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**DAILY QUIZ — SOLVED**

# Daily Quiz — April 16, 2026

16 April 2026



CURATED & WRITTEN BY

**Bharat Choudhary**

UPSC Educator & Content Creator

[linkedin.com/in/epicbharat](https://www.linkedin.com/in/epicbharat)

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## DAILY QUIZ — SOLVED ANSWER KEY

# Daily Quiz — April 16, 2026

16 April 2026 · 12 Questions · Answers &amp; Explanations Included

**Question 1**

of 12

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The Constitution (131st Amendment) Bill proposes to expand Lok Sabha from 543 to 850 seats by amending Article 81. Which of the following correctly describes the mandatory procedure to pass this Bill?

- A Simple majority in Parliament — since it deals only with electoral procedures, not fundamental constitutional structure
- B Special majority in each House of Parliament alone — the same procedure as other constitutional amendments
- C **Special majority in each House of Parliament, plus ratification by at least half of all state legislatures ✓**
- D Two-thirds majority in Lok Sabha and simple majority in Rajya Sabha — since the amendment affects only Lok Sabha composition

## ANSWER &amp; ANALYSIS

 **EXPLANATION**

**FACT:** Article 368 provides that amendments affecting representation of states in Parliament (i.e., changes to Article 81) require: (1) a **special majority** in each House — more than 50% of total membership AND two-thirds of members present and voting; AND (2) **ratification by at least half of all state legislatures**. This two-step procedure reflects the federal dimension of such amendments.

**ANALYSIS:** A simple majority (as for ordinary bills) or a special majority alone (as for most constitutional amendments) is constitutionally insufficient for amendments touching state-Centre representation. The 131st Amendment, by changing Article 81 which governs Lok Sabha seat distribution among states, clearly falls in this category.

 **CONCEPT NOTE**

Article 368 distinguishes three streams of amendment: (1) **Simple majority** — for First Schedule (state/UT list); second schedule (salaries of constitutional office holders); Fifth/Sixth Schedule; (2) **Special majority alone** — most constitutional provisions; fundamental rights; directive principles; (3) **Special majority + state ratification by at least half of all state legislatures** — provisions affecting federal structure, representation in Parliament, SC/HC powers, election of the President, distribution of legislative powers (Lists I–III). The Lok Sabha expansion bill falls in stream 3.

Historical amendments requiring state ratification: the 42nd Amendment (1976 — emergency-era expansions), the 44th Amendment (1978 — restoring pre-emergency provisions), and the 73rd/74th Amendments (Panchayati Raj, 1992) all navigated this procedure. The 84th Constitutional Amendment (2001) extended the freeze on delimitation to 2026 — the 131st Amendment now reopens it with a new basis.

**Q1**  **CONCEPT KIT** **CROSS-PAPER**

GS2 — Polity (constitutional amendment procedure, Article 368, Article 81, delimitation).

 **MAINS KEYWORDS**

Article 368, special majority, state ratification, Article 81, 84th Amendment, Delimitation Commission.

 **COMMON MISTAKE**

Confusing Article 368 procedural categories — not every constitutional amendment needs state ratification; only those affecting the provisions listed in Article 368(2) proviso.

 **EXAM TIP**

Special majority = more than 50% of total membership of the House AND 2/3 of members present and voting — both conditions must be satisfied simultaneously.

 **INTERVIEW**

Should seat allocation in a democracy prioritise population proportionality (one person, one vote) or account for demographic achievement (rewarding states that controlled population)?

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**Question 2**

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The Constitution (131st Amendment) Bill for Lok Sabha expansion uses 2011 Census data instead of the 2021 Census. What is the constitutional basis for this choice?

- A The 2021 Census data was classified by the Central Government for national security reasons and cannot be used for constitutional exercises
- B **The 2021 Census has not yet been published; Article 82 requires seat readjustment based on the last preceding Census whose figures have been published ✓**
- C The Supreme Court directed in 2024 that the 2021 Census — conducted under COVID protocols — cannot form a constitutionally valid basis for delimitation
- D Article 82 explicitly mandates a 15-year waiting period after each Census before its data can be used for delimitation, making the 2021 Census ineligible until 2036

## ANSWER &amp; ANALYSIS

 **EXPLANATION**

**FACT:** The 2021 Census was scheduled for 2021 but was postponed due to COVID-19 and has not been published as of April 2026. Article 82 requires Parliament to readjust seat allocation based on "the Census last preceding" — meaning the last *published* Census.

Since 2011 is the last officially published Census, it constitutes the constitutionally valid basis. There is no Supreme Court ruling against 2021 data, no classification, and no 15-year waiting period in Article 82.

**ANALYSIS:** The non-publication of the 2021 Census has wide consequences: NFHS-5 (2019–21) is being used for health indicators; NPR/NRC processes are stalled; and delimitation now rests on 2011 data that will be 15 years old by the time the exercise concludes.

 **CONCEPT NOTE**

The decennial Census is constitutionally significant for multiple purposes: (1) **Delimitation** of parliamentary and assembly constituencies (Article 82); (2) **Finance Commission devolution** — population is a major variable in horizontal devolution formulas; (3) **OBC identification** and population estimation for reservation decisions; (4) **SC/ST constituency reservation** — determined by their population share in each state. The 2021 Census was postponed due to COVID-19 and remains unpublished as of 2026 — making it the first Census in Indian history to be significantly delayed.

Consequences of the delay: the 16th Finance Commission (constituted 2023) will work without final 2021 data; NFHS-5 (2019–21) is being used as a health data proxy; NPR/NRC processes are stalled; and any delimitation commission will now work with 2011 data, producing a 15-year lag. The 2021 Census is expected to be completed under the Registrar General of India in 2026–27.

**Q2**  **CONCEPT KIT**
 **CROSS-PAPER**

GS2 — Polity (delimitation, Article 82, Census, Finance Commission).

 **MAINS KEYWORDS**

Article 82, 2021 Census delay, published Census requirement, delimitation legal basis, Finance Commission devolution.

 **COMMON MISTAKE**

Assuming the Census and delimitation are automatic — both require specific statutory and constitutional steps with precise timing requirements.

 **EXAM TIP**

Article 82 is the constitutional basis for delimitation; the Delimitation Act is the statutory mechanism; the Delimitation Commission is the institutional actor.

 **INTERVIEW**

Does India need to constitutionally delink delimitation from the Census cycle — given that delayed Census data can hold constitutional processes hostage for a decade?

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**Question 3**

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The IMF cut its 2026 global growth forecast to 3.1%, warning of a potential energy crisis linked to the Strait of Hormuz. Which of the following best explains why the Strait of Hormuz is considered the world's most critical energy chokepoint?

- A It is the only maritime passage connecting the Arabian Sea to the Red Sea, through which 35% of global coal trade and 40% of global LNG trade transits daily
- B It connects the Persian Gulf to the Arabian Sea; approximately 21% of global seaborne oil trade and 30% of global LNG trade transits it daily, with no viable bypass route ✓**
- C It is jointly controlled by Saudi Arabia and the UAE under a 1975 bilateral agreement, giving OPEC direct leverage over all tanker movements
- D It is the deepest natural maritime strait globally, capable of handling the largest VLCC tankers — making its closure physically impossible to work around

## ANSWER &amp; ANALYSIS

 **EXPLANATION**

**FACT:** The **Strait of Hormuz** — approximately 33 km wide at its narrowest — connects the Persian Gulf to the Gulf of Oman (Arabian Sea). It carries approximately **20–21 million barrels per day (mbpd) of crude oil**, representing about **21% of global seaborne oil trade**, and roughly **30% of global LNG trade**.

It is flanked by **Iran (north) and Oman (south)** — not Saudi Arabia or UAE. There is no practical alternative route: re-routing Gulf oil around the Arabian Peninsula via the Red Sea (Suez route) or overland pipelines covers only a fraction of volumes. **ANALYSIS:** India's exposure — approximately 60–65% of its crude imports transit Hormuz — makes it among the most affected major non-Gulf economies in any disruption.

 **CONCEPT NOTE**

Major global energy chokepoints (UPSC frequently tested): **Strait of Hormuz** (~21% global seaborne oil, ~30% LNG) — flanked by Iran and Oman; **Strait of Malacca** (~25% global seaborne trade, ~60% of East Asian energy imports from Gulf) — between Malaysia/Singapore and Indonesia; **Suez Canal** (Red Sea to Mediterranean — 12% global trade; also LNG route from Qatar to Europe); **Bab-el-Mandeb** (southern Red Sea chokepoint connecting Indian Ocean to Red Sea — oil and container route); **Danish Straits** (Baltic to North Sea — Russian oil export route). India's exposure by chokepoint: Hormuz (~60-65% of crude imports); Malacca (~40% of crude reaching Northeast Asia from Gulf transits here; India's own exports also use this route).

A Hormuz closure would require immediate SPR activation and rerouting around the Arabian Peninsula via Suez — adding ~7–10 days of transit.

**Q3**
 **CONCEPT KIT**
 **COMMON MISTAKE**

Assuming Iran controls both sides of Hormuz — the northern shore is Iranian but the southern shore is Omani. Oman has historically maintained good relations with Iran, making full closure unlikely but not impossible.

 **CROSS-PAPER**

GS2 — IR (West Asia, energy geopolitics, maritime security); GS3 — Economy (energy security, CAD, oil prices).

 **MAINS KEYWORDS**

Strait of Hormuz, energy chokepoint, 21% global oil trade, LNG, Persian Gulf, India energy dependence, Current Account Deficit.

 **EXAM TIP**

Know the flanking countries for each chokepoint — UPSC has asked this in Prelims. Hormuz: Iran + Oman; Malacca: Malaysia/Singapore + Indonesia; Bab-el-Mandeb: Yemen + Djibouti/Eritrea.

 **INTERVIEW**

As India's renewable capacity grows, at what point does Hormuz cease to be an existential energy security risk — and what is the transition pathway?

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**Question 4**

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KABIL (Khanij Bidesh India Limited), which received environmental clearance for lithium exploration in Argentina, was incorporated as a joint venture of three PSUs. Which of the following correctly identifies its composition and nodal Ministry?

- A SAIL (50%) + Coal India (50%); Ministry of Steel — to secure overseas coking coal for domestic steel production
- B **NALCO (40%) + HCL (30%) + MECL (30%); Ministry of Mines — to identify, acquire, and develop critical mineral assets overseas ✓**
- C ONGC (50%) + GAIL (30%) + IOC (20%); Ministry of Petroleum — to diversify India's overseas energy investments beyond oil
- D NMDC (60%) + MECL (40%); Ministry of Steel — to acquire iron ore and manganese overseas for domestic metallurgy

**ANSWER & ANALYSIS**
 **EXPLANATION**

FACT: **KABIL** (Khanij Bidesh India Limited) is a JV of: **NALCO** (National Aluminium Company Limited — 40%), **HCL** (Hindustan Copper Limited — 30%), and **MECL** (Mineral Exploration Corporation Limited — 30%). It was incorporated on **August 8, 2019** under the **Ministry of Mines**.

Its mandate: identify, acquire, and develop strategic mineral assets overseas — particularly critical minerals for India's energy transition and technology sectors. ANALYSIS: Argentina's environmental clearance for five brine lithium blocks is KABIL's most significant operational milestone, moving India from pre-exploration to active deep exploration of what is likely among the world's largest untapped lithium brine systems.

 **CONCEPT NOTE**

India's critical minerals strategy has multiple pillars: (1) **KABIL** — overseas acquisition JV (NALCO+HCL+MECL); (2) **MMDR Amendment 2023** — opened 6 atomic minerals including lithium to private domestic exploration for the first time; (3) **Critical Minerals Mission** (Budget 2024-25) — dedicated mission mode covering 30 critical minerals with recycling and processing components; (4) **GSI** (Geological Survey of India) — India's own ~5.9 MT lithium inferred resource discovery in Reasi, J&K (February 2023), the first significant domestic lithium find; (5) **Bilateral partnerships** — India-Australia ECTA (Critical Minerals Investment Partnership), India-USA Critical Minerals Initiative, India-Canada critical minerals MoU. The China dominance risk: China controls ~60% of global lithium refining capacity, ~80% of cobalt refining, ~90% of rare earth element (REE) processing — India's strategy is explicitly designed to build supply chain independence. India's 30 identified critical minerals include lithium, cobalt, nickel, manganese, graphite, and vanadium — all essential for Li-ion battery production.

**Q4**  **CONCEPT KIT**
 **CROSS-PAPER**

GS3 — Economy (critical minerals, EV supply chain, PLI batteries); GS2 — IR (India-Argentina, India-Australia ECTA).

 **MAINS KEYWORDS**

KABIL, NALCO, HCL, MECL, Ministry of Mines, critical minerals, lithium, MMDR Amendment 2023, Argentina Lithium Triangle.

 **COMMON MISTAKE**

Confusing KABIL (overseas mining JV) with GSI (domestic geological survey) — different agencies with entirely different mandates and geographical scopes.

 **EXAM TIP**

The three PSUs in KABIL reflect mineral logic — NALCO (aluminium sector, uses battery lithium), HCL (copper sector, copper is critical for EV motors and wiring), MECL (mineral exploration expertise).

 **INTERVIEW**

Should India's critical mineral strategy prioritise overseas acquisition (KABIL model) or domestic processing capacity — and how do the two complement each other?

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**Question 5**

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The "Lithium Triangle" is a frequently used term in global critical mineral policy discussions. Which three countries form this triangle, and approximately what share of global identified lithium reserves do they collectively hold?

- A Chile, Peru, and Ecuador — approximately 30% of global lithium reserves
- B Australia, Canada, and South Africa — approximately 35–40% of global lithium reserves
- C **Argentina, Bolivia, and Chile — over 50% of global identified lithium reserves ✓**
- D Brazil, Bolivia, and Venezuela — approximately 25% of global lithium reserves

## ANSWER &amp; ANALYSIS

 **EXPLANATION**

**FACT:** The **Lithium Triangle** refers to **Argentina, Bolivia, and Chile** — three South American countries whose high-altitude salt flat systems (salares/salinas) contain the world's largest identified brine lithium deposits. Together they hold over **50% of global identified lithium reserves**.

Bolivia has the largest estimated reserves (~21 million tonnes) but is the least developed; Chile is the world's second-largest producer; Argentina has the most investor-friendly framework. **ANALYSIS:** India's KABIL investment is in Argentina specifically — because Bolivia's state control and Chile's political environment make Argentina the most accessible of the three for Indian PSU investment.

 **CONCEPT NOTE**

Global lithium reserve leaders (approximate, million tonnes Li equivalent): Bolivia ~21 MT (world's largest, but least developed — national company YLB only); Argentina ~20 MT (most investor-friendly framework; multiple private international JVs operational); Chile ~11 MT (world's second-largest producer; Atacama salt flat is the richest single deposit). Australia ~7 MT hard-rock spodumene (world's top producer by volume, not reserve).

India ~5.9 MT inferred resources at Reasi, J&K — not yet at commercial stage. The brine vs hard-rock distinction matters for sustainability: brine extraction uses high volumes of freshwater in extremely arid high-altitude regions — raising environmental and Indigenous community objections in all three Lithium Triangle countries.

Hard-rock (spodumene) extraction (Australia, India) has higher energy cost but lower water impact. The Lithium Triangle countries increasingly demand downstream value-addition (battery cell manufacturing, not just raw lithium export) — India must navigate this in KABIL's Argentina terms.

**Q5**
 **CONCEPT KIT**
 **COMMON MISTAKE**

Assuming Australia is in the Lithium Triangle — Australia is the top lithium producer by volume, but the Triangle is specifically Argentina-Bolivia-Chile (brine deposits).

 **CROSS-PAPER**

GS3 — Economy (critical minerals, EV supply chain); GS2 — IR (India-Argentina, India-Latin America).

 **MAINS KEYWORDS**

Lithium Triangle, Argentina, Bolivia, Chile, brine lithium, salar, critical minerals, India EV supply chain, KABIL.

 **EXAM TIP**

Bolivia has the largest lithium reserves but the most restricted access; Argentina has an open investment regime and is where KABIL is actually operating; Chile is the highest current producer.

 **INTERVIEW**

The Lithium Triangle countries are demanding value-added processing — how should India's KABIL investment terms balance securing supply with host country development interests?

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A 2026 study found the Sundarbans lost 10–15% ecological resilience between 2000 and 2024. The sea-level rise experienced by the Sundarbans (8–10 mm/year) significantly exceeds the global average (~3.7 mm/year). What best explains this disproportionately high rate?

- A The Sundarbans face stronger monsoon-driven waves than other coastlines, with each monsoon season physically eroding several centimetres of coastal land
- B The global average is measured over oceanic areas where land subsidence is absent; the Sundarbans figure reflects only the ocean-driven component, making them statistically incomparable
- C **Land subsidence — from natural delta sediment compaction plus reduced upstream sediment replenishment due to dams and barrages — adds to global mean sea-level rise, producing the higher effective rate ✓**
- D The warming Bay of Bengal expands thermally at a faster rate than other ocean basins, adding additional water volume that raises sea levels specifically in the Sundarbans delta region

**ANSWER & ANALYSIS**
**✓ EXPLANATION**

**FACT:** The Sundarbans experiences **land subsidence** from two sources: (1) natural compaction of the Ganga-Brahmaputra-Meghna delta sediments (deltas compact as loose sediment settles under its own weight); and (2) reduced upstream sediment replenishment — dams and barrages on the Ganga system (including the Farakka Barrage) trap sediment that previously replenished the delta surface. Without this replenishment, the delta surface sinks while sea levels simultaneously rise — the combination produces an **effective sea-level rise of 8–10 mm/year** vs the global mean of ~3.7 mm/year.

**ANALYSIS:** This "relative sea-level rise" concept is critical for understanding why delta regions are disproportionately vulnerable even with identical global mean sea-level rise.

**📖 CONCEPT NOTE**

The **Farakka Barrage** (1975) on the Ganga was constructed to flush the Hooghly River for Kolkata Port navigation — it diverts Ganga water through the Hooghly, reducing both flow and sediment into the Bangladesh-facing Meghna distributaries that nourish the Sundarbans. This is a significant India-Bangladesh environmental friction point — Bangladesh argues Farakka reduces sediment replenishment of the Bangladesh Sundarbans.

The **Ganga Water-Sharing Treaty (1996)** allocates river flow between India and Bangladesh but does not address sediment — a major ecological gap. Beyond Farakka, multiple dams across the Ganga-Brahmaputra basin trap sediment that historically replenished the delta.

The concept of **relative sea-level rise** = absolute global sea-level rise + local land subsidence: for the Sundarbans this means global 3.7 mm/year + subsidence 4–6 mm/year = ~8–10 mm/year effective flooding rate. Similar dynamics affect the Mekong Delta (Vietnam), Irrawaddy Delta (Myanmar), and Nile Delta (Egypt) — all heavily dammed.

**Q6**
 **CONCEPT KIT**
 **CROSS-PAPER**

GS3 — Environment (mangroves, sea-level rise, climate change); GS1 — Geography (delta systems, Bay of Bengal, river geomorphology).

 **MAINS KEYWORDS**

Sundarbans, land subsidence, delta compaction, Farakka Barrage, sediment replenishment, sea-level rise, ecological resilience, mangrove decline.

 **COMMON MISTAKE**

Treating sea-level rise as a single uniform global phenomenon — relative sea-level rise (including land subsidence) is what determines actual local flood risk and varies enormously by location.

 **EXAM TIP**

Delta subsidence is caused by both natural compaction (organic sediment settles) and anthropogenic factors (upstream dams reducing sediment replenishment, groundwater extraction) — both apply to the Sundarbans.

 **INTERVIEW**

Should India and Bangladesh develop a joint sediment management protocol for the Ganga-Brahmaputra delta — and what institutional mechanism could make such transboundary sediment cooperation feasible?

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**Question 7**

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The MISHTI scheme was announced in Union Budget 2023-24. What does MISHTI stand for and what is its primary objective?

- A Maritime Infrastructure for Shoreline Habitats and Tidal Infrastructure — to develop marine protected areas in India's EEZ
- B Mission for Integrated Shoreline Habitats and Tidal Improvements — to strengthen coastal embankments in cyclone-prone districts
- C **Mangrove Initiative for Shoreline Habitats and Tangible Incomes — to promote mangrove plantation along India's coastline with livelihood components** ✓
- D Ministry Integrated Scheme for Hill and Tribal Incomes — to support forest-based livelihoods in tribal districts

## ANSWER &amp; ANALYSIS

 **EXPLANATION**

**FACT: MISHTI = Mangrove Initiative for Shoreline Habitats and Tangible Incomes.** Announced in the Union Budget 2023-24, it promotes mangrove plantation along India's coastline — specifically targeting coastal states like West Bengal (Sundarbans), Odisha, Andhra Pradesh, Tamil Nadu, Gujarat, and Maharashtra.

The "Tangible Incomes" component integrates coastal community livelihoods (honey collection, fish nurseries, ecotourism) with conservation — recognising that mangrove protection is sustainable only when communities benefit financially. **ANALYSIS:** India's total mangrove cover as per the State of Forest Report 2023 is approximately 4,992 sq km.

India is also a founding member of the Mangrove Alliance for Climate (MAC) — launched at COP27 (2022) — targeting a doubling of global mangrove cover by 2030.

 **CONCEPT NOTE**

**Blue carbon** — carbon stored in coastal and marine ecosystems (mangroves, seagrasses, salt marshes) — is sequestered at 5–10 times the rate of terrestrial forests per unit area, making coastal ecosystems disproportionately important for climate mitigation. Mangroves deliver multiple ecosystem services simultaneously: (1) carbon sequestration; (2) storm protection (absorb 75–90% of cyclone wave energy); (3) fisheries nurseries (70–90% of commercially caught fish spend part of their life cycle in mangroves); (4) biodiversity habitat; (5) freshwater filtering; and (6) livelihoods for coastal communities.

India's mangrove cover: ~4,992 sq km (State of Forest Report 2023) — fifth largest mangrove area globally. India's mangrove policy layer: (1) **MISHTI** — active plantation with livelihoods; (2) **CRZ Notification 2019** — classifies mangroves as CRZ-I (no development); (3) **Forest Conservation Act 1980** (and 2023 amendment) — applies to notified mangrove forests.

India is a founding member of the **Mangrove Alliance for Climate (MAC)** — launched at COP27 (2022), targeting doubling of global mangrove cover by 2030.

**Q7**
 **CONCEPT KIT**
 **COMMON MISTAKE**

Thinking MISHTI is a biodiversity protection scheme — it is primarily a plantation and livelihood scheme. Existing mangrove protection falls under CRZ Notification 2019, not MISHTI.

 **CROSS-PAPER**

GS3 — Environment (mangroves, blue carbon, climate adaptation); GS3 — Economy (coastal livelihoods, ecotourism).

 **MAINS KEYWORDS**

MISHTI scheme, mangrove conservation, blue carbon, Mangrove Alliance for Climate (MAC), COP27, State of Forest Report, coastal ecosystem services.

 **EXAM TIP**

Blue carbon ecosystems are particularly efficient because they store carbon in both living biomass AND in waterlogged sediments (anaerobic conditions slow decomposition) — making mangrove destruction release millennia of stored carbon rapidly.

 **INTERVIEW**

Should India monetise mangrove carbon credits in voluntary carbon markets — and how would this interact with MISHTI's community livelihood model?

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**Question 8**

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ASI discovered a 1,500-year-old T-shaped stepped reservoir on Elephanta Island. The fact that stone blocks were transported from the mainland to build this reservoir is archaeologically significant primarily because it demonstrates:

- A That a land bridge connected Elephanta Island to the mainland ~1,500 years ago, which has since submerged due to tectonic activity
- B Foreign construction influences — specifically Roman or Persian engineers who pioneered water management infrastructure in Indian coastal regions
- C **Advanced maritime logistics and organised seafaring capability — the ability to plan, load, transport, and place heavy stone across open harbour water ✓**
- D That Elephanta Island had a freshwater spring that attracted mainland populations to colonise it specifically for water access

## ANSWER &amp; ANALYSIS

 **EXPLANATION**

**FACT:** The Elephanta Island reservoir uses stones that differ in geological character from the island's native basalt — indicating they were quarried on the mainland and transported across Mumbai Harbour (~11 km). This is significant because: (1) it requires boats capable of carrying heavy stone loads, (2) organised labour for loading and placement, (3) advance planning for a permanent construction project.

It directly demonstrates **maritime logistics capability** in 5th–6th century CE western India — a civilisation that could manage substantial seaborne construction logistics. **ANALYSIS:** There is no geological evidence of a land bridge; no historical record of Roman/Persian involvement in Elephanta; and the construction purpose was water storage for a settlement community, not freshwater attraction.

 **CONCEPT NOTE**

Elephanta Island (Gharapuri — "City of Caves") UNESCO World Heritage Site (1987) is known for its rock-cut Shaiva cave temples. The **Main Cave (Cave 1)** contains the **Maheshmurti (Trimurti)** — a 6-metre, 3-faced sculpture of Shiva as creator (Tatpuruṣa/right), destroyer (Aghora/left), and preserver (Uma/centre).

The caves are attributed primarily to the **Kalachuri dynasty** (6th century CE), with later Chalukya/Rashtrakuta modifications. The island has two groups of caves: a larger Hindu group (5 caves) and a smaller Buddhist group (2 caves). The Portuguese (who controlled the Mumbai region from 1534) renamed the island "Elephanta" after a stone elephant statue they found — this statue is now displayed at the Bhau Daji Lad Museum, Mumbai. ASI is the custodian of Elephanta under the **AMASR Act 1958** (Ancient Monuments and Archaeological Sites and Remains Act), Ministry of Culture.

The newly discovered T-shaped stepped reservoir — built from mainland-quarried stone — is the largest known water management structure on the island, indicating a substantial settled community requiring organised water supply infrastructure in the 5th–6th century CE.

**Q8**
 **CONCEPT KIT**
 **COMMON MISTAKE**

Attributing Elephanta caves to the Gupta dynasty — they are primarily attributed to the Kalachuri dynasty (6th century CE), not the Guptas who are associated with North Indian cave art.

 **CROSS-PAPER**

GS1 — History (ancient maritime capability, rock-cut architecture, Kalachuri dynasty); GS1 — Art & Culture (UNESCO WHS, Shaiva iconography).

 **MAINS KEYWORDS**

Elephanta Island, Gharapuri, UNESCO 1987, Maheshmurti, Trimurti, Kalachuri, ASI, AMASR Act, ancient water management, maritime logistics.

 **EXAM TIP**

Distinguish Elephanta from Ajanta (Buddhist, 2nd century BCE–5th century CE, Aurangabad) and Ellora (multi-religious — Buddhist, Jain, Hindu, 5th–11th century CE, also Aurangabad). All are UNESCO WHS; all are in Maharashtra.

 **INTERVIEW**

What does the Elephanta reservoir discovery reveal about ancient Indian hydraulic engineering traditions, and how should ASI balance site conservation with continued archaeological excavation?

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**Question 9**

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[Source →](#)

The DoT/TEC workshop on Direct-to-Device (D2D) satellite communication focused on Non-Terrestrial Networks (NTN). Why are Low-Earth Orbit (LEO) satellites preferred over Geostationary Earth Orbit (GEO) satellites for D2D interactive communication?

- A LEO satellites cover a larger surface area per satellite, requiring far fewer satellites to achieve global coverage compared to GEO
- B LEO satellites orbit at 500–2,000 km (vs ~35,786 km for GEO), producing signal latency of 20–40 ms — comparable to 4G networks — versus 600–800 ms for GEO, making LEO alone suitable for real-time interactive communication ✓**
- C GEO satellite frequencies (Ka-band and Ku-band) are legally reserved for television broadcasting and cannot be repurposed for mobile device communication under ITU regulations
- D LEO satellites have greater power output per unit, compensating for smartphone antennas' limited transmission capability at longer distances

## ANSWER &amp; ANALYSIS

**EXPLANATION**

FACT: The critical advantage of LEO for D2D is **latency**. LEO satellites orbit at **500–2,000 km altitude** — much closer to Earth than GEO (~35,786 km).

The round-trip signal time for LEO is **20–40 milliseconds** — suitable for voice calls, video streaming, and interactive web browsing (comparable to terrestrial 4G). GEO satellites have **600–800 ms round-trip latency** — too slow for interactive communication (users experience noticeable delay in every back-and-forth exchange).

Area coverage per satellite is actually worse for LEO (smaller footprint per satellite), requiring large constellations.

ANALYSIS: 3GPP Releases 17 and 18 standardised the NTN framework, enabling existing LTE/5G smartphone chipsets to communicate with LEO satellites with software modifications — no new hardware required for end users.

**CONCEPT NOTE**

Major LEO constellations: **Starlink** (SpaceX) — ~6,000 satellites; in-principle approval for India pending final TRAI/DoT clearance. **OneWeb** (Eutelsat) — ~648 satellites; partnered with Bharti Airtel for India services.

**Amazon Kuiper** — planned 3,236 satellites; not yet operational. India's space regulatory framework: **IN-SPACE** (Indian National Space Promotion and Authorisation Centre) authorises commercial space activities; **WPC** (Wireless Planning and Coordination) manages spectrum for satellite services; **TRAI** sets tariff and consumer protection norms.

D2D significance for India: India has ~44,000 uncovered villages where terrestrial towers are economically unviable due to low population density or difficult terrain. D2D via LEO could bridge the last-mile connectivity gap without physical tower investment — directly advancing Digital India, PM-WANI, and BharatNet goals. 3GPP Release 17 standardisation means existing LTE/5G smartphone chipsets can connect to LEO satellites with software updates — no specialised satellite phone hardware required.

For D2D national security — lawful interception is a concern since D2D bypasses terrestrial nodes used for call monitoring under the Indian Telegraph Act.

**Q9**
 **CONCEPT KIT**
 **COMMON MISTAKE**

Assuming GEO satellites (like INSAT series used for DTH broadcasting) are equally suitable for interactive D2D — GEO's 600–800 ms latency is acceptable for one-way broadcast but makes real-time conversation unusable.

 **CROSS-PAPER**

GS3 — S&T (satellite technology, NTN, 5G, digital divide); GS2 — Governance (DoT, IN-SPACe, telecom regulation, BharatNet).

 **MAINS KEYWORDS**

Direct-to-Device (D2D), Non-Terrestrial Networks (NTN), LEO satellites, 3GPP Release 17, Starlink, OneWeb, DoT, TEC, IN-SPACe, latency, digital divide.

 **EXAM TIP**

NTN ≠ traditional satellite internet — 3GPP Release 17 standards allow existing smartphone chipsets to connect to LEO satellites with firmware updates, making D2D a near-term mass-market option rather than a niche technology.

 **INTERVIEW**

D2D can bridge India's rural connectivity gap without infrastructure investment — but does it create new surveillance gaps? How should the state balance connectivity access and lawful interception?

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**Question 10**

of 12

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India chaired the First BRICS Health Working Group Meeting in April 2026. Which of the following correctly states India's BRICS 2026 Chairship theme and the current number of BRICS member countries?

- A** Theme: 'South-South Solidarity and Inclusive Development'; Members: 5 (original 5 only — BRICS expansion was reversed at the 2025 Kazan review)
- B** Theme: '**Building for Resilience, Innovation, Cooperation and Sustainability**'; Members: **9 (including Egypt, Ethiopia, UAE, and Indonesia, admitted January 2024)** ✓
- C** Theme: 'Multilateralism and Reform of Global Governance'; Members: 11 (including Saudi Arabia, which acceded in March 2025)
- D** Theme: 'Building for Resilience, Innovation, Cooperation and Sustainability'; Members: 5 (Saudi Arabia and other invited nations deferred accession)

## ANSWER &amp; ANALYSIS

 **EXPLANATION**

**FACT:** India's BRICS Chairship 2026 theme is "**Building for Resilience, Innovation, Cooperation and Sustainability.**" BRICS has **9 members** since January 2024, when Egypt, Ethiopia, the United Arab Emirates (UAE), and Indonesia joined the original 5 (Brazil, Russia, India, China, South Africa). Saudi Arabia was invited but has deferred formal accession.

The expansion was announced at the Johannesburg BRICS Summit (August 2023). The 2025 BRICS Chair was Russia (Kazan Summit, October 2024); there was no reversal of the expansion.

**ANALYSIS:** India took over the BRICS Chair for 2026 at the conclusion of Russia's 2025 chairship — a significant diplomatic responsibility given BRICS's growing relevance as a Global South forum.

 **CONCEPT NOTE**

**BRICS institutions:** **New Development Bank (NDB)** — multilateral development bank; HQ Shanghai; funds infrastructure in member and non-member developing countries. **BRICS Contingent Reserve Arrangement (CRA)** — currency swap mechanism providing liquidity support to members facing balance-of-payments distress, analogous to IMF but without conditionality.

**India's BRICS interests:** reform of Bretton Woods institutions (IMF/WB voting share), de-dollarisation discussion (BRICS payment system), South-South cooperation on technology and health. BRICS GDP (PPP) ~35% of global total; population ~46% of world.

**NDB leadership:** K.V. Kamath was founding President (2015–2020); Dilma Rousseff of Brazil succeeded. **India's 2026 chairship priorities:** digital health cooperation, climate finance for developing nations, and Global South debt restructuring mechanisms.

The April 2026 First BRICS Health Working Group Meeting focused on pandemic preparedness frameworks and traditional medicine — areas where India has institutional leadership through ICMR and AYUSH.

**Q10**  **CONCEPT KIT**
 **CROSS-PAPER**

GS2 — IR (BRICS, multilateral forums, India's chairship, NDB).

 **MAINS KEYWORDS**

BRICS 2026 Chairship, Building for Resilience Innovation Cooperation Sustainability, Egypt Ethiopia UAE Indonesia, NDB, Johannesburg Summit 2023, India multilateral diplomacy.

 **COMMON MISTAKE**

Assuming BRICS still has 5 members — the expansion to 9 happened January 2024 and is a key current affairs update.

 **EXAM TIP**

BRICS is on Concurrent List of recurring UPSC topics — always know the chair country, theme, and any expansion/institutional developments.

 **INTERVIEW**

Does India's BRICS chairship in 2026 create a tension with its Quad commitments, or does India's multi-alignment strategy reflect a sustainable model for middle powers in a multipolar world?

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**Question 11**

of 12

[Source →](#)

Scientists discovered \**Calamaria garoensis*\* — a new burrowing reed snake — in West Garo Hills, Meghalaya. Meghalaya's biodiversity richness is explained by its location within a specific global biodiversity hotspot. Which hotspot?

- A Western Ghats and Sri Lanka Hotspot
- B Himalaya Hotspot
- C Indo-Burma Hotspot ✓
- D Sundaland Hotspot

## ANSWER &amp; ANALYSIS

 **EXPLANATION**

**FACT:** Meghalaya and the broader Northeast India region fall within the **Indo-Burma Biodiversity Hotspot** — one of the 36 (formerly 34) global biodiversity hotspots identified by Conservation International. The Indo-Burma hotspot spans Northeast India (Meghalaya, Manipur, Mizoram, Nagaland, Arunachal Pradesh), Bangladesh, Myanmar, Thailand, Laos, Vietnam, Cambodia, and southern China.

It is characterised by exceptional species richness — particularly amphibians, reptiles, and freshwater fish — with a high proportion of endemic species. **ANALYSIS:** *Calamaria* genus snakes are typical of Southeast Asian rainforest habitats, consistent with the Indo-Burma biogeographic affinity of Northeast India.

 **CONCEPT NOTE**

India has **three global biodiversity hotspots**: (1) **Western Ghats and Sri Lanka** — India's southwest; extraordinarily high plant and amphibian endemism; (2) **Himalaya** — the mountain belt from northern Pakistan to Yunnan, China; high alpine and forest biodiversity; (3) **Indo-Burma** — Northeast India and mainland Southeast Asia; globally highest freshwater fish diversity. A region qualifies as a hotspot if it has: (1) at least 1,500 endemic vascular plant species, AND (2) has lost at least 70% of its primary vegetation.

Garo Hills is part of the Garo-Khasi-Jaintia hill system in Meghalaya — biogeographically aligned with Southeast Asia (Indo-Burma), not the Himalayan system. Total snake species in India: over 330 (about 60 are venomous).

*Calamaria* are small, fossorial (burrowing) snakes — the genus is mainly distributed across South and Southeast Asia. New species in Northeast India reflect historically limited survey effort: the region's difficult terrain and restricted access delayed systematic scientific cataloguing until recent decades.

India's total biodiversity hotspot area: ~330,000 sq km.

**Q11**  **CONCEPT KIT**
 **CROSS-PAPER**

GS3 — Environment (biodiversity hotspots, species discovery, Northeast India biodiversity).

 **MAINS KEYWORDS**

Indo-Burma Hotspot, biodiversity hotspot, Meghalaya, Calamaria garoensis, burrowing snake, Western Ghats, Himalaya hotspot, Conservation International.

 **COMMON MISTAKE**

Assuming Northeast India is part of the Himalaya Hotspot — it is not; it falls in the Indo-Burma Hotspot which has a distinct biogeographic character (Southeast Asian affinities).

 **EXAM TIP**

Know all 3 Indian hotspots and their rough geographic extents — UPSC has tested these in both Prelims and Mains.  
Hotspot criteria (Conservation International): 1,500+ endemic vascular plant species + 70%+ primary vegetation loss.

 **INTERVIEW**

With Northeast India consistently yielding new species discoveries, what institutional framework should India establish for systematic biodiversity surveys — and how does this connect to India's 30×30 commitments under the Kunming-Montreal Global Biodiversity Framework?

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**Question 12**

of 12

[Source →](#)

The Delimitation Commission in India, constituted under the Delimitation Act, has a distinctive legal feature regarding its orders. Which of the following correctly describes this feature?

- A Its orders are advisory and become effective only after Parliamentary approval through a simple majority resolution in both Houses
- B **Its orders are final and cannot be questioned in any court of law — they have effect from the date of publication in the Official Gazette, with associate members having full voting rights ✓**
- C Its orders are issued as Executive Orders (not statutory instruments) and can be overturned by the Election Commission of India if found inconsistent with model code provisions
- D Its orders are subject to judicial review on grounds of unreasonableness and arbitrariness — but not on procedural grounds since its procedures are statutorily prescribed

## ANSWER &amp; ANALYSIS

 **EXPLANATION**

**FACT:** Under **Section 10 of the Delimitation Act**, the orders of the Delimitation Commission **cannot be questioned in any court** — they are final and take effect when published in the Gazette of India/relevant state Gazettes. This "ouster of jurisdiction" clause has been challenged but upheld by the Supreme Court as constitutionally valid given the need for finality in electoral processes.

The Delimitation Commission is headed by a **retired Supreme Court judge** and includes the Chief Election Commissioner of India and State Election Commissioners as associate members — associate members have no veto but can express dissent. **ANALYSIS:** The non-justiciability is exceptional in Indian administrative law, where most governmental decisions are judicially reviewable.

It reflects the constitutional preference for electoral certainty over process scrutiny.

 **CONCEPT NOTE**

**Delimitation Commission composition:** (1) Chairperson — retired Supreme Court judge (appointed by President); (2) Chief Election Commissioner of India (ex-officio associate); (3) State Election Commissioner(s) of concerned states (ex-officio associates). Associate members participate in deliberations but cannot veto orders.

**Historical Delimitation Commissions:** **1952** (based on 1951 Census), **1963** (1961 Census), **1973** (1971 Census), **2002** (J&K only — special case), and the next commission expected after the post-2021 census (now delayed). A crucial distinction: the central Delimitation Commission handles Lok Sabha and State Assembly constituencies; **local body delimitation** (municipal wards, panchayat boundaries) is handled by State Election Commissions — not the central body.

Jammu & Kashmir had a separate delimitation exercise (2022) for assembly seats after reorganisation into a Union Territory. The freeze on Lok Sabha seat numbers expires after 2026 — the 131st Constitutional Amendment Bill proposes adding seats while keeping the freeze mechanism intact through a revised formula linked to TFR-adjusted population.

**Q12**  **CONCEPT KIT**
 **CROSS-PAPER**

GS2 — Polity (Delimitation Commission, election law, Article 82, judicial review limits).

 **MAINS KEYWORDS**

Delimitation Commission, Delimitation Act, Section 10 non-justiciability, ouster of jurisdiction, CEC, retired Supreme Court judge, Gazette notification.

 **COMMON MISTAKE**

Confusing Delimitation Commission (constituency boundaries) with Electoral Reforms Commission or Boundary Commission — these are different bodies with different mandates.

 **EXAM TIP**

Section 10 of the Delimitation Act is a rare example of explicit ouster of judicial review in Indian law — compare with other such clauses like the Speaker's certification of Money Bills (Article 110) and the finality of the President's election (Article 71).

 **INTERVIEW**

Is the absolute bar on judicial review of Delimitation orders consistent with Article 21 (right to fair representation) and the constitutional principle that all governmental action must remain accountable?

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CURATED &amp; WRITTEN BY

## Bharat Choudhary

UPSC Educator &amp; Content Creator

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