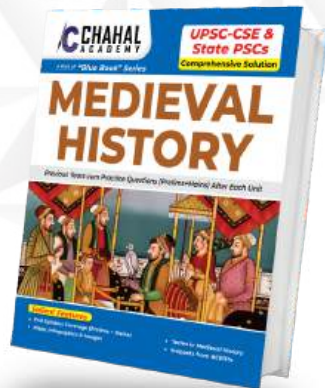
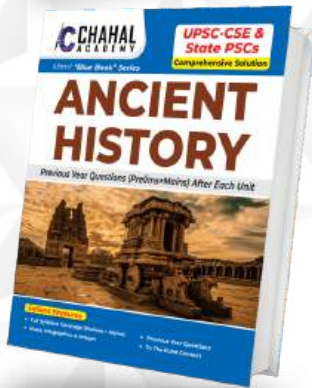
ANSWER KEY

Q1.	A	Q2.	C	Q3.	a	Q4.	C	Q5.	A
Q6.	d	Q7.	A	Q8.	A (3 only)	Q9.	C	Q10.	A
Q11.	A (2 only)	Q12.	C	Q13.	D	Q14.	B	Q15.	A (3 only)
Q16.	B	Q17.	D	Q18.	A	Q19.	A	Q20.	B
Q21.	A	Q22.	B (1 and 3 only)	Q23.	A	Q24.	C (1, 2 & 3 only)	Q25.	C
Q26.	B	Q27.	B	Q28.	D	Q29.	A	Q30.	C
Q31.	A	Q32.	A (2 only)	Q33.	C	Q34.	C	Q35.	B
Q36.	C (1, 2 & 4 only)	Q37.	A	Q38.	B	Q39.	B	Q40.	B
Q41.	D	Q42.	A (3 only)	Q43.	C	Q44.	A	Q45.	A
Q46.	D	Q47.	B	Q48.	C	Q49.	A	Q50.	B (1 and 2 only)
Q51.	B (1 and 2 only)	Q52.	B	Q53.	A (1 and 2 only)	Q54.	C	Q55.	C
Q56.	C	Q57.	A	Q58.	D	Q59.	A	Q60.	D
Q61.	D	Q62.	B	Q63.	D	Q64.	A	Q65.	A
Q66.	A (3 only)	Q67.	C	Q68.	B	Q69.	B	Q70.	B
Q71.	A	Q72.	C (1, 2, 3 and 5 only)	Q73.	B	Q74.	A	Q75.	A
Q76.	A	Q77.	B (1 & 3 only)	Q78.	C	Q79.	A	Q80.	D
Q81.	B	Q82.	D	Q83.	A	Q84.	A	Q85.	B
Q86.	D	Q87.	D	Q88.	C	Q89.	A (2 only)	Q90.	A
Q91.	A	Q92.	B	Q93.	B (1 & 2 only)	Q94.	D	Q95.	A
Q96.	C	Q97.	A	Q98.	A	Q99.	C	Q100.	C
Q101.	C	Q102.	A	Q103.	C	Q104.	C	Q105.	C
Q106.	D								

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