MISSION X

MISSION X FOR UPSC

INNOVATION IN LEARNING

THE X AMPLIFIER

SEPTEMBER 2026 EDITION

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THE X AMPLIFIER

MONTHLY PRELIMS REVISION CAPSULE · SEPTEMBER 2026 EDITION · UPSC MENTORSHIP & GUIDANCE PROGRAM

CURRENT → STATIC → TRAP → RECALL → TEST

Turn current affairs into Prelims-ready knowledge.

52	52	9
CURATED TOPICS	UPSC-PATTERN MCQS	SUBJECT SECTIONS

IN THIS EDITION

01	POLITY & GOVERNANCE	7 topics
02	PLACES IN NEWS	7 topics
03	INTERNATIONAL RELATIONS	7 topics
04	ECONOMY	6 topics
05	ECONOMIC DEVELOPMENT & SCHEMES	3 topics
06	ENVIRONMENT & ECOLOGY, GEOGRAPHY & DISASTER	6 topics
07	SCIENCE & TECHNOLOGY	11 topics
08	ARTS & CULTURE + HISTORY	3 topics
09	MISCELLANEOUS	2 topics

Monthly Prelims Dashboard

Nine sections, 52 topics, one route. Broken into a fixed sequence and a five-step checklist, it is a single, manageable monthly ritual.

52 CURATED TOPICS

52 UPSC-PATTERN MCQS

9 SUBJECT SECTIONS

YOUR REVISION ROUTE

01	**CURRENT**	Understand the news
02	**STATIC**	Connect it to the syllabus
03	**TRAP**	Identify likely confusion
04	**RECALL**	Retrieve the facts
05	**TEST**	Apply through MCQs

YOUR REVISION TRACKER , mark each section off as you complete a pass

SECTION	READ	RECALL	TEST
Polity & Governance	☐	☐	☐
Places in News	☐	☐	☐
International Relations	☐	☐	☐
Economy	☐	☐	☐
Economic Development & Schemes	☐	☐	☐
Environment & Ecology, Geography & Disaster	☐	☐	☐
Science & Technology	☐	☐	☐
Arts & Culture + History	☐	☐	☐
Miscellaneous	☐	☐	☐

01

Polity & Governance

From a digital Census to a national anti-terror doctrine, September's governance stories reshaped institutions, language policy and judicial power.

1. Census 2027
2. Article 142: NEET-UG FIRs Quashed
3. National Dam Safety Authority
4. CBFC's New Film Certification Guidelines
5. Tulu: Second Official Language Status
6. CEC & EC Appointment Act, 2023: Under SC Scrutiny
7. PRAHAAR: National Counter-Terrorism Policy

CENSUS · GS PAPER II · POLITY & GOVERNANCE

Census 2027

NEWS IN BRIEF

- India's next decadal Census will be conducted digitally for the first time, with houselisting from April 1, 2026, population enumeration in February 2027, and caste enumeration included.
- The 2021 Census was deferred repeatedly, first due to the COVID-19 pandemic; Census 2027 breaks the 2021 cycle by six years.
- Digital self-enumeration options are expected to let citizens fill details online before enumerator verification.

X-FACT MATRIX

Conducted under	Census Act, 1948 and Census Rules, 1990
Nodal office	Office of the Registrar General and Census Commissioner, India (RGI)
Ministry	Ministry of Home Affairs
Mode	First fully digital census, mobile-app based data collection
Phase 1 (Houselisting)	April 1 to September 30, 2026 (30-day window per State/UT)
Phase 2 (Population Enumeration)	February 2027
Reference date	March 1, 2027 (snow-bound areas: October 1, 2026)
Key feature	First census to include caste enumeration since 1931

▸ FLOW CHART: Census 2027 to Representation

1. **Houselisting** — April to September 2026
2. **Population enumeration** — February 2027, reference date March 1, 2027
3. **Final data** — Census Commissioner publishes
4. **Delimitation** — Article 82 and 170
5. **106th Amendment** — Women's reservation applies

KEY CONCEPTS EXPLAINED

- **Census** is Entry 69, Union List. No Article names it; it runs under the **Census Act, 1948**, administered by the Registrar General and Census Commissioner (created 1961, MHA).
- First census 1872 (non-synchronous); first synchronous census **1881**. Census 2011 was the **15th** and counted 121.08 crore.
- **Article 82** readjusts Lok Sabha seats after every census; the freeze (84th Amendment, 2001) holds seat allocation on the 1971 census until the first census after 2026.
- Links: **106th Amendment (Women's Reservation, 2023)** applies only after the next census and delimitation. SECC 2011 was run by the rural and urban development ministries, not the Census Act.

⚡ UNIQUE FACT

Census data forms the statistical base for delimitation, constituency reservation, and welfare-scheme targeting.

⚠ EXAM TRAP

The last caste-based enumeration in a full Census was 1931; the Socio Economic Caste Census (SECC) of 2011 was a separate exercise and not notified as official caste data: don't equate the two.

📌 MEMORY BANK **Census 2027** CENSUS

1. Census: Union List Entry 69, Census Act 1948
2. First digital census, mobile app based
3. Houselisting Apr-Sep 2026; enumeration Feb 2027
4. Caste enumeration returns (last full count: 1931)
5. Article 82: seats readjusted after each census

JUDICIARY · GS PAPER II · POLITY & GOVERNANCE

Article 142: NEET-UG FIRs Quashed

NEWS IN BRIEF

- The Supreme Court invoked Article 142 to quash multiple FIRs filed across states against NEET-UG 2026 exam protesters, reviving debate on the provision's scope.
- Landmark invocations include Union Carbide v. Union of India (1989, Bhopal settlement), Vishaka v. State of Rajasthan (1997), and the Ayodhya title dispute (2019).
- Self-imposed limits were laid down in Prem Chand Garg (1962) and Supreme Court Bar Association (1998), which said Article 142 fills gaps in statutes but cannot override them.

X-FACT MATRIX

Provision	Article 142, Constitution of India
Article 142(1)	SC may pass any order necessary for 'complete justice' in a pending matter
Article 142(2)	Covers attendance, discovery of documents, investigation and contempt, subject to Parliamentary law
Roots	Section 210, Government of India Act, 1935
Adopted	1949, without formal debate
2026 trigger	Quashing of FIRs against NEET-UG 2026 protesters after a Union-protester settlement

▸ **COMPARISON TABLE: Supreme Court powers at a glance**

Article	Power	Use it for
32	Writs for Fundamental Rights	Right to move SC
141	Law declared binds all courts	Precedent
142	**Complete justice in any matter**	**Case-specific relief**
129	Court of Record, contempt	Contempt power

KEY CONCEPTS EXPLAINED

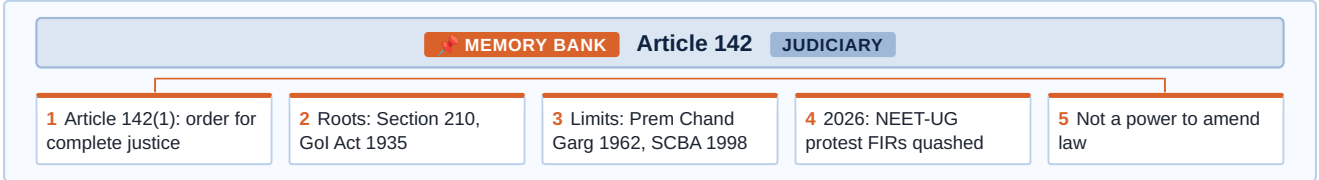
- Companion articles: **141** (SC law binds all courts), **144** (all authorities act in aid of SC), **129** (court of record), **32** (writs for Fundamental Rights), **136** (SLP), **143** (advisory).
- High Courts have separate writ power under **Article 226** and inherent power to quash FIRs under **Section 528 BNSS** (earlier Section 482 CrPC).
- Used in 2025 to give **deemed assent** to bills held by a Governor (State of Tamil Nadu v. Governor).
- Prelims trap: Article 142 is **not** a power to amend law or override the Constitution; it fills gaps within the law.

⚡ UNIQUE FACT

An IIM Ahmedabad study counted 791 direct invocations of Article 142 between 1950 and 2023, mostly in civil matters.

⚠ EXAM TRAP

Article 142 powers are self-restrained by precedent, not externally checked: no outside institution can enforce the Prem Chand Garg or SCBA limits if a bench chooses to go beyond them.



REGULATORY BODY · GS PAPER II · POLITY & GOVERNANCE

National Dam Safety Authority

NEWS IN BRIEF

- The NDSA reviewed dam safety preparedness across states including Jharkhand, pushing for Emergency Action Plans and Comprehensive Dam Safety Evaluations under the 2021 Act.
- NDSA directs states to prepare Emergency Action Plans and Operation & Maintenance Manuals and upload them on the DHARMA Portal.
- It recommends Independent Panels of Experts to carry out Comprehensive Dam Safety Evaluations of major dams.

X-FACT MATRIX

Statutory basis	Dam Safety Act, 2021
Body	National Dam Safety Authority (NDSA)
Function	Implements policies of the National Committee on Dam Safety
State counterpart	State Dam Safety Organisation (SDSO), recommended in every state
Key tool	DHARMA Portal: Dam Health And Rehabilitation Monitoring Application
Dam categories	Category I to IV, based on risk; Category II dams flagged for time-bound rehabilitation

KEY CONCEPTS EXPLAINED

- **Dam Safety Act, 2021** covers specified dams: height over **15 m**, or 10 to 15 m with specified design conditions. Administered by Ministry of Jal Shakti.
- Structure: **National Committee on Dam Safety** (policy), **NDSA** (regulator), **State Committee on Dam Safety** and **State Dam Safety Organisation**.
- **Water is State List Entry 17**; the Act rests on the Union's power over inter-state dams and rivers, so it is a frequent federalism question.
- Static: **CWC** (1945) keeps the National Register of Large Dams; **DRIP** (2012, World Bank aided) rehabilitates dams; **Tehri** (260.5 m) is India's tallest dam.

⚡ UNIQUE FACT

It also pushes states to create a dedicated dam-safety budget head and build capacity among dam owners and staff.

⚠ EXAM TRAP

NDSA regulates dams under the Dam Safety Act, 2021. It does not own or operate dams; those stay with dam owners such as States and utilities.

📌 MEMORY BANK **National Dam Safety Authority** REGULATORY BODY

1. Dam Safety Act 2021 (Jal Shakti)
2. Specified dam: over 15 m
3. NCDS makes policy, NDSA regulates
4. State Dam Safety Organisation in each State
5. DHARMA portal holds dam data

MEDIA REGULATION · GS PAPER II · POLITY & GOVERNANCE

CBFC's New Film Certification Guidelines

NEWS IN BRIEF

- The Ministry of Information and Broadcasting notified revised CBFC guidelines effective September 16, 2026, mandating statutory warnings on drug-use scenes and tightening content norms.
- Scenes glorifying drinking, drug addiction or tobacco use are not permitted; violence or anti-social acts cannot be glorified either.
- Children cannot be shown in violent scenes as victims, perpetrators or witnesses, and depictions of child abuse are restricted.

X-FACT MATRIX

Body	Central Board of Film Certification (CBFC)
Legal basis	Cinematograph Act
Replaces guidelines of	December 1991
Effective from	September 16, 2026
Age categories	U/A 7+, U/A 13+, U/A 16+ (introduced earlier, May 2025)
New mandate	Statutory warning on narcotics scenes: 'Illicit narcotics destroy health and guarantees imprisonment. Say No To Drugs.'

KEY CONCEPTS EXPLAINED

- **Cinematograph Act, 1952**: CBFC is a statutory body under the Ministry of I&B, headquartered in **Mumbai**. Categories: **U, UA, A, S**.
- **Cinematograph (Amendment) Act, 2023** split UA into **7+, 13+, 16+**, made certificates valid in perpetuity, and added anti-piracy provisions.
- The **Film Certification Appellate Tribunal** was abolished in 2021; appeals now go to the **High Court**.
- Constitutional link: **Article 19(2)** allows restrictions on speech for decency or morality; film prior censorship upheld in **K.A. Abbas v. Union of India (1970)**.

⚡ UNIQUE FACT

Films cannot question India's sovereignty and integrity or undermine the dignity of courts; titles will be scrutinised for provocative or vulgar content.

⚠ EXAM TRAP

The U/A 7+/13+/16+ age-category system was introduced in May 2025: it predates and is distinct from the September 2026 content guidelines, which only add new disclosure and warning norms.

MEMORY BANK CBFC's New Film Certification Guidelines MEDIA REGULATION

1. Cinematograph Act 1952
2. CBFC: Mumbai, Ministry of I&B
3. Categories: U, UA (7+, 13+, 16+), A, S
4. Drug-use scenes need a statutory warning
5. Appeals go to High Court (FCAT abolished 2021)

LANGUAGE POLICY · GS PAPER II · POLITY & GOVERNANCE

Tulu: Second Official Language Status

NEWS IN BRIEF

- Karnataka's Cabinet approved Tulu as a 'second additional administrative language' in Dakshina Kannada and Udupi districts, with Rs 82 lakh allocated for translation and training.
- Tulu joins Kannada as an administrative language only in the two coastal districts, not as a second official language for all of Karnataka.

X-FACT MATRIX

Decision date	September 18, 2026, Cabinet meeting in Mangaluru
Applicable districts	Dakshina Kannada and Udupi only (not state-wide)
Language family	Dravidian (also includes Kannada, Tamil, Telugu, Malayalam)
Speakers	About 1 crore people globally, mainly in coastal Karnataka
Recorded history	More than 2,000 years
Committee	Headed by academician Mohan Alva, set up before the 2023 Assembly elections
Funding	Rs 82 lakh annual allocation for translation and training

KEY CONCEPTS EXPLAINED

- **Eighth Schedule** lists 22 languages. **71st Amendment** added Konkani, Manipuri, Nepali; **92nd Amendment (2003)** added Bodo, Dogri, Maithili, Santhali.
- **Article 345**: a State may adopt any language for official purposes. **Article 347**: President may direct recognition on demand of a substantial population. **Article 350A**: mother-tongue instruction at primary stage.
- Classical languages: Tamil 2004, Sanskrit 2005, Telugu and Kannada 2008, Malayalam 2013, Odia 2014, then Marathi, Pali, Prakrit, Assamese, Bengali in 2024.
- Static: Tulu is a Dravidian language of the south group, historically written in the **Tigalari** script; Tulu Nadu covers Dakshina Kannada, Udupi and north **Kasaragod** (Kerala).

⚡ UNIQUE FACT

Tulu is not currently listed in the Eighth Schedule of the Constitution, a long-standing demand of Tulu-speaking groups.

⚠ EXAM TRAP

This is 'second additional administrative language' status confined to two districts, not inclusion in the Eighth Schedule of the Constitution: the two are separate asks and this move grants only the former.



ELECTION COMMISSION · GS PAPER II · POLITY & GOVERNANCE

CEC & EC Appointment Act, 2023: Under SC Scrutiny

NEWS IN BRIEF

- The Supreme Court continued hearing petitions challenging the constitutional validity of the CEC & EC Appointment Act, 2023, which excludes the CJI from the selection panel.
- The interim Anoop Baranwal arrangement had placed the CJI on the selection panel alongside the PM and Leader of Opposition; the 2023 Act removes the CJI.

X-FACT MATRIX

Replaces	Election Commission (Conditions of Service) Act, 1991
Triggered by	Supreme Court's Anoop Baranwal judgment (2023)
Selection Committee	PM, Leader of Opposition (Lok Sabha), and a Union Cabinet Minister nominated by PM
Search Committee	Headed by the Cabinet Secretary; shortlists names for Selection Committee
Tenure	6 years or age 65, whichever is earlier; no reappointment
Removal of CEC	Same manner and grounds as a Supreme Court judge
SC hearings	Began May 2026; validity still pending before the Court

▸ FLOW CHART: How the CEC and ECs are appointed (2023 Act)



KEY CONCEPTS EXPLAINED

- **Article 324**: ECI superintends elections; President appoints CEC and ECs, subject to law. Proviso protects the **CEC** from removal except like an SC judge.
- ECI created **25 January 1950** (National Voters' Day). Became multi-member in **1993** (Election Commissioner Amendment Act); first CEC was Sukumar Sen.
- Neighbouring articles: **325** (single electoral roll), **326** (adult suffrage at 18, 61st Amendment 1988), **327** and **328** (laws on elections), **329** (bar on court interference).
- ECI conducts elections to Parliament, State legislatures, President and Vice-President; **not** Panchayat and Municipality polls (State Election Commissions, Article 243K and 243ZA).

⚡ UNIQUE FACT

Petitioners argue the Act gives the executive two of three committee seats, weakening the neutral check envisaged in Anoop Baranwal.

⚠ EXAM TRAP

The CJI sat on the panel only under the interim Anoop Baranwal (2023) arrangement pending a law: the CEC & EC Appointment Act, 2023 itself excludes the CJI; don't assume judicial presence continues under the new law.

📌 MEMORY BANK **CEC & EC Appointment Act, 2023** ELECTION COMMISSION

1. Article 324: Election Commission
2. Panel: PM, LoP, Union Cabinet Minister
3. CJI excluded (Anoop Baranwal had included him)
4. Tenure: 6 years or age 65
5. CEC removed like an SC judge

SECURITY · GS PAPER II · POLITY & GOVERNANCE

PRAHAAR: National Counter-Terrorism Policy

NEWS IN BRIEF

- The Ministry of Home Affairs unveiled PRAHAAR, India's first comprehensive National Counter-Terrorism Policy and Strategy, shifting from a reactive to a proactive security posture.
- PRAHAAR stands for seven pillars: Prevention, Responses that are swift and proportionate, Aggregating internal capacities, Human rights-based processes, Attenuating conditions enabling terrorism, Aligning international efforts, and Recovery and resilience.
- It favours a graded, rehabilitation-first response for minor cases of radicalised youth rather than a purely punitive approach.

X-FACT MATRIX

Launched by	Ministry of Home Affairs
Nature	India's first comprehensive National Counter-Terrorism Policy and Strategy
Nodal intervention agency	National Security Guard (NSG)
Intelligence coordination	Multi Agency Centre (MAC) and Joint Task Force under the Intelligence Bureau
Legal backbone	UAPA 1967, new criminal codes of 2023, PMLA 2002, Arms Act 1959

KEY CONCEPTS EXPLAINED

- **NIA** was set up under the NIA Act, 2008 after 26/11. **NSG** (1984) is the federal contingency force, known as Black Cats, under MHA.
- **Multi Agency Centre** came after Kargil (2001); **NATGRID** links databases of agencies; both sit with the Intelligence Bureau and MHA.
- **UAPA, 1967**, amended in 2019, lets the Centre designate individuals as terrorists. **BNS, 2023** defines a terrorist act in Section 113.
- Link: the proposed **NCTC (2012)** was never operationalised because of Centre-State objections, since Police and Public Order are State subjects.

⚡ UNIQUE FACT

International cooperation is routed through Mutual Legal Assistance Treaties, extradition treaties and Joint Working Groups.

⚠ EXAM TRAP

PRAHAAR is a policy and strategy document, not a new standalone law: its teeth come from existing statutes (UAPA, BNS/BNSS, PMLA, Arms Act), which it coordinates rather than replaces.

📌 MEMORY BANK **PRAHAAR** SECURITY

1. MHA: first national counter-terror policy
2. Seven pillars spell PRAHAAR
3. NSG is the nodal intervention force
4. Multi Agency Centre and JTF under IB
5. Backbone: UAPA, BNS/BNSS, PMLA

02

Places in News

Static-connect format: geographic identity, bordering features, and administrative facts for each location. No subjective framing.

1. Nevados de Chillan
2. Emi Koussi
3. Mocha (Al Mokha)
4. Mayotte
5. Sohar Port
6. Bagmati River
7. Lord Howe Island

VOLCANO · GS PAPER I · GEOGRAPHY (PRELIMS)

Nevados de Chillan

NEWS IN BRIEF

- This Chilean volcanic complex recorded fresh eruptive pulses through September 2026, including a 900-metre ash column, keeping authorities on yellow alert.
- Part of the Andean Volcanic Belt, which runs along the Pacific Ring of Fire on Chile's eastern border with Argentina.

X-FACT MATRIX

Location	Andes range, Nuble Region, south-central Chile
Type	Volcanic complex (stratovolcano group)
Country	Chile
Monitoring body	SERNAGEOMIN (Chile's National Geology and Mining Service)
Current status	Yellow alert, recurring eruptive pulses through 2026

KEY CONCEPTS EXPLAINED

- Chile sits on the **Pacific Ring of Fire** where the Nazca Plate subducts under the South American Plate, forming the Andes.
- **Ojos del Salado** (6,893 m, Chile-Argentina) is the highest active volcano; **Valdivia 1960** is the strongest earthquake ever recorded (magnitude 9.5).
- Chile borders **Peru, Bolivia, Argentina**; the **Atacama** is its desert; the **Strait of Magellan** and **Drake Passage** lie at its southern end.
- Other Chilean volcanoes in the news: **Villarrica, Calbuco, Llaima**. Alert levels run green, yellow, orange, red.

⚡ UNIQUE FACT

The complex has shown repeated ash and gas pulses through 2026, with columns exceeding 900 metres at times.

⚠ EXAM TRAP

Nevados de Chillan is in the Chilean Andes (Nuble Region), not in Argentina or Peru, and it is a volcanic complex rather than a single cone.



VOLCANO · GS PAPER I · GEOGRAPHY (PRELIMS)

Emi Koussi

NEWS IN BRIEF

- Africa's largest shield volcano in Chad's Tibesti Mountains drew attention after a 2026 satellite image showed an unusual salt patch glinting on its summit caldera.
- It is the highest peak in the Sahara Desert, rising sharply above the surrounding arid plains.

X-FACT MATRIX

Location	Southeast end of the Tibesti Mountains, central Sahara
Country	Chad
Elevation	3,415 metres: highest point in Chad and in the Sahara
Type	Large shield volcano, capped by two nested calderas
Status	Extinct; date of last eruption unknown

KEY CONCEPTS EXPLAINED

- A **shield volcano** is broad with gentle slopes from runny basalt (Mauna Loa); a **caldera** is a collapse basin at the summit.
- Chad is **landlocked**; borders Libya, Niger, Nigeria, Cameroon, CAR, Sudan. **Lake Chad** is shared by Chad, Niger, Nigeria, Cameroon.
- Tibesti runs into Libya; the **Aouzou Strip** dispute with Libya was settled by the **ICJ in 1994**.
- Static: Sahara is the largest hot desert; **Kilimanjaro** (5,895 m, Tanzania) is Africa's highest peak. Other Saharan volcanic massifs: **Ahaggar** (Algeria), **Air** (Niger).

⚡ UNIQUE FACT

The Tibesti Mountains straddle northern Chad close to the Libyan border, a remote volcanic massif in the central Sahara.

⚠ EXAM TRAP

Emi Koussi is the highest point of the Sahara and Chad, not of Africa (that is Kilimanjaro, Tanzania). It is extinct, not active.

📌 MEMORY BANK **Emi Koussi** VOLCANO

1. Chad, Tibesti Mountains
2. 3,415 m: highest point of the Sahara
3. Shield volcano with two calderas
4. Extinct
5. Chad is landlocked

PORT · GS PAPER I · GEOGRAPHY (PRELIMS)

Mocha (Al Mokha)

NEWS IN BRIEF

- Houthi forces seized Yemen's strategic Red Sea port of Mocha in September 2026, halting operations and renewing concerns over global energy and shipping flows.
- The Bab-el-Mandeb strait connects the Red Sea to the Gulf of Aden, a route vital for Suez Canal-bound shipping.

X-FACT MATRIX

Location	Red Sea coast, southwestern Yemen
Country	Yemen
Historic significance	Historic coffee-trading port that gave 'mocha' coffee its name
2026 development	Seized by Houthi forces; port operations halted after attacks
Strategic relevance	Sits near the Bab-el-Mandeb strait, a chokepoint for Red Sea shipping

KEY CONCEPTS EXPLAINED

- **Bab-el-Mandeb** ('Gate of Tears') joins the Red Sea to the Gulf of Aden between Yemen, Djibouti and Eritrea; **Perim Island** sits in the strait.
- Yemen borders **Saudi Arabia and Oman**. Ports: **Aden, Hodeidah, Mocha**. **Socotra** (Yemen) is a UNESCO World Heritage Site for endemic biodiversity.
- Red Sea shoreline states: Egypt, Sudan, Eritrea, Saudi Arabia, Yemen, Jordan, Israel. It links to the Mediterranean through the **Suez Canal**.
- Static: the word 'mocha' for coffee comes from this port, historic exporter of Arabian coffee.

⚡ **UNIQUE FACT**

Mocha's closure adds to disruption of Red Sea shipping lanes amid continuing regional conflict.

⚠ **EXAM TRAP**

Mocha is a Red Sea port of Yemen, separate from Aden on the Gulf of Aden. Bab-el-Mandeb is the nearby strait.

📌 **MEMORY BANK** **Mocha (Al Mokha)** PORT

1. Yemen, Red Sea coast
2. Historic coffee port
3. Near Bab-el-Mandeb strait
4. Seized by Houthi forces, September 2026
5. Port operations halted

ISLAND · GS PAPER I · GEOGRAPHY (PRELIMS)

Mayotte

NEWS IN BRIEF

- A submarine volcano roughly 50 km off Mayotte has shown persistent seismicity through 2026, continuing to be monitored by France's REVOSIMA observation network.
- Mayotte lies in the Mozambique Channel, geographically part of the Comoros archipelago though politically French.

X-FACT MATRIX

Location	Mozambique Channel, between Madagascar and the African mainland
Status	Overseas department and region of France
Associated feature	Active submarine volcano roughly 50 km east of the island
Monitoring body	REVOSIMA (Réseau de surveillance volcanologique et sismologique de Mayotte)
Part of archipelago	Comoros Islands archipelago

KEY CONCEPTS EXPLAINED

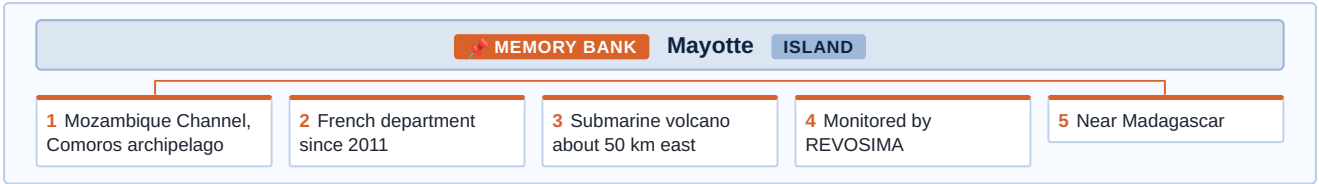
- **Comoros archipelago**: Grande Comore, Anjouan, Moheli (independent Comoros) and **Mayotte** (French, a department since **2011**, an EU outermost region).
- The **Mozambique Channel** separates **Madagascar** from mainland Africa; **Reunion** is another French island in the region.
- The submarine volcano **Fani Maore** was identified after the 2018 seismic swarm, one of the largest submarine eruptions recorded.
- Link: France holds large EEZ in the Indian Ocean through these islands; India-France ties include Indian Ocean cooperation and **IORA**.

⚡ UNIQUE FACT

The underwater volcanic activity since 2018 is among the largest submarine eruptions ever recorded and continues to be seismically active.

⚠ EXAM TRAP

Mayotte is not part of independent Comoros. It is a French department in the Comoros archipelago and an EU outermost region.



PORT · GS PAPER I · GEOGRAPHY (PRELIMS)

Sohar Port

NEWS IN BRIEF

- Oman's Sohar Port and Freezone recorded a 52% jump in cargo throughput in the first half of 2026, reinforcing its role as a Gulf industrial and logistics hub.
- Sohar sits on the Gulf of Oman coast, outside the Strait of Hormuz, giving it strategic value as a bypass route for regional trade.

X-FACT MATRIX

Location	Al Batinah coast, northern Oman, on the Gulf of Oman
Country	Oman
Type	Deep-water port and free-trade zone
H1 2026 throughput	52 million tonnes of cargo, up 52% year-on-year
Strategic relevance	Located outside the Strait of Hormuz, offering an alternative Gulf gateway

KEY CONCEPTS EXPLAINED

- **Gulf of Oman** links the Arabian Sea to the **Strait of Hormuz**. Ports on it: **Sohar** (Oman), **Chabahar** (Iran, India-developed Shahid Beheshti terminal), **Gwadar** (Pakistan, Arabian Sea).
- Oman: capital **Muscat**; borders UAE, Saudi Arabia, Yemen; **Musandam** exclave guards Hormuz. Other ports: **Duqm** (India has naval access since 2018) and **Salalah**.
- Hormuz lies between **Iran and Oman**; it is about 21 nautical miles wide at the narrowest point.
- Static: a **free zone** offers customs and tax concessions for export-oriented units, as in India's SEZs under the SEZ Act, 2005.

⚡ **UNIQUE FACT**

It functions as an integrated port-and-freezone hub for petrochemicals, metals and logistics investment.

⚠ **EXAM TRAP**

Sohar lies on the Gulf of Oman, outside the Strait of Hormuz. Do not place it inside the Persian Gulf.

📌 MEMORY BANK **Sohar Port** PORT

1. Oman, Al Batinah coast
2. Gulf of Oman, outside Hormuz
3. Port plus free zone
4. H1 2026 cargo: 52 million tonnes
5. Peers: Chabahar, Gwadar

RIVER · GS PAPER I · GEOGRAPHY (PRELIMS)

Bagmati River

NEWS IN BRIEF

- The Bagmati crossed danger levels in Nepal and Bihar through September 2026, triggering flood warnings in Kathmandu and downstream districts.
- The Bagmati flows from the Kathmandu Valley in Nepal into Bihar, India, before joining the larger Ganga river system.

X-FACT MATRIX

Source	Shivapuri Hills, near Kathmandu, Nepal
Countries	Nepal and India (Bihar)
Major tributary of	Ganga river system, via Kosi/Koshi basin confluence region
Cultural significance	Sacred river for Kathmandu Valley's Hindu and Buddhist traditions
2026 development	Crossed warning/danger levels, causing flooding in Nepal and north Bihar

KEY CONCEPTS EXPLAINED

- Rises in the **Shivapuri Hills** near Kathmandu; **Pashupatinath** temple stands on its bank (Kathmandu Valley is UNESCO World Heritage, 1979).
- Enters Bihar in the Sitamarhi-Sheohar area and is a **left-bank** Ganga system river. Other left-bank Ganga tributaries: **Ghaghara, Gandak, Kosi, Mahananda**; right-bank: **Yamuna, Son**.
- Kosi is the **'Sorrow of Bihar'**. India-Nepal agreements: **Kosi (1954)**, **Gandak (1959)**, **Mahakali Treaty (1996)**.
- Link: north Bihar floods come from Himalayan rivers with Nepal catchments, so flood data sharing is a standing India-Nepal issue.

⚡ **UNIQUE FACT**

Repeated flood warnings along its course in 2026 prompted embankment strengthening work in Bihar.

⚠ **EXAM TRAP**

The Bagmati rises in Nepal and flows into Bihar. It is not a Brahmaputra tributary, and its floods are a separate problem from the Kosi's.

📌 MEMORY BANK **Bagmati River** RIVER

1 Source: Shivapuri Hills, Nepal
2 Flows into north Bihar
3 Ganga system, left bank
4 Pashupatinath on its banks
5 Flood warnings: September 2026

ISLAND · GS PAPER I · GEOGRAPHY (PRELIMS)

Lord Howe Island

NEWS IN BRIEF

- Conservationists collected Lord Howe Island Phasmids from Ball's Pyramid for a Melbourne Zoo breeding programme, reviving plans to reintroduce the insect to its now rodent-free home island.
- Ball's Pyramid, the world's tallest sea stack, is where the phasmid survived after being presumed extinct on the main island.

X-FACT MATRIX

Location	Tasman Sea, between Australia and New Zealand
Administered by	Lord Howe Island Board, New South Wales, Australia
Associated feature	Ball's Pyramid, a volcanic sea stack nearby
Flagship species	Lord Howe Island Phasmid (Dryococelus australis), long thought extinct, rediscovered 2001
2026 development	Phasmids collected for a Zoos Victoria captive breeding and reintroduction programme

KEY CONCEPTS EXPLAINED

- **Lord Howe Island Group** is a UNESCO World Heritage Site (**1982**) in Australia, known for endemic species and its southernmost coral reef.
- **Ball's Pyramid** (562 m) is the world's tallest volcanic sea stack. The phasmid ('tree lobster') is **Critically Endangered** on the IUCN Red List.
- Tasman Sea lies between **Australia and New Zealand**; **Norfolk Island** is another Australian territory nearby.
- Link: **rodent eradication** on islands is a standard conservation tool, as in the island invasives programme; flightless **Lord Howe woodhen** was saved similarly.

⚡ **UNIQUE FACT**

Lord Howe Island is now rodent-free, a status that underpins plans to reintroduce the phasmid to its original home.

⚠ **EXAM TRAP**

Lord Howe Island belongs to Australia (New South Wales). The phasmid was rediscovered in 2001 on nearby Ball's Pyramid, not on the main island.

📌 MEMORY BANK **Lord Howe Island** ISLAND

1. Tasman Sea, Australia
2. UNESCO World Heritage (1982)
3. Ball's Pyramid: tallest sea stack
4. Phasmid: Critically Endangered
5. Island is rodent-free

03

International Relations

From a Red Sea pipeline shutdown to summit season in Bishkek and New Delhi, September's diplomacy spanned energy security, sanctions and multilateral platforms.

1. Saudi Arabia's East-West Pipeline Shutdown
2. UK Recognises India's Carbon Credit Trading Scheme
3. US-Russia Sanctions Bill
4. Trump-Xi Summit 2026
5. US-Denmark Greenland Security Deal
6. SCO Summit 2026
7. BRICS Summit 2026

ENERGY SECURITY · GS PAPER II · INTERNATIONAL RELATIONS

Saudi Arabia's East-West Pipeline Shutdown

NEWS IN BRIEF

- Saudi Arabia closed its East-West Crude Oil Pipeline after drone attacks launched from Iraq hit pumping stations, briefly pushing Brent crude above $100 a barrel.
- Brent crude jumped to around $110 a barrel before settling above $100 for the first time since May 2026.

X-FACT MATRIX

Pipeline	East-West Crude Oil Pipeline (Petroline)
Route	Eastern oil fields to Yanbu, Red Sea export terminal
Capacity	Up to 5 million barrels per day
Strategic role	Saudi Arabia's main route bypassing the Strait of Hormuz
Shutdown date	September 11, 2026, after drone attacks on September 10
Attack origin	Multiple drones launched from Iraqi territory, per Saudi Foreign Ministry

KEY CONCEPTS EXPLAINED

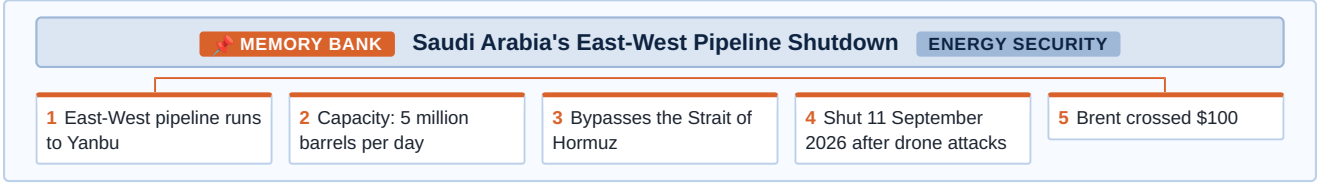
- **Strait of Hormuz** carries about a fifth of world oil; bypass routes: Saudi **East-West (Yanbu)** and UAE **Habshan-Fujairah** pipeline (about 1.5 million bpd).
- Iraq borders **Saudi Arabia, Kuwait, Iran, Turkey, Syria, Jordan**; its northern export line is **Kirkuk-Ceyhan** (Turkey).
- India imports roughly **85%** of its crude. **ISPRL** holds strategic reserves at **Visakhapatnam, Mangaluru, Padur** (about 5.33 million tonnes).
- Static: **OPEC** is headquartered in **Vienna**; Brent, WTI and Dubai/Oman are benchmarks; India buys on the **Indian Basket** (Oman, Dubai, Brent mix).

⚡ **UNIQUE FACT**

Saudi Arabia chose not to retaliate immediately, giving Iraq's government time to act against militias operating from its territory.

⚠ **EXAM TRAP**

The East-West Pipeline is a bypass for the Strait of Hormuz, not a replacement for it: its closure removes an alternative route and makes Hormuz-dependent shipping more critical, not less.



CLIMATE TRADE · GS PAPER II · INTERNATIONAL RELATIONS

UK Recognises India's Carbon Credit Trading Scheme

NEWS IN BRIEF

- The UK recognised India's Carbon Credit Trading Scheme (CCTS) as a qualifying mechanism under its Carbon Border Adjustment Mechanism, sparing Indian exporters from double carbon pricing.
- CCTS has two tracks: a compliance mechanism for energy-intensive industries and a voluntary offset mechanism for emission-reduction projects.

X-FACT MATRIX

Indian scheme	Carbon Credit Trading Scheme (CCTS), under the Indian Carbon Market
Administered by	Bureau of Energy Efficiency; registry by Grid Controller of India; CERC regulatory support
Predecessor	Perform, Achieve and Trade (PAT) scheme
UK mechanism	Carbon Border Adjustment Mechanism (CBAM)
Framework used	UK-India Energy MoU and the Partnership for Market Implementation

KEY CONCEPTS EXPLAINED

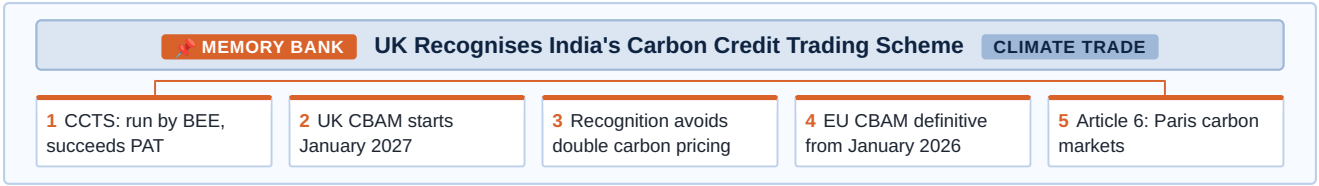
- **EU CBAM**: transitional reporting from Oct 2023, definitive charges from **1 January 2026**; covers cement, iron and steel, aluminium, fertilisers, electricity, hydrogen. UK CBAM follows from **January 2027**.
- **India-UK CETA** was signed in **July 2025**; the Energy Conservation (Amendment) Act, **2022** enabled the Indian carbon market; **CCTS notified 2023**.
- **Article 6** of the Paris Agreement lets countries trade carbon units: **6.2** bilateral, **6.4** UN-supervised mechanism (successor to Kyoto's CDM).
- India's pledges: **net zero by 2070**, 50% non-fossil capacity by 2030, 1 billion tonne emission cut by 2030. **PAT** (2012, NMEEE) was the earlier energy-efficiency trading scheme.

⚡ UNIQUE FACT

Recognition lets Indian exporters claim relief equal to the carbon price already paid under CCTS, avoiding double carbon taxation under UK CBAM.

⚠ EXAM TRAP

This is UK CBAM recognition, not EU CBAM: the EU's own CBAM (effective 2026-27) has not extended equivalent recognition to CCTS; don't conflate the two border mechanisms.



SANCTIONS · GS PAPER II · INTERNATIONAL RELATIONS

US-Russia Sanctions Bill

NEWS IN BRIEF

- The US Senate passed a sweeping sanctions bill targeting Russian energy exports and authorising tariffs of up to 100% on countries that continue buying Russian oil and gas.
- The bill had been stalled for over a year before the Senate found the votes to pass it in August 2026.

X-FACT MATRIX

Championed by	Senator Lindsey Graham
Senate vote	86-11
Target	Russian energy exports amid the ongoing Ukraine war
Key tool	Authorises tariffs of up to 100% on top buyers of Russian oil/gas
Also covers	Secondary sanctions provisions tied to Iran

KEY CONCEPTS EXPLAINED

- **CAATSA, 2017** is the US law that sanctions dealings with Russia's defence sector; India's **S-400** deal (2018, about $5.4 billion) raised the waiver question.
- G7 price cap on Russian crude (**$60**, December 2022) is a separate tool from **secondary tariffs**, which target third-country buyers.
- In the US, a bill must pass **both Senate and House** and be signed by the President, who can veto; Congress needs two-thirds to override.
- Link: India's **strategic autonomy** and energy security; Russia is a leading crude supplier and long-standing defence partner.

⚡ **UNIQUE FACT**

India, as one of the largest buyers of discounted Russian crude, is directly exposed to any tariff action under the bill's secondary-sanctions provisions.

⚠ **EXAM TRAP**

A Senate vote alone does not make the bill law. It must pass the House and receive Presidential assent.

📌 MEMORY BANK **US-Russia Sanctions Bill** SANCTIONS

1. Senate vote: 86-11
2. Led by Senator Lindsey Graham
3. Tariffs up to 100% on buyers of Russian energy
4. Needs House and President
5. CAATSA 2017: earlier sanctions law

BILATERAL SUMMIT · GS PAPER II · INTERNATIONAL RELATIONS

Trump-Xi Summit 2026

NEWS IN BRIEF

- Chinese President Xi Jinping made a state visit to Washington from September 23-25, 2026, extending the US-China trade truce and launching a new bilateral AI dialogue.
- Both leaders emphasised a shared World War II-era alliance narrative, which Taipei's Mainland Affairs Council rejected as historically distorting, since the People's Republic of China did not exist during the war.

X-FACT MATRIX

Leaders	US President Donald Trump and Chinese President Xi Jinping
Venue	Washington D.C., United States (state visit, White House)
Dates	September 23-25, 2026
Trade outcome	Trade truce extended through January 10, 2027
New mechanism	Bilateral artificial intelligence dialogue established
Taiwan	Not mentioned in either leader's official summit readout

KEY CONCEPTS EXPLAINED

- **APEC 2026** is hosted by **China** (Shenzhen); **G20 2026** is hosted by the **US** (Miami). G20 has 21 members since the **African Union** joined in 2023.
- The earlier Trump-Xi meeting was on the sidelines of **APEC 2025** in South Korea (held at Busan after the Gyeongju summit).
- **Trade truce** means pausing tariff and export-control escalation for a fixed period; it is not a trade agreement and does not need a treaty.
- Link: US-China relations shape India's choices in **Quad**, supply chains and the Indo-Pacific. **One China policy** is the standard diplomatic phrase for Taiwan.

⚡ UNIQUE FACT

Analysts describe the summit as heavy on symbolism: a state visit with full ceremonial honours: but light on new concrete agreements beyond the trade truce extension.

⚠ EXAM TRAP

This was Xi's state visit to Washington, not a Trump visit to Beijing: don't confuse it with the Busan, South Korea APEC sideline meeting between the two leaders held earlier in 2026.



ARCTIC GEOPOLITICS · GS PAPER II · INTERNATIONAL RELATIONS

US-Denmark Greenland Security Deal

NEWS IN BRIEF

- The US and Denmark reached a security deal over Greenland, granting the US permanent basing and overflight rights while both sides affirmed Danish sovereignty and Greenlandic self-determination.
- The deal bans non-NATO countries from establishing military bases in Greenland and requires US approval for sensitive adversary investments.

X-FACT MATRIX

Announced	September 18, 2026; expected signing at the UN General Assembly, New York
Parties	United States, Denmark, and Greenland
Key grant	Permanent US access, basing and overflight rights in Greenland
Existing base	Pituffik Space Base, under the 1951 Defense of Greenland Treaty
Approval pending	Danish and Greenlandic parliamentary approval still required

KEY CONCEPTS EXPLAINED

- **Greenland** is the world's largest island, capital **Nuuk**; **Home Rule 1979** and **Self-Government Act 2009** give wide autonomy; it left the EEC in **1985** and is outside the EU.
- **Pituffik Space Base** (formerly **Thule Air Base**, renamed 2023) is the US's northernmost base; the **1951 Defense of Greenland agreement** governs it.
- **Arctic Council** (1996, secretariat **Tromso**) has 8 members: Canada, Denmark, Finland, Iceland, Norway, Russia, Sweden, US. **India is an observer (2013)**.
- India in the Arctic: **Himadri** station at Ny-Alesund, **Svalbard** (2008); **Arctic Policy 2022**; **Svalbard Treaty, 1920**. Denmark is a NATO founding member (1949).

⚡ UNIQUE FACT

Greenland is an autonomous part of the Kingdom of Denmark; the deal explicitly recognises Danish sovereignty and Greenlanders' right to self-determination, shifting the dispute from territorial acquisition to defence cooperation.

⚠ EXAM TRAP

Trump's earlier rhetoric sought US control or purchase of Greenland outright: the 2026 deal is a defence-cooperation arrangement that explicitly preserves Danish sovereignty, not a transfer of territory.



MULTILATERAL SUMMIT · GS PAPER II · INTERNATIONAL RELATIONS

SCO Summit 2026

NEWS IN BRIEF

- The 26th SCO Heads of State Council met in Bishkek, Kyrgyzstan, marking 25 years of the SCO, with PM Modi describing India's approach as 'Security, Connectivity and Opportunity.'
- PM Modi held bilateral meetings on the sidelines with leaders of Russia, Iran, Kyrgyzstan and Armenia.

X-FACT MATRIX

Edition	26th SCO Summit
Venue	Yrys Ordo, Bishkek, Kyrgyzstan
Dates	August 31 to September 1, 2026
Host	Kyrgyzstan (2025-26 rotating chairmanship), chaired by President Sadyr Japarov
Theme	'25 Years of the SCO: Together Towards Sustainable Peace, Development and Prosperity'
Member states	10: India, China, Russia, Pakistan, Kazakhstan, Kyrgyzstan, Tajikistan, Uzbekistan, Iran, Belarus

KEY CONCEPTS EXPLAINED

- **SCO** was formed in **2001** at Shanghai from the **Shanghai Five (1996)**, adding Uzbekistan. **India and Pakistan** joined in **2017** (Astana), **Iran** in **2023**, **Belarus** in **2024**.
- Secretariat: **Beijing**. **RATS** (Regional Anti-Terrorist Structure): **Tashkent**. Official languages: Chinese and Russian.
- Observers include **Afghanistan and Mongolia**. India chaired SCO in **2023** (virtual summit, July).
- Static: **Kyrgyzstan** (capital **Bishkek**) is landlocked and borders Kazakhstan, Uzbekistan, Tajikistan, China.

⚡ UNIQUE FACT

The summit marked the SCO's 25th anniversary since its founding in Shanghai in 2001.

⚠ EXAM TRAP

India joined the SCO in 2017 along with Pakistan, not at its 2001 founding. Iran (2023) and Belarus (2024) joined later.

📌 MEMORY BANK **SCO Summit 2026** MULTILATERAL SUMMIT

1. 26th summit, Bishkek
2. 31 August to 1 September 2026
3. 10 member states
4. Founded 2001 at Shanghai
5. Secretariat Beijing, RATS Tashkent

MULTILATERAL SUMMIT · GS PAPER II · INTERNATIONAL RELATIONS

BRICS Summit 2026

NEWS IN BRIEF

- India hosted the BRICS Summit in New Delhi on September 12-13, 2026, under its own chairship, with the theme 'Building for Resilience, Innovation, Cooperation, and Sustainability.'
- As chair, India set the group's 2026 agenda, hosting prior events including Energy Ministers' meetings in Gurugram and a virtual BRICS Youth Energy Summit.

X-FACT MATRIX

Host and venue	New Delhi, India
Dates	September 12-13, 2026
India's role	Chair of BRICS for 2026
Theme	'Building for Resilience, Innovation, Cooperation, and Sustainability'
Member countries	11: Brazil, Russia, India, China, South Africa, Saudi Arabia, UAE, Iran, Egypt, Ethiopia, Indonesia

KEY CONCEPTS EXPLAINED

- **BRIC** term by **Jim O'Neill** (Goldman Sachs, 2001); first summit **Yekaterinburg, 2009**; **South Africa** joined **2010**.
- **New Development Bank**: agreed at Fortaleza 2014, started 2015, HQ **Shanghai**. **Contingent Reserve Arrangement** supports members facing payment pressure.
- Expansion: **Egypt, Ethiopia, Iran, UAE** (January 2024), **Indonesia** (January 2025); a **partner country** category began in 2024.
- India has chaired in **2012, 2016 (Goa), 2021 (virtual)** and **2026**. The 2025 summit was at **Rio de Janeiro**.

⚡ UNIQUE FACT

This marks the 18th BRICS summit overall and India's first hosting since the group's 2023 expansion beyond its original five members.

⚠ EXAM TRAP

BRICS has no permanent secretariat; the chair rotates yearly. The New Development Bank is the institution with a headquarters (Shanghai).

📌 MEMORY BANK **BRICS Summit 2026** MULTILATERAL SUMMIT

1. Host: New Delhi, 12-13 September 2026
2. India chairs BRICS in 2026
3. NDB headquartered in Shanghai
4. 2024 entrants: Egypt, Ethiopia, Iran, UAE
5. Indonesia joined in 2025

04

Economy

Digital payments, green finance, inflation, consumer protection and capital-market reform from September.

1. India's First Blue Bond
2. 10 Years of UPI
3. Rise in Food Price Index
4. Consumer Protection (E-Commerce) Amendment Rules, 2026
5. Demat 2.0: Tokenised Corporate Bonds
6. Agentic Commerce

GREEN FINANCE · GS PAPER III · ECONOMY

India's First Blue Bond

NEWS IN BRIEF

- Sagarmala Finance Corporation is set to issue India's first Blue Bond, raising up to $105.08 million to fund maritime and coastal infrastructure.
- A Blue Bond is a debt instrument that raises capital specifically for ocean, coastal ecosystem and sustainable marine development projects.

X-FACT MATRIX

Issuer	Sagarmala Finance Corporation (SFC), a state-owned maritime lender
Parent ministry	Ministry of Ports, Shipping and Waterways
SFC founded	2016; received NBFC licence in June 2025
Issue size	Up to $105.08 million, including a $52.54 million greenshoe option
Use of proceeds	Maritime and coastal infrastructure, ocean- and water-related projects

▸ FLOW CHART: How a blue bond works

1. **Issuer raises debt** — Investors buy the bond
2. **Funds ring-fenced** — Only for ocean and coastal projects
3. **Projects verified** — Third-party review
4. **Repayment** — Interest and principal to investors

KEY CONCEPTS EXPLAINED

- **Green bonds** fund climate-friendly projects; India issued **Sovereign Green Bonds** from **January 2023**. **Seychelles** issued the first sovereign blue bond (**2018**).
- **SEBI** (2023) added **blue, yellow and transition** bond categories under its green debt framework; **SDG 14** is Life Below Water.
- **Sagarmala** was launched in **2015**; **SFC** set up in **2016**. A **greenshoe option** lets the issuer sell extra bonds if demand is high.
- Link: **Deep Ocean Mission**, Blue Economy policy and **Maritime Amrit Kaal Vision 2047** share the same ocean-finance goal.

⚡ UNIQUE FACT

The issue aims to diversify SFC's funding sources and narrow the gap between its short-term borrowings and long-term lending commitments.

⚠ EXAM TRAP

A Blue Bond funds ocean/water and coastal infrastructure specifically: it is a sub-category of green/sustainability bonds, not a synonym for all environmentally-linked debt instruments.

📌 MEMORY BANK India's First Blue Bond **GREEN FINANCE**

1. Issuer: Sagarmala Finance Corporation
2. Up to $105.08 million
3. Greenshoe option: $52.54 million
4. Funds maritime and coastal projects
5. Ministry of Ports, Shipping and Waterways

DIGITAL PAYMENTS · GS PAPER III · ECONOMY

10 Years of UPI

NEWS IN BRIEF

- The Unified Payments Interface marked a decade of operation in 2026, processing 21.70 billion transactions in January alone and accounting for 49% of global real-time payments.
- UPI is an advanced version of IMPS, supporting real-time peer-to-peer and person-to-merchant transfers around the clock.
- International integration has expanded to the UAE, Singapore, Nepal and France, positioning UPI as a model of open digital public infrastructure.

X-FACT MATRIX

Developed by	National Payments Corporation of India (NPCI)
Initiated by	Reserve Bank of India and Indian Banks' Association
January 2026 volume	21.70 billion transactions: about 81% of retail digital transactions
Global share	India accounts for about 49% of global real-time payment transactions
Banks live	691, up from 216 in 2021
Security update	RBI mandated two-factor authentication for digital payments, effective April 1, 2026

▸ FLOW CHART: How a UPI payment moves

1. **Payer app** — Enters VPA and PIN
2. **Payer bank** — Debits on authorisation
3. **NPCI switch** — Routes and clears
4. **Payee bank** — Credits the account
5. **Confirmation** — SMS and app alert

KEY CONCEPTS EXPLAINED

- **NPCI** (2008) is a not-for-profit company under the **Payment and Settlement Systems Act, 2007**. Sequence: **IMPS (2010)**, **RuPay (2012)**, **UPI (2016)**, **BHIM app (December 2016)**.
- **UPI 123Pay** (feature phones) and **UPI Lite** (small payments) came in **2022**; **Zero MDR** from January 2020. **NIPL** is NPCI's international arm.
- Cross-border: **Singapore PayNow** (Feb 2023), **Bhutan, Nepal, UAE, Sri Lanka, Mauritius, France**.
- Link: **India Stack** and **Digital Public Infrastructure** (Aadhaar, UPI, DigiLocker); **Payments Infrastructure Development Fund (2021)** funds acceptance.

⚡ UNIQUE FACT

A key concern flagged is market concentration: two private apps hold over 80% of UPI market share.

⚠ EXAM TRAP

UPI is run by NPCI, not by the RBI directly. It is a payment interface, not a bank and not a currency.

📌 MEMORY BANK — 10 Years of UPI — DIGITAL PAYMENTS

1. Built by NPCI; RBI and IBA initiated
2. 10 years in 2026
3. January 2026: 21.70 billion transactions
4. 691 banks live
5. 49% of global real-time payments

INFLATION · GS PAPER III · ECONOMY

Rise in Food Price Index

NEWS IN BRIEF

- India's Wholesale Price Index hit a near four-year high as food prices recorded their sharpest rise in 16 months, pushing retail inflation upward through 2026.
- Food inflation has been a recurring driver of overall CPI readings through 2026, alongside fuel costs.

X-FACT MATRIX

Indicator	Wholesale Price Index (WPI): food component
2026 trend	WPI hit a near four-year high; food prices rose sharpest in 16 months
Compiling body	Office of the Economic Adviser, Department for Promotion of Industry and Internal Trade
Related measure	Consumer Price Index (CPI) food and fuel components also rose

KEY CONCEPTS EXPLAINED

- **WPI** (base **2011-12**) comes from the **Office of the Economic Adviser, DPIIT**; groups: primary articles, fuel and power, manufactured products. **CPI** comes from **MoSPI (NSO)**.
- **CPI** has a heavy food weight (food and beverages about **46%** in the 2012 base). RBI targets **4% with a band of 2%** under the 2016 framework; **MPC** has six members.
- **FAO Food Price Index** is global, monthly, base **2014-16 = 100**, covering cereals, vegetable oils, dairy, meat and sugar.
- Link: **Minimum Support Price**, buffer stocks (FCI) and **Essential Commodities Act, 1955** are the usual price-control tools.

⚡ UNIQUE FACT

Persistent food price pressure complicates the RBI's monetary policy calibration, as food carries a heavy weight in India's CPI basket.

⚠ EXAM TRAP

WPI and CPI track different baskets and purposes: WPI reflects wholesale/producer prices and excludes services, while CPI (used for RBI's inflation targeting) reflects retail prices paid by consumers; don't use the two interchangeably.

📌 MEMORY BANK **Rise in Food Price Index** INFLATION

1. WPI base 2011-12, compiled by DPIIT
2. CPI compiled by MoSPI
3. RBI target: 4% with a 2% band
4. FAO Food Price Index base: 2014-16
5. WPI at near four-year high

CONSUMER PROTECTION · GS PAPER III · ECONOMY

Consumer Protection (E-Commerce) Amendment Rules, 2026

NEWS IN BRIEF

- The Department of Consumer Affairs notified amended E-Commerce Rules effective January 1, 2027, tightening norms on dark patterns, price manipulation and sponsored-listing disclosure.
- Platforms must disclose both the reduced price and the lowest price offered in the preceding 30 days, and cannot manipulate search rankings in misleading ways.
- Sponsored listings require clear disclosure, and platforms must complete a yearly dark-patterns self-audit under the 2023 guidelines, displaying a compliance certificate.

X-FACT MATRIX

Ministry/Department	Department of Consumer Affairs
Amends	Consumer Protection (E-Commerce) Rules, 2020
Parent Act	Consumer Protection Act, 2019
Effective from	January 1, 2027
2025 e-commerce grievances	5,11,196 of 17,71,622 total National Consumer Helpline complaints (about 29%)

KEY CONCEPTS EXPLAINED

- **Consumer Protection Act, 2019** replaced the 1986 Act and took effect **20 July 2020**; **CCPA** was set up in July 2020; E-Commerce Rules were notified on **23 July 2020**.
- Three-tier forums: **District, State, National Commission**. **e-Daakhil** is the online filing portal. **National Consumer Day**: 24 December; **World Consumer Rights Day**: 15 March.
- **Dark patterns guidelines (2023)** list 13 practices, such as false urgency, basket sneaking and confirm-shaming.
- Six consumer rights: safety, information, choice, to be heard, redressal, consumer education. **BIS** sets product standards.

⚡ UNIQUE FACT

Marketplaces now need express, affirmative consumer consent before using personal data for specified purposes, and cannot charge bundled fees unrelated to the platform.

⚠ EXAM TRAP

These amend the E-Commerce Rules made under the Consumer Protection Act, 2019. They are not rules under the IT Act, 2000.

MEMORY BANK Consumer Protection (E-Commerce) Amendment Rules, 2026 CONSUMER PROTECTION

1. Consumer Protection Act 2019; effective July 2020
2. Amended rules effective 1 January 2027
3. Yearly dark-pattern self-audit
4. Prior price: lowest in the last 30 days
5. CCPA: central regulator

CAPITAL MARKETS · GS PAPER III · ECONOMY

Demat 2.0: Tokenised Corporate Bonds

NEWS IN BRIEF

- SEBI and RBI launched the 'Demat 2.0' pilot for tokenised corporate bonds, with three issuers raising Rs 1,025 crore in its first phase.
- The pilot extends India's existing dematerialisation framework by layering tokenised representation on top of corporate bonds.

X-FACT MATRIX

Launched by	SEBI, in collaboration with RBI
Pilot name	Demat 2.0: Pilot Project for Tokenised Corporate Bonds
Phase 1 result	3 issuers raised Rs 1,025 crore
Underlying concept	Tokenisation of corporate bond ownership records

▸ FLOW CHART: Tokenised bond life cycle



KEY CONCEPTS EXPLAINED

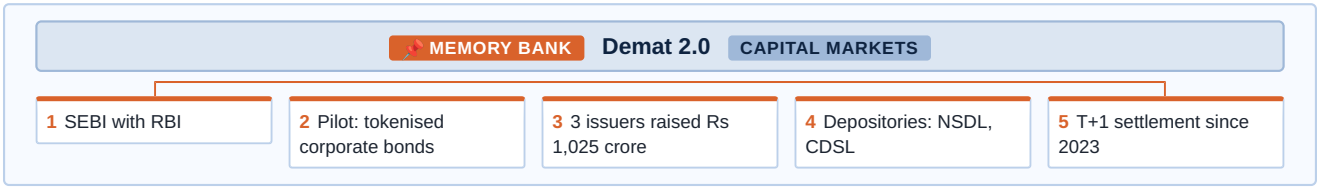
- **Depositories Act, 1996**: **NSDL** (1996) and **CDSL** (1999) are India's depositories. **SEBI** became statutory in **1992** (SEBI Act).
- India moved to **T+1 settlement** in **January 2023**; an optional **T+0** beta began in March 2024.
- **Tokenisation** here means a digital token that represents bond ownership on a distributed ledger; it differs from RBI's **card tokenisation** for payments.
- Link: **e-rupee (CBDC)** pilots began December 2022; **regulatory sandbox** lets regulators test new products on a small scale.

⚡ UNIQUE FACT

It is positioned as a step toward faster, more transparent settlement in India's corporate bond market.

⚠ EXAM TRAP

Demat 2.0 tokenises corporate bonds on a ledger. It differs from card tokenisation in payments and from the e-rupee.



DIGITAL ECONOMY · GS PAPER III · ECONOMY

Agentic Commerce

NEWS IN BRIEF

- AI agents that can independently browse, decide and complete purchases are emerging as a new frontier in India's digital economy, with OpenAI-Pine Labs and similar tie-ups expanding the model.
- Agentic commerce shifts purchase decisions from direct human clicks to AI agents acting on stated goals and preferences.

X-FACT MATRIX

Concept	AI agents that autonomously browse, decide and transact on a consumer's behalf
India context	OpenAI and Pine Labs formed a strategic alliance for agentic commerce in India's $200 billion-plus digital economy
Enabling layer	AI agents (e.g. Meta's Muse, OpenAI's agent tools) integrated with payment rails
Industry framing	Positioned as the 'next frontier of commerce' beyond app-based online shopping

KEY CONCEPTS EXPLAINED

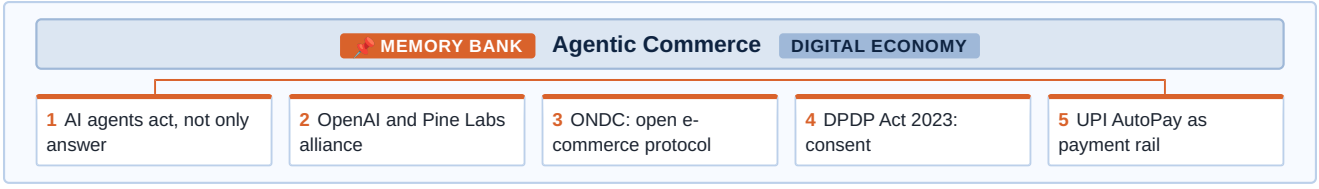
- **Generative AI** creates content; **agentic AI** plans and carries out multi-step actions such as comparing, booking and paying.
- **ONDC** (2022, DPIIT) is an open protocol for e-commerce; **IndiaAI Mission** (2024, about Rs 10,000 crore) funds compute and models; India hosted the **AI Impact Summit** in 2026.
- **DPDP Act, 2023** requires consent for personal data use, with a **Data Protection Board**; relevant when agents act on user data.
- Link: **UPI AutoPay** mandates are the payment rail for recurring agent purchases.

⚡ **UNIQUE FACT**

Surveys suggest Indian consumers are increasingly open to AI agent-led shopping, pushing businesses to prepare their platforms for agent-driven transactions.

⚠ **EXAM TRAP**

Agentic AI acts on tasks using tools; generative AI only produces content. The two are not the same.



05

Economic Development & Schemes

Industrial alliances, clean transport and green shipping fuel: infrastructure and development stories of the month.

1. India Deep Tech Alliance
2. India's First LNG-Powered Train
3. India's First Port-Based E-Methanol Plant

INNOVATION FINANCE · GS PAPER III · ECONOMIC DEVELOPMENT & SCHEMES

India Deep Tech Alliance

NEWS IN BRIEF

- The India Deep Tech Alliance, backed by Indian and US VCs along with Nvidia and Qualcomm, has committed $2.5 billion over five years, including $1 billion for AI deployment.
- IDTA targets deep-tech and semiconductor startups in India, aiming to build an Aatmanirbhar innovation ecosystem.

X-FACT MATRIX

Abbreviation	IDTA: India Deep Tech Alliance
Total commitment	$2.5 billion over five years
AI-specific allocation	$1 billion for AI deployment
Key backers	Indian and US venture capital firms, with Nvidia and Qualcomm joining
First-year deployment	Rs 2,170 crore invested across 56 deep-tech companies

KEY CONCEPTS EXPLAINED

- **Startup India** (2016) and the **Fund of Funds for Startups** (Rs 10,000 crore, run by **SIDBI**) are the older startup finance tools; **Atal Innovation Mission** (2016) sits in NITI Aayog.
- **India Semiconductor Mission** (December 2021, Rs 76,000 crore); **National Quantum Mission** (2023, Rs 6,003 crore); **RDI Scheme** (2025, Rs 1 lakh crore) targets private R&D.
- **Deep tech** means ventures built on hard science or engineering such as AI, semiconductors, quantum and space, with long gestation periods.
- Link: IDTA is private capital; contrast with **PLI** schemes, which are government incentives tied to production.

⚡ **UNIQUE FACT**

The alliance brings together private capital and global technology firms rather than being a government scheme.

⚠ **EXAM TRAP**

IDTA is a private-capital alliance. It is different from PLI, which is a government incentive scheme.

📌 MEMORY BANK **India Deep Tech Alliance** INNOVATION FINANCE

1 $2.5 billion over five years
2 $1 billion for AI deployment
3 Backers: Indian and US VCs, Nvidia, Qualcomm
4 Rs 2,170 crore in 56 firms in year one
5 Private alliance, not a government scheme

GREEN TRANSPORT · GS PAPER III · ECONOMIC DEVELOPMENT & SCHEMES

India's First LNG-Powered Train

NEWS IN BRIEF

- Union Home Minister Amit Shah flagged off India's first LNG-powered train in Ahmedabad, Gujarat, introducing dual-fuel technology to Indian Railways.
- The dual-fuel system is designed to cut diesel consumption and reduce emissions on routes not yet electrified.

X-FACT MATRIX

Flagged off by	Union Home Minister Amit Shah
Location	Sabarmati railway station, Ahmedabad, Gujarat
Technology	Dual-fuel: LNG (liquefied natural gas) combined with diesel
Operator	Indian Railways

KEY CONCEPTS EXPLAINED

- **LNG** is natural gas cooled to about **minus 162 degrees Celsius**. Terminals: **Dahej** (Petronet, 2004), Hazira, Kochi, Dabhol, Mundra, Ennore, Dhamra.
- Gas share in India's energy mix is about **6%** with a target of **15% by 2030**; regulator is **PNGRB** (Act of 2006); **GAIL** runs the **National Gas Grid**.
- Railways: net-zero carbon target by **2030**; hydrogen train pilot (**Hydrogen for Heritage**) at **Jind-Sonipat**.
- Link: **dual-fuel** engines burn a gas-diesel mix, an interim step on non-electrified lines.

⚡ **UNIQUE FACT**

It marks Indian Railways' first operational use of LNG as a locomotive fuel source.

⚠ **EXAM TRAP**

LNG is liquefied natural gas (mainly methane). It is not LPG (propane and butane) and not CNG (compressed gas).

📌 MEMORY BANK **India's First LNG-Powered Train** GREEN TRANSPORT

1. Flagged off at Sabarmati, Ahmedabad
2. Dual fuel: LNG plus diesel
3. LNG: about minus 162 degrees Celsius
4. Regulator: PNGRB
5. Gas share target: 15% by 2030

GREEN SHIPPING FUEL · GS PAPER III · ECONOMIC DEVELOPMENT & SCHEMES

India's First Port-Based E-Methanol Plant

NEWS IN BRIEF

- A Rs 2,300 crore e-methanol plant at Kandla's Deendayal Port, India's first port-based facility of its kind, will supply green fuel to ships on the Asia-Europe trade corridor.
- E-methanol is produced using renewable power, water and biogenic CO2, positioning it as a green marine fuel.

X-FACT MATRIX

Location	Deendayal Port, Kandla, Gujarat
Cost	About Rs 2,300 crore, in two phases
Capacity	150 MT/day (50 MT Phase I, 100 MT Phase II)
Partners	Deendayal Port Authority (DPA) and Assam Petro-Chemicals Ltd (APCL), 76:24 split
Ministry	Ministry of Ports, Shipping and Waterways
Target cost	$750/tonne, against a global rate of about $1,300/tonne

KEY CONCEPTS EXPLAINED

- **Deendayal Port** (earlier Kandla, renamed 2017) is a **major port**. India has **12** major ports plus **Vadhavan** planned as the 13th; governed by the **Major Port Authorities Act, 2021**.
- **National Green Hydrogen Mission** (January 2023, Rs 19,744 crore, 5 MMT by 2030) named **Deendayal, V.O. Chidambaranar and Paradip** as hydrogen hubs.
- **IMO** targets net-zero shipping emissions by about **2050**; **Maritime India Vision 2030** and **Green Tug Transition Programme** support cleaner fuels.
- Static: e-methanol is made from **green hydrogen plus captured CO2**; compare **green ammonia**, another shipping fuel.

⚡ UNIQUE FACT

The plant is projected to create over 3,500 direct and indirect jobs and position Kandla as a green-fuel hub on the Singapore-Rotterdam shipping route.

⚠ EXAM TRAP

E-methanol differs from the Green Methanol Standard under the National Green Hydrogen Mission: the Kandla plant is a production facility, while the Standard is a separate quality/certification framework; don't conflate the two.

📌 MEMORY BANK India's First Port-Based E-Methanol Plant GREEN SHIPPING FUEL

1. Deendayal Port, Kandla
2. Rs 2,300 crore; 150 MT per day
3. DPA 76 : APCL 24
4. Green hydrogen plus biogenic CO2
5. Ministry of Ports, Shipping and Waterways

06

Environment & Ecology, Geography & Disaster

Glacial risk mapping, swamp ecosystems on the brink, wildlife-crime enforcement, and a Supreme Court ruling on methanol regulation defined September's environment news.

1. Hanging Glaciers: Alaknanda Basin
2. Myristica Swamps
3. Wildlife Crime Control Bureau
4. Methanol Regulation: Supreme Court Ruling
5. COFO 28: FAO Committee on Forestry
6. PRAMAAN Certificate

CRYOSPHERE · GS PAPER III · ENVIRONMENT, GEOGRAPHY & DISASTER

Hanging Glaciers: Alaknanda Basin

NEWS IN BRIEF

- A first-of-its-kind study mapped 219 hanging glaciers in Uttarakhand's Alaknanda basin, finding nearly a third of their ice unstable amid accelerated Himalayan warming.
- The study links rising instability to faster-than-global-average warming across the Himalayas.

X-FACT MATRIX

Study area	Alaknanda basin, Uttarakhand Himalayas
Glaciers mapped	219, for the first time comprehensively
Total ice extent	About 71.7 sq km, holding roughly 2.39 cubic km of ice
Unstable share	About one-third of the ice considered at risk of breaking off
Published	April 2026
Key hazard	Glacial Lake Outburst Floods (GLOFs)

▸ FLOW CHART: From hanging glacier to downstream flood

1. **Steep slope** — Ice clings above a cliff
2. **Warming or rain** — Weakens the ice
3. **Ice avalanche** — Detaches and falls
4. **Debris in river** — Blocks or surges the channel
5. **Downstream flood** — Alaknanda basin

KEY CONCEPTS EXPLAINED

- Glacier types: **valley, cirque, piedmont, ice cap, hanging**. A hanging glacier perches on a steep slope or cliff above a valley.
- **Alaknanda** rises near the **Satopanth and Bhagirath Kharak** glaciers. It joins the **Bhagirathi** at **Devprayag** to form the Ganga. **Panch Prayag**: Vishnuprayag, Nandprayag, Karnaprayag, Rudraprayag, Devprayag.
- Disasters: **Kedarnath 2013** (Chorabari lake), **Chamoli 2021** (Rishiganga-Dhauliganga). **Nanda Devi National Park** is a UNESCO site.
- Policy: **NDMA GLOF guidelines (2020)**, **Disaster Management Act, 2005**, **Sendai Framework 2015-2030**. The Hindu Kush Himalaya is called the **Third Pole**.

⚡ UNIQUE FACT

It cites the Kedarnath (2013) and Chamoli (2021) disasters as major past GLOF events linked to glacial instability in this region.

⚠ EXAM TRAP

Hanging glaciers sit on steep slopes and are prone to detachment-triggered avalanches/GLOFs: don't confuse them with valley glaciers, which flow along gentler gradients and pose different hazard profiles.

📌 MEMORY BANK — Hanging Glaciers — CRYOSPHERE

1. 219 glaciers mapped in Alaknanda basin
2. About one-third of ice unstable
3. Hazard: GLOFs
4. Kedarnath 2013, Chamoli 2021
5. Alaknanda and Bhagirathi form Ganga at Devprayag

ECOSYSTEM · GS PAPER III · ENVIRONMENT, GEOGRAPHY & DISASTER

Myristica Swamps

NEWS IN BRIEF

- A new study warns that India's rare freshwater Myristica swamps, found mainly in Kerala's Western Ghats, are nearing extinction due to habitat loss.
- Myristica swamps are considered evolutionary relicts, among the oldest surviving freshwater swamp forest types in peninsular India.

X-FACT MATRIX

Type	Rare freshwater swamp ecosystem
Primary location	Kerala's Western Ghats; smaller patches in Andaman & Nicobar Islands
Kerala extent	Only 53 patches, in Shendurney Wildlife Sanctuary, Anchal and Kulathupuzha forest areas
Ecological role	Recharges groundwater, sustains year-round stream flow, reduces flooding
Threats	Logging, drainage, conversion to paddy fields and plantations

KEY CONCEPTS EXPLAINED

- Named for **Myristica** (nutmeg family, Myristicaceae). Typical tree: **Myristica fatua var. magnifica** with **stilt roots and knee roots** adapted to waterlogging.
- Kerala sites: **Kulathupuzha** and **Shendurney**. Western Ghats: UNESCO World Heritage (**2012**), a global **biodiversity hotspot**.
- Panels: **Gadgil (2011)** wanted the whole Ghats as ESA; **Kasturirangan (2013)** proposed about 37% (**56,825 sq km**) as ESA.
- Kerala **Ramsar sites**: **Ashtamudi, Sasthamkotta, Vembanad-Kol**. Law: **Wetlands (Conservation and Management) Rules, 2017**.

⚡ **UNIQUE FACT**

Their decline directly threatens downstream water security for communities dependent on Western Ghats streams.

⚠ **EXAM TRAP**

Myristica swamps are freshwater swamp forests, not saline coastal mangroves.



ENFORCEMENT BODY · GS PAPER III · ENVIRONMENT, GEOGRAPHY & DISASTER

Wildlife Crime Control Bureau

NEWS IN BRIEF

- The MoEF&CC constituted a WCCB inquiry team to probe possible international organised-crime links behind the mysterious appearance of an orangutan in Odisha's Balasore district.
- WCCB maintains a centralised Wildlife Crime Database Management System and implements India's obligations under CITES, which India joined in 1976.

X-FACT MATRIX

Established under	Section 38Y, Wild Life (Protection) Act, 1972
Operational since	2008
Ministry	Ministry of Environment, Forest and Climate Change (MoEF&CC)
Headquarters	New Delhi, with 5 regional offices (Delhi, Kolkata, Mumbai, Chennai, Bhopal)
Nature	Multidisciplinary: Police, Forest, Customs and intelligence officials
International link	Liaises with INTERPOL's Environmental Crime Programme and the World Customs Organization

KEY CONCEPTS EXPLAINED

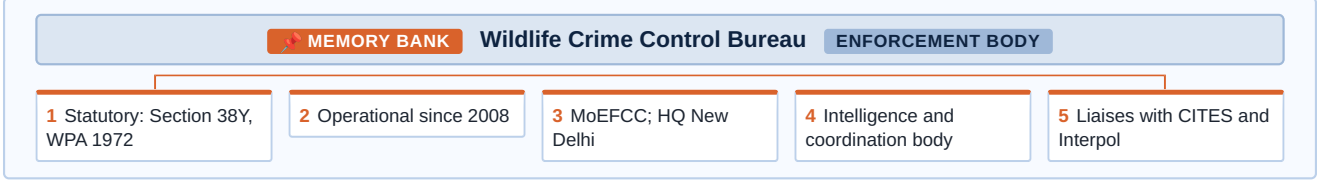
- **Wild Life (Protection) Act, 1972**: the **2022 amendment** cut schedules to four and added a schedule for **CITES-listed** specimens.
- **CITES** (1973, in force 1975): **Appendix I** bans commercial trade, **II** regulates, **III** national requests. India is a party since **1976**.
- **NTCA** (statutory since 2006) governs tigers under **Project Tiger (1973)**; WCCB handles trafficking networks across species.
- Link: orangutans are **Critically Endangered** (IUCN) and in **CITES Appendix I**; they are native to **Sumatra and Borneo**, not India.

⚡ UNIQUE FACT

It advises the central government on wildlife crime policy and assists states with scientific investigation and prosecution.

⚠ EXAM TRAP

WCCB is a statutory body under the Wild Life (Protection) Act, 1972 (Section 38Y): it is not a police force itself, but a multidisciplinary coordination and intelligence body that works with state enforcement agencies.



PUBLIC HEALTH REGULATION · GS PAPER III · ENVIRONMENT, GEOGRAPHY & DISASTER

Methanol Regulation: Supreme Court Ruling

NEWS IN BRIEF

- The Supreme Court struck down Maharashtra's colourant-bitterant rules for methanol sale, calling them arbitrary, and recommended supply-chain controls instead to prevent diversion into illicit liquor.
- The struck-down rules required licensing for methanol purchasers and mandated adding colourant and bitterant to methanol sold to non-drug manufacturers.
- The Court suggested supply-chain controls instead: monitoring, stock reconciliation, licence scrutiny, tamper-evident transport and excise supervision.

X-FACT MATRIX

Case	M/s Balaji Formalin Pvt. Ltd. v. Union of India (September 18, 2026)
Rules struck down	Rules 18A and 18B, Maharashtra Poisons Rules, 1972 (2011 amendment)
Grounds	Violated Article 14 (equality) and Article 19(1)(g) (right to trade)
Test applied	Proportionality test from K.S. Puttaswamy v. Union of India (2017)
Union-level standard	Methanol (Quality Control) Order, 2019, under the BIS Act, 2016
Background	1991 Mumbai hooch tragedy involving methanol-laced liquor, about 93 deaths

KEY CONCEPTS EXPLAINED

- **Poisons Act, 1919** lets States regulate poisons; **intoxicating liquors** is **State List Entry 8** and public health **Entry 6**. **Article 47** directs the State to curb harmful intoxicants.
- Doctrines: **proportionality** (Modern Dental College 2016, Puttaswamy 2017) and **manifest arbitrariness** under Article 14 (**Shayara Bano 2017**). **Article 19(6)** permits reasonable trade restrictions.
- **Methanol (CH3OH)** is wood alcohol and is toxic; **ethanol** is the drinkable and fuel alcohol. India reached **E20** petrol blending in 2025.
- Link: **Methanol Economy** programme (NITI Aayog, 2018) promotes methanol as fuel; **Assam Petrochemicals** is a major producer.

⚡ UNIQUE FACT

A Green Methanol Standard was separately notified in February 2026 under the National Green Hydrogen Mission, unrelated to the poisoning-control issue.

⚠ EXAM TRAP

The ruling strikes down Maharashtra's colourant-bitterant rules. It does not legalise diversion of methanol into liquor, nor remove the Methanol (Quality Control) Order, 2019.

📌 MEMORY BANK **Methanol Regulation** PUBLIC HEALTH REGULATION

1. Balaji Formalin v. Union of India, 18 September 2026
2. Rules 18A, 18B (Maharashtra Poisons Rules) struck down
3. Violated Article 14 and 19(1)(g)
4. Proportionality test applied
5. Court suggested supply-chain controls

INTERNATIONAL FORESTRY · GS PAPER III · ENVIRONMENT, GEOGRAPHY & DISASTER

COFO 28: FAO Committee on Forestry

NEWS IN BRIEF

- India presented its forest-restoration progress at the 28th session of FAO's Committee on Forestry in Rome, backing the proposed UN Decade for Afforestation and Reforestation (2027-2036).
- India also cited MISHTI (mangrove restoration) and Ek Ped Maa Ke Naam, under which over 3.5 billion saplings have been planted.
- Under the Bonn Challenge, India committed to restoring 26 million hectares by 2030 and reports 21.76 million hectares restored so far.

X-FACT MATRIX

Session	COFO 28 (28th Committee on Forestry)
Host body	Food and Agriculture Organization (FAO)
Venue and dates	Rome, Italy, September 28 to October 2, 2026
India backed	Proposed UN Decade for Afforestation and Reforestation, 2027-2036
Key Indian initiative cited	Aravalli Green Wall: about 6.45 million hectares identified for restoration

KEY CONCEPTS EXPLAINED

- **FAO** was founded in **1945**, HQ **Rome**. COFO is its forestry body; FAO publishes **State of the World's Forests** and **Global Forest Resources Assessment**.
- **UNFF** (2000) and the **UN Strategic Plan for Forests 2017-2030** set six Global Forest Goals. **Bonn Challenge (2011)**: 350 million ha by 2030.
- India: **FSI, Dehradun** publishes **ISFR** every two years; forest and tree cover is about **25%**. **Van (Sanrakshan Evam Samvardhan) Adhiniyam, 2023** amended the Forest Conservation Act.
- Dates: **International Day of Forests 21 March**; **MISHTI** (2023 Budget) restores mangroves; **Ek Ped Maa Ke Naam** began **5 June 2024**.

⚡ UNIQUE FACT

India's enhanced climate target is an additional carbon sink of 3.5 to 4 billion tonnes of CO_2 equivalent by 2035, relative to 2005 levels.

⚠ EXAM TRAP

COFO is an FAO body based in Rome. Do not confuse it with the UN Forum on Forests (UNFF) or the UNFCCC COP.

📌 MEMORY BANK — COFO 28 — INTERNATIONAL FORESTRY

1. FAO Committee on Forestry, 28th session
2. Rome, 28 September to 2 October 2026
3. India backs UN Decade for Afforestation 2027-36
4. Aravalli Green Wall: 6.45 million ha
5. Bonn Challenge: 26 million ha by 2030

CERTIFICATION SCHEME · GS PAPER III · ENVIRONMENT, GEOGRAPHY & DISASTER

PRAMAAN Certificate

NEWS IN BRIEF

- India handed over its first PRAMAAN certificates for sustainable forest management, with Andhra Pradesh's Forest Development Corporation among the first beneficiaries.
- PRAMAAN covers three scopes: Forest Management, Trees Outside Forests, and Chain of Custody tracking through supply chains.

X-FACT MATRIX

Full form	Programme for Recognition and Accreditation of sustainable Management practices for Agroforestry And Natural forestry resources
Ministry	Ministry of Environment, Forest and Climate Change (MoEFCC)
Issued under	Indian Forest and Wood Certification Scheme (IFWCS)
Implementing body	Indian Institute of Forest Management (IIFM), Bhopal
Launch	First certificates handed over September 29, 2026, New Delhi, by Union Minister Bhupender Yadav
Accreditation	National Accreditation Board for Certification Bodies (NABCB), Quality Council of India

KEY CONCEPTS EXPLAINED

- Global peers: **FSC** (Forest Stewardship Council) and **PEFC**; the **EU Deforestation Regulation** pushes importers to prove deforestation-free sourcing.
- **IIFM Bhopal** (1982) is an autonomous institute under MoEFCC. **NABCB** (under **QCI**, 1997) accredits certification bodies.
- **Trees Outside Forests (TOF)**: trees on farms and village land; **Chain of Custody** tracks wood from forest to product.
- Link: **Indian Forest Service** and **National Working Plan Code** govern forest management plans; certification complements, not replaces, them.

⚡ UNIQUE FACT

Certification relies on independent third-party audits, aligned with the National Working Plan Code 2023, rather than self-declaration.

⚠ EXAM TRAP

PRAMAAN certifies sustainable forest management and supply-chain traceability: it is not a carbon-credit or emissions-trading scheme; don't conflate it with CCTS or green hydrogen standards.

📌 MEMORY BANK **PRAMAAN Certificate** CERTIFICATION SCHEME

1. MoEFCC, under IFWCS
2. Implemented by IIFM Bhopal
3. First certificates: 29 September 2026
4. Scopes: forest management, TOF, chain of custody
5. Third-party audit; NABCB accredits

07

Science & Technology

Biotech, ICT and AI, defence, space and health, followed by ocean technology and physics.

1. Reverse Vaccinology
2. ChatGPT Atlas
3. Meta Muse
4. INS Nipun
5. AASHVAST Labs
6. TRISHNA Mission
7. International Space Summit 2026
8. Peptide Therapy
9. Matsya 6000
10. Sagar Manthan
11. Plasma Wakefield Accelerator

BIOTECH · GS PAPER III · SCIENCE & TECHNOLOGY

Reverse Vaccinology

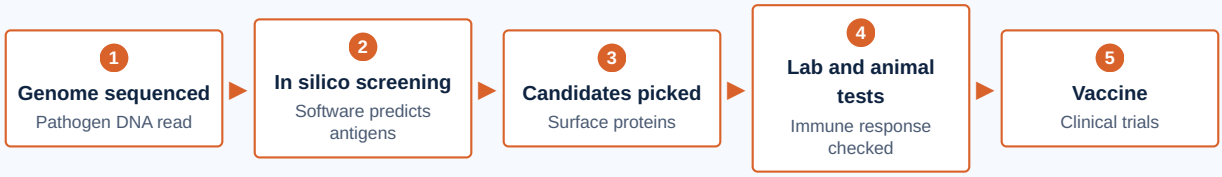
NEWS IN BRIEF

- British scientists took a step toward a new pneumonia vaccine using reverse vaccinology, a genome-driven approach to identifying vaccine targets without culturing the pathogen.
- The process involves predicting surface-exposed or secreted proteins in silico, cloning and expressing them, then testing immune response through high-throughput immunisation.

X-FACT MATRIX

Concept coined by	Rino Rappuoli, in 2000
Method	Uses whole-genome sequencing and bioinformatics to find vaccine candidate proteins
First application	Vaccine against serogroup B Neisseria meningitidis (MenB)
Also applied to	Bacillus anthracis, Streptococcus pneumoniae, M. tuberculosis
2026 development	British scientists' step toward a pneumonia vaccine using this method

▸ FLOW CHART: Reverse vaccinology pipeline



KEY CONCEPTS EXPLAINED

- Vaccine types: **live attenuated** (BCG, OPV, MMR), **inactivated**, **subunit**, **toxoid**, **mRNA**, **viral vector**. **Rotavac** (Bharat Biotech) and **Cervavac** (Serum Institute, HPV) are Indian-made.
- **Universal Immunisation Programme** began in **1985** (from the 1978 EPI); **Mission Indradhanush** in **2014**; **U-WIN** is the digital immunisation portal.
- **Genome India Project** completed sequencing of 10,000 genomes (data released January 2025); **CDSCO** approves vaccines; **ICMR** leads research.
- Link: **MenB** vaccines were the first product of this approach; pneumococcal conjugate vaccines are now part of India's immunisation programme.

⚡ UNIQUE FACT

It reverses the traditional vaccine-development order: target identification happens computationally before any lab culturing of the pathogen.

⚠ EXAM TRAP

Reverse vaccinology identifies candidate antigens from genome data before wet-lab work: traditional vaccinology instead starts by culturing the pathogen and testing attenuated or killed forms; the sequence of steps is reversed, hence the name.

📌 MEMORY BANK **Reverse Vaccinology** BIOTECH

1. Term coined by Rino Rappuoli, 2000
2. Genome first, lab later
3. First used for MenB vaccine
4. Targets surface proteins in silico
5. 2026: UK pneumonia vaccine step

ICT & AI · GS PAPER III · SCIENCE & TECHNOLOGY

ChatGPT Atlas

NEWS IN BRIEF

- OpenAI's agentic AI browser, ChatGPT Atlas, continued rolling out through 2026, letting the AI assistant act directly within web pages to challenge traditional search-engine browsing.
- Atlas integrates conversational AI directly into the browsing experience rather than operating as a separate chat window.

X-FACT MATRIX

Developer	OpenAI
Product	ChatGPT Atlas: an AI-powered web browser
Key feature	'Agent mode': ChatGPT can act within web pages, not just answer queries
Positioning	Challenges Google's search dominance by embedding AI directly into browsing

KEY CONCEPTS EXPLAINED

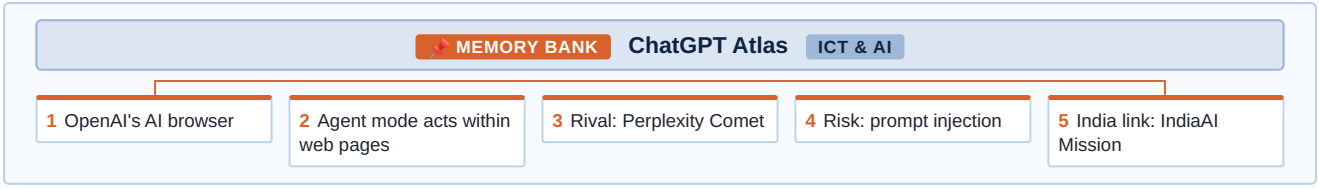
- A **large language model** predicts text; an **AI agent** adds tools and actions. Rivals in AI browsers include Perplexity's **Comet**.
- India's AI push: **IndiaAI Mission** (2024), **Bhashini** (language translation), **BharatGen**. India hosted the **AI Impact Summit** (New Delhi, 2026) after Bletchley (2023), Seoul (2024), Paris (2025).
- Risks: **prompt injection**, hallucination, privacy. Regulation: **EU AI Act (2024)**; India uses the **IT Act, 2000** and **DPDP Act, 2023**.
- Static: **Narrow AI** does specific tasks; **AGI** is a hypothetical general intelligence.

⚡ UNIQUE FACT

It is part of a broader 2026 wave of agentic AI tools (alongside Meta's Muse) that complete multi-step tasks rather than only answering questions.

⚠ EXAM TRAP

Atlas is a browser, not a new language model. It uses ChatGPT models inside a browsing interface.



ICT & AI · GS PAPER III · SCIENCE & TECHNOLOGY

Meta Muse

NEWS IN BRIEF

- Meta launched Muse, a personal AI agent that can book travel, send emails, fill forms and make purchases, powered by its new Muse Spark model and secured through a dedicated cloud sandbox.
- Muse can break down goals into plans, monitor progress, and pause for human approval on sensitive actions like purchases.

X-FACT MATRIX

Developer	Meta
Launch	September 2026, initially in the US (iOS, Android, web, WhatsApp)
Underlying model	Muse Spark
Security sandbox	Muse Secure VM, with a separate Sentinel system controlling outbound data
Payments	Uses Link by Stripe for one-time-use cards, shielding real payment details

KEY CONCEPTS EXPLAINED

- **Agentic AI** differs from chatbots by acting on goals with tools. A **sandbox** or virtual machine isolates the agent from the user's device.
- **Link by Stripe** issues one-time virtual cards, similar in idea to RBI's **card tokenisation** that hides real card numbers from merchants.
- India context: **WhatsApp** has India's largest user base; **DPDP Act, 2023** governs consent and data fiduciaries.
- Static: **Llama** is Meta's open-weight model family; **open-weight** means weights are public but training data and code may not be.

⚡ UNIQUE FACT

Pricing tiers are free (most users), Power at $20/month, and Maximum at $100/month.

⚠ EXAM TRAP

Muse Secure VM is isolated by design but Meta has acknowledged it is not technically inaccessible to the company, relying on policy rather than architecture to bar access: distinct from a fully 'Confidential VM' planned for later.

📌 MEMORY BANK **Meta Muse** ICT & AI

1. Meta's personal AI agent
2. Launched September 2026 in the US
3. Model: Muse Spark
4. Muse Secure VM plus Sentinel
5. Payments via Link by Stripe

DEFENCE · GS PAPER III · SCIENCE & TECHNOLOGY

INS Nipun

NEWS IN BRIEF

- The Indian Navy commissioned INS Nipun, its second Nistar-class Diving Support Vessel, built indigenously by Hindustan Shipyard Limited with about 75% indigenous content.
- It can act as a mother ship for a Deep Submergence Rescue Vessel (DSRV), supporting submarine rescue operations.

X-FACT MATRIX

Class	Second Nistar-class Diving Support Vessel (DSV)
Builder	Hindustan Shipyard Limited (HSL), Visakhapatnam
Commissioned	August 31, 2026, Naval Dockyard, Mumbai
Specifications	About 119.4 m long, 10,500 tonnes
Indigenous content	Roughly 75%
Diving capability	Supports diving up to 300 metres, including saturation diving

KEY CONCEPTS EXPLAINED

- **Nistar class** diving support vessels: **INS Nistar** (first, 2025) and **INS Nipun** (second), built by **Hindustan Shipyard** (founded **1941**, Visakhapatnam, now a defence PSU).
- **Saturation diving** keeps divers pressurised at depth for days, avoiding repeated decompression; **DSRV** rescues crew from stranded submarines.
- Naval commands: **Western** (Mumbai), **Eastern** (Visakhapatnam), **Southern** (Kochi). **Navy Day**: 4 December. **INS Vikrant** (2022) is the first indigenous aircraft carrier.
- Link: **Project 75 Kalvari** submarines (Scorpene class) raise the need for rescue capability.

⚡ **UNIQUE FACT**

The name 'Nipun' is Sanskrit for skilled, capable and knowledgeable; the ship is part of India's Aatmanirbhar Bharat defence push.

⚠ **EXAM TRAP**

INS Nipun is a diving support and submarine rescue support vessel, not an armed combat ship.



DEFENCE · GS PAPER III · SCIENCE & TECHNOLOGY

AASHVAST Labs

NEWS IN BRIEF

- The Indian Army began setting up AASHVAST firmware-verification labs to detect hidden vulnerabilities in military drones and electronic components, starting with one inaugurated in New Delhi.
- The labs address supply-chain risk by checking active electronic components of foreign origin used in military drones.

X-FACT MATRIX

Full form (translated)	Assessment and analysis of hardware vulnerabilities and security threats in electronic systems
Developer	QuickPay Pvt. Ltd., for the Directorate General of Electronics and Mechanical Engineers (DG EME)
Deploying agency	Indian Army
Scale	6 labs planned; first inaugurated in New Delhi
Function	Detects about 14 kinds of firmware-level and hidden-code vulnerabilities in drones

KEY CONCEPTS EXPLAINED

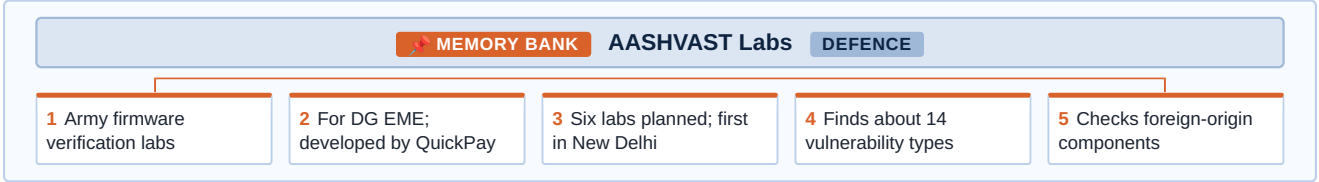
- **Firmware** is permanent software on a chip; hidden code in it can leak data or cut off a device remotely, which is the supply-chain risk here.
- **Drone Rules, 2021** liberalised drones; **PLI for drones** (2021); **iDEX** (2018) funds defence startups; **DRDO** (1958) is the R&D arm.
- Cyber bodies: **CERT-In** (2004, MeitY), **Defence Cyber Agency** (2019), **I4C** (MHA).
- Static: **EME Corps** maintains Army equipment; **Positive Indigenisation Lists** ban imports of listed defence items.

⚡ **UNIQUE FACT**

They may later extend to testing CCTV cameras and other electronic equipment purchased by the Army.

⚠ **EXAM TRAP**

AASHVAST labs test firmware and hardware for hidden vulnerabilities. They do not manufacture drones.



SPACE · GS PAPER III · SCIENCE & TECHNOLOGY

TRISHNA Mission

NEWS IN BRIEF

- TRISHNA, the Indo-French thermal infrared imaging satellite mission between ISRO and CNES, remains on track for a 2026 PSLV launch to monitor water, agriculture and climate.
- TRISHNA is the third major Indo-French Earth observation mission, after Megha-Tropiques (2011) and SARAL-AltiKa (2013).

X-FACT MATRIX

Full form	Thermal infraRed Imaging Satellite for High-resolution Natural resource Assessment
Partners	ISRO (satellite bus, PSLV launch, VNIR-SWIR payload) and CNES, France (TIR payload)
Orbit	Sun-synchronous, about 761 km altitude, 3-day revisit
Launch vehicle	PSLV, from Sriharikota
Mission life	5 years nominal

KEY CONCEPTS EXPLAINED

- Indo-French missions: **Megha-Tropiques (2011)**, **SARAL-AltiKa (2013)**. **NISAR** (NASA-ISRO radar) launched in **July 2025** on **GSLV-F16**.
- ISRO: founded **1969**, HQ **Bengaluru**, under the **Department of Space**; launch site **SDSC SHAR, Sriharikota**; **IN-SPACe** (2020) authorises private players.
- **Sun-synchronous orbit** passes over a place at the same local time each day, giving consistent lighting; used for earth observation. **Land surface temperature** comes from thermal infrared bands.
- Link: **evapotranspiration** data helps irrigation and drought monitoring, tied to **PM Krishi Sinchayee Yojana** goals.

⚡ UNIQUE FACT

Applications include irrigation planning, agricultural drought monitoring, urban heat island mapping, glacier monitoring and forest fire detection.

⚠ EXAM TRAP

TRISHNA images in thermal infrared for water, crops and heat. Do not confuse it with NISAR, the NASA-ISRO radar mission.

MEMORY BANK TRISHNA Mission SPACE

1. ISRO and CNES joint mission
2. Thermal infrared imaging
3. Sun-synchronous orbit, about 761 km
4. PSLV launch from Sriharikota
5. Third Indo-French Earth observation mission

SPACE · GS PAPER III · SCIENCE & TECHNOLOGY

International Space Summit 2026

NEWS IN BRIEF

- France hosted the first-ever International Space Summit in Paris, bringing together nearly 120 foreign delegations to discuss space security, the space economy and lunar exploration.
- Four stated priorities: security in space, the space economy, space as a global common good, and space as inspiration for youth and exploration.

X-FACT MATRIX

Dates	September 9-10, 2026
Venue	Paris, France
Host	French President, with Special Envoys astronaut Thomas Pesquet and Helene Huby
Scale	Nearly 120 foreign delegations: the first summit of its kind
Theme	'Coming together to take action for the planet'

KEY CONCEPTS EXPLAINED

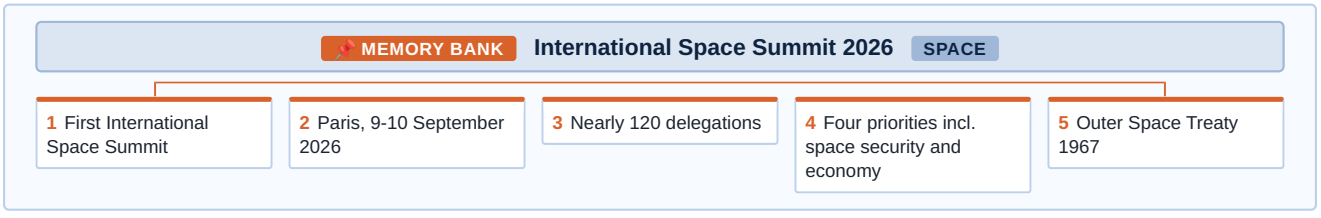
- **Outer Space Treaty, 1967** bans national appropriation of space and weapons of mass destruction in orbit. Others: Rescue Agreement 1968, **Liability Convention 1972**, Registration Convention 1975, **Moon Agreement 1979**.
- **UNOOSA** is in **Vienna**; **COPUOS** is the UN space committee. India signed the **Artemis Accords** in **June 2023**.
- **Kessler syndrome**: debris collisions that multiply debris. India's **Space Policy 2023** opens the sector to private players.
- India milestones: **Chandrayaan-3** (August 2023, Shiv Shakti point), **Aditya-L1**, **Gaganyaan**, **Bharatiya Antariksh Station** targeted by 2035.

⚡ UNIQUE FACT

Agenda items included low-orbit use, space governance, and renewed interest in Moon and Mars exploration.

⚠ EXAM TRAP

The International Space Summit is a diplomatic meeting in Paris, not the International Space Station.



HEALTH · GS PAPER III · SCIENCE & TECHNOLOGY

Peptide Therapy

NEWS IN BRIEF

- Peptide-based drugs, especially GLP-1 therapies for diabetes and obesity, are gaining rapid traction worldwide even as experts caution against unregulated use in anti-ageing and fitness markets.
- Peptides are also used in oncology (targeting tumour receptors), endocrinology, and regenerative medicine for tissue repair.

X-FACT MATRIX

What they are	Short chains of amino acids acting as signalling molecules
Mechanism	Mimic the body's natural signals, binding specific receptors to regulate hormones, metabolism, immunity
Global scale	Over 80 peptide-based drugs approved; nearly 9% of new FDA-approved medicines in recent years
Key use driving demand	GLP-1-based peptide drugs for diabetes and obesity

KEY CONCEPTS EXPLAINED

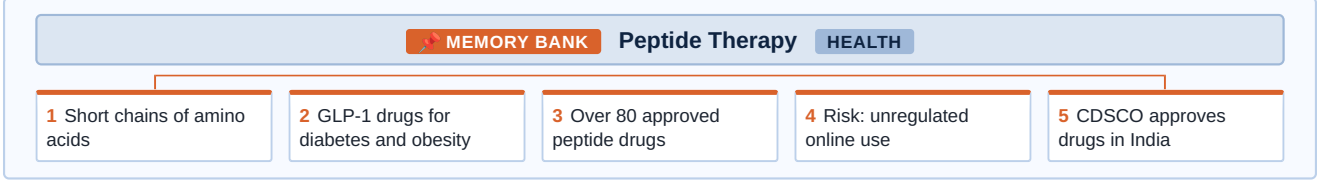
- A **peptide** is a short chain of amino acids (**peptide bond**); a protein is a longer chain. There are **20 standard amino acids**. **Insulin** is a peptide hormone (51 amino acids).
- **GLP-1** drugs: **semaglutide** (Ozempic, Wegovy) and **tirzepatide** (acts on GLP-1 and GIP). They lower blood sugar and appetite.
- India: **Drugs and Cosmetics Act, 1940**, **CDSCO** approves drugs, **NPPA** fixes ceiling prices under the **Drug Prices Control Order, 2013**.
- Link: **WADA** bans several peptide hormones as doping agents.

⚡ **UNIQUE FACT**

Experts flag risks from unregulated peptide products in biohacking and anti-ageing markets, including metabolic disturbance and endocrine imbalance.

⚠ **EXAM TRAP**

A peptide is not the same as a protein: peptides are short chains, proteins are long folded chains. Not every peptide product sold online is an approved drug.



OCEAN TECH · GS PAPER III · SCIENCE & TECHNOLOGY

Matsya 6000

NEWS IN BRIEF

- India's Matsya 6000, a three-person manned submersible rated to 6,000 metres depth, remains the centrepiece of the Samudrayaan Project under the Ministry of Earth Sciences.
- Matsya 6000 is positioned as a flagship Make in India and Aatmanirbhar Bharat project in ocean science.

X-FACT MATRIX

Mission	Samudrayaan Project
Ministry	Ministry of Earth Sciences (MoES)
Crew capacity	3 people
Target depth	Up to 6,000 metres
Significance	Would place India among a select group of nations with manned deep-ocean submersible capability

KEY CONCEPTS EXPLAINED

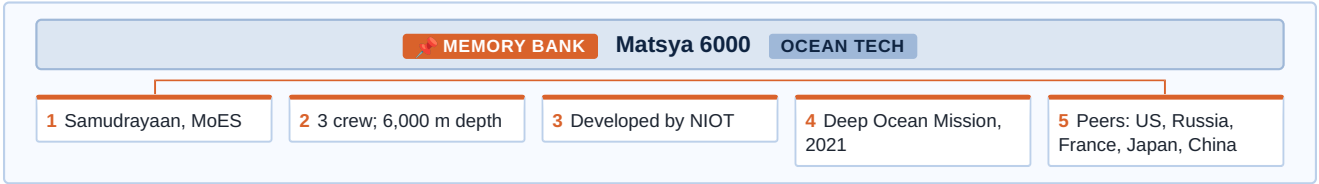
- **Deep Ocean Mission** (approved **June 2021**, about Rs 4,077 crore, MoES) has six pillars; **NIOT, Chennai** (1993) builds the submersible with a titanium personnel sphere.
- Only **US, Russia, France, Japan, China** have crewed submersibles to about 6,000 m or more. India would be the sixth.
- **UNCLOS 1982** (in force 1994): territorial sea **12 nm**, contiguous zone **24 nm**, EEZ **200 nm**, continental shelf up to **350 nm**. India ratified in **1995**.
- India holds an **ISA** contract (**2002**) for **polymetallic nodules** in the **Central Indian Ocean Basin**; **ISA** sits in **Kingston, Jamaica**. **BBNJ Agreement (2023)** covers the high seas.

⚡ UNIQUE FACT

It is designed to let scientists directly study deep-ocean regions, supporting India's wider blue economy ambitions.

⚠ EXAM TRAP

Matsya 6000 is a crewed submersible. Do not mix it with unmanned vehicles such as ROSUB 6000.



OCEAN TECH · GS PAPER III · SCIENCE & TECHNOLOGY

Sagar Manthan

NEWS IN BRIEF

- GRSE launched the research vessel Sagar Manthan for the National Centre for Polar and Ocean Research, strengthening India's Deep Ocean Mission capability for seabed and oceanographic surveys.
- Capabilities include CTD profiling, water and biological sampling, seabed sampling, rock dredging, and onboard data processing.

X-FACT MATRIX

Builder	Garden Reach Shipbuilders and Engineers (GRSE), Kolkata
Operator	National Centre for Polar and Ocean Research (NCPOR), Ministry of Earth Sciences
Launched	September 9, 2026
Specifications	89.50 m long, 18.80 m wide, 5,900 gross tonnes
Survey depth	Multibeam and seismic surveys to a maximum depth of 6 km

KEY CONCEPTS EXPLAINED

- **NCPOR** (Goa, set up 1998 as NCAOR, renamed 2006) runs India's polar programme: **Dakshin Gangotri** (1983, first), **Maitri** (1989), **Bharati** (2012) in Antarctica; **Himadri** in the Arctic (2008).
- **Indian Antarctic Act, 2022** regulates activity; **Antarctic Treaty (1959)** (India joined **1983**); **Madrid Protocol (1991)** protects the environment.
- Earlier research vessels: **Sagar Kanya, Sagar Nidhi, Sagar Manjusha, Sagar Tara**. **GRSE** (Kolkata, 1884) builds naval and research ships.
- Link: **CTD** measures conductivity, temperature and depth, the basic ocean profile; **multibeam** sonar maps the seabed.

⚡ UNIQUE FACT

The vessel supports India's Deep Ocean Mission and reflects GRSE's broader Aatmanirbharta push, alongside an Acoustic Research Ship and Coastal Research Vessels under construction.

⚠ EXAM TRAP

Sagar Manthan is a research vessel for NCPOR, not a naval warship. GRSE is a defence PSU that also builds research ships.

📌 MEMORY BANK **Sagar Manthan** **OCEAN TECH**

1. Built by GRSE, Kolkata
2. For NCPOR, MoES
3. Launched 9 September 2026
4. Surveys down to 6 km
5. Under Deep Ocean Mission

PHYSICS · GS PAPER III · SCIENCE & TECHNOLOGY

Plasma Wakefield Accelerator

NEWS IN BRIEF

- European physicists advanced plans for plasma-based particle accelerators, building on CERN's AWAKE project to compress the scale of future high-energy physics facilities.
- Plasma wakefield acceleration could shrink next-generation particle colliders from kilometres to a fraction of that length.

X-FACT MATRIX

Concept	Uses plasma waves, rather than conventional radiofrequency cavities, to accelerate particles
Key project	AWAKE (Advanced Wakefield Experiment) at CERN
Advantage	Can achieve high acceleration gradients over much shorter distances
2026 development	European roadmap drawn up for future plasma-based accelerator facilities

▸ FLOW CHART: How a plasma wakefield accelerates particles

1. **Driver pulse** — Laser or particle beam
2. **Plasma disturbed** — Electrons pushed aside
3. **Wake forms** — Charge separation creates a field
4. **Particles surf the wake** — Gain energy rapidly
5. **Compact accelerator** — Short distance, high energy

KEY CONCEPTS EXPLAINED

- **Plasma** is the fourth state of matter: ionised gas. A wakefield is the wave a driver beam leaves behind, like a boat's wake, which then accelerates particles.
- **CERN** (1954, Geneva): **LHC** is a 27 km ring that found the **Higgs boson** (2012). India became an **Associate Member** in **January 2017**.
- India's accelerators: **Indus-1 and Indus-2** synchrotrons at **RRCAT Indore**; **VECC Kolkata** cyclotron; **LIGO-India** is planned at **Hingoli, Maharashtra**.
- Link: **AWAKE** at CERN uses proton beams from the **SPS** to drive the plasma wake.

⚡ UNIQUE FACT

CERN's AWAKE experiment uses proton-driven plasma wakefields, a distinct approach from laser-driven wakefield schemes used elsewhere.

⚠ EXAM TRAP

Wakefield acceleration uses plasma, not microwave (RF) cavities, and it is still experimental. It has not replaced conventional colliders.

📌 MEMORY BANK — Plasma Wakefield Accelerator — PHYSICS

1. Plasma waves accelerate particles
2. AWAKE experiment at CERN
3. Gradient far above RF cavities
4. Shrinks accelerator size
5. India: CERN Associate Member since 2017

08

Arts & Culture + History

A script revival and two temples in the heritage news this month.

1. Dogri Script Revival: Takri Signage
2. Gollala Gudi Temple
3. Saptakoteshwar Temple

LANGUAGE HERITAGE · GS PAPER I · ARTS, CULTURE & HISTORY

Dogri Script Revival: Takri Signage

NEWS IN BRIEF

- The Jammu Municipal Corporation installed Dogri-language signboards in the Takri script at over 24 prominent locations, reviving the Duggar region's traditional writing system.
- Locations include Jammu Airport, the railway station, the bus stand and several religious sites, aiming to boost the script's visibility.

X-FACT MATRIX

Language	Dogri, spoken in the Duggar region around Jammu
Script revived	Takri, locally called 'nayah dogra akhar'
Implementing body	Jammu Municipal Corporation (JMC)
Scale	Signboards at 24+ locations, with 40 more sites identified
Eighth Schedule status	Dogri was added to the Eighth Schedule of the Constitution in 2003

KEY CONCEPTS EXPLAINED

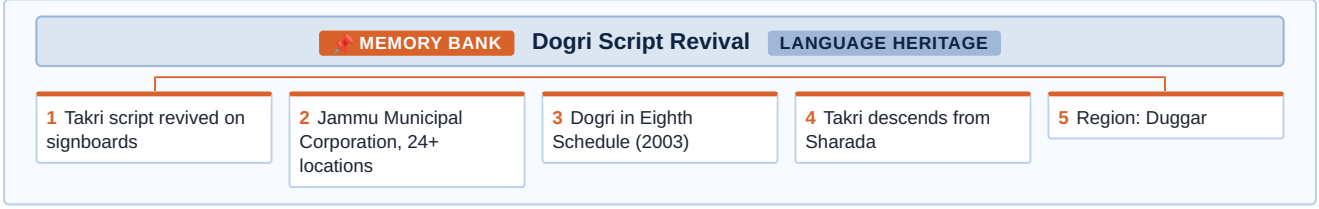
- **92nd Amendment, 2003** added Dogri to the Eighth Schedule. **J&K Official Languages Act, 2020** made Dogri, Hindi, Urdu, Kashmiri and English official languages.
- **Takri** descends from the **Sharada** script of Kashmir; regional forms include **Chambeali** and **Kangra Takri**. Kashmiri has its own **Sharada** heritage.
- **Duggar** covers Jammu and surrounding hills; the **Dogra** dynasty began with **Gulab Singh** after the **Treaty of Amritsar (1846)**.
- Link: **Article 29** protects a distinct language or script of a section of citizens; **Article 350B** provides a Special Officer for linguistic minorities.

⚡ UNIQUE FACT

The initiative followed a civic request from the Siyana Nagrik Muddad Seva Sanstha to extend Dogri signage into neighbourhood lanes and markets.

⚠ EXAM TRAP

Takri is the traditional script for Dogri, but Dogri today is more commonly written in the Devanagari script: don't assume Takri is Dogri's only or current standard script; this initiative is a heritage revival, not a script change.



PROTECTED MONUMENT · GS PAPER I · ARTS, CULTURE & HISTORY

Gollala Gudi Temple

NEWS IN BRIEF

- The ASI declared Telangana's 12th-13th century Gollala Gudi Temple, near the UNESCO-listed Ramappa Temple, a Monument of National Importance for its rare triple-shrine layout.
- The main sanctum houses a Shiva lingam, with outer wall niches carrying deity figures and doorways featuring carved swans and latticework screens.

X-FACT MATRIX

Location	Palampet village, Mulugu district, Telangana
Era / Dynasty	12th-13th century CE, Kakatiya dynasty
Nearby landmark	Kakatiya Rudreshwara (Ramappa) Temple, a UNESCO World Heritage Site
Declared under	AMASR Act, 1958, by the Archaeological Survey of India
Architecture	Rare layout: three shrines linked to a single central pillared hall

KEY CONCEPTS EXPLAINED

- **Ramappa (Rudreshwara) Temple**, Palampet, became a UNESCO World Heritage Site in **2021**; known for **floating bricks** and a **sandbox foundation**.
- Kakatiya capital **Orugallu (Warangal)**; rulers **Ganapati Deva** and **Rudrama Devi**; **Thousand Pillar Temple** and Warangal Fort are other Kakatiya works.
- **AMASR Act, 1958** (amended **2010**): **100 m prohibited** and **200 m regulated** zones. **ASI** was founded in **1861** by **Alexander Cunningham**.
- Static: Kakatiya temples follow a **Deccan-Chalukyan** tradition with star-shaped platforms; the Shiva lingam is the main icon.

⚡ UNIQUE FACT

Monument status brings a 100-metre prohibited zone and a further 200-metre regulated zone around the site, enforced by the National Monuments Authority.

⚠ EXAM TRAP

Gollala Gudi is a protected monument, not itself a UNESCO World Heritage Site. The nearby Ramappa (Rudreshwara) Temple holds that status.

📌 MEMORY BANK **Gollala Gudi Temple** PROTECTED MONUMENT

1. Palampet, Mulugu, Telangana
2. Kakatiya era, 12th-13th century
3. Three shrines, one pillared hall
4. Monument of National Importance (ASI)
5. Near Ramappa, UNESCO 2021

HERITAGE TEMPLE · GS PAPER I · ARTS, CULTURE & HISTORY

Saptakoteshwar Temple

NEWS IN BRIEF

- PM Modi welcomed the renovation of Goa's Saptakoteshwar Temple on Divar Island, a 12th-century Kadamba-era shrine that Maratha king Shivaji had ordered rebuilt centuries ago.
- The temple's mandapa, built in a distinctly European architectural style, reflects Goa's layered colonial-era history.

X-FACT MATRIX

Location	Narve, Divar Island, Goa
Original construction	12th century, by the Kadamba dynasty
Deity	Lord Shiva
Historic restoration	Rebuilt by Maratha king Shivaji after earlier destruction, with a stone plaque recording the order
Architecture	Five pillared halls, a European-style mandapa, surrounded by laterite and stone caves

KEY CONCEPTS EXPLAINED

- **Kadambas** of Goa ruled from Chandor and Goa Velha; the older **Kadamba** line of **Banavasi** was founded by **Mayurasharma** in the 4th century.
- Portuguese rule in Goa: arrived **1510** (Albuquerque); **Goa Inquisition 1560**; ended with **Operation Vijay**, **19 December 1961**; statehood on **30 May 1987**.
- **Old Goa churches** (Basilica of Bom Jesus, Se Cathedral) are UNESCO World Heritage (**1986**). **Divar Island** lies in the **Mandovi** river.
- Static: the Marathas under **Shivaji** rebuilt the temple (**1668**); the mix of Hindu, Islamic and European features is called an **Indo-Portuguese** style.

⚡ UNIQUE FACT

The 2026 renovation was highlighted by the Prime Minister as a boost to Goa's heritage tourism.

⚠ EXAM TRAP

The temple's current structure reflects Shivaji-era reconstruction, not the original 12th-century Kadamba building: the deity and site are Kadamba-origin, but much of what stands today dates to the Maratha restoration.

📌 MEMORY BANK **Saptakoteshwar Temple** HERITAGE TEMPLE

1. Narve, Divar Island, Goa
2. Kadamba-era origin, 12th century
3. Deity: Shiva
4. Rebuilt by Shivaji (1668)
5. European features in the mandapa

09

Miscellaneous

Social issues for Prelims, sports, awards and personalities.

1. Archery World Cup Final 2026
2. Ramon Magsaysay Award 2026

SPORTS · PRELIMS · CURRENT AFFAIRS

Archery World Cup Final 2026

NEWS IN BRIEF

- Dhiraj Bommadevara became the first Indian male archer to win an individual title at the Archery World Cup Final, beating Japan's Nakanishi Junya in a shoot-off at Saltillo, Mexico.
- He is only the second Indian archer overall to win an individual World Cup Final title, after Dola Banerjee's women's recurve win in Dubai, 2007.

X-FACT MATRIX

Event	Archery World Cup Final 2026
Venue	Saltillo, Mexico
Indian winner	Dhiraj Bommadevara, men's individual recurve
Final result	Beat Nakanishi Junya (Japan) 6-5 in a shoot-off
Historic first	First Indian male archer to win an individual crown at the season-ending Final

KEY CONCEPTS EXPLAINED

- **World Archery** is headquartered in **Lausanne**. Disciplines: **recurve** (Olympic) and **compound** (not an Olympic event so far).
- Indian achievers: **Dola Banerjee** (World Cup Final 2007), **Deepika Kumari**, **Atanu Das**, **Aditi Swami** (youngest compound world champion, 2023), **Jyoti Surekha Vennam**.
- Sports honours: **Arjuna Award**, **Dronacharya Award**, **Major Dhyan Chand Khel Ratna**. **Khelo India** (2018) is the grassroots programme.
- Static: **Saltillo** is in **Coahuila, Mexico**.

⚡ UNIQUE FACT

India won seven medals, including four golds, across four World Cup stages (Puebla, Shanghai, Antalya, Madrid) in the 2026 season.

⚠ EXAM TRAP

Dola Banerjee won the women's recurve World Cup Final in 2007. Dhiraj is the first Indian man, not the first Indian.

MEMORY BANK Archery World Cup Final 2026 SPORTS

1. Saltillo, Mexico
2. Dhiraj Bommadevara: men's recurve gold
3. Beat Nakanishi Junya 6-5 in a shoot-off
4. First Indian man to win this title
5. India: 7 medals across 4 stages

AWARDS · PRELIMS · CURRENT AFFAIRS

Ramon Magsaysay Award 2026

NEWS IN BRIEF

- The 2026 Ramon Magsaysay Awards, often called 'Asia's Nobel Prize', went to Tommy Koh (Singapore), Bo Kyi (Myanmar), and Runa Khan (Bangladesh), with no Indian awardee this year.
- Past Indian laureates include Vinoba Bhave, Mother Teresa, Satyajit Ray and Verghese Kurien; Educate Girls was among the 2025 recipients.

X-FACT MATRIX

Administered by	Ramon Magsaysay Award Foundation (RMAF), established 1957
Named after	Ramon Magsaysay, 7th President of the Philippines (d. 1957)
2026 announcement	August 31, 2026
2026 ceremony	November 15, 2026, Metropolitan Theater, Manila
2026 awardees	Tommy Koh (Singapore, diplomacy/UNCLOS), Bo Kyi (Myanmar, human rights), Runa Khan (Bangladesh, humanitarian development)

KEY CONCEPTS EXPLAINED

- Established **1957** (Rockefeller Brothers Fund); categories include government service, public service, community leadership, peace and international understanding, emergent leadership (added 2009).
- Indian laureates: **Vinoba Bhave** (1958, first Indian), **Verghese Kurien** (1963), **Satyajit Ray** (1967), **M.S. Subbulakshmi** (1974), **Baba Amte** (1985), **T.N. Seshan** (1996), **Sonam Wangchuk** (2018).
- **Tommy Koh** led **UNCLOS III** (1981-82). **ITLOS** sits in **Hamburg**. **Bo Kyi** co-founded the **Assistance Association for Political Prisoners (Myanmar)**. **Runa Khan** founded **Friendship**, known for floating hospitals in Bangladesh.
- Static: Magsaysay was the **7th President of the Philippines** (capital **Manila**); Asian honours to compare: **Nobel Peace Prize**, **Bharat Ratna** (titles under **Article 18**).

⚡ UNIQUE FACT

The award recognises 'greatness of spirit' through selfless public service to the peoples of Asia.

⚠ EXAM TRAP

No Indian is among the 2026 awardees. The award is called 'Asia's Nobel Prize' but is not the Nobel Prize.

📌 MEMORY BANK Ramon Magsaysay Award 2026 AWARDS

1. Awardees: Tommy Koh, Bo Kyi, Runa Khan
2. Announced 31 August 2026
3. Ceremony: 15 November, Manila
4. No Indian winner in 2026
5. Established 1957

Model MCQ Session

One Prelims-pattern question for every topic, in the same order as the sections. The formats follow recent UPSC papers: direct questions, statement-based questions, "how many of the above" and Statement I / Statement II. Attempt first; answers follow in the next part.

01 · POLITY & GOVERNANCE

Q1 **With reference to Census 2027, consider the following statements:**

1. It will be conducted digitally for the first time.
2. Census is an item in the State List of the Seventh Schedule.
3. Caste enumeration is included for the first time since 1931.

Which of the statements given above is/are correct?

(a) 1 and 2 only

(b) 2 and 3 only

(c) 1 and 3 only

(d) 1, 2 and 3

Q2 **With reference to Article 142, consider the following statements:**

1. It lets the Supreme Court pass orders needed for complete justice in a pending matter.
2. It allows the Supreme Court to amend statutes passed by Parliament.
3. Courts have held that it can fill gaps but cannot override substantive law.

Which of the statements given above is/are correct?

(a) 1 and 2 only

(b) 2 and 3 only

(c) 1 and 3 only

(d) 1, 2 and 3

Q3 **The National Dam Safety Authority has been established under which one of the following?**

(a) Environment (Protection) Act, 1986

(b) Disaster Management Act, 2005

(c) Dam Safety Act, 2021

(d) River Boards Act, 1956

Q4 **With reference to CBFC's New Film Certification Guidelines, consider the following statements:**

1. CBFC functions under the Cinematograph Act, 1952.
2. Certification categories include U, UA, A and S.
3. Appeals against CBFC decisions lie before the Film Certification Appellate Tribunal.

How many of the above statements are correct?

(a) Only one

(b) Only two

(c) All three

(d) None

Q5 **With reference to Tulu, consider the following statements:**

1. Tulu belongs to the Dravidian language family.
2. Tulu is listed in the Eighth Schedule of the Constitution.
3. Article 345 lets a State adopt a language for official purposes.

Which of the statements given above is/are correct?

(a) 1 and 2 only

(b) 2 and 3 only

(c) 1 and 3 only

(d) 1, 2 and 3

Q6 **Consider the following statements:**

Statement I : Under the 2023 Act, the Chief Justice of India is a member of the committee that selects the Chief Election Commissioner.

Statement II : The selection committee comprises the Prime Minister, the Leader of Opposition in the Lok Sabha and a Union Cabinet Minister nominated by the Prime Minister.

Which one of the following is correct in respect of the above statements?

(a) Both Statement I and Statement II are correct and Statement II explains Statement I

(b) Both Statement I and Statement II are correct but Statement II does not explain Statement I

(c) Statement I is correct but Statement II is not correct

(d) Statement I is not correct but Statement II is correct

Q7 **Under India's PRAHAAR counter-terrorism policy, which one of the following is the nodal intervention agency?**

(a) National Security Guard

(b) Central Reserve Police Force

(c) Border Security Force

(d) Sashastra Seema Bal

02 · PLACES IN NEWS

Q8 **With reference to Nevados de Chillan, consider the following statements:**

1. It is located in the Andes of south-central Chile.
2. Chile lies on the Pacific Ring of Fire.
3. It is the highest active volcano in the world.

How many of the above statements are correct?

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

Q9 **Emi Koussi, the highest point of the Sahara, is located in which one of the following countries?**

(a) Algeria
(b) Libya
(c) Chad
(d) Niger

Q10 **With reference to Mocha (Al Mokha), consider the following statements:**

1. Bab-el-Mandeb connects the Red Sea with the Gulf of Aden.
2. Mocha lies on the Persian Gulf coast.
3. Yemen shares land borders with Saudi Arabia and Oman.

How many of the above statements are correct?

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

Q11 **Mayotte, an island in the Mozambique Channel, is administered by which one of the following countries?**

(a) Comoros
(b) Madagascar
(c) France
(d) Mozambique

Q12 **Consider the following statements:**

Statement I : Sohar Port is better placed than Gulf ports to continue operations during a disruption in the Strait of Hormuz.

Statement II : Sohar lies on the Gulf of Oman coast, outside the Strait of Hormuz.

Which one of the following is correct in respect of the above statements?

(a) Both Statement I and Statement II are correct and Statement II explains Statement I

(b) Both Statement I and Statement II are correct but Statement II does not explain Statement I

(c) Statement I is correct but Statement II is not correct

(d) Statement I is not correct but Statement II is correct

Q13 **The Bagmati River, which flows through the Kathmandu Valley, is a part of which one of the following river systems?**

(a) Indus

(b) Ganga

(c) Brahmaputra

(d) Mahanadi

Q14 **With reference to Lord Howe Island, consider the following statements:**

1. Lord Howe Island lies in the Tasman Sea.
2. It is a UNESCO World Heritage Site.
3. The Lord Howe phasmid was rediscovered on Ball's Pyramid.

How many of the above statements are correct?

(a) Only one

(b) Only two

(c) All three

(d) None

03 · INTERNATIONAL RELATIONS

Q15 **The East-West crude oil pipeline of Saudi Arabia, which bypasses the Strait of Hormuz, ends at which one of the following Red Sea terminals?**

(a) Jeddah

(b) Yanbu

(c) Ras Tanura

(d) Dammam

Q16 **With reference to UK Recognises India's Carbon Credit Trading Scheme, consider the following statements:**

1. The UK has recognised India's CCTS under its Carbon Border Adjustment Mechanism.
2. CCTS succeeded the Perform, Achieve and Trade scheme as India's main trading scheme.
3. Recognition raises the carbon cost for Indian exporters to the UK.

Which of the statements given above is/are correct?

(a) 1 and 2 only

(b) 2 and 3 only

(c) 1 and 3 only

(d) 1, 2 and 3

Q17 **Consider the following statements:**

Statement I : After clearing the Senate by 86-11, the sanctions bill has become law.

Statement II : A bill passed by the Senate must also pass the House of Representatives and receive the President's assent.

Which one of the following is correct in respect of the above statements?

(a) Both Statement I and Statement II are correct and Statement II explains Statement I

(b) Both Statement I and Statement II are correct but Statement II does not explain Statement I

(c) Statement I is correct but Statement II is not correct

(d) Statement I is not correct but Statement II is correct

Q18 **Consider the following statements:**

Statement I : The September 2026 Trump-Xi summit was held in Washington, United States.

Statement II : The summit extended the US-China trade truce through January 10, 2027.

Which one of the following is correct in respect of the above statements?

(a) Both Statement I and Statement II are correct and Statement II explains Statement I

(b) Both Statement I and Statement II are correct but Statement II does not explain Statement I

(c) Statement I is correct but Statement II is not correct

(d) Statement I is not correct but Statement II is correct

Q19 **Consider the following statements:**

Statement I : The US-Denmark-Greenland security arrangement announced in September 2026 is already in force.

Statement II : Pituffik Space Base operates under the 1951 Defense of Greenland agreement.

Which one of the following is correct in respect of the above statements?

(a) Both Statement I and Statement II are correct and Statement II explains Statement I

(b) Both Statement I and Statement II are correct but Statement II does not explain Statement I

(c) Statement I is correct but Statement II is not correct

(d) Statement I is not correct but Statement II is correct

Q20 **With reference to SCO Summit 2026, consider the following statements:**

1. The SCO was founded in 2001.
2. India became a full member in 2017.
3. The SCO Secretariat is in Tashkent.

How many of the above statements are correct?

(a) Only one

(b) Only two

(c) All three

(d) None

Q21 **Consider the following statements:**

Statement I : The 2026 BRICS Summit was hosted in New Delhi.

Statement II : India holds the BRICS chairship for 2026.

Which one of the following is correct in respect of the above statements?

(a) Both Statement I and Statement II are correct and Statement II explains Statement I

(b) Both Statement I and Statement II are correct but Statement II does not explain Statement I

(c) Statement I is correct but Statement II is not correct

(d) Statement I is not correct but Statement II is correct

04 · ECONOMY

Q22 **With reference to India's First Blue Bond, consider the following statements:**

1. A blue bond raises funds for ocean and coastal projects.
2. Seychelles issued the first sovereign blue bond.
3. Sagarmala Finance Corporation functions under the Ministry of Finance.

How many of the above statements are correct?

(a) Only one

(b) Only two

(c) All three

(d) None

Q23 **The Unified Payments Interface was developed by which one of the following?**

(a) Reserve Bank of India

(b) Securities and Exchange Board of India

(c) National Payments Corporation of India

(d) Indian Banks' Association

Q24 **Consider the following statements:**

Statement I : The Wholesale Price Index is compiled by the Office of the Economic Adviser in the DPIIT.

Statement II : The Consumer Price Index is also compiled by the Office of the Economic Adviser in the DPIIT.

Which one of the following is correct in respect of the above statements?

(a) Both Statement I and Statement II are correct and Statement II explains Statement I

(b) Both Statement I and Statement II are correct but Statement II does not explain Statement I

(c) Statement I is correct but Statement II is not correct

(d) Statement I is not correct but Statement II is correct

Q25 **With reference to Consumer Protection (E-Commerce) Amendment Rules, 2026, consider the following statements:**

1. The E-Commerce Rules, 2020 were made under the Consumer Protection Act, 2019.
2. Sponsored listings must carry clear disclosure under the amended rules.
3. The rules are administered by the Ministry of Electronics and IT.

How many of the above statements are correct?

(a) Only one

(b) Only two

(c) All three

(d) None

Q26 **With reference to Demat 2.0, consider the following statements:**

1. NSDL and CDSL are India's depositories.
2. SEBI became statutory under the SEBI Act, 1992.
3. India introduced T+1 settlement in 2013.

Which of the statements given above is/are correct?

(a) 1 and 2 only

(b) 2 and 3 only

(c) 1 and 3 only

(d) 1, 2 and 3

Q27 **With reference to Agentic Commerce, consider the following statements:**

1. Agentic AI can carry out multi-step tasks on a user's behalf.
2. ONDC is an open network for e-commerce.
3. The DPDP Act, 2023 does not require consent for processing personal data.

Which of the statements given above is/are correct?

(a) 1 and 2 only

(b) 2 and 3 only

(c) 1 and 3 only

(d) 1, 2 and 3

05 · ECONOMIC DEVELOPMENT & SCHEMES

Q28 **Consider the following statements:**

Statement I : The India Deep Tech Alliance is a scheme of the Government of India.

Statement II : The India Deep Tech Alliance is a private alliance of Indian and US venture capital firms.

Which one of the following is correct in respect of the above statements?

(a) Both Statement I and Statement II are correct and Statement II explains Statement I

(b) Both Statement I and Statement II are correct but Statement II does not explain Statement I

(c) Statement I is correct but Statement II is not correct

(d) Statement I is not correct but Statement II is correct

Q29 **Consider the following statements:**

Statement I : The LNG-powered train is a dual-fuel train using LNG together with diesel.

Statement II : The train was flagged off at Sabarmati railway station in Ahmedabad.

Which one of the following is correct in respect of the above statements?

(a) Both Statement I and Statement II are correct and Statement II explains Statement I

(b) Both Statement I and Statement II are correct but Statement II does not explain Statement I

(c) Statement I is correct but Statement II is not correct

(d) Statement I is not correct but Statement II is correct

Q30 **Consider the following statements:**

Statement I : The e-methanol plant at Deendayal Port supports green shipping fuel goals.

Statement II : E-methanol is made from green hydrogen and captured biogenic carbon dioxide.

Which one of the following is correct in respect of the above statements?

(a) Both Statement I and Statement II are correct and Statement II explains Statement I

(b) Both Statement I and Statement II are correct but Statement II does not explain Statement I

(c) Statement I is correct but Statement II is not correct

(d) Statement I is not correct but Statement II is correct

06 · ENVIRONMENT & ECOLOGY, GEOGRAPHY & DISASTER

Q31 **Consider the following statements:**

Statement I : Hanging glaciers are prone to sudden ice avalanches.

Statement II : Hanging glaciers sit on steep slopes above cliffs and valley floors.

Which one of the following is correct in respect of the above statements?

(a) Both Statement I and Statement II are correct and Statement II explains Statement I

(b) Both Statement I and Statement II are correct but Statement II does not explain Statement I

(c) Statement I is correct but Statement II is not correct

(d) Statement I is not correct but Statement II is correct

Q32 **With reference to Myristica Swamps, consider the following statements:**

1. They are freshwater swamp forests found mainly in the Western Ghats.
2. They are coastal saline mangrove ecosystems.
3. They help recharge groundwater and sustain stream flow.

How many of the above statements are correct?

(a) Only one

(b) Only two

(c) All three

(d) None

Q33 **The Wildlife Crime Control Bureau is a statutory body constituted under which one of the following Acts?**

(a) Environment (Protection) Act, 1986

(b) Biological Diversity Act, 2002

(c) Forest (Conservation) Act, 1980

(d) Wild Life (Protection) Act, 1972

Q34 **Consider the following statements:**

Statement I : The Supreme Court struck down Rules 18A and 18B of the Maharashtra Poisons Rules, 1972.

Statement II : The Rules were held to violate Article 14 and Article 19(1)(g) under the proportionality test.

Which one of the following is correct in respect of the above statements?

(a) Both Statement I and Statement II are correct and Statement II explains Statement I

(b) Both Statement I and Statement II are correct but Statement II does not explain Statement I

(c) Statement I is correct but Statement II is not correct

(d) Statement I is not correct but Statement II is correct

Q35 **With reference to COFO 28, consider the following statements:**

1. COFO is a body of the Food and Agriculture Organization.
2. India's Bonn Challenge target is 26 million hectares by 2030.
3. COFO 28 was held in Nairobi.

Which of the statements given above is/are correct?

(a) 1 and 2 only

(b) 2 and 3 only

(c) 1 and 3 only

(d) 1, 2 and 3

Q36 **Which one of the following institutions implements the Indian Forest and Wood Certification Scheme, under which PRAMAAN certificates are issued?**

(a) Forest Survey of India

(b) Wildlife Institute of India

(c) Indian Institute of Forest Management

(d) Indian Council of Forestry Research and Education

07 · SCIENCE & TECHNOLOGY

Q37 **With reference to Reverse Vaccinology, consider the following statements:**

1. It identifies vaccine targets from the pathogen genome.
2. It starts by growing large quantities of the pathogen.
3. Its first application was a vaccine against meningococcus B.

Which of the statements given above is/are correct?

(a) 1 and 2 only

(b) 2 and 3 only

(c) 1 and 3 only

(d) 1, 2 and 3

Q38 **With reference to ChatGPT Atlas, consider the following statements:**

1. ChatGPT Atlas is a web browser from OpenAI.
2. It can act on web pages in agent mode.
3. It is a search engine owned by Google.

How many of the above statements are correct?

(a) Only one

(b) Only two

(c) All three

(d) None

Q39 **With reference to Meta Muse, consider the following statements:**

1. Muse is an AI agent that can act on a user's behalf.
2. It was first launched in the United States.
3. It runs on Google's Gemini model.

Which of the statements given above is/are correct?

(a) 1 and 2 only

(b) 2 and 3 only

(c) 1 and 3 only

(d) 1, 2 and 3

Q40 **INS Nipun, a Nistar-class diving support vessel, has been built by which one of the following?**

(a) Mazagon Dock Shipbuilders

(b) Garden Reach Shipbuilders and Engineers

(c) Cochin Shipyard

(d) Hindustan Shipyard Limited

Q41 **With reference to AASHVAST Labs, consider the following statements:**

1. AASHVAST labs verify firmware in military electronic systems.
2. The first lab was inaugurated in New Delhi.
3. They are operated by ISRO.

How many of the above statements are correct?

(a) Only one

(b) Only two

(c) All three

(d) None

Q42 **TRISHNA is a joint Earth observation mission of ISRO and which one of the following space agencies?**

(a) NASA

(b) CNES

(c) JAXA

(d) ESA

Q43 **With reference to International Space Summit 2026, consider the following statements:**

1. The summit was hosted by France in Paris.
2. The Outer Space Treaty, 1967 bars national appropriation of celestial bodies.
3. India signed the Artemis Accords in 2023.

Which of the statements given above is/are correct?

(a) 1 and 2 only

(b) 2 and 3 only

(c) 1 and 3 only

(d) 1, 2 and 3

Q44 **With reference to Peptide Therapy, consider the following statements:**

1. Peptides are short chains of amino acids.
2. Insulin is a peptide hormone.
3. GLP-1 drugs are antibiotics.

How many of the above statements are correct?

(a) Only one

(b) Only two

(c) All three

(d) None

Q45 **With reference to Matsya 6000, consider the following statements:**

1. Matsya 6000 can carry three people.
2. It is designed for depths up to 6,000 metres.
3. It is operated by ISRO.

Which of the statements given above is/are correct?

(a) 1 and 2 only

(b) 2 and 3 only

(c) 1 and 3 only

(d) 1, 2 and 3

Q46 **With reference to Sagar Manthan, consider the following statements:**

1. Sagar Manthan was built by GRSE.
2. It is meant for the National Centre for Polar and Ocean Research.
3. It is an armed warship of the Indian Navy.

Which of the statements given above is/are correct?

(a) 1 and 2 only

(b) 2 and 3 only

(c) 1 and 3 only

(d) 1, 2 and 3

Q47 **With reference to Plasma Wakefield Accelerator, consider the following statements:**

1. Plasma is the fourth state of matter.
2. AWAKE at CERN uses a proton beam to drive plasma wakefields.
3. The LHC is located in Japan.

How many of the above statements are correct?

(a) Only one

(b) Only two

(c) All three

(d) None

08 · ARTS & CULTURE + HISTORY

Q48 **Which one of the following scripts is being revived on public signboards for the Dogri language in Jammu?**

(a) Sharada

(b) Kharosthi

(c) Takri

(d) Brahmi

Q49 **With reference to Gollala Gudi Temple, consider the following statements:**

1. It was built under the Kakatiya dynasty.
2. It was declared a monument under the AMASR Act, 1958.
3. It is itself a UNESCO World Heritage Site.

How many of the above statements are correct?

(a) Only one

(b) Only two

(c) All three

(d) None

Q50 **With reference to Saptakoteshwar Temple, consider the following statements:**

1. The temple is on Divar Island in Goa.
2. It was originally built by the Kadambas.
3. Goa was liberated from Portuguese rule in 1971.

Which of the statements given above is/are correct?

(a) 1 and 2 only

(b) 2 and 3 only

(c) 1 and 3 only

(d) 1, 2 and 3

09 · MISCELLANEOUS

Q51 **Dhiraj Bommadevara won the men's recurve title at the 2026 Archery World Cup Final held at which one of the following venues?**

(a) Saltillo, Mexico

(b) Paris, France

(c) Madrid, Spain

(d) Antalya, Turkey

Q52 **Consider the following statements:**

Statement I : The Ramon Magsaysay Award is named after the 7th President of the Philippines.

Statement II : The Ramon Magsaysay Award Foundation administers the award.

Which one of the following is correct in respect of the above statements?

(a) Both Statement I and Statement II are correct and Statement II explains Statement I

(b) Both Statement I and Statement II are correct but Statement II does not explain Statement I

(c) Statement I is correct but Statement II is not correct

(d) Statement I is not correct but Statement II is correct

Answers & Solutions

Each solution is explained two ways: through logical analysis, then through factual knowledge.

01 · POLITY & GOVERNANCE

Q1 Census 2027

✓ ANSWER: (c)

① THROUGH LOGICAL ANALYSIS

Statement 2 fails on logic: a nationwide count needs one authority, so it cannot sit with individual States.

② THROUGH FACTUAL KNOWLEDGE

Census is Entry 69 of the Union List. Digital mode and caste enumeration are both features of Census 2027, so statements 1 and 3 hold.

Q2 Article 142: NEET-UG FIRs Quashed

✓ ANSWER: (c)

① THROUGH LOGICAL ANALYSIS

Statement 2 clashes with separation of powers: courts interpret laws, Parliament amends them.

② THROUGH FACTUAL KNOWLEDGE

Article 142(1) allows orders for complete justice, and Prem Chand Garg and SCBA limit it to gap filling, so 1 and 3 are correct.

Q3 National Dam Safety Authority

✓ ANSWER: (c)

① THROUGH LOGICAL ANALYSIS

A dam-specific regulator needs a dam-specific statute; the other Acts cover environment, disasters and river boards.

② THROUGH FACTUAL KNOWLEDGE

The Dam Safety Act, 2021 created the National Committee on Dam Safety, the NDSA and State Dam Safety Organisations.

Q4 CBFC's New Film Certification Guidelines

✓ ANSWER: (b)

① THROUGH LOGICAL ANALYSIS

Tribunal rationalisation removed several appellate bodies, so statement 3 looks dated.

② THROUGH FACTUAL KNOWLEDGE

FCAT was abolished in 2021 and appeals now go to the High Court, so 3 is wrong while 1 and 2 are correct.

Q5 Tulu: Second Official Language Status

✓ ANSWER: (c)

① THROUGH LOGICAL ANALYSIS

The 2026 move concerns administrative use in two districts; an Eighth Schedule listing would be a separate, central step.

② THROUGH FACTUAL KNOWLEDGE

Tulu is Dravidian and Article 345 empowers States, but Tulu is not in the Eighth Schedule, so the answer is 1 and 3.

Q6 **CEC & EC Appointment Act, 2023: Under SC Scrutiny** ✓ ANSWER: (d)

① THROUGH LOGICAL ANALYSIS
Statement II names a committee with no judicial member, which contradicts Statement I.

② THROUGH FACTUAL KNOWLEDGE
The 2023 Act replaced the Chief Justice with a Union Cabinet Minister, which is why the Act is under scrutiny after the Anoop Baranwal judgment.

Q7 **PRAHAAR: National Counter-Terrorism Policy** ✓ ANSWER: (a)

① THROUGH LOGICAL ANALYSIS
Counter-terror intervention is a specialist task, which points to the force trained for it.

② THROUGH FACTUAL KNOWLEDGE
The NSG is the nodal intervention force; the Multi Agency Centre and Joint Task Force coordinate intelligence.

02 · PLACES IN NEWS

Q8 **Nevados de Chillan** ✓ ANSWER: (b)

① THROUGH LOGICAL ANALYSIS
A complex under yellow alert is a monitored hazard, not a record holder; records belong to named giants.

② THROUGH FACTUAL KNOWLEDGE
Ojos del Salado holds the highest active volcano title, so 3 is wrong; 1 and 2 are correct.

Q9 **Emi Koussi** ✓ ANSWER: (c)

① THROUGH LOGICAL ANALYSIS
The Tibesti Mountains lie in northern Chad and spill over into southern Libya, and the summit is on the Chad side.

② THROUGH FACTUAL KNOWLEDGE
Emi Koussi is a shield volcano, 3,415 m high, at the southeast end of the Tibesti range.

Q10 **Mocha (Al Mokha)** ✓ ANSWER: (b)

① THROUGH LOGICAL ANALYSIS
Yemen is at the southwest of Arabia; the Persian Gulf lies to the northeast, so statement 2 fails.

② THROUGH FACTUAL KNOWLEDGE
Mocha is a Red Sea port. Bab-el-Mandeb and Yemen's borders are as in statements 1 and 3.

Q11 **Mayotte** ✓ ANSWER: (c)

① THROUGH LOGICAL ANALYSIS
Mayotte is geographically part of the Comoros archipelago but politically separate.

② THROUGH FACTUAL KNOWLEDGE
It has been an overseas department of France since 2011, with an active submarine volcano about 50 km to its east.

Q12 **Sohar Port** ✓ ANSWER: (a)

① THROUGH LOGICAL ANALYSIS
Location outside a chokepoint is the direct reason for lower exposure, so Statement II explains Statement I.

② THROUGH FACTUAL KNOWLEDGE
Sohar is a deep-water port and free-trade zone on the Al Batinah coast of Oman, on the Gulf of Oman side of Hormuz.

Q13 **Bagmati River** ✓ ANSWER: (b)

① THROUGH LOGICAL ANALYSIS
Himalayan rivers of Nepal that enter Bihar drain into the Ganga plain.

② THROUGH FACTUAL KNOWLEDGE
The Bagmati rises in the Shivapuri Hills and joins the Kosi system, a left-bank tributary system of the Ganga.

Q14 **Lord Howe Island** ✓ ANSWER: (c)

① THROUGH LOGICAL ANALYSIS
All three statements hang together with the news item on phasmid collection from Ball's Pyramid.

② THROUGH FACTUAL KNOWLEDGE
The island group was inscribed in 1982 and the phasmid was rediscovered on Ball's Pyramid in 2001, so all three are correct.

03 · INTERNATIONAL RELATIONS

Q15 **Saudi Arabia's East-West Pipeline Shutdown** ✓ ANSWER: (b)

① THROUGH LOGICAL ANALYSIS
A route built to avoid Hormuz must end on the Red Sea, so Ras Tanura and Dammam (Gulf coast) are ruled out.

② THROUGH FACTUAL KNOWLEDGE
The Petroline carries up to 5 million barrels per day from the eastern oil fields to Yanbu.

Q16 **UK Recognises India's Carbon Credit Trading Scheme** ✓ ANSWER: (a)

① THROUGH LOGICAL ANALYSIS
Recognition is a concession, so it cannot raise costs.

② THROUGH FACTUAL KNOWLEDGE
Recognition avoids double carbon pricing for exporters, so 3 is wrong.

Q17 **US-Russia Sanctions Bill** ✓ ANSWER: (d)

① THROUGH LOGICAL ANALYSIS
Statement II states the full legislative route, which shows that a Senate vote alone cannot make a law.

② THROUGH FACTUAL KNOWLEDGE
The bill authorises tariffs of up to 100% on top buyers of Russian oil and still needs the House and the President.

Q18 **Trump-Xi Summit 2026** ✓ ANSWER: (b)

① THROUGH LOGICAL ANALYSIS
The venue and the trade outcome are two separate facts; one does not cause the other.

② THROUGH FACTUAL KNOWLEDGE
It was a state visit by Xi Jinping on September 23-25, 2026, which also set up a bilateral AI dialogue.

Q19 **US-Denmark Greenland Security Deal** ✓ ANSWER: (d)

① THROUGH LOGICAL ANALYSIS
An announced deal that still needs parliamentary approval is not in force, so Statement I fails while Statement II stands on its own.

② THROUGH FACTUAL KNOWLEDGE
The deal needs Danish and Greenlandic approval; Pituffik (earlier Thule) is the existing US base.

Q20 **SCO Summit 2026** ✓ ANSWER: (b)

① THROUGH LOGICAL ANALYSIS
The Secretariat is the political centre; RATS is the body tied to Tashkent.

② THROUGH FACTUAL KNOWLEDGE
The Secretariat is in Beijing, and RATS is in Tashkent, so 3 is wrong.

Q21 **BRICS Summit 2026** ✓ ANSWER: (a)

① THROUGH LOGICAL ANALYSIS
The chair hosts the annual summit, so Statement II explains Statement I.

② THROUGH FACTUAL KNOWLEDGE
The summit was held on September 12-13, 2026, under the theme of resilience, innovation, cooperation and sustainability.

04 · ECONOMY

Q22 **India's First Blue Bond** ✓ ANSWER: (b)

① THROUGH LOGICAL ANALYSIS
Sagarmala is a ports programme, so its finance arm sits with the ports ministry.

② THROUGH FACTUAL KNOWLEDGE
SFC works under the Ministry of Ports, Shipping and Waterways, so 3 is wrong.

Q23 **10 Years of UPI** ✓ ANSWER: (c)

① THROUGH LOGICAL ANALYSIS
RBI and IBA initiated the idea, but the payment system itself is built by the umbrella retail payments organisation.

② THROUGH FACTUAL KNOWLEDGE
NPCI developed UPI; the RBI and the Indian Banks' Association initiated it.

Q24 **Rise in Food Price Index** ✓ ANSWER: (c)

① THROUGH LOGICAL ANALYSIS
Two different indices are compiled by two different bodies; the second claim merges them.

② THROUGH FACTUAL KNOWLEDGE
WPI (base 2011-12) is compiled by the Office of the Economic Adviser, DPIIT; CPI is compiled by MoSPI.

Q25 **Consumer Protection (E-Commerce) Amendment Rules, 2026** ✓ ANSWER: (b)

① THROUGH LOGICAL ANALYSIS
Consumer rules are naturally administered by the consumer affairs department.

② THROUGH FACTUAL KNOWLEDGE
The Department of Consumer Affairs administers them, so 3 is wrong.

Q26 **Demat 2.0: Tokenised Corporate Bonds** ✓ ANSWER: (a)

① THROUGH LOGICAL ANALYSIS
T+1 is a recent change tied to 'India first among major markets', so a date as early as 2013 looks off.

② THROUGH FACTUAL KNOWLEDGE
T+1 settlement began in January 2023, so 3 is wrong.

Q27 **Agentic Commerce** ✓ ANSWER: (a)

① THROUGH LOGICAL ANALYSIS
A data protection law that skipped consent would defeat its purpose.

② THROUGH FACTUAL KNOWLEDGE
The DPDP Act is consent based, so 3 is wrong.

05 · ECONOMIC DEVELOPMENT & SCHEMES

Q28 **India Deep Tech Alliance** ✓ ANSWER: (d)

① THROUGH LOGICAL ANALYSIS
A private alliance cannot also be a government scheme, so the two statements cannot both hold.

② THROUGH FACTUAL KNOWLEDGE
The alliance commits $2.5 billion over five years, with $1 billion for AI deployment.

Q29 **India's First LNG-Powered Train** ✓ ANSWER: (b)

① THROUGH LOGICAL ANALYSIS
The fuel technology and the flag-off location are unrelated facts.

② THROUGH FACTUAL KNOWLEDGE
It is operated by Indian Railways and was flagged off at Sabarmati, Ahmedabad.

Q30 **India's First Port-Based E-Methanol Plant** ✓ ANSWER: (a)

① THROUGH LOGICAL ANALYSIS
The production route from green hydrogen and biogenic CO2 is why the product counts as a green fuel.

② THROUGH FACTUAL KNOWLEDGE
The plant at Kandla is planned at about Rs 2,300 crore with 150 MT per day capacity, by Deendayal Port Authority and Assam Petro-Chemicals.

06 · ENVIRONMENT & ECOLOGY, GEOGRAPHY & DISASTER

Q31 **Hanging Glaciers: Alaknanda Basin** ✓ ANSWER: (a)

① THROUGH LOGICAL ANALYSIS
Ice on a steep edge is easily dislodged, so Statement II explains Statement I.

② THROUGH FACTUAL KNOWLEDGE
A study mapped 219 hanging glaciers in the Alaknanda basin, with about one-third of the ice considered unstable.

Q32 **Myristica Swamps** ✓ ANSWER: (b)

① THROUGH LOGICAL ANALYSIS
Myristica trees grow in freshwater; saline mangroves hold different species.

② THROUGH FACTUAL KNOWLEDGE
Myristica swamps are freshwater and recharge groundwater, so 1 and 3 are correct.

Q33 **Wildlife Crime Control Bureau** ✓ ANSWER: (d)

① THROUGH LOGICAL ANALYSIS
A wildlife enforcement body naturally derives from the wildlife statute.

② THROUGH FACTUAL KNOWLEDGE
WCCB was set up under Section 38Y of the Wild Life (Protection) Act, 1972 and has been operational since 2008.

Q34 **Methanol Regulation: Supreme Court Ruling** ✓ ANSWER: (a)

① THROUGH LOGICAL ANALYSIS
The violation of constitutional rights is the reason the Court struck the Rules down.

② THROUGH FACTUAL KNOWLEDGE
The case is Balaji Formalin Pvt. Ltd. v. Union of India, decided on September 18, 2026.

Q35 **COFO 28: FAO Committee on Forestry** ✓ ANSWER: (a)

① THROUGH LOGICAL ANALYSIS
FAO is headquartered in Rome, and COFO sessions are normally held at its headquarters.

② THROUGH FACTUAL KNOWLEDGE
COFO 28 met in Rome, so 3 is wrong.

Q36 **PRAMAAN Certificate** ✓ ANSWER: (c)

① THROUGH LOGICAL ANALYSIS
A certification scheme needs a management and standards body rather than a survey or research institute.

② THROUGH FACTUAL KNOWLEDGE
IIFM, Bhopal implements the scheme under MoEFCC; NABCB accredits the certification bodies.

07 · SCIENCE & TECHNOLOGY

Q37 **Reverse Vaccinology** ✓ ANSWER: (c)

① THROUGH LOGICAL ANALYSIS
The word 'reverse' suggests the usual culture-first order is flipped.

② THROUGH FACTUAL KNOWLEDGE
Reverse vaccinology begins with genome data, and MenB was the first use, so 1 and 3 are correct.

Q38 **ChatGPT Atlas** ✓ ANSWER: (b)

① THROUGH LOGICAL ANALYSIS
The name ChatGPT ties it to OpenAI, not Google.

② THROUGH FACTUAL KNOWLEDGE
Atlas is OpenAI's AI browser with an agent mode, so 1 and 2 are correct.

Q39 **Meta Muse** ✓ ANSWER: (a)

① THROUGH LOGICAL ANALYSIS
A Meta product is expected to run on Meta's own model.

② THROUGH FACTUAL KNOWLEDGE
Muse runs on Meta's Muse Spark model, so 3 is wrong.

Q40 **INS Nipun** ✓ ANSWER: (d)

① THROUGH LOGICAL ANALYSIS
The Nistar class was ordered from a single Visakhapatnam yard, which narrows the choice.

② THROUGH FACTUAL KNOWLEDGE
INS Nipun is the second Nistar-class vessel, built by HSL, Visakhapatnam, and commissioned on August 31, 2026.

Q41 **AASHVAST Labs** ✓ ANSWER: (b)

① THROUGH LOGICAL ANALYSIS
Verifying Army-bought drones is an Army task, not a space agency task.

② THROUGH FACTUAL KNOWLEDGE
The Army is setting them up for DG EME, so 3 is wrong.

Q42 **TRISHNA Mission** ✓ ANSWER: (b)

① THROUGH LOGICAL ANALYSIS

NISAR is the ISRO-NASA mission; TRISHNA is the other joint mission and is a European partnership.

② THROUGH FACTUAL KNOWLEDGE

TRISHNA (Thermal infraRed Imaging Satellite for High-resolution Natural resource Assessment) is an ISRO-CNES mission to be launched on a PSLV.

Q43 **International Space Summit 2026** ✓ ANSWER: (d)

① THROUGH LOGICAL ANALYSIS

All three match the summit and treaty background, so none can be eliminated.

② THROUGH FACTUAL KNOWLEDGE

Paris hosted the summit, the 1967 treaty bars appropriation, and India signed the Accords in June 2023, so all three are correct.

Q44 **Peptide Therapy** ✓ ANSWER: (b)

① THROUGH LOGICAL ANALYSIS

GLP-1 drugs are discussed for diabetes and obesity, not infections.

② THROUGH FACTUAL KNOWLEDGE

GLP-1 drugs regulate blood sugar and appetite, so 3 is wrong.

Q45 **Matsya 6000** ✓ ANSWER: (a)

① THROUGH LOGICAL ANALYSIS

A deep ocean vehicle belongs to an ocean science body, not a space agency.

② THROUGH FACTUAL KNOWLEDGE

It belongs to the Samudrayaan project under MoES and NIOT, so 3 is wrong.

Q46 **Sagar Manthan** ✓ ANSWER: (a)

① THROUGH LOGICAL ANALYSIS

The vessel is for a research centre under MoES, so it is not a combat ship.

② THROUGH FACTUAL KNOWLEDGE

It is a research vessel under the Deep Ocean Mission, so 3 is wrong.

Q47 **Plasma Wakefield Accelerator** ✓ ANSWER: (b)

① THROUGH LOGICAL ANALYSIS

CERN is the Geneva laboratory, so an LHC in Japan contradicts the source.

② THROUGH FACTUAL KNOWLEDGE

The LHC is at CERN near Geneva, so 3 is wrong.

08 · ARTS & CULTURE + HISTORY

Q48 **Dogri Script Revival: Takri Signage** — ✓ ANSWER: (c)

① THROUGH LOGICAL ANALYSIS
The script revived is the traditional Dogri script, descended from an older Kashmir-region script.

② THROUGH FACTUAL KNOWLEDGE
Takri, locally called 'nayah dogra akhar', descends from Sharada; Dogri was added to the Eighth Schedule in 2003.

Q49 **Gollala Gudi Temple** — ✓ ANSWER: (b)

① THROUGH LOGICAL ANALYSIS
The news says it was declared a national monument; a UNESCO listing would be a different headline.

② THROUGH FACTUAL KNOWLEDGE
The nearby Ramappa temple is the UNESCO site, so 3 is wrong.

Q50 **Saptakoteshwar Temple** — ✓ ANSWER: (a)

① THROUGH LOGICAL ANALYSIS
India's 1971 war was with Pakistan, which suggests Goa's liberation was earlier.

② THROUGH FACTUAL KNOWLEDGE
Goa was liberated on 19 December 1961 (Operation Vijay), so 3 is wrong.

09 · MISCELLANEOUS

Q51 **Archery World Cup Final 2026** — ✓ ANSWER: (a)

① THROUGH LOGICAL ANALYSIS
Madrid and Antalya were earlier stages of the season and the final is held at a separate venue.

② THROUGH FACTUAL KNOWLEDGE
He beat Japan's Nakanishi Junya 6-5 in a shoot-off at Saltillo, Mexico, and became the first Indian man to win the individual title.

Q52 **Ramon Magsaysay Award 2026** — ✓ ANSWER: (b)

① THROUGH LOGICAL ANALYSIS
The naming of the award and its administering body are independent facts.

② THROUGH FACTUAL KNOWLEDGE
The Foundation was set up in 1957; the 2026 ceremony is scheduled for November 15, 2026 in Manila.

X-Numbers

The headline figures from this issue, collected in one place. No new information: every number here is stated in full inside its topic.

6,000 m	Target depth of Matsya 6000, India's first manned deep ocean submersible under the Samudrayaan Project
5 million bpd	Capacity of Saudi Arabia's East-West pipeline, shut after drone strikes launched from Iraq
21.70 billion	UPI transactions processed in January 2026 alone, as the system marks 10 years
219	Hanging glaciers mapped for the first time in Uttarakhand's Alaknanda basin
$105.08 mn	Size of India's first Blue Bond, to be issued by Sagarmala Finance Corporation
Rs 2,300 cr	Cost of Kandla's e-methanol plant, India's first port-based green-fuel facility
691	Banks live on UPI as of January 2026, up from 216 banks in 2021
Rs 82 lakh	Annual allocation for Tulu's new administrative-language status in coastal Karnataka
$2.5 bn	India Deep Tech Alliance's five-year funding commitment, including $1 billion for AI deployment
120	Foreign delegations at the first International Space Summit, Paris, September 2026
300 m	Maximum diving depth supported by INS Nipun, the Indian Navy's new diving support vessel
28 Sep to 2 Oct	Dates of FAO's COFO 28 session in Rome, where India backed the UN Decade for Afforestation

X Master Recall: This Month's Key Takeaways

✦ **X-RECALL COMPILATION** , every takeaway from this issue

POLITY & GOVERNANCE · CENSUS 2027

Census data forms the statistical base for delimitation, constituency reservation, and welfare-scheme targeting.

POLITY & GOVERNANCE · ARTICLE 142: NEET-UG FIRS QUASHED

An IIM Ahmedabad study counted 791 direct invocations of Article 142 between 1950 and 2023, mostly in civil matters.

POLITY & GOVERNANCE · NATIONAL DAM SAFETY AUTHORITY

It also pushes states to create a dedicated dam-safety budget head and build capacity among dam owners and staff.

POLITY & GOVERNANCE · CBFC'S NEW FILM CERTIFICATION GUIDELINES

Films cannot question India's sovereignty and integrity or undermine the dignity of courts; titles will be scrutinised for provocative or vulgar content.

POLITY & GOVERNANCE · TULU: SECOND OFFICIAL LANGUAGE STATUS

Tulu is not currently listed in the Eighth Schedule of the Constitution, a long-standing demand of Tulu-speaking groups.

POLITY & GOVERNANCE · CEC & EC APPOINTMENT ACT, 2023: UNDER SC SCRUTINY

Petitioners argue the Act gives the executive two of three committee seats, weakening the neutral check envisaged in Anoop Baranwal.

POLITY & GOVERNANCE · PRAHAAR: NATIONAL COUNTER-TERRORISM POLICY

International cooperation is routed through Mutual Legal Assistance Treaties, extradition treaties and Joint Working Groups.

PLACES IN NEWS · NEVADOS DE CHILLAN

The complex has shown repeated ash and gas pulses through 2026, with columns exceeding 900 metres at times.

PLACES IN NEWS · EMI KOUSSI

The Tibesti Mountains straddle northern Chad close to the Libyan border, a remote volcanic massif in the central Sahara.

PLACES IN NEWS · MOCHA (AL MOKHA)

Mocha's closure adds to disruption of Red Sea shipping lanes amid continuing regional conflict.

PLACES IN NEWS · MAYOTTE

The underwater volcanic activity since 2018 is among the largest submarine eruptions ever recorded and continues to be seismically active.

PLACES IN NEWS · SOHAR PORT

It functions as an integrated port-and-freezone hub for petrochemicals, metals and logistics investment.

PLACES IN NEWS · BAGMATI RIVER

Repeated flood warnings along its course in 2026 prompted embankment strengthening work in Bihar.

PLACES IN NEWS · LORD HOWE ISLAND

Lord Howe Island is now rodent-free, a status that underpins plans to reintroduce the phasmid to its original home.

INTERNATIONAL RELATIONS · SAUDI ARABIA'S EAST-WEST PIPELINE SHUTDOWN

Saudi Arabia chose not to retaliate immediately, giving Iraq's government time to act against militias operating from its territory.

INTERNATIONAL RELATIONS · UK RECOGNISES INDIA'S CARBON CREDIT TRADING SCHEME

Recognition lets Indian exporters claim relief equal to the carbon price already paid under CCTS, avoiding double carbon taxation under UK CBAM.

INTERNATIONAL RELATIONS · US-RUSSIA SANCTIONS BILL

India, as one of the largest buyers of discounted Russian crude, is directly exposed to any tariff action under the bill's secondary-sanctions provisions.

INTERNATIONAL RELATIONS · TRUMP-XI SUMMIT 2026

Analysts describe the summit as heavy on symbolism: a state visit with full ceremonial honours: but light on new concrete agreements beyond the trade truce extension.

INTERNATIONAL RELATIONS · US-DENMARK GREENLAND SECURITY DEAL

Greenland is an autonomous part of the Kingdom of Denmark; the deal explicitly recognises Danish sovereignty and Greenlanders' right to self-determination, shifting the dispute from territorial acquisition to defence cooperation.

INTERNATIONAL RELATIONS · SCO SUMMIT 2026

The summit marked the SCO's 25th anniversary since its founding in Shanghai in 2001.

INTERNATIONAL RELATIONS · BRICS SUMMIT 2026

This marks the 18th BRICS summit overall and India's first hosting since the group's 2023 expansion beyond its original five members.

ECONOMY · INDIA'S FIRST BLUE BOND

The issue aims to diversify SFC's funding sources and narrow the gap between its short-term borrowings and long-term lending commitments.

ECONOMY · 10 YEARS OF UPI

A key concern flagged is market concentration: two private apps hold over 80% of UPI market share.

ECONOMY · RISE IN FOOD PRICE INDEX

Persistent food price pressure complicates the RBI's monetary policy calibration, as food carries a heavy weight in India's CPI basket.

ECONOMY · CONSUMER PROTECTION (E-COMMERCE) AMENDMENT RULES, 2026

Marketplaces now need express, affirmative consumer consent before using personal data for specified purposes, and cannot charge bundled fees unrelated to the platform.

ECONOMY · DEMAT 2.0: TOKENISED CORPORATE BONDS

It is positioned as a step toward faster, more transparent settlement in India's corporate bond market.

ECONOMY · AGENTIC COMMERCE

Surveys suggest Indian consumers are increasingly open to AI agent-led shopping, pushing businesses to prepare their platforms for agent-driven transactions.

ECONOMIC DEVELOPMENT & SCHEMES · INDIA DEEP TECH ALLIANCE

The alliance brings together private capital and global technology firms rather than being a government scheme.

ECONOMIC DEVELOPMENT & SCHEMES · INDIA'S FIRST LNG-POWERED TRAIN

It marks Indian Railways' first operational use of LNG as a locomotive fuel source.

ECONOMIC DEVELOPMENT & SCHEMES · INDIA'S FIRST PORT-BASED E-METHANOL PLANT

The plant is projected to create over 3,500 direct and indirect jobs and position Kandla as a green-fuel hub on the Singapore-Rotterdam shipping route.

ENVIRONMENT & ECOLOGY, GEOGRAPHY & DISASTER · HANGING GLACIERS: ALAKNANDA BASIN

It cites the Kedarnath (2013) and Chamoli (2021) disasters as major past GLOF events linked to glacial instability in this region.

ENVIRONMENT & ECOLOGY, GEOGRAPHY & DISASTER · MYRISTICA SWAMPS

Their decline directly threatens downstream water security for communities dependent on Western Ghats streams.

ENVIRONMENT & ECOLOGY, GEOGRAPHY & DISASTER · WILDLIFE CRIME CONTROL BUREAU

It advises the central government on wildlife crime policy and assists states with scientific investigation and prosecution.

ENVIRONMENT & ECOLOGY, GEOGRAPHY & DISASTER · METHANOL REGULATION: SUPREME COURT RULING

A Green Methanol Standard was separately notified in February 2026 under the National Green Hydrogen Mission, unrelated to the poisoning-control issue.

ENVIRONMENT & ECOLOGY, GEOGRAPHY & DISASTER · COFO 28: FAO COMMITTEE ON FORESTRY

India's enhanced climate target is an additional carbon sink of 3.5 to 4 billion tonnes of CO2 equivalent by 2035, relative to 2005 levels.

ENVIRONMENT & ECOLOGY, GEOGRAPHY & DISASTER · PRAMAAN CERTIFICATE

Certification relies on independent third-party audits, aligned with the National Working Plan Code 2023, rather than self-declaration.

SCIENCE & TECHNOLOGY · REVERSE VACCINOLOGY

It reverses the traditional vaccine-development order: target identification happens computationally before any lab culturing of the pathogen.

SCIENCE & TECHNOLOGY · CHATGPT ATLAS

It is part of a broader 2026 wave of agentic AI tools (alongside Meta's Muse) that complete multi-step tasks rather than only answering questions.

SCIENCE & TECHNOLOGY · META MUSE

Pricing tiers are free (most users), Power at $20/month, and Maximum at $100/month.

SCIENCE & TECHNOLOGY · INS NIPUN

The name 'Nipun' is Sanskrit for skilled, capable and knowledgeable; the ship is part of India's Aatmanirbhar Bharat defence push.

SCIENCE & TECHNOLOGY · AASHVAST LABS

They may later extend to testing CCTV cameras and other electronic equipment purchased by the Army.

SCIENCE & TECHNOLOGY · TRISHNA MISSION

Applications include irrigation planning, agricultural drought monitoring, urban heat island mapping, glacier monitoring and forest fire detection.

SCIENCE & TECHNOLOGY · INTERNATIONAL SPACE SUMMIT 2026

Agenda items included low-orbit use, space governance, and renewed interest in Moon and Mars exploration.

SCIENCE & TECHNOLOGY · PEPTIDE THERAPY

Experts flag risks from unregulated peptide products in biohacking and anti-ageing markets, including metabolic disturbance and endocrine imbalance.

SCIENCE & TECHNOLOGY · MATSYA 6000

It is designed to let scientists directly study deep-ocean regions, supporting India's wider blue economy ambitions.

SCIENCE & TECHNOLOGY · SAGAR MANTHAN

The vessel supports India's Deep Ocean Mission and reflects GRSE's broader Aatmanirbharta push, alongside an Acoustic Research Ship and Coastal Research Vessels under construction.

SCIENCE & TECHNOLOGY · PLASMA WAKEFIELD ACCELERATOR

CERN's AWAKE experiment uses proton-driven plasma wakefields, a distinct approach from laser-driven wakefield schemes used elsewhere.

ARTS & CULTURE + HISTORY · DOGRI SCRIPT REVIVAL: TAKRI SIGNAGE

The initiative followed a civic request from the Siyana Nagrik Muddad Seva Sanstha to extend Dogri signage into neighbourhood lanes and markets.

ARTS & CULTURE + HISTORY · GOLLALA GUDI TEMPLE

Monument status brings a 100-metre prohibited zone and a further 200-metre regulated zone around the site, enforced by the National Monuments Authority.

ARTS & CULTURE + HISTORY · SAPTAKOTESHWAR TEMPLE

The 2026 renovation was highlighted by the Prime Minister as a boost to Goa's heritage tourism.

MISCELLANEOUS · ARCHERY WORLD CUP FINAL 2026

India won seven medals, including four golds, across four World Cup stages (Puebla, Shanghai, Antalya, Madrid) in the 2026 season.

MISCELLANEOUS · RAMON MAGSAYSAY AWARD 2026

The award recognises 'greatness of spirit' through selfless public service to the peoples of Asia.

⚠ TOP EXAM TRAPS , every distractor from this issue

POLITY & GOVERNANCE · CENSUS 2027

The last caste-based enumeration in a full Census was 1931; the Socio Economic Caste Census (SECC) of 2011 was a separate exercise and not notified as official caste data: don't equate the two.

POLITY & GOVERNANCE · ARTICLE 142: NEET-UG FIRS QUASHED

Article 142 powers are self-restrained by precedent, not externally checked: no outside institution can enforce the Prem Chand Garg or SCBA limits if a bench chooses to go beyond them.

POLITY & GOVERNANCE · NATIONAL DAM SAFETY AUTHORITY

NDSA regulates dams under the Dam Safety Act, 2021. It does not own or operate dams; those stay with dam owners such as States and utilities.

POLITY & GOVERNANCE · CBFC'S NEW FILM CERTIFICATION GUIDELINES

The U/A 7+/13+/16+ age-category system was introduced in May 2025: it predates and is distinct from the September 2026 content guidelines, which only add new disclosure and warning norms.

POLITY & GOVERNANCE · TULU: SECOND OFFICIAL LANGUAGE STATUS

This is 'second additional administrative language' status confined to two districts, not inclusion in the Eighth Schedule of the Constitution: the two are separate asks and this move grants only the former.

POLITY & GOVERNANCE · CEC & EC APPOINTMENT ACT, 2023: UNDER SC SCRUTINY

The CJI sat on the panel only under the interim Anoop Baranwal (2023) arrangement pending a law: the CEC & EC Appointment Act, 2023 itself excludes the CJI; don't assume judicial presence continues under the new law.

POLITY & GOVERNANCE · PRAHAAR: NATIONAL COUNTER-TERRORISM POLICY

PRAHAAR is a policy and strategy document, not a new standalone law: its teeth come from existing statutes (UAPA, BNS/BNSS, PMLA, Arms Act), which it coordinates rather than replaces.

PLACES IN NEWS · NEVADOS DE CHILLAN

Nevados de Chillan is in the Chilean Andes (Nuble Region), not in Argentina or Peru, and it is a volcanic complex rather than a single cone.

PLACES IN NEWS · EMI KOUSSI

Emi Koussi is the highest point of the Sahara and Chad, not of Africa (that is Kilimanjaro, Tanzania). It is extinct, not active.

PLACES IN NEWS · MOCHA (AL MOKHA)

Mocha is a Red Sea port of Yemen, separate from Aden on the Gulf of Aden. Bab-el-Mandeb is the nearby strait.

PLACES IN NEWS · MAYOTTE

Mayotte is not part of independent Comoros. It is a French department in the Comoros archipelago and an EU outermost region.

PLACES IN NEWS · SOHAR PORT

Sohar lies on the Gulf of Oman, outside the Strait of Hormuz. Do not place it inside the Persian Gulf.

PLACES IN NEWS · BAGMATI RIVER

The Bagmati rises in Nepal and flows into Bihar. It is not a Brahmaputra tributary, and its floods are a separate problem from the Kosi's.

PLACES IN NEWS · LORD HOWE ISLAND

Lord Howe Island belongs to Australia (New South Wales). The phasmid was rediscovered in 2001 on nearby Ball's Pyramid, not on the main island.

INTERNATIONAL RELATIONS · SAUDI ARABIA'S EAST-WEST PIPELINE SHUTDOWN

The East-West Pipeline is a bypass for the Strait of Hormuz, not a replacement for it: its closure removes an alternative route and makes Hormuz-dependent shipping more critical, not less.

INTERNATIONAL RELATIONS · UK RECOGNISES INDIA'S CARBON CREDIT TRADING SCHEME

This is UK CBAM recognition, not EU CBAM: the EU's own CBAM (effective 2026-27) has not extended equivalent recognition to CCTS; don't conflate the two border mechanisms.

INTERNATIONAL RELATIONS · US-RUSSIA SANCTIONS BILL

A Senate vote alone does not make the bill law. It must pass the House and receive Presidential assent.

INTERNATIONAL RELATIONS · TRUMP-XI SUMMIT 2026

This was Xi's state visit to Washington, not a Trump visit to Beijing: don't confuse it with the Busan, South Korea APEC sideline meeting between the two leaders held earlier in 2026.

INTERNATIONAL RELATIONS · US-DENMARK GREENLAND SECURITY DEAL

Trump's earlier rhetoric sought US control or purchase of Greenland outright: the 2026 deal is a defence-cooperation arrangement that explicitly preserves Danish sovereignty, not a transfer of territory.

INTERNATIONAL RELATIONS · SCO SUMMIT 2026

India joined the SCO in 2017 along with Pakistan, not at its 2001 founding. Iran (2023) and Belarus (2024) joined later.

INTERNATIONAL RELATIONS · BRICS SUMMIT 2026

BRICS has no permanent secretariat; the chair rotates yearly. The New Development Bank is the institution with a headquarters (Shanghai).

ECONOMY · INDIA'S FIRST BLUE BOND

A Blue Bond funds ocean/water and coastal infrastructure specifically: it is a sub-category of green/sustainability bonds, not a synonym for all environmentally-linked debt instruments.

ECONOMY · 10 YEARS OF UPI

UPI is run by NPCI, not by the RBI directly. It is a payment interface, not a bank and not a currency.

ECONOMY · RISE IN FOOD PRICE INDEX

WPI and CPI track different baskets and purposes: WPI reflects wholesale/producer prices and excludes services, while CPI (used for RBI's inflation targeting) reflects retail prices paid by consumers; don't use the two interchangeably.

ECONOMY · CONSUMER PROTECTION (E-COMMERCE) AMENDMENT RULES, 2026

These amend the E-Commerce Rules made under the Consumer Protection Act, 2019. They are not rules under the IT Act, 2000.

ECONOMY · DEMAT 2.0: TOKENISED CORPORATE BONDS

Demat 2.0 tokenises corporate bonds on a ledger. It differs from card tokenisation in payments and from the e-rupee.

ECONOMY · AGENTIC COMMERCE

Agentic AI acts on tasks using tools; generative AI only produces content. The two are not the same.

ECONOMIC DEVELOPMENT & SCHEMES · INDIA DEEP TECH ALLIANCE

IDTA is a private-capital alliance. It is different from PLI, which is a government incentive scheme.

ECONOMIC DEVELOPMENT & SCHEMES · INDIA'S FIRST LNG-POWERED TRAIN

LNG is liquefied natural gas (mainly methane). It is not LPG (propane and butane) and not CNG (compressed gas).

ECONOMIC DEVELOPMENT & SCHEMES · INDIA'S FIRST PORT-BASED E-METHANOL PLANT

E-methanol differs from the Green Methanol Standard under the National Green Hydrogen Mission: the Kandla plant is a production facility, while the Standard is a separate quality/certification framework; don't conflate the two.

ENVIRONMENT & ECOLOGY, GEOGRAPHY & DISASTER · HANGING GLACIERS: ALAKNANDA BASIN

Hanging glaciers sit on steep slopes and are prone to detachment-triggered avalanches/GLOFs: don't confuse them with valley glaciers, which flow along gentler gradients and pose different hazard profiles.

ENVIRONMENT & ECOLOGY, GEOGRAPHY & DISASTER · MYRISTICA SWAMPS

Myristica swamps are freshwater swamp forests, not saline coastal mangroves.

ENVIRONMENT & ECOLOGY, GEOGRAPHY & DISASTER · WILDLIFE CRIME CONTROL BUREAU

WCCB is a statutory body under the Wild Life (Protection) Act, 1972 (Section 38Y): it is not a police force itself, but a multidisciplinary coordination and intelligence body that works with state enforcement agencies.

ENVIRONMENT & ECOLOGY, GEOGRAPHY & DISASTER · METHANOL REGULATION: SUPREME COURT RULING

The ruling strikes down Maharashtra's colourant-bitterant rules. It does not legalise diversion of methanol into liquor, nor remove the Methanol (Quality Control) Order, 2019.

ENVIRONMENT & ECOLOGY, GEOGRAPHY & DISASTER · COFO 28: FAO COMMITTEE ON FORESTRY

COFO is an FAO body based in Rome. Do not confuse it with the UN Forum on Forests (UNFF) or the UNFCCC COP.

ENVIRONMENT & ECOLOGY, GEOGRAPHY & DISASTER · PRAMAAN CERTIFICATE

PRAMAAN certifies sustainable forest management and supply-chain traceability: it is not a carbon-credit or emissions-trading scheme; don't conflate it with CCTS or green hydrogen standards.

SCIENCE & TECHNOLOGY · REVERSE VACCINOLOGY

Reverse vaccinology identifies candidate antigens from genome data before wet-lab work: traditional vaccinology instead starts by culturing the pathogen and testing attenuated or killed forms; the sequence of steps is reversed, hence the name.

SCIENCE & TECHNOLOGY · CHATGPT ATLAS

Atlas is a browser, not a new language model. It uses ChatGPT models inside a browsing interface.

SCIENCE & TECHNOLOGY · META MUSE

Muse Secure VM is isolated by design but Meta has acknowledged it is not technically inaccessible to the company, relying on policy rather than architecture to bar access: distinct from a fully 'Confidential VM' planned for later.

SCIENCE & TECHNOLOGY · INS NIPUN

INS Nipun is a diving support and submarine rescue support vessel, not an armed combat ship.

SCIENCE & TECHNOLOGY · AASHVAST LABS

AASHVAST labs test firmware and hardware for hidden vulnerabilities. They do not manufacture drones.

SCIENCE & TECHNOLOGY · TRISHNA MISSION

TRISHNA images in thermal infrared for water, crops and heat. Do not confuse it with NISAR, the NASA-ISRO radar mission.

SCIENCE & TECHNOLOGY · INTERNATIONAL SPACE SUMMIT 2026

The International Space Summit is a diplomatic meeting in Paris, not the International Space Station.

SCIENCE & TECHNOLOGY · MATSYA 6000

Matsya 6000 is a crewed submersible. Do not mix it with unmanned vehicles such as ROSUB 6000.

SCIENCE & TECHNOLOGY · PLASMA WAKEFIELD ACCELERATOR

Wakefield acceleration uses plasma, not microwave (RF) cavities, and it is still experimental. It has not replaced conventional colliders.

ARTS & CULTURE + HISTORY · GOLLALA GUDI TEMPLE

Gollala Gudi is a protected monument, not itself a UNESCO World Heritage Site. The nearby Ramappa (Rudreshwara) Temple holds that status.

MISCELLANEOUS · ARCHERY WORLD CUP FINAL 2026

Dola Banerjee won the women's recurve World Cup Final in 2007. Dhiraj is the first Indian man, not the first Indian.

SCIENCE & TECHNOLOGY · PEPTIDE THERAPY

A peptide is not the same as a protein: peptides are short chains, proteins are long folded chains. Not every peptide product sold online is an approved drug.

SCIENCE & TECHNOLOGY · SAGAR MANTHAN

Sagar Manthan is a research vessel for NCPOR, not a naval warship. GRSE is a defence PSU that also builds research ships.

ARTS & CULTURE + HISTORY · DOGRI SCRIPT REVIVAL: TAKRI SIGNAGE

Takri is the traditional script for Dogri, but Dogri today is more commonly written in the Devanagari script: don't assume Takri is Dogri's only or current standard script; this initiative is a heritage revival, not a script change.

ARTS & CULTURE + HISTORY · SAPTAKOTESHWAR TEMPLE

The temple's current structure reflects Shivaji-era reconstruction, not the original 12th-century Kadamba building: the deity and site are Kadamba-origin, but much of what stands today dates to the Maratha restoration.

MISCELLANEOUS · RAMON MAGSAYSAY AWARD 2026

No Indian is among the 2026 awardees. The award is called 'Asia's Nobel Prize' but is not the Nobel Prize.

STUDY STRATEGY · NOT A CLAIM ABOUT EXACT READING TIME

LAST 30 MINUTES

BEFORE YOUR PRELIMS TEST

10 MIN

X-FACT MATRICES

Cover every X-Fact Matrix and reproduce it cold.

10 MIN

EXAM TRAPS / DON'T CONFUSE

Read only the ⚠ boxes and Don't-Mix-These-Up cards: nothing else.

5 MIN

VISUAL MEMORY

Re-look at every diagram/chart; name what each axis or box means.

5 MIN

X-TEST MISTAKES

Re-attempt every X-Test question and PYQ you got wrong.