

#RiseWithRICE



Weekly EXPECTED CURRENT AFFAIRS

for

IAS EXAMINATION



From

16th to 20th Mar 2026

INDEX

1. POLITY & GOVERNANCE	1
1.1. Bharat Ratna & Padma Awards	1
1.2. Guillotine in Parliamentary Procedure	3
2. INTERNATIONAL RELATIONS	5
2.1. Brics	5
2.2. Kurdistan Region	6
3. ECONOMY	9
3.1. Pulses	9
3.2. Public Insurance Registry (PIR)	11
3.3. Bharat Audyogik Vikas Yojana (BHAVYA)	13
4. ENVIRONMENT & GEOGRAPHY	15
4.1. Crab	15
4.2. Tropical Forest Forever Facility (TFFF)	16
4.3. India's Carbon Strategy: CCUS Vs. Nature-Based Credits	18
4.4. Ethyl Chloroformate	20
4.5. World Frog Day	22
5. SCIENCE & TECHNOLOGY	24
5.1. NAVIC and Global/Regional Satellite Navigation Systems	24
6. HISTORY & CULTURE	26
6.1. Sangita Kalanidhi Award	26
6.2. Keeladi Excavation	27
7. MISCELLANEOUS	30
7.1. Project Nanhi Kali	30
7.2. Operation Sankalp	31
7.3. Border Security and Diplomacy on the India-Myanmar Frontier	33

1.1. BHARAT RATNA & PADMA AWARDS

Context:

In light of contemporary political discourse, there have been renewed public demands for the Bharat Ratna to be conferred upon prominent historical figures like Kanshi Ram. Furthermore, the 2026 award cycle has highlighted a significant shift towards recognizing "Unsung Heroes" and grassroots innovators, ensuring that India's highest civilian honors reflect diverse contributions from various strata of society.



Bharat Ratna: The Highest Civilian Honor

The Bharat Ratna is awarded in recognition of exceptional service or performance of the highest order in any field of human endeavor.

1. Key Features and Evolution

- **Inception:** Instituted in 1954, it was initially restricted to Art, Literature, Science, and Public Service, but the criteria were expanded in 2011 to include "any field of human endeavor."
- **Recommendations:** Unlike the Padma Awards, recommendations for the Bharat Ratna are made by the **Prime Minister** directly to the **President of India**. No formal committee is involved.
- **Cap on Awards:** The number of Bharat Ratna awards is generally restricted to a maximum of **three** in any particular year.
- **Benefits:** The award includes a *Sanad* (certificate) signed by the President and a medallion. It does not carry any monetary grant, but recipients receive several perquisites like "State Guest" status and a place in the Table of Precedence (7A).

2. Constitutional Status

- In the **Balaji Raghavan v. Union of India (1996)** case, the Supreme Court upheld the constitutional validity of these awards.
- The Court ruled that they are "**National Honours**" and not "titles" within the meaning of **Article 18(1)**.
- **Mandatory Restriction:** Recipients cannot use the award as a prefix or suffix to their names. Violation of this rule can lead to the forfeiture of the award.

The Padma Awards

The Padma Awards are the second, third, and fourth highest civilian honors in the country, announced annually on the eve of Republic Day.

1. Hierarchy and Criteria

- **Padma Vibhushan:** For exceptional and distinguished service.
- **Padma Bhushan:** For distinguished service of high order.
- **Padma Shri:** For distinguished service in any field.

2. Selection Process

- **Padma Awards Committee:** Formed every year by the Prime Minister, headed by the **Cabinet Secretary**.
- **Nominations:** The process is open to the public, including **self-nomination**.
- **Eligibility:** All persons without distinction of race, occupation, position, or sex are eligible. However, **Government servants** (including those in PSUs), except doctors and scientists, are **not eligible** for these awards while in service.

3. Highlights of 2026 Awards

- **Total Count:** A total of 131 awards were approved (5 Padma Vibhushan, 13 Padma Bhushan, 113 Padma Shri).
- **Diversity:** The 2026 list includes 19 women, 6 foreigners/NRIs, and 16 posthumous awardees.
- **Prominent Names:**
 - **Padma Vibhushan:** Dharmendra Singh Deol (Art), V.S. Achuthanandhan (Posthumous - Public Affairs).
 - **Padma Bhushan:** Alka Yagnik (Art), Mammooty (Art), Uday Kotak (Trade & Industry).
 - **Padma Shri:** Rohit Sharma (Sports), Harmanpreet Kaur (Sports), and several "Unsung Heroes" like Anke Gowda (Social Work).

Q. With reference to Civilian Awards in India, consider the following statements:

1. The recommendations for the Bharat Ratna are made by a committee headed by the Cabinet Secretary.
2. According to the Supreme Court, these awards are not considered 'titles' under Article 18, provided they are not used as a prefix or suffix.
3. A person can be awarded a higher category of Padma Award only after a gap of at least five years from the earlier award.

Which of the statements given above is/are correct?

- A) 1 and 2 only
- B) 2 and 3 only
- C) 1 and 3 only
- D) 1, 2, and 3

Answer: B

Solution:

- **STATEMENT 1 INCORRECT:** Recommendations for the Bharat Ratna are made by the **Prime Minister** directly to the President. No committee is required.

- **STATEMENT 2 CORRECT:** In the **Balaji Raghavan case (1996)**, the SC ruled they are "Honours" and not titles, provided they aren't used as prefixes or suffixes.
- **STATEMENT 3 CORRECT:** Typically, a higher Padma Award can only be conferred after **five years** have elapsed since the previous one, though the committee can relax this in exceptional cases.

1.2. GUILLOTINE IN PARLIAMENTARY PROCEDURE

Context:

Lok Sabha Speaker is expected to apply the **guillotine** to fast-track the passage of the outstanding Demands for Grants for the Union Budget 2026-27. This procedural move follows a period of frequent disruptions in the House, which limited the time available for detailed discussions on various ministerial expenditures. By invoking this measure, the remaining budgetary demands will be put to a vote simultaneously to ensure the Finance Bill is passed within the constitutional deadline.



1. What is the Guillotine?

In legislative parlance, to "guillotine" means to bunch together and fast-track the passage of financial business or clauses of a bill. It is a procedural tool used primarily in the **Lok Sabha** during the Budget Session to ensure that the government meets its financial deadlines.

2. The Budgetary Process and Guillotine

The application of the guillotine is the final stage of the discussion on the **Demands for Grants**:

- **Presentation & Recess:** After the Budget is presented, the House goes into a recess for about three weeks. During this time, **Departmentally Related Standing Committees (DRSCs)** examine the Demands for Grants of various ministries.
- **Discussion:** When the House reassembles, the **Business Advisory Committee (BAC)** schedules discussions for specific ministries (usually high-stakes ones like Defence, Home, and External Affairs).
- **The Deadline:** On the last day allotted for the discussion on Demands for Grants, the Speaker puts all the remaining undiscussed demands to vote, whether they have been debated or not. This specific act is called "applying the guillotine."

3. Classification as a Closure Motion

The guillotine is one of the four types of **Closure Motions** used to cut short the debate on a matter before the House:

- **Simple Closure:** A member moves that the matter has been sufficiently discussed and should be put to vote.
- **Closure by Compartments:** Clauses of a bill are grouped into parts; the debate occurs on the whole part, and the entire group is put to vote.

- **Kangaroo Closure:** Only important clauses are taken up for debate, and the intervening clauses are skipped and taken as passed.
- **Guillotine Closure:** Undiscussed clauses of a bill or resolution are put to vote along with the discussed ones due to a lack of time.

4. Constitutional and Functional Necessity

- **Article 113:** Mandates that any expenditure from the Consolidated Fund of India (other than charged expenditure) must be submitted to the Lok Sabha in the form of Demands for Grants.
- **Financial Year Deadlines:** The government must have the Appropriation Bill and Finance Bill passed before the new financial year begins on April 1st to ensure it has the legal authority to spend money.

Q. With reference to the 'Guillotine' procedure in the Indian Parliament, consider the following statements:

1. It is a procedural exercise that can be invoked in both the Lok Sabha and the Rajya Sabha during the Budget Session.
2. It is applied only to those Demands for Grants that have been discussed but not yet voted upon.
3. It is a form of closure motion intended to ensure the timely passage of the Finance Bill.

How many of the above statements are correct?

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

Solution: A (Only one)

- **STATEMENT 1 IS INCORRECT:** The Rajya Sabha has no power to vote on Demands for Grants; it can only discuss them. Therefore, the guillotine, which involves putting demands to a vote, is a procedure exclusive to the **Lok Sabha**.
- **STATEMENT 2 IS INCORRECT:** The guillotine is applied specifically to **undiscussed** demands for grants (along with discussed ones) to ensure they are all passed together before the time limit expires.
- **STATEMENT 3 IS CORRECT:** The guillotine is indeed a specialized form of **Closure Motion** used to conclude the financial business of the House within the allotted timeframe.

INTERNATIONAL RELATIONS

2.1. BRICS

Context:

Recently, India assumed the **BRICS Presidency for 2026**, positioning itself to host the 18th BRICS Summit later this year. India is currently facilitating high-level diplomatic negotiations through the "Sherpa channel" to forge a consensus among members regarding



the ongoing volatility in West Asia. This presidency follows the historic expansion of the bloc and comes at a time when the grouping, now often referred to as **BRICS+**, represents over 40% of the world's population and approximately 30% of the global GDP.

Key Pillars and Institutional Framework

- **The Three Pillars of Cooperation:** BRICS operations are structured around three main areas:
 - **Political and Security:** Aimed at reforming the global governance architecture, including the UN Security Council and the WTO.
 - **Economic and Financial:** Focused on intra-BRICS trade, de-dollarization (using national currencies), and infrastructure funding.
 - **Cultural and People-to-People Exchanges:** Enhancing ties through forums, youth summits, and academic cooperation.
- **New Development Bank (NDB):** Headquartered in **Shanghai**, it was established in 2014 to mobilize resources for infrastructure and sustainable development. Unlike the World Bank, the NDB provides **equal voting rights** to its founding members, and its membership is open to any member of the United Nations (e.g., Bangladesh and Uruguay have joined).
- **Contingent Reserve Arrangement (CRA):** Created to provide a liquidity cushion for member countries during short-term balance of payments pressures, acting as a regional alternative to the IMF.

Membership Evolution: From BRICS to BRICS+

The grouping has evolved through several distinct phases of expansion:

1. **2006–2011:** Formation of BRIC (Brazil, Russia, India, China) and the subsequent inclusion of South Africa.
2. **2024 Expansion:** Full membership was granted to **Egypt, Ethiopia, Iran, and the United Arab Emirates**. Saudi Arabia has also been invited and participates in activities, though its formalization status is often monitored.
3. **2025 Addition: Indonesia** was officially admitted as the 10th full member in early 2025, further strengthening the group's presence in Southeast Asia.
4. **Partner Country Category:** A new "Partner Country" tier was established at the Kazan Summit (2024), including nations like Malaysia, Thailand, Vietnam, and Nigeria, to allow for cooperation without full membership obligations.

Q. With reference to the BRICS grouping and its financial institutions, consider the following statements:

1. In the New Development Bank (NDB), no single founding member holds a veto power, and each has an equal share of voting rights.
2. The "Kazan Declaration" (2024) officially introduced a new "Partner Country" category to accommodate interested nations without granting full membership.
3. Following the latest expansions in 2024 and 2025, Indonesia and Argentina are currently full members of the BRICS+ bloc.

How many of the statements given above are correct?

- A) Only one
- B) Only two
- C) All three
- D) None

Solution: B

- **STATEMENT 1 IS CORRECT:** The NDB is unique because the five founding members (Brazil, Russia, India, China, and South Africa) each contributed equally to the initial capital and hold **equal voting power**, with no veto rights.
- **STATEMENT 2 IS CORRECT:** The 16th BRICS Summit in Kazan, Russia, formalized the "Partner Country" model to maintain a balance between expansion and institutional efficiency.
- **STATEMENT 3 IS INCORRECT:** While **Indonesia** joined in 2025, **Argentina** (under President Javier Milei) officially declined the invitation to join BRICS in late 2023/early 2024.

2.2. KURDISTAN REGION

Context:

The **Kurdistan Free Life Party (PJAK)**, an armed Kurdish group in Iran, has asserted its independence from foreign influence despite regional tensions. The group seeks a "Democratic Republic of Iran" to ensure the rights of all ethnic minorities.

This highlights the ongoing "Kurdish Question" in West Asia, where an ethnic group of nearly 35–40 million people remains without a sovereign state, spread across four primary nations.

1. Who are the Kurds?

- **Ethnic Identity:** The Kurds are an Indo-European ethnic group, mostly Sunnis, who speak the Kurdish language.



- **Population:** They are the **fourth-largest ethnic group** in West Asia but have never obtained a **permanent nation-state**.
- **Capital city of Kurdistan: Erbil City**
- **The Region (Kurdistan):** A roughly defined geo-cultural region spanning:
 - **Turkey:** (Northern Kurdistan) - Home to the largest Kurdish population.
 - **Iran:** (Eastern Kurdistan / Rojhelat) - Home to PJAK.
 - **Iraq:** (Southern Kurdistan) - The only region with a semi-autonomous government (KRG).
 - **Syria:** (Western Kurdistan / Rojava) - Gained prominence during the fight against ISIS.

2. Geographical Features:

- **Mountains:** Zagros Mountains dominate the landscape, providing natural borders with Iran and Turkey.
- **Rivers:** The Tigris and Greater Zab Rivers flow through the region, supporting agriculture and settlements.

3. Key Organizations Mentioned

- **PJAK (Kurdistan Free Life Party):** An armed group fighting for Kurdish autonomy within a democratic Iran.
- **PKK (Kurdistan Workers' Party):** A militant political organization based in Turkey and Iraq. It is listed as a terrorist organization by Turkey, the US, and the EU. PJAK is often seen as the Iranian wing/affiliate of the PKK.

Q. With reference to the Kurdistan, consider the following statements:

1. The Kurds are an Indo-European ethnic group, predominantly following Sunni Islam and speaking the Kurdish language.
2. Kurdistan is a sovereign state with its capital at Erbil.
3. The Kurdistan Region in Iraq is the only area where Kurds have a constitutionally recognized autonomous government.
4. The Zagros Mountains and rivers such as the Tigris River play an important role in shaping the geography of the region.
5. The PJAK operates mainly in Turkey, while the PKK is primarily active in Iran.

Which of the statements given above are correct?

- (a) 1, 3 and 4 only
- (b) 1, 2 and 5 only
- (c) 2, 3, 4 and 5 only
- (d) 1, 3, 4 and 5 only

Answer: A

Explanation:

- **Statement 1 is correct:** The Kurds are an **Indo-European** ethnic group. While they are a diverse population, the vast majority are **Sunni Muslims**. Their language, Kurdish, belongs to the Indo-Iranian branch of the Indo-European language family.
- **Statement 2 is incorrect:** Kurdistan is **not a sovereign state**. It is a geo-cultural region spanning parts of Turkey, Iraq, Iran, and Syria. While **Erbil** is the capital of the *Kurdistan Region in Iraq* (an autonomous entity), there is no independent country called Kurdistan.
- **Statement 3 is correct:** The **Kurdistan Regional Government (KRG)** in Iraq is currently the only Kurdish entity that is constitutionally recognized as an autonomous government within a federal state (established under the 2005 Iraqi Constitution).
- **Statement 4 is correct:** The geography of the region is heavily defined by the **Zagros Mountains**, which run through Iran, Iraq, and southeastern Turkey. Furthermore, the headwaters of major rivers like the **Tigris and Euphrates** originate in or flow through Kurdish-inhabited territories, making the region strategically significant for water security.
- **Statement 5 is incorrect:** The roles are swapped. The **PKK** (Kurdistan Workers' Party) is primarily active in **Turkey** (and parts of Northern Iraq), whereas the **PJAK** (Kurdistan Free Life Party) is an Iranian Kurdish group that operates mainly in **Iran**.

Scan to know more about our courses...



IAS 2-Year GS PCM



IAS 10-Month GS PCM



Degree + IAS



Prelims Test Series

3.1. PULSES

Context:

Recently, the Supreme Court of India directed the Central Government to diversify agricultural practices and encourage farmers to cultivate pulses to move away from the current cereal-centric crop cycle. This judicial intervention aligns with the government's Second Advance Estimates for 2025–26, which project a robust increase in domestic pulse production, and the active implementation of the "Mission for Aatmanirbharta in Pulses" launched to eliminate import dependence by 2030.



Technical Overview of Pulses

Pulses are the edible seeds of leguminous plants harvested solely for the dry grain. They belong to the **Leguminosae (Fabaceae)** family.

1. Climatic and Soil Requirements

- **Temperature:** They thrive in temperatures ranging between **20°C and 27°C**.
- **Rainfall:** Pulses are primarily rain-fed crops requiring moderate rainfall of **25 cm to 60 cm**.
- **Soil Type:** Sandy-loamy soils are most suitable, though they can grow in varied terrains except for heavy alkaline or saline soils.
- **Cropping Seasons:**
 - **Kharif:** Arhar (Tur), Urad (Blackgram), Moong (Greengram).
 - **Rabi:** Gram (Chickpea), Lentil (Masur), Peas.
 - **Summer:** Moong and Urad are also grown as short-duration summer crops.

2. Ecological and Nutritional Importance

- **Nitrogen Fixation:** Most pulses (except Arhar/Pigeon pea to a lesser extent) have nodules in their roots containing *Rhizobium* bacteria, which fix atmospheric nitrogen, thereby improving soil fertility and reducing the need for chemical fertilizers.
- **Water Efficiency:** They are highly water-efficient compared to cereals like rice and wheat.
- **Protein Source:** Pulses contribute nearly **20% to 25%** of the total protein intake in Indian diets, making them vital for combating protein-energy malnutrition.

3. India's Position in the Pulse Sector

- **Global Rank:** India is the **world's largest producer (25%), consumer (27%), and importer (14%)** of pulses.

- **Production Statistics:** As per the 2025–26 Second Advance Estimates, total production is showing a steady increase, with **Gram** accounting for nearly **50%** of the total pulses share.
- **Import Trends:** While imports have significantly declined (by approximately 45% in FY26), India still procures pulses like Yellow Peas and Lentils from countries such as Canada, Myanmar, and Australia to bridge the demand-supply gap.
- **Top Producing States (2025-26):**
 - **Madhya Pradesh** (Largest producer).
 - **Rajasthan.**
 - **Maharashtra.**
 - **Uttar Pradesh.**

4. Key Government Initiatives

Mission for Aatmanirbharta in Pulses (2025–2031)

- **Outlay:** ₹11,440 crore.
- **Goal:** Reach **350 lakh tonnes** of production and **310 lakh hectares** of cultivation area by 2030–31.
- **Key Feature:** Assured **100% procurement** of Tur, Urad, and Masoor at MSP for four years to provide price stability.

SATHI Portal

The **Seed Authentication, Traceability & Holistic Inventory (SATHI)** portal ensures the quality of seeds by tracking the entire lifecycle from production to certification, helping farmers access high-yielding and climate-resilient varieties.

PM-AASHA

The **Pradhan Mantri Annadata Aay SanraksHan Abhiyan** integrates the Price Support Scheme (PSS) and Price Deficiency Payment Scheme (PDPS) to ensure farmers receive the Minimum Support Price.

Q. With reference to the cultivation of pulses in India, consider the following statements:

1. Unlike cereals, all pulses have the unique ability to fix atmospheric nitrogen through root nodules.
2. The "Mission for Aatmanirbharta in Pulses" aims to achieve 100% self-sufficiency by 2030 through assured procurement of all pulse varieties.
3. India's pulses import value has seen a significant decline in the 2025-26 fiscal year compared to the previous year.

Which of the statements given above is/are correct?

- A) 1 and 2 only
- B) 3 only
- C) 1 and 3 only
- D) 1, 2, and 3

Answer: B

Solution:

- **STATEMENT 1 INCORRECT:** While most pulses fix nitrogen, some varieties like **Arhar (Pigeon Pea)** have a very low capacity for nitrogen fixation compared to others, and some leguminous plants do not fix nitrogen at all.
- **STATEMENT 2 INCORRECT:** The Mission provides assured 100% procurement specifically for **Tur, Urad, and Masoor**, not every single variety of pulses.
- **STATEMENT 3 CORRECT:** Recent trade data for 2025-26 indicates a decline in pulses import volume and value by nearly 35% to 45% due to robust domestic production and carry-forward stocks.

3.2. PUBLIC INSURANCE REGISTRY (PIR)**Context:**

Recently, the Insurance Regulatory and Development Authority of India (IRDAI) proposed the establishment of a **Public Insurance Registry (PIR)** to consolidate insurance data across all stakeholders and modernize the information architecture of the Indian insurance sector.

This move, discussed during a high-level stakeholder meeting in New Delhi, aims to create a unified, consent-driven digital infrastructure that tracks the entire lifecycle of an insurance policy from issuance to dispute resolution.

**1. Key Features and Details of Public Insurance Registry (PIR)**

- **Definition and Governance:** The PIR is envisioned as a structured, interoperable information infrastructure governed by the **IRDAI** to act as a centralized database for the insurance industry.
- **Consent-Driven Framework:** It is designed to be a legally compliant, digital platform where data sharing is based strictly on the **explicit consent** of the policyholder, ensuring privacy and security.
- **Comprehensive Lifecycle Coverage:** The registry will host data covering every stage of an insurance policy, including its issuance, premium payments, claims processing, grievance redressal, and final dispute resolution.
- **Integration with Bima Sugam:** The PIR will work in tandem with **Bima Sugam** (an e-marketplace) to enable seamless access to insurance policies and enhance the overall customer experience by providing a single source of truth for policy data.
- **Interoperability:** The system is built to be interoperable across various insurance entities, including life, general, and health insurers, ensuring that data can be seamlessly exchanged between authorized stakeholders.

2. Objectives and Significance

- **Reducing Information Asymmetry:** By consolidating data in one place, the PIR aims to provide a transparent view of the insurance landscape to both regulators and consumers.
- **Fraud Detection and Mitigation:** A centralized registry allows for better cross-verification of claims and policyholder history, making it significantly easier to identify and prevent fraudulent activities.
- **Data-Driven Oversight:** The IRDAI will be able to perform more effective regulatory oversight using real-time, high-quality data to monitor the solvency and conduct of insurance companies.
- **Enhancing "Insurance for All by 2047":** It aligns with the national goal of achieving universal insurance coverage by reducing administrative friction and lowering costs for both insurers and the insured.

3. Institutional & Statutory Facts

- **Malhotra Committee (1994):** The foundational committee that recommended the opening of the insurance sector and the creation of IRDAI.
- **Statutory Status:** IRDAI was established under the **IRDAI Act, 1999**. It is a 10-member body (1 Chairman, 5 full-time, 4 part-time members) appointed by the Government of India.
- **FDI Limit:** The Foreign Direct Investment limit in the insurance sector has been hiked to **74%**, while it is **100%** for insurance intermediaries (brokers).

4. Critical Economic Terms

- **Insurance Penetration:** The ratio of premium underwritten in a year to the **GDP**. (India: approx. **3.8% to 4%**).
- **Insurance Density:** The ratio of premium to the **total population** (measured in USD per capita).

Q. With reference to the "Public Insurance Registry (PIR)" recently proposed by IRDAI, consider the following statements:

1. It is designed as a mandatory database where policyholder data is shared automatically with all insurers without requiring individual consent.
2. The registry aims to provide a centralized infrastructure covering the entire lifecycle of a policy, from issuance to dispute resolution.
3. It is intended to operate as a separate entity from the "Bima Sugam" e-marketplace to ensure data silos for security.

Which of the statements given above is/are correct?

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

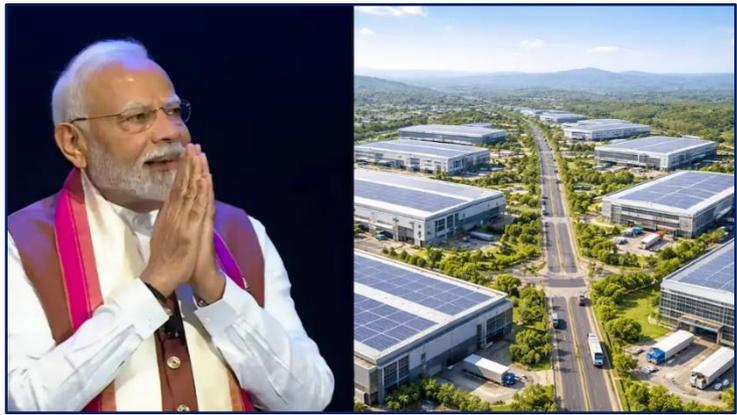
Solution: B

- **STATEMENT 1 IS INCORRECT:** The PIR is explicitly envisioned as a **consent-driven** digital infrastructure, meaning data is not shared automatically but requires the policyholder's permission.
- **STATEMENT 2 IS CORRECT:** The primary objective of the PIR is to consolidate data across stakeholders to track the **full lifecycle** of a policy, including claims and grievances.
- **STATEMENT 3 IS INCORRECT:** IRDAI has emphasized the need for **alignment** and integration between PIR and Bima Sugam to enable seamless access and service delivery, rather than keeping them as disconnected silos.

3.3. BHARAT AUDYOGIK VIKAS YOJANA (BHAVYA)

Context:

Recently, the Union Cabinet chaired by the Prime Minister has approved the **Bharat Audyogik Vikas Yojana (BHAVYA)**. This flagship scheme, with a significant financial outlay of **₹33,660 crore**, aims to transform India's manufacturing landscape by developing 100 high-end "plug-and-play" industrial parks across the country. The move is seen



as a strategic step to counter "premature de-industrialization" and achieve the goal of a *Viksit Bharat* by enhancing domestic manufacturing capabilities and generating approximately 15 lakh direct jobs.

1. Overview and Objectives

The Bharat Audyogik Vikas Yojana (BHAVYA) is a central sector initiative designed to provide world-class, investment-ready infrastructure.

- **Goal:** To build **100 industrial parks** that allow companies to move from "intent to production" with minimal delay.
- **Primary Target:** Boosting the manufacturing sector's contribution to the GDP and creating large-scale employment.
- **Focus Areas:** Ease of Doing Business (EoDB), deregulation, and streamlined single-window clearances.

2. Infrastructure and Funding Model

The scheme introduces a robust financial support mechanism to ensure the quality of these industrial ecosystems:

- **Grant Support:** The Central Government will provide a grant of up to **₹1 crore per acre** for core infrastructure development.
- **External Connectivity:** The Centre will fund up to **25% of the cost** for external infrastructure (roads, rail links, etc.) to ensure seamless multimodal connectivity.
- **Scale of Parks:** General Regions: Minimum area of **100 acres** (scaling up to 1,000 acres).
 - North-Eastern and Hilly States: Minimum area of **25 acres** to suit the local terrain.

3. Key Features of BHAVYA

- **Plug-and-Play Facilities:** These parks will offer ready-to-use factory sheds, testing laboratories, and pre-approved environmental and building clearances.
- **Challenge Mode Selection:** Projects will be selected through a competitive "Challenge Mode" among states to ensure only high-quality, reform-oriented proposals receive funding.
- **PM GatiShakti Alignment:** The parks are designed based on the **National Master Plan (NMP)** for multimodal connectivity, ensuring efficient logistics and "no-dig" underground utility corridors.
- **Social Infrastructure:** Unlike traditional industrial zones, BHAVYA includes provisions for **worker housing**, health centers, and basic amenities within the park to support the workforce.

4. Implementation Agency

The **National Industrial Corridor Development Corporation (NICDC)**, under the Department for Promotion of Industry and Internal Trade (**DPIIT**), will be the lead agency for executing the scheme in partnership with State Governments and the private sector.

Q. With reference to the 'Bharat Audyogik Vikas Yojana (BHAVYA)', consider the following statements:

1. It is a scheme aimed at developing 100 plug-and-play industrial parks with a focus on reducing the time between investment intent and actual production.
2. Under this scheme, the Central Government provides financial support of up to ₹10 crore per acre for the development of internal roads and ICT systems.
3. The selection of industrial parks under the scheme follows a 'Challenge Mode' to incentivize reforms at the state level.

How many of the above statements are correct?

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

Solution: Answer: (b) (Only two)

- **STATEMENT 1 IS CORRECT:** The primary objective of BHAVYA is to provide "investment-ready" land and infrastructure to accelerate industrialization.
- **STATEMENT 2 IS INCORRECT:** The financial support provided by the Central Government is up to **₹1 crore per acre** (not ₹10 crore) for core and value-added infrastructure.
- **STATEMENT 3 IS CORRECT:** The scheme utilizes a **Challenge Mode** selection process to ensure that only those states that are willing to implement investor-friendly reforms and have high-quality proposals are selected.

4.1. CRAB

Context:

Researchers have discovered a unique biological phenomenon in a freshwater crab species within the **Silent Valley National Park** (Kerala). This marks the first-ever reported instance of **gynandromorphy** within the freshwater crab family **Gecarcinucidae**.



1. Key Biological Term: Gynandromorphy

- **Definition:** A rare biological condition in which an individual organism exhibits **both male and female physical characteristics** on the same body.
- **Mechanism:** In this specific case (*Vela carli*), the crabs displayed male reproductive structures alongside female features, such as **gonopores** (genital pores in crustaceans).
- **Occurrence:** While documented in some marine and freshwater crustacean families, it was previously unknown in the **Gecarcinucidae** family.

2. The Species: *Vela carli*

- **Status:** An **endemic** freshwater crab.
- **Habitat:** Found only in the forests and streams of the **Central Western Ghats**.
- **Behavioral Note:** The specific specimens in this study were found living in **tree holes**.

3. Geographical Context: Silent Valley National Park

The location is a frequent subject for UPSC map-based and ecology questions.

- **Location:** Palakkad district, Kerala (within the Nilgiri Biosphere Reserve).
- **Ecosystem:** It contains some of the last undisturbed tracts of **South Western Ghats mountain rain forests** and tropical moist evergreen forests.
- **River:** The **Kunthipuzha River** flows through the entire length of the valley (from north to south).
- **Flora/Fauna:** Famous for the **Lion-tailed Macaque** (Endangered).

Q. Consider the following statements:

1. Silent Valley National Park's Kunthipuzha River provides habitat for freshwater crab species.
2. Crabs in the park play a role in nutrient cycling and ecosystem balance.
3. Lion-tailed Macaque preys extensively on crabs in the river.

Which of the statements given above is/are correct?

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

(d) 1, 2 and 3

Answer: A

Explanation:

Here is the detailed UPSC-style breakdown of the statements based on the recent findings and ecological facts:

Analysis of Statements

- **Statement 1 is correct:** As per the recent discovery in **Silent Valley National Park**, the freshwater crab species *Vela carli* is endemic to the streams and forests of the Central Western Ghats. The **Kunthipuzha River**, which flows through the entire length of the park, provides the primary perennial freshwater habitat for such species.
- **Statement 2 is correct:** In any forest ecosystem, especially in the Western Ghats, freshwater crabs are vital "**ecosystem engineers**." They assist in **nutrient cycling** by breaking down leaf litter and detritus. They also serve as a crucial link in the food chain, acting as prey for various birds, small mammals, and reptiles, thereby maintaining the ecological balance.
- **Statement 3 is incorrect:** While the **Lion-tailed Macaque (LTM)** is the flagship species of Silent Valley, it is primarily **frugivorous** (fruit-eating). Its diet consists mainly of fruits, seeds, and occasionally insects or small tree-dwelling animals. They do not "extensively prey" on riverine crabs; most of their foraging happens in the upper canopy of the rainforest, not in the river beds.

4.2. TROPICAL FOREST FOREVER FACILITY (TFFF)

Context

- **Recently**, the **Tropical Forest Forever Facility (TFFF)** has come into the spotlight as several tropical nations gathered in Brazil to finalize its launch for **COP30**. This new \$125 billion global fund is unique because it moves away from traditional "charity" or "carbon credits." Instead, it treats standing forests like a **financial asset**, offering countries a fixed annual payment for every hectare of tropical forest they keep intact.
- This development is significant as it provides a steady income to developing countries—including potential benefits for India's own tropical regions—provided they keep their deforestation rates near zero.



1. What is the TFFF?

- **Nature:** A permanent, multi-billion dollar **trust fund** designed to incentivize the conservation of tropical forests.
- **Proponent:** It was spearheaded by **Brazil** at COP28 and has now gained support from over 60 nations.

- **Shift in Approach:** Unlike the REDD+ mechanism (which pays for *reducing* deforestation), the TFFF pays for *preserving* what already exists. It rewards "standing forests."

2. How the Money Works (The \$125 Billion Model)

- **The Corpus:** The fund aims to raise **\$125 billion** through a mix of investments from wealthy countries and private institutional investors.
- **Investment Returns:** This money is invested in safe global financial markets. The **interest/profit** earned from these investments is then distributed to tropical countries.
- **Fixed Payment:** A country receives a specific dollar amount (e.g., \$4 per hectare) every year, as long as its forest cover remains protected.

3. Who is Eligible?

- **The Tropical Belt:** Up to **74 developing countries** located between the Tropics of Cancer and Capricorn are eligible.
- **Low Deforestation Rule:** To receive payments, a country must keep its annual deforestation rate below a strict threshold (currently proposed at **0.5%**).
- **Strict Monitoring:** Forest cover is verified annually using **high-resolution satellite imagery** to ensure no "factual mistakes" or false claims are made regarding forest loss.

4. Key Social Safeguard: The 20% Rule

- **Indigenous Focus:** A mandatory **20% of the payout** must be given to **Indigenous Peoples and Local Communities (IPLCs)**.
- **Reasoning:** These communities are the frontline protectors of the forest, and the TFFF ensures they are financially compensated for their stewardship.

5. India's Role and Benefit

- **Observer Status:** India currently acts as an **Observer**, helping shape the rules of the facility.
- **Potential:** If India joins as a member, its vast tropical stretches in the **Western Ghats, Northeast, and Andaman Islands** could generate significant annual revenue for the government and local tribal communities.

Q. With reference to the 'Tropical Forest Forever Facility (TFFF)', consider the following statements:

1. It is the first global fund to pay countries for keeping their forests standing rather than just reducing the rate of cutting them down.
2. The fund's capital is intended to be spent entirely within five years to achieve immediate reforestation targets.
3. Satellite-based monitoring is the primary tool used to verify eligibility for annual payments.

Which of the statements given above are correct?

- A) 1 and 2 only
- B) 2 and 3 only
- C) 1 and 3 only
- D) 1, 2 and 3

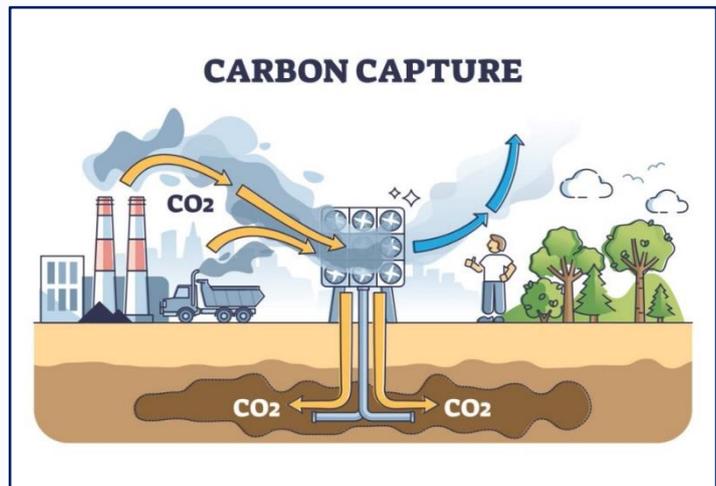
Solution: C) 1 and 3 only

- **STATEMENT 1 IS CORRECT:** This is the core "USP" of the TFFF—it rewards the maintenance of existing forests, shifting away from the "offset" logic of previous models.
- **STATEMENT 2 IS INCORRECT:** The TFFF is a **permanent trust fund**. The \$125 billion capital is kept intact and invested; only the **interest earned** is distributed as payments, ensuring the fund lasts "forever."
- **STATEMENT 3 IS CORRECT:** To ensure transparency and prevent fraud, the facility relies on objective, satellite-derived data to measure forest cover.

4.3. INDIA'S CARBON STRATEGY: CCUS VS. NATURE-BASED CREDITS

Context:

The **Union Budget 2026** announced a massive **₹20,000 crore outlay** for a carbon credit programme. While there has been public debate regarding whether this fund is for farmers or industry, technical documents from the **Department of Science and Technology (DST)** clarify that this specific allocation is dedicated to **Carbon Capture, Utilization, and Storage (CCUS)** technologies for heavy industries.



1. The CCUS Programme for "Hard-to-Abate" Sectors

The DST's "R&D Roadmap for CCUS" (released in December 2025) serves as the technical basis for the ₹20,000 crore budgetary provision.

- **Objective:** Large-scale deployment of CCUS technologies over five years to capture CO₂ from factory flue gases for industrial use or underground storage.
- **Target Sectors:** The roadmap explicitly identifies "hard-to-abate" industries where emissions are concentrated and technically challenging to eliminate via renewable energy alone:
 - Power
 - Steel and Cement
 - Refineries and Chemicals
- **Significance:** These sectors are responsible for approximately **one-quarter of India's total emissions**.

2. CCUS vs. Carbon Dioxide Removal (CDR)

The DST roadmap draws a clear technical distinction between preventing new industrial emissions and removing existing atmospheric CO₂.

- **CCUS (Industrial Focus):** Targets point-source capture from smokestacks; it is biologically mediated and suited for concentrated emissions.
- **CDR (Nature-Based Focus):** Involves drawing down existing atmospheric CO₂ through agricultural and forestry practices.
- **Exclusion of Agriculture from CCUS:** Agriculture is excluded from CCUS strategies because its emissions (primarily methane and nitrous oxide) are **diffuse** and not suited to point-source capture technology.

3. Key Aspects of CCUS Technology

- Capture Methods:
- **Post-combustion:** Removes CO₂ from flue gases after burning fossil fuels.
- **Pre-combustion:** Converts fuel into a CO₂-hydrogen mix; CO₂ is extracted before combustion.
- **Oxy-fuel combustion:** Burns fuel in pure oxygen to produce high-concentration CO₂ and steam.
- **Advanced Technologies:** Includes membrane-based capture, cryogenic separation, and modular systems like **CycloneCC**.
- Carbon Clean's CycloneCC is a revolutionary, modular industrial carbon capture technology with a footprint 10x smaller than conventional systems.

4. The "Farmer Carbon Credit" Narrative

While the ₹20,000 crore fund is industrial, a parallel narrative exists regarding a domestic carbon market for agriculture.

- **Key Mechanisms:** Agriculture contributes to carbon sequestration through:
 - **Soil Carbon Sequestration:** Enhancing soil organic carbon.
 - **Biochar and Agroforestry:** Utilizing trees and charcoal to lock away carbon.
- **Current Status:** These are currently part of the **evolving voluntary carbon market** in India, driven by private sector initiatives and some state-level pilot programmes rather than this specific Budget 2026 outlay.

Q. With reference to India's Carbon Capture, Utilization, and Storage (CCUS) strategy, consider the following statements:

1. It is primarily designed to mitigate diffuse emissions from the agricultural sector.
2. It focuses on "hard-to-abate" sectors such as steel, cement, and chemicals.
3. The ₹20,000 crore outlay in Budget 2026 is earmarked for industrial decarbonization rather than nature-based sequestration.

Which of the statements given above are correct?

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

(d) 1, 2, and 3

Answer: B

Explanation:

- **Statement 1 is incorrect:** The strategy explicitly **excludes agriculture** from CCUS because agricultural emissions (like methane and nitrous oxide) are **diffuse** and biologically mediated. CCUS is designed for **point-source capture**, which targets concentrated emissions from specific industrial locations rather than the spread-out emissions found in farming.
- **Statement 2 is correct:** The "R&D Roadmap for CCUS" specifically targets "**hard-to-abate**" **industries**. These are sectors where emissions are highly concentrated and difficult to eliminate through renewable energy alone, specifically including **steel, cement, chemicals, power, and refineries**.
- **Statement 3 is correct:** The **₹20,000 crore outlay** in the Union Budget 2026 is specifically earmarked for the large-scale deployment of **industrial CCUS technologies** over five years. While there is significant potential for **nature-based sequestration** (like agroforestry or soil carbon) in India, these are currently part of a separate, voluntary carbon market and are not funded by this specific industrial decarbonization outlay.

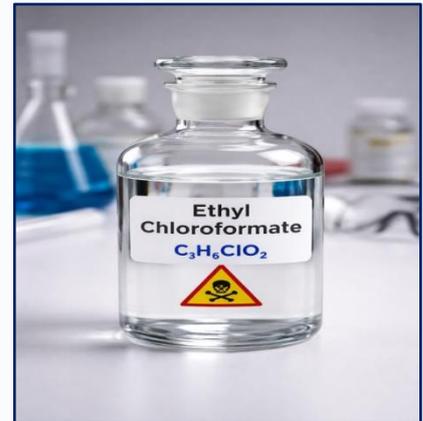
4.4. ETHYL CHLOROFORMATE

Context:

India recently opened an **anti-dumping investigation** into ethyl chloroformate imports from China after a domestic producer alleged the chemical, used in pharmaceutical and agrochemical manufacturing, was being sold at unfairly low prices.

Key Aspects of Anti-Dumping Investigations

- Anti-dumping investigations are trade remedies initiated by governments to protect domestic industries from unfair competition, where foreign firms sell goods below their home market price or production cost.
- In India, the **Directorate General of Trade Remedies (DGTR)** investigates these cases.
- The **World Trade Organization (WTO)** permits **anti-dumping measures** as a tool for ensuring fair competition, which is typically imposed for five years.



About Ethyl Chloroformate

Ethyl chloroformate is an organic chemical intermediate widely used in pharmaceutical and agrochemical manufacturing

- **Appearance:** It is a **colorless to light yellow** liquid.
- **Odor:** It possesses a **pungent, irritating** odor.
- **Volatility:** It is a **highly flammable** liquid and vapor.

- **Solubility:** It **decomposes in water** to form toxic and corrosive fumes, including Hydrogen Chloride.
- **Uses:** In Pharmaceuticals, Pesticides

Health Hazards and Safety

- **Toxicity:** It is **fatal if swallowed** or inhaled.
- **Corrosivity:** Causes **severe skin burns** and eye damage.
- **Respiratory Impact:** Inhalation leads to severe irritation of the respiratory tract and can cause pulmonary edema.
- **Environmental Impact:** It is **toxic to aquatic life** with long-lasting effects

Q. In India, the use of carbofuran, methyl parathion, Ethyl Chloroformate, Hexamine is viewed with apprehension. These chemicals are used as:

- (a) Insecticides and pesticide intermediates used in agriculture and chemical industries
- (b) Food preservatives used to enhance shelf life of packaged foods
- (c) Bio-fertilizers used to improve soil nitrogen content
- (d) Industrial refrigerants used in cooling systems

Answer: A

Explanation:

- **Carbofuran:** A potent broad-spectrum **carbamate insecticide** and acaricide. It is one of the most toxic pesticides used on crops like rice, corn, and soybeans. It is notorious for its high toxicity to birds and non-target wildlife, leading to its restricted use or ban in many countries.
- **Methyl Parathion:** An **organophosphate insecticide** used to control insects on a wide variety of crops. It is highly toxic to humans and bees. Like Carbofuran, it is often viewed with apprehension due to its potential for accidental poisoning and environmental persistence.
- **Ethyl Chloroformate:** As seen in your provided chemical safety article, this is a highly reactive **chemical intermediate**. In the context of this question, it is used in the synthesis of **carbamate-based pesticides** and herbicides. It is "apprehended" because it is fatal if inhaled and highly corrosive.
- **Hexamine (Hexamethylenetetramine):** In agriculture and industry, it is used as a stabilizer for certain **pesticide formulations**. It is also a precursor in the manufacture of explosives and resins, leading to regulatory scrutiny regarding its diversion.

4.5. WORLD FROG DAY

Context:

World Frog Day (**March 20**) highlights the ecological importance of frogs, the most numerous group of amphibians. Despite their vital role, they are currently the **most threatened vertebrate group** globally, according to the IUCN.



1. Ecological Significance of Frogs

- **Interface Species:** They bridge the gap between **freshwater** and **terrestrial** ecosystems.
- **Biomass Conversion:** They play a critical role in converting **insect biomass** (by eating insects) into **vertebrate biomass** (by being eaten by birds, reptiles, and mammals).
- **Pest Control:** They act as natural biological controllers of agricultural pests.
- **Ecosystem Indicators:** Their permeable skin makes them highly sensitive to environmental changes (pollution, climate), acting as "ecological sentinels."

2. Major Threats to Amphibians

- **Chytridiomycosis:** A devastating fungal disease caused by:
 1. *Batrachochytrium dendrobatidis* (in frogs).
 2. *Batrachochytrium salamandrivorans* (in salamanders).
 - **Mechanism:** It attacks the skin, disrupting respiration and electrolyte balance.
 - **Origin:** Asia (spread globally via the pet trade and frog leg exports).
- **Climate Change (39%):** Now the leading driver of extinction. It causes a "seasonal mismatch" (e.g., false monsoon cues followed by droughts).
- **Habitat Loss (37%):** Significant threat due to land-use changes.

3. The Indian Scenario

- **Diversity:** India is home to over **450 amphibian species**.
- **Conservation Status:** Roughly **1/4th** are 'Threatened'.
 - **1/5th** are 'Data Deficient' (lack of long-term monitoring).
- **Legal Protection:** Out of 157 threatened species, only **six** are protected under the **Wildlife Protection Act, 1972**.
- **Regional Trends:** Mass mortality due to fungi is lower in India compared to the Americas/Australia, likely because the fungi originated in Asia.

4. Key Conservation Initiatives in India

- **Jorepokhri Salamander Sanctuary (WB):** Created in 1985 for the Himalayan Salamander.
- **Dissection Ban:** In 2011, the **UGC** banned the dissection of frogs for educational purposes.
- **Breeding Programmes:** **Padmaja Naidu Himalayan Zoological Park (Darjeeling):** Conservation breeding for the Himalayan Salamander.
 - **Tillari Conservation Reserve (Maharashtra):** Long-term monitoring of stream frogs.

- **Citizen Science Projects: Mapping Malabar Tree Toad Project** (Western Ghats).
 - **Amphibian Recovery Project** (Munnar, Kerala).
 - **Naturalist:** A portal for citizens to share photographs and recordings of frogs.

5. Important Biological Facts for Prelims

- **Metamorphosis:** The transition from aquatic **tadpoles** (algae eaters) to terrestrial **froglings/adults** (insect eaters).
- **Skin Functions:** In amphibians, the skin is an organ for **protection, respiration, and ion exchange** (electrolyte balance).
- **IUCN Assessment:** The 2023 Global Amphibian Assessment confirmed 37 species have gone extinct recently.

Q. With reference to frogs, consider the following statements:

1. They act as an interface between freshwater and terrestrial ecosystems.
2. They convert plant biomass directly into vertebrate biomass.
3. They are considered ecological indicators due to their permeable skin.

Which of the statements given above is/are correct?

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

Answer: a

The correct answer is **(a) 1 and 3 only**.

Detailed Explanation:

- **Statement 1 is correct:** Frogs are known as "**interface species**." They spend part of their life cycle in water (as eggs and tadpoles) and part on land (as adults). This allows them to link **freshwater and terrestrial ecosystems**, facilitating the flow of energy and nutrients between the two environments.
- **Statement 2 is incorrect:** According to the article provided, frogs eat **insects** and are then eaten by other vertebrates. Therefore, they are crucial in converting **insect biomass** into **vertebrate biomass**, not plant biomass directly. While tadpoles may eat algae (plant matter), the primary ecological role highlighted for frogs in the food chain is the consumption of insects.
- **Statement 3 is correct:** Frogs are excellent **ecological indicators** (or "sentinel species"). Their **permeable skin** allows them to breathe and exchange ions, but it also makes them highly susceptible to absorbing toxins, pollutants, and pathogens (like the *Chytrid* fungus) from their environment. A decline in frog populations often signals an early warning of environmental degradation.

5.1. NAVIC AND GLOBAL/REGIONAL SATELLITE NAVIGATION SYSTEMS

Context:

Recently, India's indigenous navigation system, **NavIC** (Navigation with Indian Constellation), faced a technical challenge following the failure of an atomic clock onboard the **IRNSS-1F** satellite in March 2026. This development is significant as it reduces the number of fully operational satellites providing precise Positioning, Navigation, and Timing (PNT) services. While the satellite remains in orbit for one-way messaging, the loss of its timing frequency highlights the critical need for India to accelerate the launch of its **second-generation NVS series** satellites to maintain a robust and independent regional navigation network.



1. NavIC: India's Indigenous Navigation System

NavIC, formerly known as the **Indian Regional Navigation Satellite System (IRNSS)**, is an independent regional system developed by **ISRO**.

- **Constellation Design:** It originally consisted of 7 satellites.
 - **3 satellites** are in **Geostationary Orbit (GEO)** (appearing fixed over the equator).
 - **4 satellites** are in **Geosynchronous Orbit (GSO)** (inclined at 29° to the equatorial plane).
- **Coverage Area: Primary Service Area:** Entire Indian landmass and an area extending up to **1,500 km** beyond its borders.
- **Services Provided:**
 1. **Standard Positioning Service (SPS):** Open for all civilian users (accuracy < 20 meters).
 2. **Restricted Service (RS):** An encrypted service for authorized users (military and strategic applications).
- **Frequency Bands:** Initially used **L5 and S bands**. The new NVS satellites have added the **L1 band**, which is common in civilian GPS, making NavIC compatible with most smartphones and wearable devices.

2. Global vs. Regional Systems

The world's navigation systems are categorized based on their coverage:

System Name	Country/Region	Type	Number of Satellites
GPS	USA	Global (GNSS)	24+ (MEO)
GLONASS	Russia	Global (GNSS)	24+ (MEO)
Galileo	European Union	Global (GNSS)	30 (MEO)
BeiDou	China	Global (GNSS)	35+ (MEO/GEO/GSO)
NavIC	India	Regional	7 (GEO/GSO)
QZSS	Japan	Regional	4 (GSO/GEO)

Note: Global systems primarily use **Medium Earth Orbit (MEO)** to ensure worldwide visibility, whereas regional systems like NavIC use higher orbits (**GEO/GSO**) to remain focused over a specific geography.

3. The Role of Atomic Clocks

Atomic clocks are the "heart" of navigation satellites. They measure time based on the vibrations of atoms (usually **Rubidium** or **Cesium**).

- **Principle:** Navigation works via **trilateration**. The satellite sends a signal with a timestamp; the receiver calculates distance based on the time delay.
- **Precision:** Even a nanosecond error can lead to a positioning error of several meters.
- **Indigenous Progress:** Earlier IRNSS satellites used imported rubidium clocks which faced frequent failures. ISRO has now developed **indigenous Space-qualified Rubidium Atomic Clocks**, first flown in the **NVS-01** satellite in 2023.

Q. With reference to the 'Navigation with Indian Constellation' (NavIC), consider the following statements:

1. NavIC provides global coverage similar to the Global Positioning System (GPS) of the United States.
2. The constellation uses a combination of satellites in Geostationary and Medium Earth Orbits.
3. The second-generation NVS satellites include the L1 frequency band to enhance interoperability with civilian devices.

Which of the statements given above is/are correct?

- A) 1 and 2 only
- B) 3 only
- C) 2 and 3 only
- D) 1, 2 and 3

Solution: B

- **STATEMENT 1 IS INCORRECT:** NavIC is a **regional** navigation system, not a global one. It covers India and an area of 1,500 km around it.
- **STATEMENT 2 IS INCORRECT:** NavIC uses a combination of **Geostationary (GEO)** and **Geosynchronous (GSO)** orbits, not Medium Earth Orbit (MEO). GPS, GLONASS, and Galileo use MEO.
- **STATEMENT 3 IS CORRECT:** The new NVS series satellites (starting with NVS-01) incorporate the **L1 band** to improve compatibility with commercial smartphones and wearables.

HISTORY & CULTURE

6.1. SANGITA KALANIDHI AWARD

Context:

Recently, The Music Academy announced that during its **100th Conference and Concerts**, scheduled to begin in December this year in Chennai, the prestigious **Sangita Kalanidhi** will be conferred upon renowned veena player Jayanthi Kumaresh.



1. Sangita Kalanidhi Award (2026)

- **Recipient:** **Jayanthi Kumaresh**, a renowned exponent of the **Saraswati Veena**.
- **Significance:** She is the first veena artiste to be selected for this honor in **34 years**.
- **Legacy:** Her selection coincides with the centenary year of her guru, the late **S. Balachander**.
- **Background:** She belongs to the musically prominent **Lalgudi G. Jayaraman** family and has collaborated with global maestros like Zakir Hussain.

2. Nritya Kalanidhi Award (2026)

- **Recipient:** **Narendra G.**, a distinguished **Bharatanatyam** dancer.
- **Timing:** The award will be presented during the inauguration of the 20th Annual Dance Festival of the Academy.

3. About Sangita Kalanidhi Award:

- It is considered the **highest award** in the field of Carnatic music.
- The award is conferred by the **Madras Music Academy**.
- Instituted in 1942, the Sangita Kalanidhi was earlier preceded by the practice of inviting a senior musician or expert to preside over the annual conference of The Music Academy.
- From 1942 onward, the presiding musician began to be formally honoured with the title, accompanied by a gold medal and a birudu patra (citation).

4. Madras Music Academy

- The Music Academy, Madras is a landmark institution in the history of the fine arts. It emerged as an offshoot of the **All India Congress Session held in Madras** in December 1927.
- A music conference was held along with it and during the deliberations, the idea of a Music Academy emerged.

Q. With reference to the Sangita Kalanidhi, consider the following statements:

1. The award is conferred by the The Music Academy Madras and is regarded as one of the highest honours in the field of Carnatic music.
2. The title was instituted in 1942, when the presiding musician of the Academy's annual conference began to be formally honoured with the award.

3. The award carries a gold medal and a citation known as a *birudu patra*.
4. The The Music Academy Madras was established as an outcome of the All India Congress Session 1927.

Which of the statements given above are correct?

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

Answer: D

Explanation:

- **Statement 1 is correct:** The **Sangita Kalanidhi** is conferred by **The Music Academy Madras** (now Chennai) and is widely regarded as the highest accolade in the world of **Carnatic music**.
- **Statement 2 is correct:** While the Academy began holding annual conferences in 1929, the formal title of "Sangita Kalanidhi" was instituted in **1942**. From that year onward, the musician selected to preside over the annual conference was formally invested with this title.
- **Statement 3 is correct:** The award is a prestigious honor that includes a **gold medal** and a citation known as a **birudu patra**. The recipient (Sangita Kalanidhi-designate) presides over the academic sessions of the conference and is conferred the title on the day of **Sadas** (the convocation of the Academy).
- **Statement 4 is correct:** The Music Academy Madras was an offshoot of the **All India Congress Session** held in Madras in **1927**. A music conference was held alongside the political session, which eventually led to the formal inauguration of the Academy in 1928.

6.2. KEELADI EXCAVATION

Context:

The **Archaeological Survey of India (ASI)** has officially granted permission to the **Tamil Nadu State Department of Archaeology (TNSDA)** to begin excavations at eight historical sites across the state. This follows a period of administrative delays and is crucial because the primary excavation window in Tamil Nadu is limited (January to July) due to the monsoon cycle.



1. Key Excavation Sites and Locations

Archaeological Site	District	Significance / Note
Keeladi (and its clusters)	Sivaganga	Entering its 11th phase of excavation; evidence of an urban civilization on the banks of the Vaigai River .
Pattanamardhur	Thoothukudi	Coastal/Interior research potential.
Karivalamvanthanallur	Tenkasi	Expansion of the Sangam era footprint.
Manikollai	Cuddalore	Located in the northern coastal belt.
Adichanur	Villupuram	<i>Note: Not to be confused with Adichanallur in Thoothukudi.</i>
Vellalore	Coimbatore	Historic trade hub known for Roman coin finds.
Telunganur-Mangadu	Salem	Research into Iron Age/Megalithic cultures.
Nagapattinam	Nagapattinam	Significant for maritime history and Buddhist influence.

2. About Keeladi

- **Location:** Tamil Nadu, on the banks of the **Vaigai River**.
- **Period:** Carbon dating suggests **6th century BCE to 1st century CE**, roughly overlapping with **Sangam Age**.
- **Significance:** Confirms urban settlement and advanced culture in Tamilakam much earlier than previously thought.

3. Material Culture and Daily Life

- **Artifacts found:** Pottery, beads, iron tools, graffiti on pots, terracotta figurines.
- Indicates **trade, craft specialization, and literacy**—like other ancient Indian regions:
 - Similar to **Northern Iron Age settlements** (like **Ujjain, Mathura**) in use of iron tools.
 - Script resemblance to **Tamil-Brahmi**, which links to early **Indian scripts evolution**

4. Urbanization in Ancient India

- Traditionally, urbanization is associated with **Indus Valley Civilization (c. 3300–1300 BCE)**.
- Keeladi shows **continuity of urban settlements in South India** post-Harappan decline, implying:
 - Advanced urban planning (brick structures, street layouts)
 - Drainage and water management systems

5. Trade and External Contacts

- **Beads, pottery styles, and semi-precious stones** suggest:
 - Internal trade within Tamilakam
 - Possibly maritime contacts (like **Roman trade with South India**, 1st century BCE onward)

Which of the following statements correctly places Keeladi in the context of Ancient Indian history?

- (a) It was the first urban settlement in India
- (b) It shows South India had urbanization, trade, and literacy alongside North India after Harappan decline
- (c) It proves Indus Valley Civilization extended to Tamil Nadu
- (d) It was primarily a Roman colony in South India

Answer: B

Explanation:

Previously, it was believed that urbanization in South India occurred much later than in the Gangetic plains (North India). Keeladi's findings (dated to **6th century BCE**) prove that a highly developed, literate (Tamil-Brahmi script), and urban society existed in the Vaigai river valley contemporary to the Mahajanapada period in the North.

Scan to know more about our courses...



IAS 2-Year GS PCM



IAS 10-Month GS PCM



Degree + IAS



Prelims Test Series

MISCELLANEOUS

7.1. PROJECT NANHI KALI

Context:

Recently, **Project Nanhi Kali** was honoured with the **Sports for Social Good Award** at the **Sportstar Aces Awards 2026**, in recognition of its long-standing efforts to empower girls from underserved communities through sports.

About the Project Nnanhi Kali

- **Objective and Inception:** Launched in **1996**, the project focuses on empowering girls from underserved communities through a combination of **education and sport**.
- **Implementing Organization:** The programme is managed by the **K.C. Mahindra Education Trust**.
- **Geographical Reach:** It currently supports over **8.7 lakh girls** across **15 States**, including Maharashtra, Gujarat, Karnataka, Andhra Pradesh, Punjab, Uttar Pradesh, Odisha, and West Bengal.
- **Target Demographic:** The initiative primarily supports girls studying in **government schools**.
- **Integration of Sport:**
 - In 2018, the project launched '**Sports for Life**' to promote fitness, leadership, and confidence among participants.
 - In FY25, approximately **94,000 girls** were engaged in the programme, including more than 18,000 participants in football.
- **Recent Honors:** The project received the '**Sports for Social Good**' award at the Sportstar Aces Awards 2026.



Related Industrial/Sporting Context

- **IndianOil Corporation Limited (IOCL):** Recognized as the '**Best PSU for Promotion of Sport**' at the same ceremony. This reaffirms its four-decade commitment to nurturing sporting talent in India's ecosystem.

Q. With reference to Project Nanhi Kali, consider the following statements:

1. The project was launched in 1996 to empower girls from underserved communities through education and sports.
2. The programme is implemented by the K. C. Mahindra Education Trust.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Answer: C

Explanation:

- **Statement 1 is correct:** The project was launched in **1996** with the primary objective of empowering girls from underserved communities. While it began with a focus on education, it later expanded to include sports, notably through the launch of the '**Sports for Life**' initiative in 2018.
- **Statement 2 is correct:** The programme is managed and implemented by the **K.C. Mahindra Education Trust**.

7.2. OPERATION SANKALP

Context

- **Recently**, the Indian Navy has successfully escorted three Indian-flagged merchant vessels—the LPG carriers **Shivalik** and **Nanda Devi**, and the crude oil tanker **Jag Laadki**—from the **Gulf of Oman** after they transited the volatile **Strait of Hormuz**. These warships are operating under **Operation Sankalp** to provide a "safe corridor" amidst the ongoing U.S.-Israel-Iran conflict which has effectively disrupted navigation in the Persian Gulf.



1. Overview of the Mission

- **Launch Date:** Officially launched on **June 19, 2019**.
- **Objective:** To ensure the **safe passage** of Indian-flagged merchant vessels transiting through the Gulf region (specifically the Strait of Hormuz) and to provide a sense of reassurance to the maritime community.
- **Meaning:** "Sankalp" is a Sanskrit word meaning "**Commitment**."
- **Agencies Involved:** It is an integrated effort involving the **Ministry of Defence, Ministry of External Affairs, Ministry of Shipping, Ministry of Petroleum and Natural Gas**, and the **Director General of Shipping**.

2. Geographical and Strategic Focus

- **Key Chokepoints:** The operation focuses on the **Strait of Hormuz, Gulf of Oman**, and the **Persian Gulf**.

- **Trade Significance:** Nearly **62% of India's oil imports** and a significant portion of its natural gas pass through the Strait of Hormuz.
- **Extended Reach:** In response to the 2023-2024 Red Sea crisis, the Navy expanded the scope of Operation Sankalp to the **Central and North Arabian Sea** and the **Gulf of Aden** to counter Houthi drone threats and Somali piracy.

3. Key Assets and Operations

- **Deployment:** The Navy maintains a continuous presence with at least one **Destroyer or Frigate** (e.g., INS Talwar, INS Chennai, INS Kolkata) and regular aerial surveillance using **P-8I Neptune** maritime patrol aircraft and **Sea Guardian drones**.
- **The "First Responder" Role:** India has established itself as the **Preferred Security Partner** in the Indian Ocean Region (IOR), evidenced by successful rescue operations like those of **MV Ruen** and **MV Chem Pluto**.
- **MARCOS Involvement:** Elite Marine Commandos (MARCOS) are frequently deployed for boarding operations and to neutralize pirate threats.

4. Legal Framework

- **Maritime Anti-Piracy Act 2022:** This act provides the legal teeth to the Indian Navy to prosecute pirates apprehended during these operations, moving beyond mere "deterrence" to "legal accountability."

Q. With reference to 'Operation Sankalp', recently seen in the news, consider the following statements:

1. It was launched by the Indian Navy specifically to combat the impact of oil spills in the Arabian Sea.
2. The operation involves close coordination between the Ministry of External Affairs and the Ministry of Petroleum and Natural Gas.
3. The scope of the operation is limited strictly to the territorial waters of India.

How many of the statements given above are correct?

- A) Only one
- B) Only two
- C) All three
- D) None

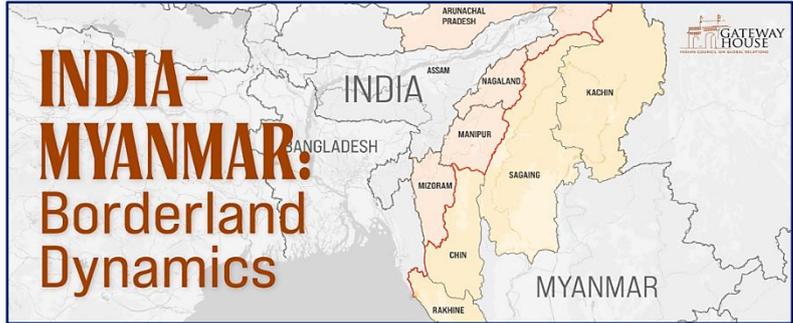
Solution: A) Only one

- **STATEMENT 1 IS INCORRECT:** Operation Sankalp was launched in 2019 to ensure the safe passage of Indian merchant vessels amid regional tensions, not for oil spill management.
- **STATEMENT 2 IS CORRECT:** It is a multi-ministerial effort involving Defence, External Affairs, Shipping, and Petroleum ministries to safeguard trade and energy interests.
- **STATEMENT 3 IS INCORRECT:** The operation is conducted in international waters, specifically the Persian Gulf, Gulf of Oman, and the North Arabian Sea, far beyond India's territorial waters.

7.3. BORDER SECURITY AND DIPLOMACY ON THE INDIA-MYANMAR FRONTIER

Context:

The unfenced border between India and Myanmar has gained strategic attention following the arrest of seven foreign nationals (six Ukrainians and one U.S. citizen) in Mizoram. They were allegedly involved in training armed ethnic groups in Myanmar in weapons handling and drone operations.



1. Geography of the India-Myanmar Border

- **Total Length:** Approximately **1,643 km**.
- **Bordering States:** Four Indian states share a border with Myanmar:
 1. Arunachal Pradesh
 2. Nagaland
 3. Manipur
 4. Mizoram
- **River:** The **Tiau River (or Tyao)** and the **Kaladan River** (known as Chhimtuipui in India) are the primary rivers forming part of the 1,643-km international border between India and Myanmar.
- **Fencing Status:** Currently, the border is largely unfenced. Out of the 1,643 km, only about **43.75 km** of fencing has been completed so far.

2. The Free Movement Regime (FMR)

- **Definition:** A unique institutional arrangement between India and Myanmar that allowed tribes living along the border to travel into each other's territory **without a visa**.
- **Historical Context:** People on both sides share deep ethnic, social, and cultural ties.
- **Recent Changes:** In February 2024, the Union Home Ministry announced the **scrapping of the FMR** to check illegal migration and insurgent activities.
 - Prior to being scrapped, it was restricted to **10 km** from the border (reduced from the original **16 km**).
 - Movement is now regulated through designated gates requiring biometrics and gate passes.

3. Security and Agencies Involved

- **National Investigation Agency (NIA):** The primary agency investigating the illegal crossing and the importation of drones from Europe to Myanmar via India.

- **Assam Rifles:** (Note: While not explicitly named in the snippet, they are the primary "Border Guarding Force" for the Myanmar border).
- **Security Challenges: EAGs (Ethnically Armed Groups):** Insurgent groups active in Myanmar that sometimes use Indian territory for transit or logistics.
 - **Counter-Drone Mechanism:** A joint mechanism with monthly reporting has been instituted to monitor the use of drones by insurgents.
 - **Trafficking and Migration:** The unfenced nature of the border facilitates illegal human trafficking and migration.

4. Key Infrastructure and Technology

- **Smart Fencing:** The project includes the installation of gates that record **biometrics and photographs** of individuals crossing the border.
- **Challenges in Construction:** The fencing project has faced resistance from local communities and coordination challenges with the Myanmar Army and security agencies.
- **Functional Gates:** Out of 43 proposed entry/exit gates, the number has declined to 38, with only **20 currently functional**.

Q. Consider the following statements regarding the India–Myanmar border:

1. The India–Myanmar border is approximately 1,643 km long and fully fenced.
2. The Free Movement Regime (FMR) allowed border tribes to cross without visas but was scrapped in 2024.
3. The National Investigation Agency is investigating illegal cross-border activities involving drones.
4. Assam Rifles is the primary force guarding the India–Myanmar border.

Which of the statements given above are correct?

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

Answer: B

Explanation:

- **Statement 1 is incorrect:** While the India–Myanmar border is indeed approximately **1,643 km** long, it is **not fully fenced**. In fact, as of early 2024, only about **43 km** of the total length has been fenced, with the government recently approving plans to fence the remaining stretch to check illegal migration and insurgent activities.
- **Statement 2 is correct:** The **Free Movement Regime (FMR)** was a unique arrangement that allowed tribes living within 16 km of the border on either side to cross without a visa.

However, due to security concerns, the Union Home Ministry announced the **scrapping of the FMR in February 2024.**

- **Statement 3 is correct:** The **National Investigation Agency (NIA)** is actively investigating cases involving foreign nationals and the illegal importation/use of **drones** by ethnically armed groups (EAGs) across the Myanmar border.
- **Statement 4 is correct:** The **Assam Rifles** is the oldest paramilitary force in India and is the designated "**Border Guarding Force**" specifically for the India–Myanmar border.

Scan to know more about our courses...



IAS 2-Year GS PCM



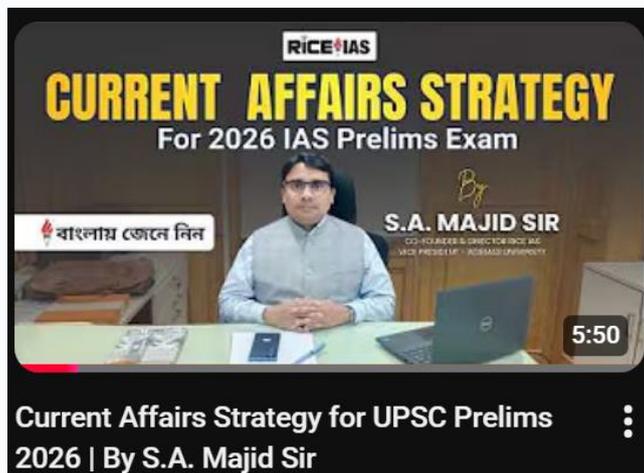
IAS 10-Month GS PCM



Degree + IAS



Prelims Test Series



[Click here to watch this video](#)