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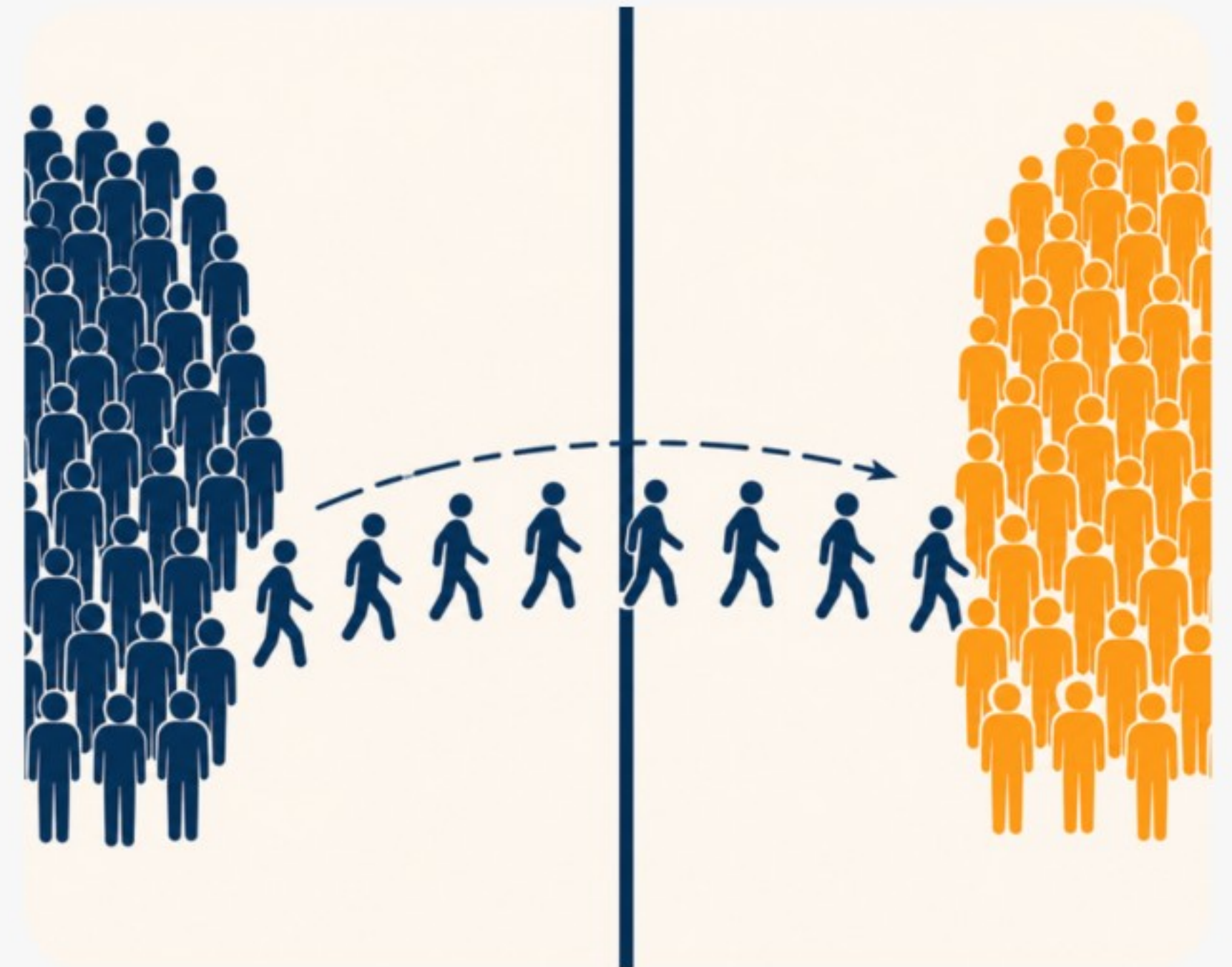
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## PRELIMS CORNER

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**Turmeric Production  
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## Rajya Sabha Chairman accepts merger of seven AAP MPs with BJP

The Rajya Sabha Secretariat has updated its party-wise composition after accepting the "merger" of seven Aam Aadmi Party MPs, including Raghav Chadha, with the Bharatiya Janata Party, increasing the BJP's strength to 113 members and consolidating the NDA's position beyond the halfway mark. The MPs had submitted a letter to the Chairman, C. P. Radhakrishnan, asserting their merger, which was subsequently recognised. The AAP has challenged the move, with leader Sanjay Singh seeking disqualification of the members under the Tenth Schedule, arguing that the Chairman failed to consider objections before accepting the merger. The issue has sparked political reactions, with the Indian National Congress criticising the decision as unsurprising, while the AAP has indicated it may pursue legal recourse, highlighting ongoing concerns over the interpretation and enforcement of anti-defection provisions in parliamentary democracy.

## EDITORIALS DECODED

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### Gang of seven

*Large-scale defections have rendered the Tenth Schedule impotent*



### The violent state of America



### Anchoring trade

*Maritime insurance corpus, a strategic imperative*

## Can middle school students engage with AI?

The Central Board of Secondary Education has proposed introducing Computational Thinking (CT) and Artificial Intelligence (AI) for Classes 3–8 from the 2026–27 academic session. CT involves skills such as abstraction, decomposition, pattern recognition, and algorithmic thinking, forming the foundation for understanding AI systems and machine learning.

### CT as a Foundation for AI

Globally, CT is seen as a precursor to AI learning. Frameworks by the Organisation for Economic Co-operation and Development, the European Commission, and initiatives like AI4K12 Initiative emphasise progressive CT skill development across school levels. The CBSE curriculum aligns with these models and is guided by National Education Policy 2020 and National Curriculum Framework for School Education 2023.

### Pedagogical Feasibility and Learning Outcomes

Research indicates that students aged 10–14 can grasp foundational AI concepts such as supervised learning and predictive models when supported by structured pedagogy. Use of no-code tools enables middle school learners to design and test AI applications without programming complexity. The curriculum's focus on experiential and inquiry-based learning aligns with global best practices.

### Ethical and Cognitive Dimensions

The curriculum incorporates modules on AI ethics, fairness, bias, and responsible digital behaviour. This is crucial as children may anthropomorphise AI systems. Early exposure to ethical reasoning helps build critical thinking and reduces misconceptions, consistent with international standards in AI education.

The CBSE's CT–AI curriculum represents a forward-looking reform aligned with global trends and national education policy. Its success will depend on effective implementation, teacher training, and continuous evaluation to ensure that it enhances learning outcomes while remaining inclusive and age-appropriate.



### Interdisciplinary Approach and Skill Development

CT is integrated into subjects like Mathematics and environmental studies (“The World Around Us”) in early classes. Cross-disciplinary models have been shown to improve reasoning, problem-solving, and analytical skills, making learning more holistic and application-oriented.

### Challenges and Risks

Key concerns include age-appropriate pedagogy, teacher preparedness, and infrastructure gaps. Ensuring effective implementation across diverse school settings, especially in resource-constrained areas, remains a challenge. There is also a need to balance conceptual understanding with cognitive readiness.

### Implications for Education Reform

The initiative supports a shift away from rote learning toward inquiry-driven, reflective education. By fostering computational and digital literacy early, it prepares students for future technological environments and aligns with broader goals of skill development and innovation.

## Electoral roll purges raise constitutional questions

Recent elections in states like Assam, Kerala, Tamil Nadu, and West Bengal have witnessed large-scale deletions from electoral rolls during the Election Commission's Special Intensive Revision (SIR). The introduction of the term "logical discrepancy" by the Election Commission of India has raised concerns, with reports of lakhs of voters being excluded, particularly in West Bengal and Bihar.



### Constitutional Basis: Citizenship and Voting Rights

Under Article 326, the right to vote is contingent on citizenship, age (18+), and absence of disqualification. The authority to define and regulate proof of citizenship lies with the Union Home Ministry, not the ECI. However, in the absence of a clear list of acceptable documents from the Ministry, the ECI prescribed its own criteria, excluding commonly used IDs like Aadhaar and voter ID cards, creating confusion and exclusion.

### Legal and Procedural Issues in SIR

The SIR exercise appears to deviate from established legal provisions under the Representation of the People Act 1950 and the Registration of Electors Rules 1960. These laws mandate that pre-election revisions should be summary in nature, while intensive revisions are meant for non-election periods due to their complexity. Conducting intensive revision close to elections violates procedural norms and past practices.

### Administrative Lapses and Exclusion Errors

Implementation flaws, including stringent documentation requirements and inadequate outreach, have disproportionately affected rural and vulnerable populations. Booth-level officers are required to collect information through house-to-house visits, accepting data provided "to the best of ability." However, insistence on hard-to-procure documents led to large-scale deletions—reportedly 64 lakh in Bihar and 91 lakh in West Bengal.

### Governance Concerns: Overreach and Institutional Roles

A key governance issue is whether the ECI exceeded its mandate under Article 324 by effectively determining citizenship proof norms. This raises concerns of institutional overreach and undermines the division of responsibilities between the ECI and the Union Home Ministry. The lack of judicial clarity from the Supreme Court of India on this issue further complicates accountability.

### Electoral Integrity and Natural Justice

Reports indicate that many deletions occurred without prior notice or opportunity for affected individuals to be heard, violating principles of natural justice. Arbitrary categorisation under "logical discrepancy," which lacks legal basis, raises serious concerns about transparency and fairness. Such actions risk disenfranchisement and undermine the credibility of free and fair elections.

### Way Forward

The controversy highlights the need for clear guidelines on citizenship documentation, better coordination between institutions, and strict adherence to legal procedures. Strengthening grievance redressal mechanisms, ensuring due process, and improving transparency in electoral roll management are essential to safeguard democratic rights. The SIR episode underscores critical challenges in electoral governance, where procedural deviations and institutional ambiguities risk undermining voter inclusion. Ensuring legality, transparency, and accountability is vital to uphold the integrity of India's democratic process.

## The evolving China-Pakistan space cooperation

China and Pakistan have significantly deepened their “all-weather” strategic partnership through cooperation in the space sector. What began with the launch of **Pakistan’s first satellite** in **1990** has evolved into a comprehensive collaboration involving satellite development, navigation systems, and human spaceflight, reflecting growing technological and strategic alignment.

### China’s Advancing Space Capabilities

China has emerged as a major space power, with achievements including satellite launches, spacewalks, its own space station (**Tiangong space station**), and plans for a manned moon mission by 2030. It has also promoted international cooperation through the Belt and Road Initiative (BRI), using platforms like the Long March rockets to launch satellites for partner countries, thereby enhancing its global influence.

### Satellite & Lunar Collaboration with Pakistan

China has played a central role in building and launching Pakistan’s satellites, including remote sensing (PRSS series), communication (PakSat series), and electro-optical satellites (EO-3). Collaborative missions such as the ICUBE-Q lunar CubeSat demonstrate joint research capabilities. These efforts have helped Pakistan develop a functional satellite network for communication, surveillance, and earth observation.

### Human Spaceflight & Institutional Cooperation

Under a 2025 agreement between the China Manned Space Engineering Office and Pakistan Space and Upper Atmosphere Research Commission, Pakistan is set to send an astronaut to China’s space station. This marks a new phase in cooperation, expanding into human spaceflight and advanced training.

China’s support to Pakistan reflects its broader strategy of expanding geopolitical influence through technology diplomacy under BRI. For India and the region, this underscores the need to strengthen indigenous space capabilities, enhance regional cooperation, and address emerging security challenges in the space domain. China-Pakistan space cooperation exemplifies the growing convergence of technology and geopolitics. While it advances scientific and developmental goals, its strategic and dual-use dimensions necessitate careful policy responses to ensure regional stability and technological competitiveness.



### Navigation Systems and Strategic Autonomy

Pakistan’s adoption of China’s BeiDou Navigation Satellite System (BDS) since 2014 reduces reliance on the U.S.-led Global Positioning System. The planned establishment of BeiDou-enabled ground infrastructure further enhances precision in navigation, disaster management, and military coordination.

### Strategic and Security Implications

The collaboration has significant dual-use implications. While civilian applications include urban planning and disaster relief, enhanced satellite and navigation capabilities strengthen Pakistan’s surveillance, reconnaissance, and communication systems. This raises concerns for regional security, particularly for India, as space technology can be leveraged for military and intelligence purposes.

**The Indian EXPRESS**

## The violent state of America

Rising political violence in the United States, highlighted by repeated assassination attempts on Donald Trump and killings of leaders across ideological lines, reflects a deeper erosion of democratic norms rooted in dialogue and negotiation. Incidents in 2025, including the deaths of Melissa Hortman and Charlie Kirk, alongside increasing threats, abuse, and coercive state actions, point to a widening culture of hostility that extends beyond individuals to societal divisions. The decline can be traced to events such as the Capitol Hill riots and earlier challenges to electoral legitimacy since 2016, which weakened trust in democratic processes. Even symbolic spaces like the White House Correspondents' Dinner—once representing civility and shared democratic purpose—now reflect a fractured public sphere where consensus-building is undermined by political polarisation and algorithm-driven echo chambers. This pattern of violence and mistrust signals a broader breakdown of democratic consensus, where conflict increasingly replaces deliberation as the dominant mode of political engagement.

**Editorial to Exam - Most probable question from this editorial**

*Rising political violence and increasing polarisation pose significant challenges to democratic systems. In this context, examine the causes and consequences of the erosion of democratic consensus in contemporary societies, with suitable examples.*



## Gang of Seven

The merger of seven out of ten Aam Aadmi Party (AAP) Rajya Sabha members with the Bharatiya Janata Party (BJP), accepted by the Rajya Sabha Chairman, has shifted the Upper House arithmetic by raising the BJP's strength to 113 and giving the NDA a majority for the first time. The episode reflects political opportunism, organisational fragility within AAP, and strategic manoeuvring by the BJP, while also exposing weaknesses in the anti-defection framework. The core legal issue centres on the interpretation of the Tenth Schedule, which permits mergers only when two-thirds of a party agree to merge as a political entity; treating a two-thirds split in the legislature party as sufficient for defection without disqualification appears to contradict both the constitutional intent and the Supreme Court's clarification that legislative and organisational wings cannot be conflated. Repeated instances of large-scale defections, often altering elected mandates, indicate the erosion of deterrence under the anti-defection law and raise concerns about institutional accountability and the safeguarding of democratic principles.

**Editorial to Exam - Most probable question from this editorial**

*The recent merger of legislators in the Rajya Sabha has reignited debates about the effectiveness of the anti-defection law. Critically examine the limitations of the Tenth Schedule in preventing political defections, and discuss its implications for parliamentary democracy in India.*

thehindu**businessline.**

TUESDAY - MARCH 31, 2026

## Anchoring trade

India's export-import ecosystem, heavily dependent on maritime trade (about 70% or \$800–850 billion), has been exposed to geopolitical risks due to reliance on foreign 'protection and indemnity' insurance dominated by Western clubs, leading to disruptions such as \$10 billion worth of stranded consignments during conflicts like the Iran war. In response, the government has introduced the Bharat Maritime Insurance (BMI) Pool, comprising a ₹950 crore war-risk fund managed by GIC Re, a \$300 million claims pool to ease trade finance stress, and a \$1.2 billion sovereign guarantee to back large claims and future contingencies, signalling an effort to secure trade flows amid global uncertainties. While BMI could reduce annual foreign exchange outflows of \$350–500 million and lower business uncertainty, its success depends on attracting a wider customer base in a context where India has limited global shipping capacity (around 1%). Strengthening domestic shipping, promoting hubs like GIFT City, enabling insurance cooperatives, and expanding ship registration are critical for long-term self-reliance, though dependence on global insurance systems is likely to persist in the near term.

**Editorial to Exam - Most probable question from this editorial**

*India's heavy reliance on foreign maritime insurance has exposed vulnerabilities in its trade ecosystem during geopolitical crises. In this context, examine the significance of the Bharat Maritime Insurance (BMI) Pool and discuss the challenges in achieving self-reliance in marine insurance in India.*

## The Gulf war's toll on Asia's AI ambitions

The ongoing Iran war has created a paradox by accelerating military adoption of artificial intelligence (AI) while simultaneously disrupting the material foundations that sustain it. Attacks on digital infrastructure and disruptions like the closure of the Strait of Hormuz highlight the vulnerability of AI systems to geopolitical instability.

### Material Foundations of AI Systems

Contrary to perceptions, AI is heavily dependent on physical inputs such as helium (chip fabrication), bromine (photoresist), tungsten (tooling and munitions), and energy resources. The conflict has disrupted both supply chains and logistics, exposing the fragility of global semiconductor ecosystems concentrated in Asia and dependent on West Asian and Chinese resources.

### Chokepoints and Supply Chain Disruptions

Key disruptions include strikes on Qatar's Ras Laffan helium facilities, which supply a major share of semiconductor-grade helium, and instability in bromine production regions like Israel and Jordan. Additionally, China's dominance and export controls over critical minerals such as tungsten, gallium, and germanium intensify supply risks. These chokepoints have created cascading effects across fabrication, logistics, and AI deployment.

### Energy Shock and Economic Impact

The closure of the Strait of Hormuz has triggered a global energy shock, significantly raising costs for semiconductor manufacturing and data centres, particularly in energy-dependent economies like South Korea. AI training costs have risen by 15–20%, leading to delays in corporate investments and digital transformation projects, thereby slowing innovation momentum.

The Iran conflict reveals a structural vulnerability in the global AI ecosystem—its deep dependence on fragile, geopolitically exposed supply chains. Ensuring long-term technological leadership will require diversification of critical resources, resilient supply chains, and alignment between technological advancement and geopolitical strategy.



### Impact on Asia's Technological Leadership

Asia, which contributed nearly two-thirds of global AI trade growth in 2025, now faces a structural setback. Disruptions in high-bandwidth memory production, rising logistics costs, and uncertainty in semiconductor supply chains challenge the assumption of Asia as a stable hub for AI infrastructure and chip manufacturing.

### Defence Modernisation and Strategic Contradictions

The conflict has accelerated military use of AI in targeting and operations, particularly by actors like the Pentagon. However, defence systems rely on the same fragile semiconductor supply chains. Dependence on China-controlled materials creates a "coupling trap," where even advanced military capabilities depend on strategic competitors.

### Geopolitical and Strategic Implications

The conflict demonstrates that AI supremacy depends not only on innovation but also on secure access to materials and stable geopolitics. It underscores the growing role of technology diplomacy, resource control, and supply chain resilience in global power dynamics, particularly in the context of China's material dominance.

### CSIP SCHOLARSHIP GUIDE

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**3 Days to go - 3 model questions**

**1. With reference to the Durand Line, consider the following statements:**

- (i) It was established in 1893 between Sir Mortimer Durand and Amir Abdur Rahman Khan.
  - (ii) It demarcates the boundary between India and Afghanistan.
- Which of the statements given above is/are correct?
- (a) (i) only
  - (b) (ii) only
  - (c) Both (i) and (ii)
  - (d) Neither (i) nor (ii)

**2. With reference to the Article 32, consider the following statements:**

- (i) It empowers individuals to directly approach the Supreme Court for enforcement of Fundamental Rights.
  - (ii) It can be suspended during a National Emergency in all circumstances.
- Which of the statements given above is/are correct?
- (a) (i) only
  - (b) (ii) only
  - (c) Both (i) and (ii)
  - (d) Neither (i) nor (ii)

**3. With reference to the El Niño, consider the following statements:**

- (i) It is associated with warming of surface waters in the central and eastern Pacific Ocean.
  - (ii) It generally strengthens the Indian summer monsoon.
- Which of the statements given above is/are correct?
- (a) (i) only
  - (b) (ii) only
  - (c) Both (i) and (ii)
  - (d) Neither (i) nor (ii)

**Answers to the Previous Day's Questions**

1. Compensation for climate impacts
2. Income inequality
3. Tropical dry deciduous forests (Eastern Ghats region)
4. Eco-label for clean and sustainable beaches)

**Scholarship exam countdown**

**3 days to go**

## PRELIMS CORNER :

1) Consider the following statements about turmeric during the year 2022-23:

I. India is the largest producer and exporter of turmeric in the world.

II. More than 30 varieties of turmeric are grown in India.

III. Maharashtra, Telangana, Karnataka and Tamil Nadu are major turmeric producing States in India.

Which of the statements given above are correct?

- (a) I and II only
- (b) II and III only
- (c) I and III only
- (d) I, II and III

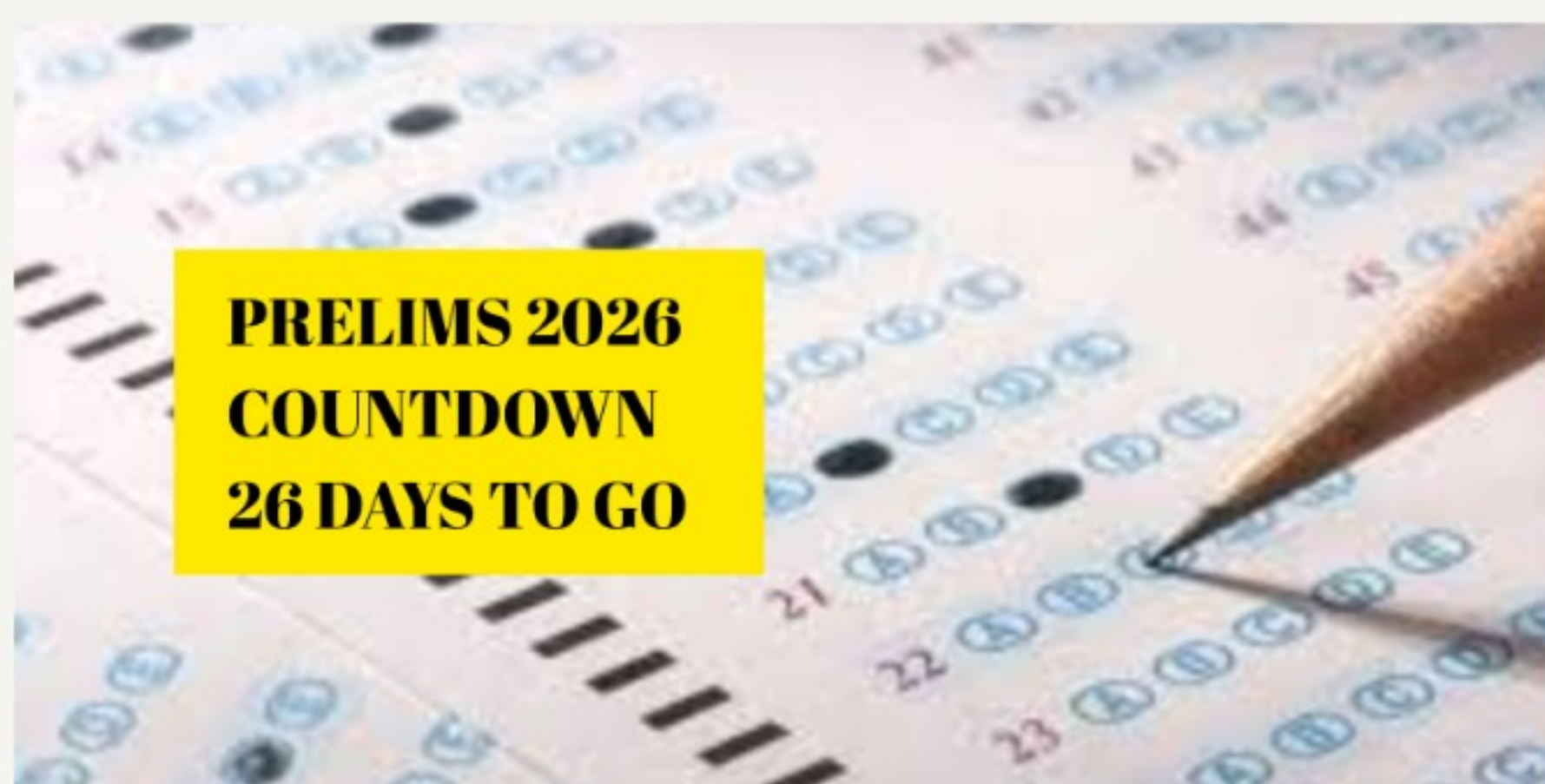
2) Consider the following statements about the Rashtriya Gokul Mission:

I. It is important for the upliftment of rural poor as majority of low producing indigenous animals are with small and marginal farmers and landless labourers.

II. It was initiated to promote indigenous cattle and buffalo rearing and conservation in a scientific and holistic manner.

Which of the statements given above is/are correct?

- (a) I only
- (b) II only
- (c) Both I and II
- (d) Neither I nor II



## WONDERS OF INDIA

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### Kanheri Caves –

#### Location

- Located inside Sanjay Gandhi National Park
- Situated in Salsette Island
- Group of **109** Buddhist rock-cut caves
- Period: 1st century CE to 10th century CE

#### Historical Significance

- Flourished as a major Buddhist monastic centre
- Located near ancient trade routes, enabling interaction with merchants
- Patronage from traders evidenced through inscriptions (donations, endowments)
- Indicates urbanised and economically active settlement in ancient times

#### Geographical & Architectural Features

- Caves distributed across three hills with a natural stream between them
- Advanced rainwater harvesting system

#### Important Caves

- Cave 1: A vihara (monastery)
  - Features massive pillars, comparable to those at Elephanta Caves
- Cave 2: Contains three stupas in separate chambers + vihara

Multiple stupas in a single complex is architecturally uncommon.



# Prelims Corner: Explanations

1) The correct answer is (d) I, II and III.

India is the largest producer, consumer and exporter of turmeric in the world. In the year 2022-23, an area of 3.24 lakh ha was under turmeric cultivation in India with a production of 11.61 lakh tonnes (over 75% of global turmeric production). More than 30 varieties of Turmeric are grown in India and it is grown in over 20 states in the country. The largest producing states of Turmeric are Maharashtra, Telangana, Karnataka and Tamil Nadu.

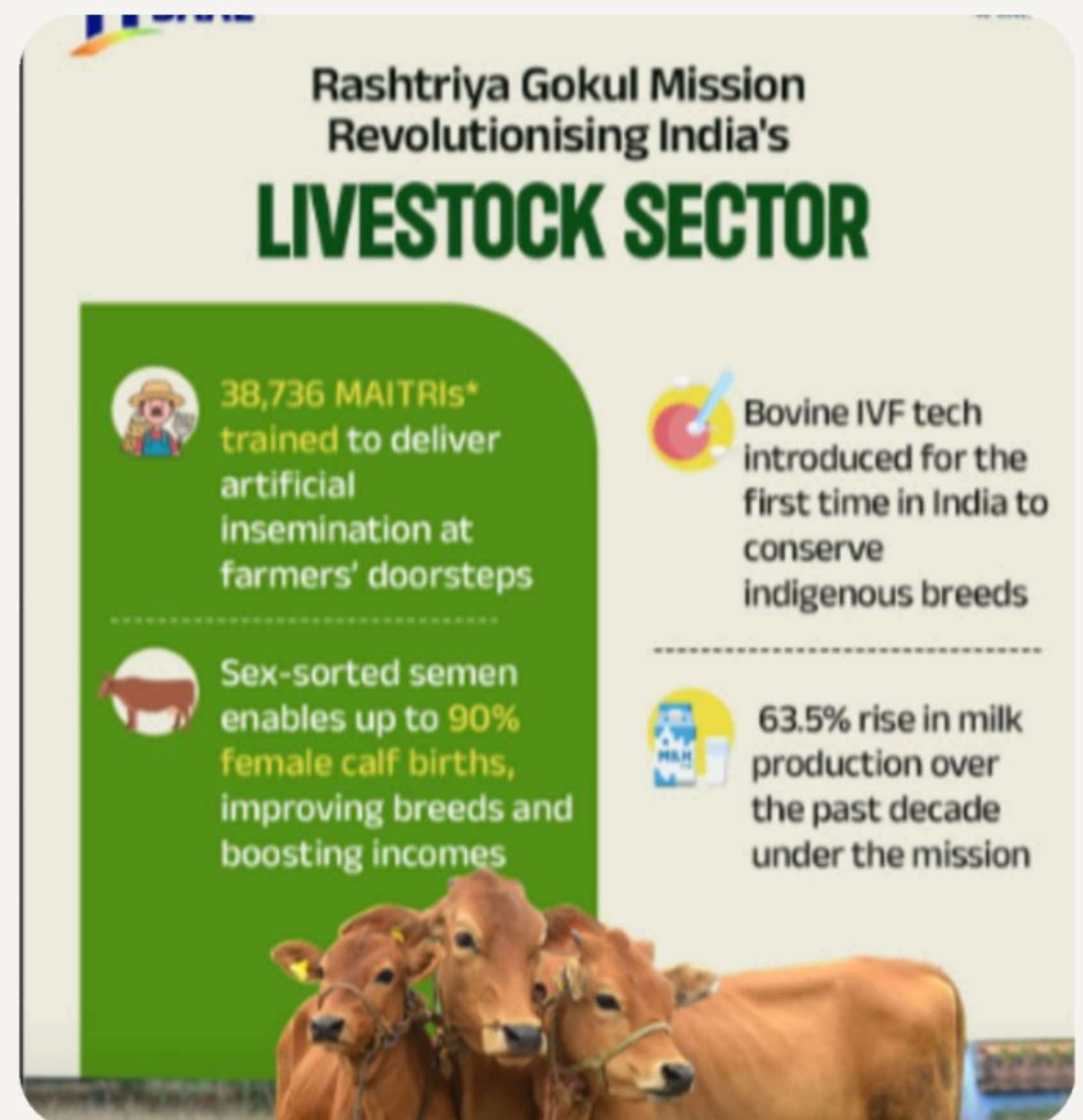
(taken from PIB release Posted On: 04 OCT 2023)

## National Turmeric Board

- The Government of India has established the National Turmeric Board in 2023 to promote the development, growth, and global competitiveness of the turmeric sector.
- It will act as a coordinating body, working alongside the Spices Board and other government agencies to streamline efforts across production, research, and trade.
- The Board will focus on market expansion and aim to boost exports to USD 1 billion by 2030.
- It will promote research and development, innovation in value-added products, and integration of traditional knowledge systems.
- A major emphasis is placed on capacity building and skill development of farmers, along with improving value addition near farms to enhance income realisation.
- The Board will ensure adherence to quality and food safety standards to strengthen India's position in global markets.
- Structure
  - It will include a **Chairperson, representatives from key ministries (Commerce, Agriculture, AYUSH, Pharmaceuticals), state governments (on rotation), research institutions, farmers, exporters, and a Secretary** from the Department of Commerce.
- Overall, the Board aims to enhance farmer welfare, sectoral coordination, and India's dominance as the world's leading producer, consumer, and exporter of turmeric.

2) Answer is option C

The Department of Animal Husbandry and Dairying is implementing Rashtriya Gokul Mission (RGM) since 2014 for development and conservation of indigenous cattle and buffalo breeds, genetic upgradation of bovine population and enhancement of milk production and productivity of bovines.



The objectives of the scheme are:

1. to enhance productivity of bovines and increasing milk production in a sustainable manner using advanced technologies;
2. to propagate use of high genetic merit bulls for breeding purposes;
3. to enhance Artificial insemination coverage through strengthening breeding network and delivery of Artificial insemination services at farmers doorstep;
4. to promote indigenous cattle & buffalo rearing and conservation in a scientific and holistic manner.

The Rashtriya Gokul Mission (RGM) is being implemented for development and conservation of indigenous bovine breeds. **Scheme is crucial for upliftment of rural poor as more than 80% low producing indigenous animals are with small and marginal farmers and landless labourers.**