THE DAILY UPSC BRIEF

HIGH-YIELD DAILY SOURCES & ANALYSIS | 7 OCTOBER 2026

TODAY'S COVERAGE

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PRELIMS POINTERS — TODAY IN ONE LINE EACH

1. **Bab el-Mandeb** — strait between Yemen and Djibouti/Eritrea; links the Red Sea with the Gulf of Aden.
2. **Ebola** — Kenya confirms its first (imported) case; a filovirus first identified in 1976.
3. **Kasturi Cotton Bharat** — Textiles Ministry brand for traceable premium Indian cotton (blockchain-based).
4. **2036 Olympics** — India among seven bidders named by the IOC; Ahmedabad also hosts the 2030 CWG.
5. **Silk Road** — land and sea trade network across Eurasia, prominent from China's Han dynasty (2nd c. BC).

HOW TO READ THIS BRIEF

☐ Why in News ☐ Target Prelims MCQ ☐ How to Use in UPSC Mains ☐ Mains Practice / Case Study Question

GS PAPER 1: SOCIETY & GEOGRAPHY

Women Commute Differently: India's First National Household Travel Survey

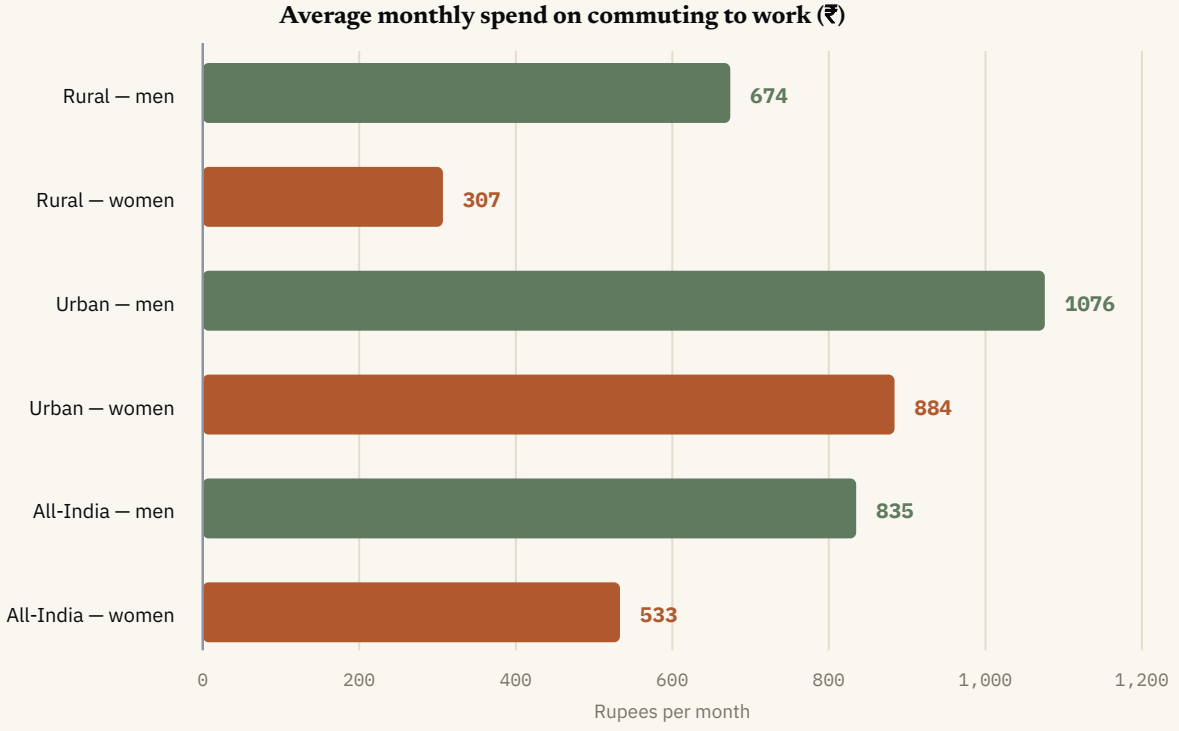
Why in news: The NSO's first-ever NHTS (July 2025–June 2026) shows women are twice as likely as men to walk or use public transport to reach work.

Key Details:

- **Gender gap:** Nearly 67% of women commuters walk or use buses/other public transport, against 33% of men; in rural areas 64.8% of working women simply walk.
- **Shorter trips:** 61.9% of men's work trips exceed 1 km against 41.9% for women — a sign of jobs chosen for proximity, not pay or skill.
- **Spending gap:** Women spend ₹533 a month on commuting vs ₹835 for men; urban workers spend ₹1,044 vs ₹612 in rural areas.
- **Overnight travel:** Buses carry 55.8% of overnight household journeys and railways 17.7%; two-wheelers are the main daily work mode (42.6% of trips).

Data/Facts/Example:

- **Coverage:** 4,92,023 households and 20,34,371 people across 14,274 villages and 10,377 urban blocks.
- **Regional pattern:** Walking dominates rural women's commute in M.P., U.P., Bihar and Chhattisgarh (M.P.: 88.7% walk, 2% bus); in Keralam 48.6% use the bus.



The National Statistics Office (NSO)

- **What it is:** India's main official data-gathering body, working under MoSPI.
- **Origin:** Formed in 2019 by merging the CSO (national accounts, GDP) and the NSSO (sample surveys).
- **Key outputs:** GDP estimates, CPI, IIP, PLFS (jobs), HCES (consumption), Time Use Survey and now the NHTS.
- **Oversight:** The NSC sets statistical standards; it was created by an executive resolution in 2005.
- **Not to confuse:** NSC is not a statutory body; the Collection of Statistics Act, 2008 governs data collection, not the NSC's creation.

How to use in UPSC Mains: Use in GS1 (women, urbanisation) to show that 'mobility poverty' shrinks women's job choices — cheap, safe, frequent public transport is labour-market policy, not just transport policy.

Mains value-add: Delhi made bus travel free for women in 2019 and Karnataka followed with the Shakti scheme in 2023 — cite them to argue that fare-free, frequent buses are a direct lever for women's mobility and work participation.

TARGET PRELIMS MCQ

Q. With reference to official statistics in India, consider the following statements:
1. The National Statistics Office was formed by merging the Central Statistics Office and the National Sample Survey Office.
2. The National Statistical Commission is a statutory body created under the Collection of Statistics Act, 2008.
3. The Periodic Labour Force Survey is conducted by the National Statistics Office.
Which of the statements given above is/are correct?

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

Answer: (a) 1 and 3 only

Explanation: NSO was created in 2019 by merging the CSO and NSSO (Statement 1 true). The NSC was set up by a Government resolution in 2005 on the Rangarajan Commission's advice — it is not statutory; the 2008 Act governs data collection (Statement 2 false, the trap). PLFS is an NSO survey (Statement 3 true).

■ **[Abbreviations & Terminology]:** NSO: National Statistics Office | NHTS: National Household Travel Survey | MoSPI: Ministry of Statistics and Programme Implementation | CSO: Central Statistics Office | NSSO: National Sample Survey Office | NSC: National Statistical Commission | CPI: Consumer Price Index | IIP: Index of Industrial Production | PLFS: Periodic Labour Force Survey | HCES: Household Consumption Expenditure Survey | GDP: Gross Domestic Product

Siang Upper Multipurpose Project: Arunachal's Youth Body Seeks Withdrawal of Forces

Why in news: The All Adi Youth Association has asked the government to pull out CAPF and State police deployed amid protests against pre-feasibility surveys for the Siang Upper Multipurpose Project.

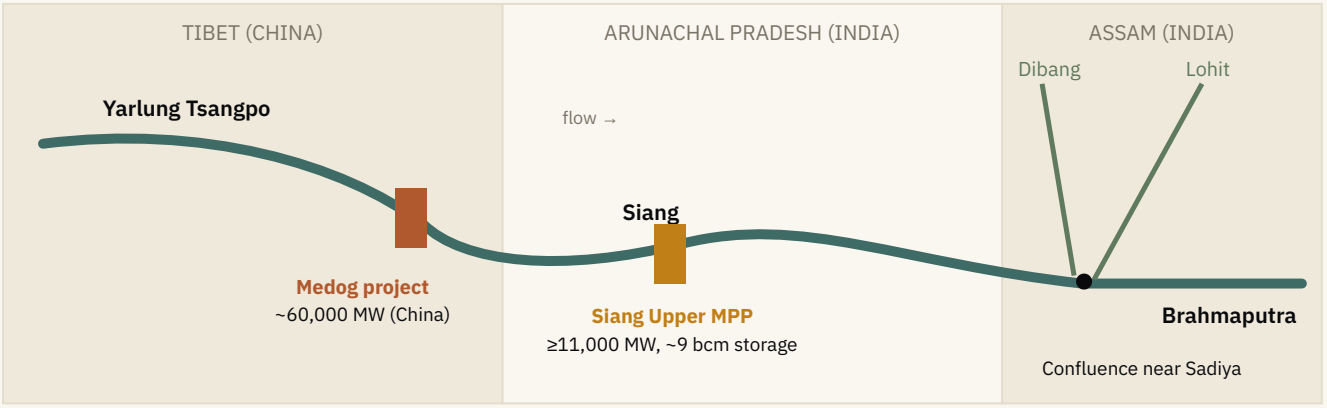
Key Details:

- **The project:** NHPC's proposed storage dam on the Siang is to generate at least 11,000 MW and act as a buffer against China's 60,000 MW Medog project upstream.
- **Local objection:** Adi villagers say it would submerge forests, farmland and wildlife habitat; memoranda 'in favour' allegedly do not reflect 27 affected villages.
- **Governance angle:** The Adis resolve disputes through the Kebang, a traditional village council; heavy security is seen as bypassing consent-based dialogue.
- **Strategic angle:** A large reservoir could absorb sudden upstream releases; India and China have no water-sharing treaty, only an Expert Level Mechanism (2006).

Data/Facts/Example:

- **Reservoir:** About 9 billion cubic metres of planned storage — among the largest in India.
- **River course:** The Siang meets the Dibang and Lohit near Sadiya in Assam to form the Brahmaputra.

One river, three names, two mega-dams



Schematic diagram, not to scale; not a political or survey map. Siang Upper MPP = proposed Siang Upper Multipurpose Project. Storage dam is planned to buffer sudden releases/flood pulses from upstream.

The Brahmaputra River System

- **Origin:** Rises from the Chemayungdung glacier near Mansarovar in Tibet, where it flows east as the Yarlung Tsangpo.
- **Entry into India:** Takes a U-turn around Namcha Barwa and enters Arunachal Pradesh as the Siang (Dihang).
- **In Assam:** Joined by the Dibang and Lohit near Sadiya; from here it is called the Brahmaputra.
- **Tributaries:** Right bank: Subansiri, Kameng, Manas, Sankosh, Teesta. Left bank: Dibang, Lohit, Burhi Dihing, Dhansiri.
- **In Bangladesh:** Flows as the Jamuna and joins the Padma (Ganga), finally reaching the Bay of Bengal as the Meghna.
- **Not to confuse:** Majuli, the world's largest inhabited river island, is in the Brahmaputra in Assam — not in the Siang stretch.

How to use in UPSC Mains: Use in GS1 (resource geography) and GS3 (energy, disaster management, internal security) to weigh strategic infrastructure against Free, Prior and Informed Consent of indigenous communities.

Mains value-add: India's flood-season hydrological data MoU with China on the Brahmaputra lapsed in 2023 — cite it to argue that dams alone cannot substitute for a binding data-sharing framework.

TARGET PRELIMS MCQ

Q. With reference to the Brahmaputra river system, consider the following statements:
1. The Yarlung Tsangpo enters India in Arunachal Pradesh where it is known as the Siang.
2. The Dibang and the Lohit join the Siang near Sadiya in Assam.
3. The Kameng is a left-bank tributary of the Brahmaputra.
Which of the statements given above is/are correct?

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

Answer: (d) 1 and 2 only

Explanation: The Tsangpo enters Arunachal as the Siang/Dihang (Statement 1 true). The Dibang and Lohit join it near Sadiya, after which it is called the Brahmaputra (Statement 2 true). The Kameng (Jia Bharali) rises in the Himalaya to the north and is a right-bank tributary (Statement 3 false — the bank is the trap).

Related PYQ: UPSC Prelims 2016: "Which of the following is/are tributary/tributaries of Brahmaputra? 1. Dibang 2. Kameng 3. Lohit" — Answer: (d) 1, 2 and 3.

■ **[Abbreviations & Terminology]:** CAPF: Central Armed Police Forces | NHPC: National Hydroelectric Power Corporation | MW: megawatt | MoU: Memorandum of Understanding

QUICK FACTS & EXAMPLES — GS PAPER 1

Silk Road as a carrier of ideas: beyond silk, the network carried Buddhism from India through Central Asia into China and papermaking westward from China; the Mongol empire of the 13th–14th centuries kept long-distance routes open.

How to use: *GS1 (world/Indian history, art and culture): use to show that trade routes were channels of religion and technology, e.g. on the spread of Buddhism or India's cultural links with Central Asia.*

GS PAPER 2: POLITY, HEALTH & INTERNATIONAL RELATIONS

CBI Probe Into Punjab CM's Office: Courts, Consent and Federalism

Why in news: On a High Court direction, the CBI registered an FIR and booked six persons, including the Punjab CM's OSD, over alleged 'influencing' of IAS/IPS postings; the SC has agreed to hear Punjab's challenge.

Key Details:

- **Trigger:** The Punjab and Haryana HC, hearing a PIL, found a fair probe was needed and was dissatisfied with the State police's handling of ED inputs.
- **Allegations:** Influencing postings and transfers, policy decisions, tenders, land-use change and revenue disputes for pecuniary gain.
- **State's case:** Punjab says the order violates federalism since policing is a State subject (Entry 2, List II) and the State is poll-bound.
- **Consent rule:** Punjab withdrew general consent to the CBI in 2020, but a constitutional court's direction does not need State consent.

Data/Facts/Example:

- **Searches:** CBI raids at eight locations in Chandigarh, Mohali, Gurdaspur, Ludhiana, Patiala, Sangrur and Jalandhar.
- **ED inputs:** Communications sent to Punjab Police between July 24 and August 12 formed the basis of the allegations.

How the CBI can enter a State

Route	Legal basis	State consent needed?
State gives general or case-specific consent	Section 6, DSPE Act, 1946	Yes
Order of a High Court or the Supreme Court	Articles 32/226; CPDR case (2010)	No
Terror and specified offences	NIA Act, 2008 (via NIA, not CBI)	No

The CBI & the DSPE Act, 1946

- **Origin:** Grew out of the Special Police Establishment (1941); the CBI was set up by an MHA resolution in 1963.
- **Legal basis:** Its powers flow from the DSPE Act, 1946 — the CBI is not a statutory body by name.
- **Section 5 & 6:** The Centre may extend its jurisdiction to a State (S.5) only with that State's consent (S.6).
- **Control:** Administrative control lies with DoPT; superintendence over corruption cases lies with the CVC.
- **Director:** Chosen by a committee of the PM, LoP (or leader of largest Opposition party) and the CJI or his nominee.
- **Not to confuse:** The NIA is statutory and does not need State consent; the CBI does.

How to use in UPSC Mains: Use in GS2 (federalism, accountability institutions) to show that consent protects State autonomy, while judicial directions act as a safety valve against States shielding their own officials.

Mains value-add: State of West Bengal v. Committee for Protection of Democratic Rights (2010), a 5-judge Bench: HCs and the SC can direct a CBI probe without State consent, but only sparingly in exceptional cases — cite it for the balance between federalism and the right to a fair probe.

TARGET PRELIMS MCQ

Q. With reference to the Central Bureau of Investigation (CBI), consider the following statements:
1. The CBI derives its power to investigate from the Delhi Special Police Establishment Act, 1946.
2. Once a State withdraws general consent, the CBI cannot investigate any case in that State even on the direction of a High Court.
3. The CBI functions under the administrative control of the Department of Personnel and Training.
Which of the statements given above is/are correct?

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

Answer: (b) 1 and 3 only

Explanation: The DSPE Act, 1946 is the CBI's legal source (Statement 1 true). Withdrawal of consent does not bar a probe ordered by a constitutional court — the 2010 CPDR judgment settled this (Statement 2 false, the trap). The CBI is under DoPT, Ministry of Personnel (Statement 3 true).

Related PYQ: UPSC Mains 2021, GS Paper II: "The jurisdiction of the Central Bureau of Investigation (CBI) regarding lodging an FIR and conducting probe within a particular State is being questioned by various States. However, the power of States to withhold consent to the CBI is not absolute. Explain with special reference to the federal character of India."

■ **[Abbreviations & Terminology]:** CBI: Central Bureau of Investigation | FIR: First Information Report | CM: Chief Minister | OSD: Officer on Special Duty | SC: Supreme Court | HC: High Court | PIL: Public Interest Litigation | ED: Enforcement Directorate | IAS/IPS: Indian Administrative/Police Service | DSPE: Delhi Special Police Establishment | CPDR: Committee for Protection of Democratic Rights | NIA: National Investigation Agency | MHA: Ministry of Home Affairs | DoPT: Department of Personnel and Training | CVC: Central Vigilance Commission | PM: Prime Minister | LoP: Leader of Opposition | CJI: Chief Justice of India

Breaking the Chain of Leprosy Transmission

Why in news: India's 2025-26 leprosy programme report shows cases overshooting projections, with only 148 districts reaching 'interruption of transmission' against a projected 300.

> **Story so far:** The 4 Oct Brief covered rising child leprosy cases (3,832) threatening the 2027 goal. New today: district-level transmission data and the scale-up of screening and preventive drugs.

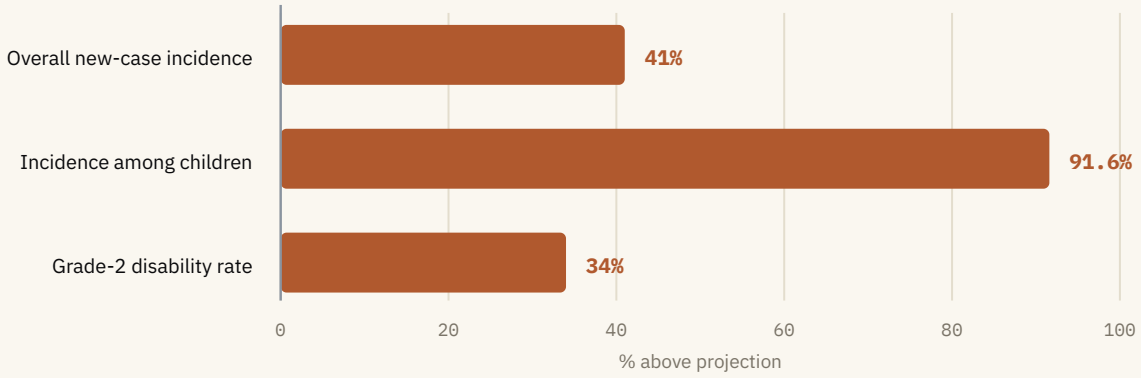
Key Details:

- **Missed targets:** Overall incidence overshot projections by 41%, child incidence by 91.6% and G2D by 34% — signs of continuing hidden transmission.
- **Why it slipped:** After the 2005 'elimination' tag (<1 case per 10,000), dedicated surveillance was folded into general health services and detection fell.
- **New tools:** SDR-PEP was given to 91.1% of 16.9 lakh contacts; the indigenous MIP vaccine is being considered for high-risk groups.
- **Care gap:** Stigma delays care-seeking and many doctors misdiagnose leprosy as a skin condition, so nerve damage is often present at detection.

Data/Facts/Example:

- **Screening drive:** Over 70 crore people screened in highly endemic areas in 2025-26; ASHAs flagged ~40 lakh suspected cases.
- **Hotspots:** Chhattisgarh, Jharkhand, Odisha and Maharashtra carry a disproportionate share; India accounts for ~46% of children's cases reported globally.

By how much 2025-26 leprosy indicators overshot projections



Leprosy Prevention Tools: SDR-PEP & the MIP Vaccine

- **The disease:** Chronic infection by Mycobacterium leprae; curable with MDT, the mainstay of India's programme since 1983.
- **SDR-PEP:** A single dose of rifampicin given to close contacts of a new patient to cut their risk of falling ill.
- **MIP vaccine:** Made from Mycobacterium indicus pranii, developed at India's NII; used to boost immunity in contacts.
- **Grade-2 disability:** Visible deformity or damage at diagnosis — a marker of late detection.
- **Not to confuse:** BCG (for TB) gives partial protection against leprosy but is not a leprosy vaccine.

How to use in UPSC Mains: Use in GS2 (health, vulnerable sections) to argue that disease 'elimination' targets based on prevalence can breed complacency; prevention, active case-finding and anti-stigma work must continue after a target is met.

Mains value-add: WHO's Global Leprosy Strategy 2021–2030, 'Towards zero leprosy', set the goal of zero infection, zero disability and zero stigma — cite it to show that India's 'interruption of transmission' target is about stopping spread, not just reducing prevalence.

MAINS PRACTICE QUESTION

Q. India declared leprosy 'eliminated as a public health problem' in 2005, yet transmission continues in many districts. Examine the reasons and suggest measures to achieve interruption of transmission. (150 words)

▪ **[Abbreviations & Terminology]:** G2D: Grade-2 disability | SDR-PEP: Single-Dose Rifampicin Post-Exposure Prophylaxis | MIP: Mycobacterium indicus pranii | ASHA: Accredited Social Health Activist | MDT: Multi-Drug Therapy | NII: National Institute of Immunology | BCG: Bacillus Calmette-Guérin | TB: tuberculosis | WHO: World Health Organization

The U.S. Blockade on Cuba: Sanctions Beyond Borders

Why in news: Nine months after a U.S. order threatening tariffs on any country supplying oil to Cuba, fuel shortages have left the island with daily power cuts of 12–20 hours.

Key Details:

- **Old embargo:** A partial embargo of October 1960, made total in 1962, was turned into law by the Helms-Burton Act, 1996, so only Congress can lift it.
- **New blockade:** A January 2026 order declared a national emergency and authorised extra duties on any country selling or supplying oil to Cuba.
- **Lost lifelines:** Venezuela's 2000 oil-for-doctors deal (~1,00,000 barrels/day) ended after U.S. action in Venezuela; Mexico, supplying 44% of oil, suspended deliveries.
- **Legal debate:** UN experts call it 'energy starvation'; threats of takeover clash with Article 2(4) of the UN Charter.

Data/Facts/Example:

- **Humanitarian toll:** UN rapporteurs cite a backlog of 96,000+ surgeries (11,000 of children); one in five Cubans has emigrated in five years.
- **Solar pivot:** Cuba has 1,418 MW of solar in 144 parks (target 1,500 MW by end-2026); renewables give 21.4% of power.

Cuba's shrinking lifelines

Indicator	Earlier	2026
Ships reaching Cuba each month	100–120	50–60 (low of 56 in March)
Night-light index (proxy for power use)	10–12 (2021–25)	about 6 (mid-2026)
Chinese solar exports to Cuba (cumulative)	minimal till 2024	about 2,200 MW

The U.S. Embargo on Cuba: Legal Architecture

- **Base law:** The Trading with the Enemy Act, 1917 gave the President power to bar trade; Cuban Assets Control Regulations followed in 1963.
- **Cuban Democracy Act, 1992:** Barred foreign subsidiaries of U.S. firms from trading with Cuba.
- **Helms-Burton Act, 1996:** Codified the embargo and allowed lawsuits against foreign firms using property confiscated from Americans.
- **Secondary sanctions:** Penalise third-country firms and banks dealing with a target — the 'extraterritorial' reach others object to.
- **UNGA:** Has passed a resolution against the embargo every year since 1992; these are recommendatory, not binding.
- **Not to confuse:** CAATSA (2017) targets Russia, Iran and North Korea — it is not part of the Cuba regime.

How to use in UPSC Mains: Use in GS2 (effect of developed countries' policies on developing countries) to show how unilateral and secondary sanctions hurt civilians and third countries — a concern India shares on Iran (Chabahar) and Russian oil.

Mains value-add: India has consistently voted for the annual UNGA resolution calling for an end to the U.S. embargo on Cuba — cite it as evidence of India's principled opposition to unilateral sanctions outside the UN framework.

TARGET PRELIMS MCQ

Q. With reference to the U.S. embargo on Cuba, consider the following statements:
1. The Helms-Burton Act, 1996 placed the embargo in statute, so it cannot be lifted by executive action alone.
2. Resolutions of the UN General Assembly calling for an end to the embargo are binding on the United States.
3. The UN Charter prohibits the threat or use of force against the political independence of any State.
Which of the statements given above is/are correct?

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

Answer: (c) 1 and 3 only

Explanation: Helms-Burton codified the embargo, so only Congress can fully lift it (Statement 1 true). UNGA resolutions are recommendatory; only Security Council decisions under Chapter VII bind members (Statement 2 false, the trap). Article 2(4) bars threat or use of force against a State's territorial integrity or political independence (Statement 3 true).

■ **[Abbreviations & Terminology]:** UN: United Nations | UNGA: UN General Assembly | MW: megawatt | CAATSA: Countering America's Adversaries Through Sanctions Act

QUICK FACTS & EXAMPLES — GS PAPER 2

Privilege vs free speech reference closed: a seven-judge SC Bench under CJI Surya Kant disposed of, as infructuous, the 2003 reference arising from the T.N. Assembly's privilege resolution to arrest editors of *The Hindu*; the resolution had been withdrawn in 2004. Larger questions on Article 194 vs Article 19(1)(a) were left open.

How to use: *GS2 (legislature, privileges): cite as evidence that legislative privileges remain uncodified and that the clash with press freedom is still unsettled since MSM Sharma (1959) and Keshav Singh (1965).*

Census 2027 timeline: provisional data is expected by March–April 2027; Ladakh became the first State/UT to complete the entire Census, and snow-bound areas finished early. Census operations in Manipur have been deferred.

How to use: *GS2/GS1 (population, governance): use for data-driven policy and the first digital Census, which also enumerates caste beyond SC/ST.*

U.S.–China 'G2' talk: four summits in six months, a regularised Treasury–Vice Premier channel and the 12-month 'Busan Tariff Truce' (extended two months) have steadied ties, but export controls on chips and rivalry over AI remain.

How to use: *GS2 (IR): use to argue that U.S.–China ties are 'managed competition', not condominium — and why India should hedge through strategic autonomy rather than bet on either.*

GS PAPER 3: ECONOMY, INFRASTRUCTURE, SECURITY, ENVIRONMENT & S&T

Integrated Transport & Logistics Authority: One Apex Body for Roads, Rail, Ports and Airports

Why in news: The Union Cabinet approved ITLA, an apex SPV to plan, appraise and monitor transport and logistics projects now handled separately by different ministries.

Key Details:

- **Master plan:** ITLA will prepare a National Transport Master Plan with a 10-year-plus horizon across all major modes, so capacity is planned network-wide, not mode by mode.
- **Appraisal:** It will technically appraise Union infrastructure projects costing ₹500 crore or more; financial appraisal stays with existing mechanisms.
- **Monitoring:** For projects above ₹500 crore it will track implementation, resolve bottlenecks and run impact assessments after completion.
- **Data:** A National Transport Data Repository will pool GSTN e-way bill, FASTag, Vahan and GPS data for freight-flow analysis.

Data/Facts/Example:

- **Plan hierarchy:** Ministries' ~5-year sectoral plans and annual plans will be checked against the master plan.
- **Scope:** Covers roads, railways, ports and shipping, civil aviation, inland waterways, coastal shipping, urban mobility and logistics; it will also review the National Logistics Policy.

How the Integrated Transport & Logistics Authority will sit across modes



Ministries' ~5-yr sectoral plans and annual plans are checked against the master plan

Data layer: National Transport Data Repository (GSTN e-way bills, FASTag, Vahan, GPS)

PM Gati Shakti & the National Logistics Policy

- **PM Gati Shakti NMP:** Launched in October 2021; a GIS-based digital platform that layers infrastructure plans of many ministries on one map.
- **Seven engines:** Railways, roads, ports, waterways, airports, mass transport and logistics infrastructure.
- **NPG:** An inter-ministerial Network Planning Group examines big projects using the NMP before approval.
- **NLP, 2022:** Released in September 2022 to cut logistics costs and improve India's rank in the World Bank LPI.
- **LEADS:** An annual index ranking States on logistics ease, published by DPIIT.
- **Not to confuse:** The NIP is a list of projects to be funded; Gati Shakti is a planning and coordination platform.

How to use in UPSC Mains: Use in GS3 (infrastructure, logistics) to show the shift from silo-based to network-based planning — linking it with PM Gati Shakti, multimodal logistics parks and competitiveness of exports.

Mains value-add: NCAER's 2023 estimate put India's logistics cost at 7.8–8.9% of GDP — cite it to argue that integrated, multimodal planning is a direct lever for export competitiveness.

MAINS PRACTICE QUESTION

Q. Mode-wise planning has long produced missing links and under-used assets in India's transport network. Critically examine whether an apex Integrated Transport & Logistics Authority can overcome these silos. (150 words)

Related PYQ: UPSC Mains 2022, GS Paper II: "The Gati-Shakti Yojana needs meticulous co-ordination between the government and the private sector to achieve the goal of connectivity. Discuss."

▪ **[Abbreviations & Terminology]:** ITLA: Integrated Transport & Logistics Authority | SPV: Special Purpose Vehicle | GSTN: Goods and Services Tax Network | GPS: Global Positioning System | GDP: Gross Domestic Product | NCAER: National Council of Applied Economic Research | NMP: National Master Plan | GIS: Geographic Information System | NPG: Network Planning Group | NLP: National Logistics Policy | LPI: Logistics Performance Index | LEADS: Logistics Ease Across Different States | DPIIT: Department for Promotion of Industry and Internal Trade | NIP: National Infrastructure Pipeline

Cabinet Approves ₹10,000-Crore SME Growth Fund

Why in news: The Cabinet approved ₹10,000 crore of central funding for an SME Growth Fund, announced in Union Budget 2026-27, to give patient equity to small and medium firms.

Key Details:

- **The gap:** Existing equity funds mostly back early-stage start-ups or micro firms; small and medium firms that want to scale lack growth capital.
- **Target firms:** Most of the allocation will go to small and medium manufacturing firms, including SMEs in Tier II and Tier III industrial clusters.
- **Use of funds:** Expansion, technology upgrades, entry into global value chains and strategic acquisitions — making 'champion' enterprises.
- **Why equity:** Equity, unlike loans, does not add repayment burden and helps firms meet the quality demands opened up by new FTAs.

Data/Facts/Example:

- **Selection:** Investments will be made in select enterprises based on set criteria, not as blanket support.
- **Sector weight:** MSMEs contribute roughly 30% of GDP and about 45% of exports.

Revised MSME classification (in force since 1 April 2025)

Category	Investment up to	Turnover up to
Micro	₹2.5 crore	₹10 crore
Small	₹25 crore	₹100 crore
Medium	₹125 crore	₹500 crore

MSME Classification & the Self-Reliant India Fund

- **Law:** MSMEs are defined under the MSMED Act, 2006; the Centre notifies the limits.
- **Composite test:** Since 2020, a firm is classified on both investment in plant & machinery and turnover; exports are excluded from turnover.
- **SRI Fund:** Set up in 2020 as a ₹50,000-crore fund of funds (₹10,000 crore from the Centre) run by NSIC Venture Capital Fund Ltd.
- **Registration:** Udyam registration is free, online and based on PAN and GST data.
- **Not to confuse:** The Fund of Funds for Start-ups (SIDBI, 2016) backs start-ups; the SRI Fund backs MSMEs.

How to use in UPSC Mains: Use in GS3 (inclusive growth, industrial policy) on the 'missing middle' — India has many micro firms and a few large ones, but too few medium firms that create jobs and exports.

Mains value-add: The Economic Survey 2018-19 chapter 'Nourishing Dwarfs to become Giants' showed that firms which stay small for years create few jobs, and urged policies that reward growth — cite it to justify growth-equity support over permanent size-based concessions.

TARGET PRELIMS MCQ

Q. With reference to the classification of Micro, Small and Medium Enterprises (MSMEs) in India, consider the following statements:
1. An enterprise is classified on the basis of both investment in plant and machinery and annual turnover.
2. Exports of an enterprise are counted in its turnover for the purpose of classification.
3. A medium enterprise can have an investment in plant and machinery of up to ₹250 crore.
Which of the statements given above is/are correct?

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

Answer: (d) 1 only

Explanation: Since 2020, classification uses a composite test of investment and turnover (Statement 1 true). Export turnover is excluded so that firms are not penalised for exporting (Statement 2 false, the trap). The revised medium-enterprise investment cap is ₹125 crore — ₹500 crore is the turnover cap, a common mix-up (Statement 3 false).

■ **[Abbreviations & Terminology]:** SME: Small and Medium Enterprise | MSME: Micro, Small and Medium Enterprises | FTA: Free Trade Agreement | GDP: Gross Domestic Product | MSMED: Micro, Small and Medium Enterprises Development | SRI: Self-Reliant India | NSIC: National Small Industries Corporation | PAN: Permanent Account Number | GST: Goods and Services Tax | SIDBI: Small Industries Development Bank of India

Defence Indigenisation: Fleet Support Ship 'Surya', BrahMos Launchers and Aero-Engines

Why in news: The Defence Minister launched Surya, the Navy's first indigenous Fleet Support Ship, at HSL; the MoD also signed a BrahMos launcher contract and flagged aero-engines as the next frontier.

Key Details:

- **FSS programme:** Surya is the first of five FSS under a ₹19,000-crore MoD–HSL contract; the keel of the fifth (FSS-5) was laid the same day.
- **Role:** FSS carry fuel, water, ammunition and stores and transfer them to warships at sea, letting the fleet stay deployed far from home ports.
- **BrahMos deal:** A ₹661.50-crore contract with BAPL for fire-control systems and launchers was placed under Buy (Indian-IDDM), with at least 68% indigenous content.

- **Engine gap:** About ₹5,000 crore is proposed for indigenous aero-engine capability for the AMCA; MIDHANI will help localise critical alloys.

Data/Facts/Example:

- **Capacity:** Each FSS stores up to 20,000 tonnes of high-speed diesel and 2,500 tonnes of aviation fuel; indigenous content is about 82%.
- **Shipyard upgrade:** HSL's modernised slipway can now build ships up to 45,000 DWT, backed by a 300-tonne Goliath crane.

Three indigenisation moves in one day

Item	What it adds	Indigenous content / category
Fleet Support Ship 'Surya'	At-sea replenishment for long blue-water deployments	About 82%
BrahMos fire-control systems & launchers	Strike capability on Navy ships	Buy (Indian-IDDM), at least 68%
AMCA aero-engine plan	Propulsion — the weakest link in self-reliance	Proposed ~₹5,000 crore

DAP 2020: Procurement Categories

- **What it is:** The Defence Acquisition Procedure, 2020 sets how the armed forces buy equipment.
- **Priority order:** Buy (Indian-IDDM) is the top preference, followed by Buy (Indian), Buy & Make (Indian), Buy & Make, and Buy (Global) last.
- **IDDM meaning:** Equipment Indigenously Designed, Developed and Manufactured, with at least 50% indigenous content.
- **Positive Indigenisation Lists:** MoD lists of items that can be bought only from Indian sources after set dates.
- **Not to confuse:** BrahMos is a joint venture of DRDO and Russia's NPO Mashinostroyenia, named after the Brahmaputra and Moskva rivers.

How to use in UPSC Mains: Use in GS3 (security, indigenisation of technology) to show that self-reliance needs both platforms (ships) and core technologies (engines, alloys) — and that logistics ships matter for India's role as first responder in the IOR.

Mains value-add: India's annual defence production crossed about ₹1.5 lakh crore in 2024-25 — cite it to show momentum, while noting that aero-engines remain largely imported.

TARGET PRELIMS MCQ

Q. With reference to defence procurement in India, consider the following statements:
1. 'Buy (Indian-IDDM)' is the highest-priority category under the Defence Acquisition Procedure, 2020.
2. BrahMos is a joint venture between DRDO and a Russian company, named after the Brahmaputra and the Volga rivers.
3. Positive Indigenisation Lists name items that the armed forces may procure only from Indian sources after a set date.
Which of the statements given above is/are correct?

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

Answer: (b) 1 and 3 only

Explanation: DAP 2020 places Buy (Indian-IDDM) first (Statement 1 true). BrahMos takes its name from the Brahmaputra and the Moskva, not the Volga — a common slip (Statement 2 false). Positive Indigenisation Lists bar imports of listed items after timelines (Statement 3 true).

■ **[Abbreviations & Terminology]:** HSL: Hindustan Shipyard Limited | MoD: Ministry of Defence | FSS: Fleet Support Ship | BAPL: BrahMos Aerospace Private Limited | IDDM: Indigenously Designed, Developed and Manufactured | AMCA: Advanced Medium Combat Aircraft | MIDHANI: Mishra Dhatu Nigam Limited | DWT: deadweight tonnage | DAP: Defence Acquisition Procedure | DRDO: Defence Research and Development Organisation | IOR: Indian Ocean Region

Pre-COP31 Talks: India Says There Is No One-Size-Fits-All Climate Path

Why in news: At pre-COP31 meetings in Fiji, Environment Minister Bhupender Yadav called for equal attention to adaptation, mitigation and means of implementation before COP31 in Antalya, Türkiye.

Key Details:

- **Core principle:** Equity and CBDR-RC must be upheld 'in letter and in spirit' — developed countries should lead on cuts and finance.
- **Balance:** India wants adaptation and finance treated on par with mitigation, which matters most to small island and coastal States.
- **Offer to Pacific:** India offered space-based Earth observation for shoreline monitoring, cyclone warning and coastal risk mapping.
- **Venue:** Pre-COP talks were held in Nadi, Fiji and in Tuvalu, co-hosted by Australia, Fiji and Tuvalu.

Data/Facts/Example:

- **Indian expertise:** ISRO, NCSCM and NCCR have built coastal vulnerability, shoreline-change and marine spatial planning capacity.
- **India's record:** India met its target of 50% non-fossil installed power capacity in 2025, five years ahead of its 2030 NDC goal.

CBDR-RC & the UNFCCC

- **Origin:** Principle 7 of the Rio Declaration (1992); written into Article 3.1 of the UNFCCC.
- **Meaning:** All countries share the duty to protect the climate, but rich nations bear more as they emitted more and have more capacity.
- **Kyoto (1997):** Binding cuts only for Annex I (developed) countries.
- **Paris (2015):** All parties submit NDCs; CBDR-RC is read 'in the light of different national circumstances'.
- **COP:** The annual meeting of all UNFCCC parties; a 'pre-COP' prepares its agenda.
- **Not to confuse:** The UNFCCC is a framework convention; the Kyoto Protocol and the Paris Agreement are agreements under it.

How to use in UPSC Mains: Use in GS3 (environment, climate negotiations) and GS2 (India and the Global South) to show India as a bridge between developing-country equity demands and the needs of small island States.

Mains value-add: India's updated NDC (2022) commits to cutting emissions intensity of GDP by 45% by 2030 from 2005 levels — cite it to show India acting within CBDR-RC without giving up development space.

TARGET PRELIMS MCQ

Q. With reference to the principle of 'Common But Differentiated Responsibilities and Respective Capabilities' (CBDR-RC), consider the following statements:
1. The principle is part of the United Nations Framework Convention on Climate Change.
2. Under the Kyoto Protocol, binding emission-reduction targets applied only to developed (Annex I) countries.
3. Under the Paris Agreement, only developed countries are required to submit Nationally Determined Contributions.
Which of the statements given above is/are correct?

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

Answer: (c) 1 and 2 only

Explanation: CBDR-RC is in Article 3.1 of the UNFCCC (Statement 1 true). Kyoto's binding targets bound only Annex I parties (Statement 2 true). Paris requires every party, developed or developing, to submit NDCs — differentiation is now self-determined (Statement 3 false, the trap).

Related PYQ: UPSC Mains 2021, GS Paper III: "Describe the major outcomes of the 26th session of the Conference of the Parties (COP) to the United Nations Framework Convention on Climate Change (UNFCCC). What are the commitments made by India in this conference?"

■ **[Abbreviations & Terminology]:** COP: Conference of the Parties | CBDR-RC: Common But Differentiated Responsibilities and Respective Capabilities | ISRO: Indian Space Research Organisation | NCSCM: National Centre for Sustainable Coastal Management | NCCR: National Centre for Coastal Research | NDC: Nationally Determined Contribution | UNFCCC: United Nations Framework Convention on Climate Change | GDP: Gross Domestic Product

Physics Nobel 2026: IceCube and the Discovery of Cosmic Neutrinos

Why in news: Belgium-born physicist Francis Halzen, 82, won the 2026 Nobel Prize in Physics for IceCube, the South Pole neutrino observatory, and the discovery of high-energy neutrinos of astrophysical origin.

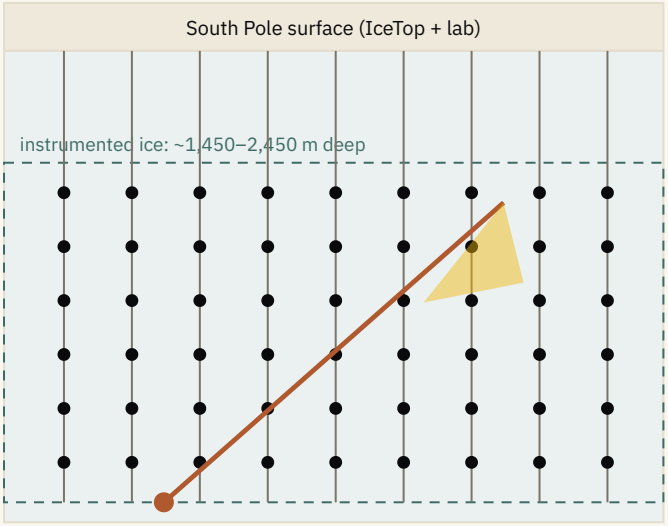
Key Details:

- **The particle:** Neutrinos have no charge and almost no mass, so they pass through matter almost untouched — they can carry news from deep space.
- **The detector:** IceCube instruments about one cubic kilometre of Antarctic ice with 5,160 optical sensors; it was completed in 2010.
- **How it works:** A rare collision with a nucleus produces a charged particle whose blue Cherenkov light the sensors record.
- **Discoveries:** First high-energy cosmic neutrinos in 2013; in 2018 one was traced to a blazar, a galaxy whose black hole fires a jet towards Earth.

Data/Facts/Example:

- **Why the South Pole:** Pure, clear, stable ice free from interference makes an ideal and very large medium.
- **Halzen's role:** First proposed capturing neutrinos in South Pole ice in 1988; now at the University of Wisconsin–Madison.

How IceCube "sees" a neutrino it cannot catch



1. A neutrino (no charge) passes through Earth easily.
2. Rarely, it hits an atomic nucleus in the ice.
3. A charged particle (e.g. a muon) is produced.
4. It outruns light's speed in ice → blue Cherenkov flash.
5. 5,160 optical sensors on 86 strings record the light; timing and brightness reveal direction and energy.

Completed 2010; ~1 cubic kilometre of instrumented ice. Schematic diagram, not to scale.

Neutrinos & Cherenkov Radiation

- **Neutrino:** A neutral, near-massless particle; proposed by Pauli in 1930 and first detected in 1956.
- **Sources:** The Sun, nuclear reactors, cosmic-ray showers in the atmosphere, and violent cosmic events.
- **Cherenkov radiation:** Light given off when a charged particle moves faster than light can travel in that medium (not faster than light in vacuum).
- **India's INO:** The India-based Neutrino Observatory is planned in the Bodi West Hills, Theni (Tamil Nadu) to study atmospheric neutrinos.
- **Not to confuse:** The Higgs boson (found at CERN, 2012) gives particles mass; neutrinos are separate particles.

How to use in UPSC Mains: Use in GS3 (S&T, big science) to show the value of large international facilities and long-horizon basic research — and to argue for completing India's own INO.

Mains value-add: Pavel Cherenkov, Ilya Frank and Igor Tamm won the 1958 Physics Nobel for discovering and explaining Cherenkov radiation — cite it to show how a 1930s discovery became the working principle of modern neutrino telescopes.

TARGET PRELIMS MCQ

Q. With reference to neutrinos and their detection, consider the following statements:
1. Cherenkov radiation is produced when a charged particle travels faster than the speed of light in vacuum.
2. Neutrinos carry no electric charge.
3. The India-based Neutrino Observatory is proposed in Tamil Nadu.
Which of the statements given above is/are correct?

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

Answer: (b) 2 and 3 only

Explanation: Nothing exceeds light's speed in vacuum; Cherenkov light arises when a charged particle exceeds light's lower speed in a medium such as ice or water (Statement 1 false, the trap). Neutrinos are electrically neutral (Statement 2 true). INO is planned at Bodi West Hills, Theni, Tamil Nadu (Statement 3 true).

Related PYQ: UPSC Prelims 2015: "In the context of modern scientific research, consider the following statements about 'IceCube', a particle detector located at South Pole, which was recently in the news: 1. It is the world's largest neutrino detector, encompassing a cubic kilometre of ice. 2. It is a powerful telescope to search for dark matter. 3. It is buried deep in the ice. Which of the statements given above is/are correct?" — Answer: (d) 1, 2 and 3.

- **[Abbreviations & Terminology]:** INO: India-based Neutrino Observatory | CERN: European Organization for Nuclear Research

Why NASA Wants a Nuclear Reactor on the Moon

Why in news: NASA plans a nuclear reactor near the lunar south pole by 2030, as the U.S.-led Artemis and the China–Russia ILRS race to build permanent Moon bases.

Key Details:

- **Why nuclear:** A two-week lunar night and polar craters below −200°C make solar power unreliable; a reactor gives steady power for life support and rovers.
- **Scale:** NASA's planned reactor is about 20 kW; the ILRS plans one of about 10 kW. NASA advises siting reactors at least 1 km from people.
- **Ice as resource:** Polar crater ice can supply water and be split into hydrogen and oxygen for fuel — power is the key to using it.
- **Legal risk:** A reactor needs a safety perimeter; Artemis Accords 'safety zones' could, in effect, keep others away from prized sites.

Data/Facts/Example:

- **Oxygen output:** A 2020 NASA study estimated that making 10 tonnes of oxygen a year from moon soil would need about 68 kW.
- **Safety:** Launch failure, radiation shielding, waste heat and moondust are unresolved technical risks.

The Outer Space Treaty, 1967 & the Artemis Accords

- **OST, Article II:** No nation can claim the Moon or other celestial bodies by sovereignty, use or occupation.
- **OST, Article IX:** States must act with 'due regard' for others and avoid harmful contamination.
- **Moon Agreement, 1979:** Declares the Moon the 'common heritage of mankind'; few space powers joined — India signed but has not ratified it.
- **Artemis Accords, 2020:** U.S.-led non-binding principles for lunar exploration; India signed in June 2023.
- **ILRS:** A Moon research station planned by China and Russia, announced in 2021.
- **Not to confuse:** Artemis is NASA's programme; the Artemis Accords are a separate set of principles countries sign.

How to use in UPSC Mains: Use in GS3 (space technology) and GS2 (global commons) to discuss the risk of 'first-come' appropriation on the Moon, and India's interest as both an Artemis signatory and a lunar south-pole explorer (Chandrayaan-3).

Mains value-add: Chandrayaan-3 made India the first country to land near the lunar south pole (23 August 2023) — cite it to show India has a direct stake in rules for south-pole resources.

TARGET PRELIMS MCQ

Q. With reference to international law on outer space, consider the following statements:
1. India has ratified the Moon Agreement, 1979.
2. The Outer Space Treaty, 1967 prohibits national appropriation of the Moon by claim of sovereignty.
3. India is a signatory to the Artemis Accords.
Which of the statements given above is/are correct?

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

Answer: (c) 2 and 3 only

Explanation: India signed the Moon Agreement in 1982 but has not ratified it — 'signed' vs 'ratified' is the trap (Statement 1 false). Article II of the OST bars national appropriation (Statement 2 true). India signed the Artemis Accords in June 2023 (Statement 3 true).

▪ **[Abbreviations & Terminology]:** NASA: National Aeronautics and Space Administration | ILRS: International Lunar Research Station | kW: kilowatt | OST: Outer Space Treaty

QUICK FACTS & EXAMPLES — GS PAPER 3

UPI MDR: the Finance Ministry has notified that NPCI will apply a 0.4% Merchant Discount Rate on specified merchant UPI payments above ₹2,000 from October 15; consumers will not pay it. On September 28 the SC declined to stay it but asked whether it is a tax or a fee. UPI handled 24,000+ crore transactions worth over ₹314 lakh crore in FY 2025-26.

How to use: *GS3 (digital economy): use for the debate on who pays for public digital infrastructure — and Article 265 (no tax without authority of law) in GS2.*

Bank liability in cyber fraud: under a 2017 RBI rule, a customer bears zero loss for unauthorised electronic transactions caused by a third-party breach if reported within three working days; a 2026 pilot extends this to some cases where customers were tricked. SPIR 2026: 63% of victims told their bank within 24 hours, yet 22% were 'very dissatisfied' with recovery.

How to use: *GS3 (cyber security, banking): cite when arguing for stronger bank accountability and faster blocking of mule accounts.*

Growth outlook: the World Bank raised India's FY27 GDP growth forecast by 0.5 point to 7.1%, citing domestic demand and exports, while flagging oil prices, El Niño and capital-flow risks.

How to use: *GS3 (economy): quote as an external validation of growth resilience amid global headwinds.*

Data centres: India's data-centre investment commitments reached about $173 billion; about 130 MW was added in H1 2026 (CBRE), with hyperscale and co-location making up ~62%.

How to use: *GS3 (infrastructure, digital economy): use for energy and water demand of digital infrastructure and India's data-localisation advantage.*

AI watermarking: OpenAI will add an invisible text watermark to ChatGPT output in the EU to meet Article 50(2) of the EU AI Act (obligations from August 2, 2026); its detector misses some short or mathematical text.

How to use: *GS3 (S&T, AI governance): example of transparency-by-design rules for synthetic content and their technical limits.*

Navy espionage case: Andhra Pradesh counter-intelligence uncovered a racket of 18 people, including 13 working for the Navy, allegedly passing data on Visakhapatnam naval establishments to Pakistani operatives; cases are under the Official Secrets Act, 1923, UAPA and BNS Section 61(2).

How to use: *GS3 (internal security): cite on honey-traps and social-media-led espionage as a growing insider threat.*

GS PAPER 4: ETHICS

Compassion in Medicine: President Murmu's Call to Young Doctors

Why in news: At the first convocation of AIIMS Bilaspur, President Murmu urged doctors to put service to humanity first and to work in inaccessible areas that graduates of top institutions often avoid.

Key Details:

- **The message:** Medicine's primary aim is to serve humanity; sensitivity and compassion must sit alongside excellence.
- **The concern:** Graduates of premier institutions often hesitate to serve in remote and under-served areas.
- **GS4 concepts:** This illustrates compassion towards weaker sections and dedication to public service — two of UPSC's own named foundational values.
- **Equity angle:** Taking care to the 'last rung' of society reflects the Antyodaya idea and the State's duty under Article 47.

Data/Facts/Example:

- **Rural shortfall:** Rural Health Statistics 2021-22 showed a shortfall of nearly 80% of specialists at Community Health Centres.
- **Ethic in practice:** A doctor's choice of where to serve is personal, but public subsidy in medical training creates a moral claim from society.

Four Principles of Medical Ethics

- **Autonomy:** Respect the patient's right to make informed decisions about their own care.
- **Beneficence:** Act in the patient's best interest.
- **Non-maleficence:** 'First, do no harm' — avoid needless risk or injury.
- **Justice:** Distribute care fairly, including to people in remote and poor areas.
- **Source:** Set out by Beauchamp and Childress (1979); widely used in medical ethics worldwide.
- **Not to confuse:** The Charaka Shapath is an Indian oath for medical students; the four principles are an analytical framework, not an oath.

How to use in UPSC Mains: Use in GS4 (professional ethics, values in public service) to show how personal ambition and social obligation can be reconciled, e.g. through incentives, rotation and a strong sense of vocation.

Mains value-add: Gandhi's talisman: 'Recall the face of the poorest and the weakest man whom you may have seen, and ask yourself, if the step you contemplate is going to be of any use to him' — cite it as a test for career and policy choices in public service.

MAINS CASE STUDY EXERCISE

Q. Dr. Meera, a gold medallist from a premier public medical institute, has two offers: a well-paid post at a reputed private hospital in a metro, and a three-year posting at a Community Health Centre in a remote tribal district with no specialist. Her family has taken a loan for her sibling's education and expects her to choose the city job. (a) Identify the ethical issues involved. (b) What options does she have, and what should she do? (c) Suggest systemic measures the State can take so that such choices are not left to individual sacrifice alone. (250 words)

- **[Abbreviations & Terminology]:** AIIMS: All India Institute of Medical Sciences