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Weekly EXPECTED **CURRENT** **AFFAIRS**

for

IAS EXAMINATION



From

29th Jun *to* **04th July 2026**

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1.1. STATE FOOD SAFETY INDEX & INDIA'S FOOD SAFETY ARCHITECTURE

Context

- Recent reports of food poisoning events—such as those in Indore (Madhya Pradesh) and Bhiwandi (Maharashtra)—alongside findings from the latest **Accidental Deaths and Suicides in India (ADSI) report**, have brought the implementation of the **Food Safety and Standards (FSS) Act** under scrutiny.
- Data highlights a crucial structural correlation: states reporting high numbers of food poisoning cases and casualties simultaneously register low to moderate scores on the central **State Food Safety Index (SFSI)**.



About the State Food Safety Index (SFSI)

- The State Food Safety Index is an annual assessment released by the **Food Safety and Standards Authority of India (FSSAI)** to evaluate the performance of States and Union Territories across India's food safety ecosystem.
- The Five Key Parameters of SFSI:**
 - Human Resources and Institutional Data:** Measures the availability of regulatory staff (like Food Safety Officers) and institutional mechanisms.
 - Compliance:** Evaluates the licensing, registration, and regular inspections of Food Business Operators (FBOs).
 - Food Testing Infrastructure and Surveillance:** Tracks the availability of laboratories, mobile food testing labs, and overall sample testing efficiency.
 - Training and Capacity Building:** Assesses training programs conducted for regulatory staff and food handlers.
 - Consumer Empowerment:** Focuses on consumer awareness initiatives like *Eat Right India*, food fortification, and grievance redressal mechanisms.
- Key Trend Alert:** Data shows that nearly **three-fourths of all Indian States and UTs** scored less than 50 out of the maximum 100 points on the SFSI. States like Jharkhand (26.5) and Uttar Pradesh (44.25) reflect this lower threshold, which directly aligns with higher mortality/morbidity rates from foodborne illnesses.

Institutional Framework & Enforcement Mechanisms

- FSSAI vs. State Authorities:** While the FSSAI (a statutory body under the Ministry of Health & Family Welfare) ensures overall coordination, policy framework, and standards setting, the **State Food Safety Authorities** are primarily responsible for **field-level enforcement and inspections**.

- **Regulatory Deficit:** Field enforcement is severely restricted by high vacancy rates. FSSAI's officer vacancies have scaled from roughly 30% to nearly 40% over the last five years, and as of late FY 2025-26, only 2,997 of the 4,208 sanctioned Food Safety Officer (FSO) positions across States/UTs are filled.
- **Risk-Based Inspections:** Under the FSS Act, periodic inspections and analysis of food samples from registered Food Business Operators (FBOs) are mandatory. A recent amendment to the Act has transitioned food safety inspection frequencies to a **dynamic risk-based assessment** of FBOs based on their establishment type, past compliance records, and other risk indices.

Global and National Burden of Foodborne Diseases

- **Global Burden (WHO Estimates):** Unsafe food causes approximately 866 million illnesses and 1.5 million deaths globally on an annual basis. Furthermore, 57.1 million Disability-Adjusted Life Years (DALYs)—representing the years of potential life lost due to premature mortality and years productive life lost due to disability—were attributed to foodborne diseases, with **children under 5 years bearing 30% of this entire burden**.
 - **Disability-Adjusted Life Years (DALYs):** A DALY represents one lost year of healthy life due to disease, disability, or premature death. It is developed by the World Health Organization (WHO) and the World Bank under the **Global Burden of Disease (GBD) Study**.
- **India's Global Standing:** According to a country-wise analysis of "foodborne years of lives lost" per 100,000 persons, India ranks **15th globally**, placing it alongside several low-income African nations experiencing high health burdens from foodborne pathogens.

Q. With reference to the State Food Safety Index (SFSI) and India's food safety framework, consider the following statements:

1. The **State Food Safety Index (SFSI)** is released annually by the **Food Safety and Standards Authority of India (FSSAI)** to assess the food safety performance of States and Union Territories.
2. The **FSSAI** is a statutory body under the **Ministry of Health and Family Welfare** and is responsible for framing food safety standards, while State Food Safety Authorities primarily undertake field-level enforcement.
3. Under the Food Safety and Standards (FSS) Act, food safety inspections are now conducted using a **risk-based assessment** of Food Business Operators (FBOs).
4. A **Disability-Adjusted Life Year (DALY)** measures only the years of life lost due to premature mortality.

Select the correct answer using the code below:

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

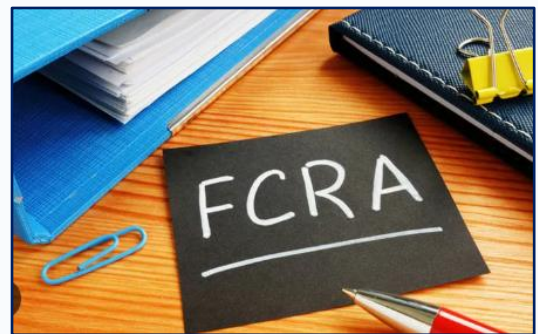
Answer: A

Detailed Explanation:

- **Statement 1 is correct:** The State Food Safety Index (SFSI) is an annual assessment released by the Food Safety and Standards Authority of India (FSSAI) to evaluate and measure the performance of States and UTs across various parameters of food safety.
- **Statement 2 is correct:** The FSSAI is the central statutory body responsible for setting overall regulations and coordination, whereas the field-level implementation and inspections are primarily the responsibility of the respective State Food Safety Authorities.
- **Statement 3 is correct:** A recent amendment to the FSS Act notified that the frequency of inspections will be based on a dynamic, risk-based assessment of Food Business Operators (FBOs) considering their establishment type, past records, and other factors.
- **Statement 4 is incorrect:** A Disability-Adjusted Life Year (DALY) does not measure only premature mortality. As a standard public health metric (and reflected in global health assessments), one DALY represents the loss of the equivalent of one year of full health. It is a composite metric that combines both the **years of life lost (YLL)** due to premature mortality and the **years lived with disability (YLD)** due to the illness or injury.

1.2. NEW FCRA 2.0 PORTAL & E-OCI CARD LAUNCHED**Context**

- Recently, the Union Home Minister **Amit Shah** launched the **FCRA 2.0 Portal** and the **e-OCI (Electronic Overseas Citizen of India) Card** to improve transparency, efficiency, and digital governance in foreign contribution regulation and OCI services.

**FCRA 2.0 Portal: Key Features**

The new portal replaces the earlier paper-based system with a fully digital platform.

- **Hosting:** The portal is hosted on MeghRaj (the National Government Cloud) to ensure data security and reduce the threat of data breaches.
- **Paperless Compliance:** Eliminates the physical submission of compliance documents.
- **Advanced Tools:** Integrated with Aadhaar-based authentication, e-Sign facilities, and Optical Character Recognition (OCR)-based document analysis for quick verification.

The e-Overseas Citizen of India (e-OCI) Card

The OCI scheme was introduced to grant a form of lifetime residency and professional freedom to Persons of Indian Origin (PIOs), short of dual citizenship.

- **Core Objective:** To streamline and digitize processes for more than **50 lakh (5 million) OCI cardholders**.
- **The "Age 20" Rule Modification:** Previously, OCI booklets had to be re-issued every time a cardholder obtained a new passport after turning 20 years old. Under the new e-OCI system, **this requirement is eliminated**. Cardholders no longer need a physical re-issuance of the booklet;

instead, their registration number becomes unique, and they can perform real-time verification and update passport details digitally online.

- **Security & Convenience:** The completely digital document eliminates the risk of loss or physical damage and allows real-time immigration verification at borders.

What is FCRA?

- The **Foreign Contribution (Regulation) Act (FCRA), 2010** regulates the acceptance and utilization of **foreign contributions** and foreign hospitality by individuals, associations, and NGOs.
- **Objectives**
- Ensure foreign funds do not affect:
 - National security
 - Sovereignty and integrity of India
 - Public interest
 - Democratic institutions
- **Administered by:** Ministry of Home Affairs (MHA)

Who Needs FCRA Registration?

Organizations receiving foreign donations such as:

- NGOs
- Trusts
- Societies
- Section 8 Companies
- Charitable and educational institutions

What is OCI?

- **OCI (Overseas Citizen of India)** is an immigration status granted to eligible Persons of Indian Origin (except citizens of Pakistan and Bangladesh, subject to provisions).

OCI Cardholders Get

- Multiple-entry lifelong visa
- Exemption from registration with FRRO
- Parity with NRIs in specified economic, educational and financial matters

OCI Cardholders Cannot

- Vote in elections
- Contest elections
- Hold constitutional offices
- Purchase agricultural or plantation land

Q. With reference to the newly launched FCRA 2.0 Portal, consider the following statements:

1. It is hosted on the MeghRaj (National Government Cloud).
2. It provides Aadhaar-based authentication and e-Sign facilities.
3. It uses Optical Character Recognition (OCR) for document verification.

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: D

Explanation:

- **Statement 1 is correct:** The newly launched FCRA 2.0 Portal is hosted on **MeghRaj** (the National Government Cloud) to ensure robust security and efficient digital infrastructure.
- **Statement 2 is correct:** To streamline processes and verify users securely, the portal integrates features like **Aadhaar-based authentication** and **e-Sign facilities**.
- **Statement 3 is correct:** The platform leverages technology by incorporating **Optical Character Recognition (OCR)-based document analysis** for quick and accurate verification of submitted files.

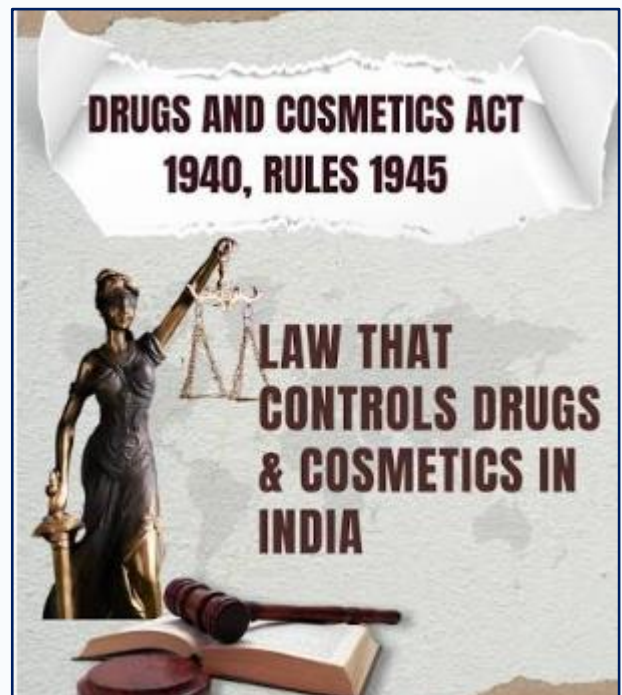
1.3. CENTRE AMENDS DRUG RULES TO ENSURE UNIFORM REGULATIONS

Context

- The Central Government has amended the **Drugs Rules, 1945** to strengthen the regulatory framework for advanced and emerging medical technologies.
- The amendment brings **stem cell-derived products, gene therapeutic products, and xenografts** under the purview of the **Central Licensing Approval Authority (CLAA)**.
- It also expands the scope of CLAA to regulate other emerging biological products.

Key Highlights

- **Uniform Regulation:** Establishes a centralized approval mechanism for advanced biological products across India.
- **Expanded CLAA Jurisdiction:** The CLAA will now regulate:
 - Stem cell-derived products
 - Gene therapeutic products
 - Xenografts



- Vaccines
- Large Volume Parenterals (LVPs)
- Recombinant DNA (r-DNA) based medicines
- **Objective:** Ensure quality, safety, efficacy, and uniform standards for emerging therapies.

What is the Central Licensing Approval Authority (CLAA)?

- Constituted under the **Drugs and Cosmetics Rules, 1945**.
- Functions under the **Central Drugs Standard Control Organisation (CDSCO)**.
- Grants centralized licences for specified categories of drugs requiring higher regulatory oversight.
- Ensures uniform standards across all States and Union Territories.

About Drugs and Cosmetics Act, 1940

- Primary legislation regulating the **import, manufacture, distribution, and sale of drugs and cosmetics** in India.
- Objective:
 - Ensure safety, efficacy, and quality of drugs.
 - Prevent manufacture and sale of substandard or adulterated medicines.
- Administered by:
 - **Ministry of Health and Family Welfare**
 - **Central Drugs Standard Control Organisation (CDSCO)**

Core Comparison: Act vs. Rules

Feature	Drugs and Cosmetics Act, 1940	Drugs and Cosmetics Rules, 1945
Nature of Law	Parent Legislation / Statutory Law enacted by the Parliament (Imperial Legislative Council pre-independence).	Subordinate / Delegated Legislation framed by the Executive (Ministry of Health and Family Welfare).
Primary Purpose	Defines broad legal mandates, offenses, penalties, jurisdictions, and overarching objectives.	Outlines the exact procedures, forms, fees, conditions, and technical standards required to implement the Act.
Amendment Process	Requires a formal amendment bill to be passed by Parliament .	Can be amended directly by the Executive/Ministry via gazette notifications (often in consultation with statutory boards).

Q. With reference to the Drugs and Cosmetics Act, 1940 and the Drugs and Cosmetics Rules, 1945, consider the following statements:

1. The Drugs and Cosmetics Act, 1940 is the parent legislation that provides the legal framework for regulating drugs and cosmetics in India.

2. The Drugs and Cosmetics Rules, 1945 can be amended by the Executive through gazette notifications.
3. The Central Licensing Approval Authority (CLAA) functions under the Ministry of Commerce and Industry.
4. The recent amendment to the Drugs Rules, 1945 brings stem cell-derived products, gene therapeutic products, and xenografts under the purview of the CLAA.

Which of the statements given above are correct?

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

Answer: A

Explanation:

- **Statement 1 is Correct:** The **Drugs and Cosmetics Act, 1940** is the parent legislation governing drugs and cosmetics in India.
- **Statement 2 is Correct:** The **Drugs and Cosmetics Rules, 1945** are subordinate legislation and can be amended by the Executive through gazette notifications.
- **Statement 3 is Incorrect:** The **Central Licensing Approval Authority (CLAA)** functions under the **Central Drugs Standard Control Organisation (CDSCO)**, under the **Ministry of Health and Family Welfare**, not the Ministry of Commerce and Industry.
- **Statement 4 is Correct:** The recent amendment brings **stem cell-derived products, gene therapeutic products, and xenografts** under the CLAA's regulatory framework.

1.4. CENTRE FIXES ₹300/DAY FLOOR WAGE UNDER REVISED MNREGA WAGE RATES

Context

- The Central Government has fixed a **national floor wage of ₹300 per day** under the **Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA)**. The revised wage rates will come into effect from **October 1**, ensuring that no State offers wages below the prescribed national minimum.



Key Highlights

- **The Floor Wage Rule:** The Central government has set a minimum baseline wage of ₹300 per day under the VB-G RAM G Act.
- **Impact on States:** 21 States and Union Territories that previously offered less than ₹300/day under MGNREGA have had their wages automatically bumped up to meet this baseline. States already paying above ₹300 saw comparatively smaller adjustments.
- **State-Wise Trends (Highs & Lows):**

- **Highest Wage Rate: Haryana** continues to hold the highest regular wage rate at **₹409 per day** (excluding a special rate of ₹450 applicable to certain gram panchayats in Sikkim).
- **Other Top States:** Goa (₹406) and Kerala (₹401) are the only other states offering daily wages above ₹400.
- **Lowest Increase: Telangana** recorded the absolute lowest increase of just ₹1 (a 0.33% rise from ₹307 to ₹308). Wages remained completely unchanged from former MGNREGA levels in the UT of Dadra and Nagar Haveli and Daman and Diu.

Background of Rural Employment and Development Policy in India

- India's wage employment initiatives progressed through multiple phases, beginning with early programmes such as the Rural Manpower Programme (1960s) and the Crash Scheme for Rural Employment (1971).
- 1980s–1990s: National Rural Employment Programme (NREP) and Rural Landless Employment Guarantee Programme (RLEGP) were later merged into the **Jawahar Rozgar Yojana (JRY)**.
- A major shift came with the Maharashtra Employment Guarantee Act of 1977, which introduced the concept of a statutory right to work.
- These experiences culminated in the enactment of the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) in 2005, providing a nationwide legal framework for rural employment generation.

MGNREGA Evolution and the Limits of Incremental Reform

- Enacted in 2005 to enhance livelihood security in rural areas.
- Guarantees 100 days of wage employment every financial year to every rural household willing to undertake **unskilled manual work**.

Rationale for a New Statutory Framework

- The need for reform is also rooted in broader socio-economic changes. MGNREGA was built in 2005, but rural India has transformed. Poverty levels declined from 27.1 per cent in 2011-12 to 5.3 per cent in 2022-23.
- The Viksit Bharat- G RAM G Act, 2025 responds to this context by modernising rural employment guarantees, strengthening accountability, and aligning employment creation with long term infrastructure and climate resilience goals.

About Viksit Bharat- G RAM G Act 2025

- Employment guarantee increased from 100 days to 125 days per rural household in a financial year.
- Introduces a national minimum wage floor of ₹300 per day, with states free to pay higher wages.
- Emphasises GIS-based planning, satellite mapping, and digital monitoring for project implementation.
- Overall implementation is overseen by the Ministry of Rural Development.

Funding Pattern between the two Schemes

Category	MGNREGA	VB-G RAM G
Labour wages	100% by Centre	60:40 ratio
Material costs	75:25 ratio	60:40 ratio
Administrative expenses	75:25 ratio	60:40 ratio
Number of guaranteed workdays	100	125
Exceptions for any States or Union Territories	None	90:10 ratio in total expenditure for NE States, Himachal Pradesh, Uttarakhand, and Jammu and Kashmir. Full expenditure to be borne by the Centre for UTs without legislatures

Q. With reference to the Viksit Bharat–Guarantee for Rozgar and Ajeevika Mission (Gramin) Act, 2025 (VB–G RAM G Act), consider the following statements:

1. It increases the guaranteed wage employment from 100 days to 125 days per rural household in a financial year.
2. It prescribes a national minimum wage floor of ₹300 per day, while allowing States to pay higher wages.
3. The overall implementation of the Act is overseen by the Ministry of Labour and Employment.
4. Under the Act, the total expenditure is shared in a 90:10 ratio between the Centre and States for all States.

Which of the statements given above is/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: A. 1 and 2 only

Explanation:

- **Statement 1 is Correct** – Employment guarantee has been increased from **100 to 125 days**.
- **Statement 2 is Correct** – The Act introduces a **₹300/day national floor wage**, while States may prescribe higher wages.
- **Statement 3 is Incorrect** – The Act is implemented by the **Ministry of Rural Development**, not the Ministry of Labour and Employment.
- **Statement 4 is Incorrect** – The **90:10 funding ratio** applies only to **North-Eastern States, Himachal Pradesh, Uttarakhand, and Jammu & Kashmir**, not to all States.

INTERNATIONAL RELATIONS

2.1. INDIAN ARMY CONTINGENT TO PARTICIPATE IN SEYCHELLES' 50TH NATIONAL DAY

Context

- An **Indian Army contingent** will participate in **Seychelles' 50th National Day celebrations**, marking the **Golden Jubilee of the island nation's independence**.
- The **Prime Minister of India** will attend the event as the **Guest of Honour**, highlighting strong India–Seychelles ties.



Key Highlights

- A **32-member Indian Army contingent** from the **Assam Regiment** will participate in the ceremonial parade.
- An **Indian Navy marching contingent** and **warship** will also take part.
- The visit aims to strengthen **defence cooperation**, **maritime security**, and **people-to-people ties** in the **Indian Ocean Region (IOR)**.

India–Seychelles Relations

- **Strategic Importance:** Seychelles is a key maritime partner in the **Western Indian Ocean**.
- **Areas of Cooperation:**
 - Maritime security
 - Defence training and joint exercises
 - Capacity building
 - Blue Economy
 - Disaster management
- India supports Seychelles through **patrol vessels, aircraft, coastal surveillance radar systems, and defence assistance**.

About Seychelles

- **Location:** Western Indian Ocean, northeast of Madagascar.
- **Capital:** Victoria.
- **Archipelago:** 115 islands.
- **Neighbouring Water Body:** Indian Ocean.
- **Member of:** Indian Ocean Rim Association (IORA), African Union (AU), Commonwealth.



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

1. It is an archipelago in the Western Indian Ocean.
2. It lies northeast of Madagascar.
3. Its capital is Victoria.

Which of the statements given above is/are correct?

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

The correct answer is **D. 1, 2 and 3.**

Here is a quick breakdown of why all the statements are correct:

- **Statement 1 is correct:** Seychelles is an island nation consisting of an archipelago of 115 islands located in the Western Indian Ocean.
- **Statement 2 is correct:** Geographically, it lies about 1,500 kilometers east of mainland Southeast Africa and sits directly **northeast of Madagascar**.
- **Statement 3 is correct:** **Victoria** is the capital and largest city of Seychelles, located on the main island of Mahé.

2.2. CAN NEUTRAL SHIPS BE LAWFULLY ATTACKED?

Context

- Recent attacks on neutral merchant ships carrying Indian seafarers during the U.S.–Iran conflict have revived debates on **UNCLOS, International Humanitarian Law, maritime neutrality, naval blockades, and protection of civilian shipping.**

Two primary legal frameworks governing naval warfare:

- **International Humanitarian Law (IHL) / Law of Naval Warfare**
- **United Nations Convention on the Law of the Sea (UNCLOS), UNCLOS is often called the "Constitution of the Oceans."**



Important Maritime Zones (UNCLOS)

- **Territorial Sea (Up to 12 NM):** Sovereign territory extending to the airspace and seabed, subject only to the foreign right of innocent passage.
- **Contiguous Zone (Up to 24 NM):** A buffer zone where the coastal state lacks sovereignty but can enforce customs, fiscal, immigration, and sanitary laws.
- **Exclusive Economic Zone (Up to 200 NM):** Area where the state has exclusive rights to exploit economic resources, while other nations retain navigation and overflight freedoms.
- **High Seas & The Area (Beyond 200 NM):** Global commons open to all nations for peaceful use, with deep seabed minerals regulated as the common heritage of mankind.

International Humanitarian Law (IHL)

- **Codified primarily in 1949 Geneva Conventions**
- Governs **conduct of war (Jus in Bello)**, not legality of war.

Four Core Principles of IHL

- Distinction
- Proportionality
- Military Necessity
- Precaution

Jus ad Bellum vs Jus in Bello

- **Jus ad Bellum:** Legality of using force (UN Charter)
- **Jus in Bello:** Conduct during armed conflict (IHL)

Protection of Neutral Merchant Ships

- Neutral merchant vessels are **generally protected** from attack.
- Civilian objects like:
 - Oil tankers
 - Container ships
 - Food carriers
 - Fertilizer ships
 - Submarine cables
 - Pipelines are protected unless they become military objectives.

Transit Passage

- Applies through **international straits**.
- Continues **even during armed conflict**.
- Codified under **UNCLOS Part III (Articles 37–44)**.

When Can Neutral Merchant Ships Be Attacked?

According to the **San Remo Manual (1994)**, if they:

- Carry **contraband**
- Violate a lawful **naval blockade**
- Refuse visit/search after warning
- Make an **effective contribution to enemy military action**

UN Charter Provisions

- **Article 2(4):** Prohibits the use of force against another state's territorial integrity or political independence.
- **Article 42:** UN Security Council may authorize a blockade.
- **Article 51:** Recognizes the inherent right of self-defence.

Q. Under the law of naval warfare, which of the following may cause a neutral merchant vessel to lose its protected status?

- I. Carrying contraband.
- II. Violating a lawful blockade.
- III. Refusing visit and search after prior warning.
- IV. Making an effective contribution to enemy military operations.

Select the correct answer using the code below:

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

Answer: (c)

Explanation:

Under customary international law and **Paragraph 67 of the San Remo Manual on International Law Applicable to Armed Conflicts at Sea**, a merchant vessel flying the flag of a neutral state loses its protected status and may be lawfully attacked if it is reasonably believed to be engaged in any of the following activities (after appropriate warnings have been given):

1. **Carrying contraband:** Transporting goods destined for enemy-controlled territory that have military utility or support the enemy's military effort.
2. **Breaching or violating a blockade:** Attempting to enter or leave an enemy port or coast under a declared, effective, and impartial naval blockade.
3. **Resisting visit and search:** Intentionally and clearly refusing to stop, or resisting visit, search, or capture by a belligerent warship after a prior warning.
4. **Contributing to enemy operations:** Otherwise making an effective contribution to the enemy's military action (e.g., relaying tactical intelligence, sailing under enemy convoy, or laying mines).

2.3. HUMAN RIGHTS CRISES DEEPEN IN SUDAN AND MYANMAR

Context

- **Amnesty International** has alleged that the **Rapid Support Forces (RSF)** committed **ethnic cleansing and crimes against humanity** during attacks on **El-Fasher** in Sudan between **2024 and 2025**.
- A leading conflict monitor has reported that **over 100,000 people have been killed** in **Myanmar** since the **2021 military coup**, highlighting the worsening humanitarian crisis.



Sudan Crisis: Key Highlights

- **Amnesty International** alleged that the **Rapid Support Forces (RSF)** committed **ethnic cleansing and crimes against humanity**.

- The alleged atrocities occurred during attacks on **El-Fasher**, the capital of **North Darfur State**.
- The attacks reportedly targeted settlements inhabited by the **Zaghawa ethnic community**.
- Sudan has been witnessing an armed conflict since **April 2023** between:
 - **Sudanese Armed Forces (SAF)**
 - **Rapid Support Forces (RSF)**
- The conflict has triggered one of the world's largest humanitarian crises.

Myanmar Crisis: Key Highlights

- A conflict monitoring group estimates that **over 100,000 people** have been killed since the **2021 military coup**.
- The military seized power on **1 February 2021**, overthrowing the elected civilian government.
- The coup triggered nationwide protests, armed resistance, and a prolonged civil conflict.
- Violence has displaced millions and caused widespread humanitarian suffering.

Sudan: Important key Facts

- **Capital:** Khartoum
- **Region:** Northeast Africa
- **Borders:** Egypt, Libya, Chad, Central African Republic, South Sudan, Ethiopia, Eritrea
- **Sea Border:** Red Sea
- **Important Rivers:** White Nile and Blue Nile meet at **Khartoum**.
- **Deserts:** The Libyan Desert and the Nubian Desert dominate the northern landscapes.
- **Mountains:** Sudan's highest peak is the **Deriba Caldera**. It is located in the **Marrah Mountains** in the Darfur region of western Sudan.
- **Gezira Plain:** The Gezira Plain is a massive, flat farming region in Sudan, located south of Khartoum between the Blue Nile and White Nile rivers.
- **Important Cities in News:** El-Fasher, Wad Madani, Kadugli & Dilling, Babanusa, El Geneina

Myanmar: Important Key Facts

- **Capital:** Naypyidaw
- **Largest City:** Yangon
- **Borders:** India, Bangladesh, China, Laos, Thailand
- **Water Bodies:** Bay of Bengal and Andaman Sea
- **Major Rivers:** Irrawaddy (Ayeyarwady), Chindwin, Sittang and Salween
- **Major mountain ranges:** Rakhine Mountains, Shan Plateau, Dawna Range, Tenasserim Mountains etc.
- **Sittwe Port & The Kaladan Project:** Located on the western coast in Rakhine State, the strategic city of Sittwe hosts the India-developed Sittwe Port. This port is the anchor of the Kaladan Multi-Modal Transit Transport Project (KMMTTP), designed to connect Kolkata port directly to Mizoram via Myanmar, bypassing the vulnerable Siliguri Corridor ("Chicken's Neck").

- **Other Important Places in News:** Mandalay (major cultural city), Rakhine State–Maungdaw (Rohingya crisis and Bangladesh border), Kachin State–Myitsone (China-backed dam project), and Shan State (ethnic conflict and drug trafficking).

Q. Consider the following pairs:

	Area of conflict mentioned in news		Country where it is located
1.	Donbas	:	Syria
2.	Kachin	:	Ethiopia
3.	Tigray	:	North Yemen

How many of the above pairs are correctly matched?

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

Answer: D

Explanation:

Explanation of the Pairs:

- **1. Donbas — Incorrectly Matched**
 - **Correct Location: Ukraine**
 - **Context:** The Donbas region (comprising Donetsk and Luhansk oblasts) is an industrial region in eastern Ukraine that has been a major zone of conflict since 2014, escalating significantly with the 2022 Russian invasion.
- **2. Kachin — Incorrectly Matched**
 - **Correct Location: Myanmar**
 - **Context:** Kachin State is the northernmost state of Myanmar, bordered by China and India. It is a long-standing conflict zone involving the Kachin Independence Army (KIA) fighting against the Myanmar military (*Tatmadaw*).
- **3. Tigray — Incorrectly Matched**
 - **Correct Location: Ethiopia**
 - **Context:** The Tigray Region is the northernmost regional state of Ethiopia. It was the center of a severe civil war between the Ethiopian federal government and the Tigray People's Liberation Front (TPLF) from 2020 to 2022, with lingering humanitarian impacts.

2.4. INDIA–BANGLADESH TEESTA RIVER PROJECT

Context

- India has stated that it will consider "**all related developments**" while formulating its approach to the **Teesta River Comprehensive Management and Restoration Project (TRCMRP)** in Bangladesh.



- The statement comes after **Bangladesh discussed the Teesta project with China** during Prime Minister **Muhammad Yunus'** recent visit, making the issue significant from the perspectives of **India–Bangladesh relations, transboundary water sharing, and regional geopolitics.**

About the Teesta River

- **Origin:** Rises from the **Pahunri glacier** (also called Teesta Kangse) in the Eastern Himalayas, in the **Tso Lhamo lake** region of North Sikkim.
- **Course:** Flows through **Sikkim** and **West Bengal** (India) before entering **Bangladesh**, where it joins the **Brahmaputra (Jamuna)** river.
- **Basin states:** Sikkim and West Bengal in India; Rangpur division in Bangladesh.
- **Right-bank tributary** of the Brahmaputra — a key distinction often tested (many assume it's a Ganga tributary; it is not).
- Known as **Trishna/Tri-Srota** in some historical references — associated with three streams.

Teesta River Water Sharing Dispute

- The Teesta is one of the **54 transboundary rivers** shared between India and Bangladesh.
- Water sharing remains unresolved due to differing requirements of:
 - **West Bengal**
 - **Government of India**
 - **Bangladesh**
- A proposed **2011 Teesta Water Sharing Agreement** could not be signed due to objections from the **West Bengal Government.**
- The river is crucial for irrigation in:
 - North Bengal
 - Northwestern Bangladesh

TRCMRP (Teesta River Comprehensive Management and Restoration Project)

- A Bangladesh-led master plan for **dredging, embankment construction, and river management** of the Teesta to address flooding, erosion, and low dry-season flow.
- Originally, **China** had shown interest in funding and implementing this project (part of its outreach in South Asia/BRI-adjacent engagement).
- India has separately offered to prepare a **feasibility report** for the same project, creating a competitive dynamic between India and China over Bangladesh's river management infrastructure.

Q. Consider the following statements regarding the Teesta River:

1. It originates from **Tso Lhamo Lake** in Sikkim.
2. It is a tributary of the **Brahmaputra River.**
3. The **2011 Teesta Water Sharing Agreement** between India and Bangladesh has been formally implemented.

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:

- **Statement 1 is correct:** The Teesta River is a perennial, glacier-fed Himalayan river that originates at an elevation of approximately 5,280 meters from **Tso Lhamo (Chho Lhamo) Lake** and the associated Pahunri/Khangse glaciers in North Sikkim.
- **Statement 2 is correct:** After flowing through Sikkim and West Bengal, the Teesta enters Bangladesh, where it ultimately joins the **Brahmaputra River** (known locally as the *Jamuna*) as a major right-bank tributary.
- **Statement 3 is incorrect:** The 2011 agreement has **not** been formally implemented. Since 2011, India and Bangladesh have remained in a diplomatic deadlock regarding a comprehensive water-sharing agreement due to regional domestic and political constraints.

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3.1. UNION CABINET APPROVES ADDITIONAL ₹30,000 CRORE INVESTMENT IN NIIF

Context

- Recently, the **Union Cabinet** approved an **additional investment of ₹30,000 crore** in the **National Investment and Infrastructure Fund (NIIF)** to establish a **second fund (NIIF II)**.
- The new fund will focus on financing **core infrastructure projects**, with the objective of mobilizing larger domestic and foreign investments.
- This approval raises the Government of India's total capital commitment to **₹60,000 crore** in NIIF.



What is the National Investment and Infrastructure Fund (NIIF)?

- It is India's Sovereign Anchored Fund (established in 2015), professionally run and managed by National Investment and Infrastructure Fund Limited (NIIFL).
- Nature:** Government-backed investment platform (Alternative Investment Fund).
- Administrative Ministry:** Ministry of Finance.
- Setup:** NIIF was registered as a Category II Alternate Investment Funds (AIF) under SEBI Regulations.
- Objective:** Mobilize long-term capital for infrastructure development in India.
- Ownership Structure:** Government of India holds 49%; institutional investors hold 51%.
- Capital Raised from:** Sovereign Wealth Funds, Pension Funds, Multilateral Development, and leading Domestic Financial Institutions.

Why was NIIF created?

NIIF was established to:

- Bridge India's infrastructure financing gap.
- Attract domestic and global institutional investors.
- Reduce dependence on government budgetary resources.
- Support long-term economic growth through infrastructure investment.

Cabinet Approval: Key Highlights

- Additional Government investment: **₹30,000 crore**
- Total Government commitment increases to **₹60,000 crore**
- Creation of **NIIF II (Second Fund)**
- Fund expected to mobilize nearly **₹3 lakh crore** through public and private investments.
- Designed to attract larger investments from sovereign wealth funds, pension funds, insurance companies and global investors.

Priority Sectors

The new fund will invest in:

- Transport Infrastructure
- Energy
- Digital Infrastructure
- Urban Infrastructure
- Water & Sanitation
- E-mobility
- Logistics

Expected Benefits

- Accelerates infrastructure creation.
- Enhances private sector participation.
- Generates employment opportunities.
- Improves India's logistics efficiency.
- Supports sustainable economic growth.
- Strengthens public-private investment partnerships.

Funding Model

- Government acts as the **anchor investor**.
- Additional capital is mobilized from:
 - Sovereign Wealth Funds
 - Pension Funds
 - Insurance Companies
 - Multilateral Development Banks
 - Domestic & Global Institutional Investors

Q. Consider the following statements regarding the National Investment and Infrastructure Fund (NIIF):

1. NIIF was established in 2015 to finance infrastructure projects in India.
2. The Government of India acts as the anchor investor in NIIF.
3. NIIF finances infrastructure projects exclusively through budgetary allocations of the Central Government.

Which of the statements given above is/are correct?

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

Answer: (b)

Explanation

- **Statement 1:** Correct. NIIF was established in **2015** to mobilize long-term capital for infrastructure projects.
- **Statement 2:** Correct. The **Government of India is the anchor investor** in NIIF.
- **Statement 3:** Incorrect. NIIF mobilizes funds from **sovereign wealth funds, pension funds, insurance companies, multilateral institutions, and other domestic and global investors**, not exclusively through government budgetary allocations.

3.2. RBI'S UPDATED RULES ON SCAM COMPENSATION

Context

- Recently, The **Reserve Bank of India (RBI)** has issued fresh amendments to its 2017 circular on **"Limiting Liability of Customers in Unauthorised Electronic Banking Transactions"**.
- These new guidelines expand the safety net to protect bank customers from financial losses incurred due to sophisticated scam transactions and cyberattacks. Initially launched as a **one-year pilot project**, these rules will become effective on **January 1, 2027**.



Core Definition: Fraudulent Electronic Banking Transactions (EBTs)

The amendments introduce a precise classification of transactions eligible for liability protection:

- **Definition:** Transactions executed by a third party using credentials obtained from the customer via fraudulent means, or executed by the customer under **coercion/duress** from a third party (e.g., "digital arrests").
- **Inclusions:** It covers unauthorized EBTs occurring due to negligence by the bank or a third-party security breach.
- **Exclusions from Compensation (Negligence Criteria):**
 - Customers who **ignore fraud signal warnings** (such as warning screens on a UPI PIN interface) will *not* be eligible.
 - Failure to update/register the latest phone number or email address with the bank is legally deemed customer negligence, as it prevents the bank from delivering real-time fraud alerts.

Key Timelines for Reporting & Implementation

- **Reporting Window for Third-Party Hacks:** The deadline for a customer to report a loss from a third-party breach has been extended to **5 calendar days** (up from the previous rule of 3 working days). Timely reporting ensures the customer bears zero liability.
- **Implementation Deadline:** Banks have been granted an extension to roll out the framework, moving the effective enforcement date to **January 1, 2027** (shifted from the initial July 1 draft proposal).

- **Complaint Settlement Window:** The timeline given to institutions to resolve and settle disputes has been increased to **45–60 days** (with the upper 60-day limit strictly applying to international transactions).

Compensation Structure and Cost-Sharing Model

The guidelines establish a specific mathematical threshold and multi-party cost-sharing mechanism for reimbursement:

- **Cap on Scams Covered:** The compensation framework applies only to scam losses **up to ₹50,000**. Scams exceeding ₹50,000 are currently excluded from this specific framework.
- **Reimbursement Limits:** Eligible victims can claim **85% of the lost amount**, capped at a lifetime maximum of **₹25,000** (applicable **only once** in a customer's lifetime).
 - *Note:* Any loss between ₹29,412 and ₹50,000 yields a flat compensation of ₹25,000.
- **Mandatory Reporting:** To qualify for this payout, the customer **must report the fraud to the national cybercrime helpline (1930)** within five days.

The Cost-Sharing Breakdown:

The total disbursed compensation amount is co-funded by three distinct entities:

Contributing Entity	Share of Compensation
Reserve Bank of India (RBI)	Roughly 3/4 (75%) of the payout amount.
Customer's Bank	Half of the remaining 1/4 balance (approx. 12.5%).
Beneficiary's Bank	Half of the remaining 1/4 balance (approx. 12.5%).

Important Legal & Institutional Touchpoints

- **Indian Contract Act:** Civil society think tanks (like Dvara Research) point out that under the *Indian Contract Act*, contracts signed under information asymmetry, fraudulent pretexts, or external influence are legally **voidable**.
- **Bank Discretion:** Banks retain the autonomous authority to completely waive customer liability and reverse transactions even if customer negligence is proven.

Q. The term Fraudulent Electronic Banking Transactions (EBTs) introduced by RBI includes:

1. Transactions executed by a third party using credentials obtained through fraud.
2. Transactions executed by the customer under coercion or duress.
3. Transactions arising due to bank negligence.
4. Transactions voluntarily made by customers after ignoring fraud warnings.

Select the correct answer using the code below:

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

Correct answer: B

Explanation:

- **Transactions executed by a third party using credentials obtained through fraud: Correct.** The RBI explicitly defines EBTs as transactions "executed by a third-party using the credentials obtained from the customer through fraudulent means...".
- **Transactions executed by the customer under coercion or duress: Correct.** The definition includes transactions executed by the customer "by granting approval under coercion or duress from the third-party".
- **Transactions arising due to bank negligence: Correct.** The definition explicitly covers an EBT "occurring on account of negligence by a bank and/or a third-party breach".
- **Transactions voluntarily made by customers after ignoring fraud warnings: Incorrect.** The text specifies that "customers who ignore fraud signal warnings... would not be eligible for any compensation", meaning these are excluded from the protective scope of the compensation framework due to customer negligence.

3.3. INCLUSIVE & INTEGRATED URBAN CLIMATE ACTION

Context

Traditional urban development heavily prioritizes physical infrastructure and technology-driven solutions. However, true urban resilience is tested by how its systems support the health, dignity, and well-being of the essential workforce that sustains city life. As climate change accelerates, urban governance must transition into a socio-ecological model that addresses systemic human vulnerability.



Institutional Gaps in Current Urban Systems

- **Policy and Departmental Silos:** Public health, labor welfare, urban housing, and climate adaptation function as parallel, uncoordinated tracks rather than a single, integrated safety net for workers.
- **Fragmented Institutional Mandate:** The presence of unelected state parastatals (e.g., water or development authorities) strips Urban Local Bodies (ULBs) of unified command over city services.
- **Incomplete Fiscal Devolution:** Despite the 74th Constitutional Amendment, state governments hold back revenue powers, keeping municipalities financially dependent and under-resourced for local climate emergencies.
- **Delivery Deficits in Social Safety Nets:** Complicated paperwork, rigid documentation, and lack of ground-level awareness block contract and informal laborers from accessing existing health and welfare benefits.
- **Severe Climate and Human Data Gaps:** Municipalities lack localized, empirical data tracking micro-level heat exposure, out-of-pocket health costs, and climate-induced damages within low-income grids.

Why Urban India Needs an Integrated Approach

- **The "Double Burden" of the Urban Poor:** Marginalized frontline workers (e.g., sanitation workers, waste collectors, street vendors) experience climate vulnerabilities as both an **occupational hazard** (prolonged outdoor exposure to heat stress, dehydration, vector diseases) and a **residential crisis** (living in overcrowded, poorly ventilated informal settlements with inadequate drainage).
- **Amplification of Urban Heat Islands (UHI):** Concrete-heavy urban spaces trap heat, elevating nighttime temperatures by 3–5°C relative to surrounding areas. This uneven distribution of environmental risk hit low-income blocks without cooling access the hardest.
- **Rapid, Unplanned Spatial Agglomeration:** Unregulated structural growth converts natural water buffers (wetlands, floodplains) into real estate, leading to frequent urban flash floods (e.g., Bengaluru, Chennai) that wipe out the assets of marginalized communities.

Government Scheme

- **National Mission on Sustainable Habitat (NMSH) 2.0:** One of the eight core missions under the National Action Plan on Climate Change (NAPCC) that mandates climate risk-informed urban planning, energy-efficient building codes, and low-carbon urban growth.
- **ClimateSmart Cities Assessment Framework (CSCAF):** A first-of-its-kind self-assessment roadmap tracking cities across 28 indicators (like green cover, water, and waste management) to integrate climate resilience into municipal budgets and policies.
- **AMRUT 2.0 (Atal Mission for Rejuvenation and Urban Transformation):** Focuses on creating climate-resilient cities through circular water economies, 100% sewage coverage, flood-mitigating stormwater drains, and the development of elderly-friendly green spaces.
- **Pradhan Mantri Awas Yojana - Urban (PMAY-U):** Integrates sustainable construction practices like thermal-comfort designs and passive cooling to protect informal settlement residents from rising extreme temperatures.

Way Forward

A. Labour & Occupational Sensitization

- **Tailored Heat Action Plans (HAPs):** Formalize occupational guidelines for municipal and third-party contract workers. Implement altered summer shift timings, set up shaded rest zones across transit routes, and mandate hydration infrastructure.
- **Routine Epidemiological Tracking:** Establish early clinical tracking systems to identify symptoms of chronic heat exhaustion and kidney stress in outdoor workforces.

B. Transforming Built Infrastructure & Informal Settlements

- **Localized Environmental Retrofitting:** Channel capital toward targeted upgrades in slums—such as passive cooling designs, white/cool roofs, decentralized drinking water networks, and robust storm-water drainage.
- **Nature-Based Solutions (NbS):** Expand green-blue infrastructure (e.g., pocket forests, restoring urban wetlands like the East Kolkata Wetlands) to naturally buffer micro-climates and curb UHI effects.

C. Strengthening the Social & Public Health Safety Net

- **Climate-Ready Primary Healthcare:** Train Urban Primary Health Centres (UPHCs) to diagnose and treat climate-sensitive ailments (heat strokes, vector-borne surges) proactively.
- **Convergent Social Portals:** Eliminate bureaucratic bottlenecks by creating unified, documentation-light social security registries that link migrant/informal workers to medical insurance and climate disaster relief funds.

D. Data-Driven & Fiscal Decentralization

- **Urban Climate Vulnerability Assessment (UCVA):** Map high-resolution socioeconomic grids to identify which communities suffer from the highest environmental exposures.
- **Empowering Urban Local Bodies (ULBs):** Devote real financial autonomy to ULBs under the **74th Constitutional Amendment**, allowing cities to issue green bonds or municipal bonds tailored for localized adaptation needs.

Conclusion

Cities are fundamentally defined by the socio-ecological systems that enable their people to live, work, and stay healthy—not just by their concrete, steel, and digital infrastructure. For states like Karnataka to chart a sustainable urban future, climate adaptation must pivot from purely protecting physical assets to actively reducing human vulnerability at the margins.

3.4. DECODING INDIA'S REMITTANCE LANDSCAPE: RESILIENCE AMIDST GLOBAL VOLATILITY**Context**

- Despite the ongoing West Asia crisis, India's net remittance inflows recorded a **70%** year-on-year surge in April 2026, reaching **\$16 billion**.
- The Department of Economic Affairs' Monthly Economic Review highlights that remittances remain an insulated, acyclical, and stable component of external financing, demonstrating resilience against geopolitical volatilities.

**Remittances in BoP Accounting**

- **Definition:** Cross-border money transfers made by migrant workers to their home countries. India consistently remains the world's largest recipient.
- **BoP Classification:** Remittances form a critical part of the **Secondary Income Account** and are recorded under the **Current Account** as **Private Transfers**.
- **Components of Private Transfers:**
 - **Workers' Remittances:** Constitute over two-thirds of total private transfers; represent genuine earned income flows.
 - **Broader Inflows:** Includes withdrawals from non-resident deposits, personal gifts, charitable donations, and gold/silver brought via passenger baggage.

- **Economic Nature:** Unlike volatile portfolio flows or external commercial borrowings, remittances are **non-debt-creating** and **counter-cyclical** (often increasing during home-country economic crises).

Top Sources of Remittance for India

- **Top 3 Contributors:** **United States (~28%), UAE (~19%),** and the **UK (~11%).**
- **Other Major Sources:** Saudi Arabia, Singapore, and Canada.
- **Structural Shift:** Advanced economies now account for **over 51%** of total inflows, officially overtaking the Gulf Cooperation Council (GCC) nations.
- **Key Driver:** A demographic transition towards high-skilled Indian migration in STEM, finance, and healthcare sectors.

Recent Trends (FY 2025-26)

- **Historic Milestone:** Total inflows crossed the **\$100 billion** threshold for the first time, reaching **\$110.47 billion** (a **26%** annual increase).
- **Quarterly Growth:** The January-March 2026 quarter witnessed a **34%** year-on-year growth, totalling **\$31.07 billion**—the highest level recorded in 13 years.

Drivers of Record Inflows

- **Precautionary Transfers:** Geopolitical crises in West Asia historically prompt migrant workers in conflict-affected regions to remit larger, "precautionary" sums to secure family assets against uncertainty.
- **Currency Depreciation Arbitrage:** The sharp depreciation of the Indian Rupee during 2025-26 incentivized larger transfers, as workers received a higher yield of domestic currency for every unit of foreign currency remitted.

Macroeconomic Significance

- **Current Account Cushion:** Remittances act as a vital secondary income buffer, substantially offsetting India's structural merchandise trade deficit, which remains elevated due to global crude oil prices.
- **Currency Stability:** By providing a non-debt-creating inflow, remittances offer critical support to the Indian Rupee, helping stabilize the exchange rate during periods of net capital outflows.

Q. With reference to the macroeconomic dynamics of remittances in India, consider the following statements:

- Remittances are classified under the capital account of the Balance of Payments as they serve as a stable foreign exchange buffer.
- They exhibit a counter-cyclical economic nature, often increasing during economic crises or periods of geopolitical uncertainty.
- The Gulf Cooperation Council (GCC) nations remain the largest macroeconomic bloc contributing to India's inward remittances.

Which of the statements given above is/are correct?

- I and II only
- II only
- II and III only

(d) I, II, and III

Answer: B

Explanation:

Statement I is incorrect: In India's Balance of Payments (BoP) accounting, remittances are recorded under the **Current Account** as **Private Transfers** (within the **Secondary Income Account**), not the capital account. They are critical, **non-debt-creating** financial inflows.

Statement II is correct: Remittances are inherently **counter-cyclical**. Unlike volatile foreign portfolio flows, remittance transfers **frequently increase during domestic economic crises** or geopolitical volatility as migrant workers remit larger precautionary sums to support their families.

Statement III is incorrect: A structural geographical shift has occurred in India's remittance sources.

Advanced economies (such as the US, UK, and Canada) now account for **over 51% of total inflows**, officially **overtaking the Gulf Cooperation Council (GCC)** nations. This is driven by a demographic transition toward high-skilled Indian migration in sectors like STEM, finance, and healthcare.

3.5. ISM 2.0 AND INDIA'S GLOBAL CHIP AMBITIONS

Context

- The Expenditure Finance Committee under the Ministry of Finance has approved an enhanced budgetary outlay of ₹1.25 lakh crore for the India Semiconductor Mission (ISM) 2.0. This major financial upgrade from the ₹76,000 crore allocated during ISM 1.0 aims to build a resilient, end-to-end indigenous chip manufacturing ecosystem and integrate India into the global semiconductor value chain.



Core Contours of ISM 2.0

- Strategic Objective:** Transition India from an import-dependent tech economy to a competitive global player under the *Make in India–Make for the World* framework.
- Expanded Scope (Beyond Fabs):** Unlike ISM 1.0, which focused primarily on fabrication plants, ISM 2.0 mandates the domestic production of essential upstream components, including **semiconductor equipment, specialty chemicals, and industrial gases**.
- Full-Stack IP Development:** Emphasizes the creation of indigenous semiconductor Intellectual Property (IP) to ensure secure, globally competitive chip solutions.
- Immediate Financial Provision:** A dedicated budgetary allocation of **₹1,000 crore for FY 2026–27** has been earmarked to initiate applied R&D, industry-led training, and supply chain resilience measures.

Key Macro Targets

- Self-Sufficiency Timeline:** Achieve **70–75% self-reliance** in fulfilling domestic semiconductor demand by **2029**.
- Advanced Node Fabrication:** Establish indigenous manufacturing capabilities for cutting-edge **3 nm and 2 nm chips by 2035**.

- **Market Scale:** Expand the domestic semiconductor market valuation to **\$100–110 billion by 2030** (scaling up from \$38 billion in 2023).

Allied Government Initiatives

- **Modified Programme for Semiconductor Ecosystem:** An overarching policy framework with a financial outlay of **₹8,000 crore (FY 2026–27)** to expand fabrication and advanced packaging capacities.
- **Design Linked Incentive (DLI) Scheme:** Provides direct fiscal support exclusively to **fabless companies** and startups engaged in semiconductor IP development and design.
- **Digital India RISC-V (DIR-V) Programme:** A strategic initiative to promote the development of **open-source microprocessors**, eliminating reliance on restrictive foreign licensing costs.
- **Chips to Startup (C2S) Programme:** Aims to generate high-quality design manpower by providing universities and startups with access to advanced **Electronic Design Automation (EDA)** tools and fabrication facilities.
- **Indigenous Microprocessors:** Focuses on developing sovereign processing engines, such as the **DHRUV64**, to reduce dependence on imported commercial chips.

Legacy and Status of ISM 1.0 (As of Dec 2025)

- **Fiscal Support:** Approved in December 2021, it provided up to **50% direct fiscal support** for setting up silicon fabs, compound semiconductors, and testing facilities.
- **Project Realization:** Successfully anchored **10 major projects** with cumulative investments of **₹1.60 lakh crore** across six Indian states.

Q. With respect to the semiconductor manufacturing ecosystem in India, consider the following statements:

- I. The India Semiconductor Mission 2.0 expands its scope to mandate the domestic production of upstream components, including specialty chemicals and industrial gases.
- II. The Design Linked Incentive Scheme focuses on providing universities and early-stage startups with access to advanced Electronic Design Automation tools.
- III. The nation targets establishing indigenous manufacturing capabilities for 3 nm and 2 nm advanced nodes by the year 2035.

How many of the above statements are correct?

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

Answer: B

Explanation:

Statement I is correct: The India Semiconductor Mission 2.0 broadens the manufacturing ecosystem beyond mere fabrication plants to include the localized production of essential upstream elements such as semiconductor equipment, specialty chemicals, and industrial gases.

Statement II is incorrect: The Design Linked Incentive Scheme provides direct fiscal support exclusively to fabless companies for semiconductor Intellectual Property (IP) development. It is the Chips to Startup (C2S) Programme that provides universities and startups with access to Electronic Design Automation (EDA) tools and fabrication facilities.

Statement III is correct: Strategic macro targets for India's semiconductor landscape include achieving 70–75% self-reliance in fulfilling domestic demand by 2029 and establishing domestic fabrication capabilities for cutting-edge 3 nm and 2 nm chips by 2035.

3.6. OVERHAULING INDIA'S TELECOM SECTOR: TELECOMMUNICATIONS RULES, 2026

Context

- The Department of Telecommunications (DoT) recently notified three key rulebooks under the Telecommunications Act, 2023, covering Principal, Captive, and Miscellaneous services. This marks a structural transition from a colonial-era licensing framework to a streamlined authorisation regime, prioritizing ease of doing business while retaining critical national security safeguards.



Key Highlights of the New Rules (2026)

- Shift to 'Authorisation':** The multi-layered, paperwork-heavy licensing regime for telecom operators and Internet Service Providers (ISPs) is replaced by a simplified authorisation framework.
- Migration Flexibility:** Existing operators are given the option to either voluntarily migrate to the new regime immediately or continue operating under their current licenses until natural expiration.
- Categorisation of Captive Networks:** Formalizes four categories of internal corporate networks, including Captive Non-Public Networks (CNPNS) for smart factories, ports, and industrial campuses, alongside Captive VSAT Services.
- Isolation Clause:** To prevent regulatory arbitrage, captive networks must remain completely isolated from the Public Switched Telephone Network (PSTN) and the public internet.
- Strict Data Localisation:** All data logs, network architecture, and routing information related to captive networks must be strictly stored locally within India.
- Omission of Satellite (GMPCS):** Explicit references to Global Mobile Personal Communications by Satellite (GMPCS) have been removed, reflecting strategic caution over regulating foreign satellite internet providers (like Starlink) during geopolitical standoffs.
- Anti-Spam Obligations:** Operators are formally obligated to enforce anti-spam measures and ensure user compliance under the new framework.

The Telecommunications Act, 2023

- Overhaul of Legacy Laws:** Formally dismantles and replaces the archaic Indian Telegraph Act of 1885 and the Wireless Telegraphy Act of 1933.

- **Expanded Statutory Scope:** Broadens the definition of "telecommunication," granting the state potential regulatory leverage over Over-The-Top (OTT) messaging applications for compliance and anti-spam measures.
- **Digital Bharat Nidhi:** Renames and re-engineers the Universal Service Obligation Fund (USOF) into the Digital Bharat Nidhi to fund telecom infrastructure expansion in isolated and financially unviable rural zones.
- **Emergency Seizure Powers:** Grants the Union government explicit authority to seize, suspend, or take control of any telecom infrastructure during times of war or national security emergencies.
- **Surveillance and Interception:** Retains legacy state surveillance powers, permitting senior bureaucrats to issue lawful phone tapping and data interception directives without heavy external judicial checks.

Q. With respect to the telecommunications regulatory framework in India, consider the following statements:

- I. The Digital Bharat Nidhi represents a newly established, separate fiscal corpus funded entirely by the Consolidated Fund of India to support urban telecom startups.
- II. Under the Telecommunications Act, 2023, the executive power to issue data interception directives has been made subject to mandatory external judicial checks to enhance privacy safeguards.

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

Answer: D

Explanation:

Statement I is incorrect: The Digital Bharat Nidhi is not a newly created corpus funded by the Consolidated Fund of India, nor is it meant for urban startups. It is the **renamed and re-engineered version of the erstwhile Universal Service Obligation Fund (USOF)**, which is funded via corporate contributions from telecom companies specifically to expand infrastructure in **isolated and financially unviable rural zones**.

Statement II is incorrect: The updated law **retains legacy state surveillance powers**. It permits senior bureaucrats to issue legal phone tapping and data interception directives **without heavy external judicial checks**, thereby maintaining the executive's authority over national security interventions.

ENVIRONMENT & GEOGRAPHY

4.1. HIMACHAL CM URGES NATURAL FARMING IN BARA BHANGAL

Context

- The Chief Minister of Himachal Pradesh, during a visit to **Bara Bhangal** in Kangra district, urged farmers to adopt **natural farming**. The region is known for its **Rajma (Kidney Bean)** cultivation. The government also announced a monthly pension of **₹1,500 for all eligible women** in the area.



What is Natural Farming?

- Natural Farming is a **chemical-free and livestock-based farming system** that relies on locally available natural inputs instead of synthetic fertilizers and pesticides. It aims to restore soil fertility, reduce cultivation costs, and promote sustainable agriculture.
- Key Features**
 - No use of chemical fertilizers or pesticides.
 - Use of **cow dung, cow urine, biomass, and crop residues**.
 - Encourages soil microorganisms and earthworms.
 - Promotes mixed cropping and crop diversity.
 - Conserves soil moisture and improves water-use efficiency.

Natural Farming Vs Organic Farming

Feature	Organic Farming	Natural Farming
Definition	A structured, managed system focused on replacing chemical inputs (synthetic fertilizers, pesticides) with organic alternatives (compost, bio-fertilizers, organic manures).	Natural Farming was pioneered by Masanobu Fukuoka ("Do-Nothing Farming") and popularized in India by Subhash Palekar as Subhash Palekar Natural Farming (SPNF), formerly Zero Budget Natural Farming (ZBNF) . It follows a biomimicry approach, working with nature while avoiding deep plowing, tillage, and external organic inputs.
Input Origin	Often relies on external/purchased organic inputs (vermicompost, neem cake, bio-fertilizers).	Uses only local, on-farm indigenous inputs (cow dung, cow urine, local flora). Ex- Jeevamrutha (microbial culture) and Bijamrutha (seed treatment), Acchadana (Mulching).

Soil Treatment	Plowing, tilling, and mixing organic manures into the soil are standard practices.	No tilling, no deep plowing. The soil structure is left undisturbed to preserve native ecosystems.
Cost to Farmer	Medium to High due to the cost of buying bulk organic inputs, composts, and certification.	Near-Zero ("Zero Budget") because all formulations are prepared on-site using a single indigenous cow.
Certification	Highly regulated, requiring strict third-party certification to sell as "Organic."	Focuses on self-sustenance and localized participatory guarantee systems rather than commercial certification.

About National Mission on Natural Farming (NMNF)

- **Launched:** 2023-24 (independent Centrally Sponsored Scheme).
- **Nodal Ministry:** Ministry of Agriculture & Farmers Welfare.
- Evolved from the **Bharatiya Prakritik Krishi Paddhati (BPKP)** component under the Paramparagat Krishi Vikas Yojana (PKVY).
- **Objectives**
 - Promote sustainable agriculture.
 - Reduce dependence on chemical fertilizers.
 - Improve soil health.
 - Increase farmers' income through lower input costs.
 - Mitigate climate change by reducing emissions from agriculture.

About Bara Bhangal

- Located in **Kangra district, Himachal Pradesh**.
- One of the **most remote and isolated villages** in the **Dhauladhar** mountain range.
- Accessible mainly by trekking during much of the year.
- Inhabited primarily by the **Gaddi pastoral community**.
- Economy is based on livestock rearing and cultivation of traditional crops, especially **Rajma (Kidney Bean)**.

Q. With reference to Natural Farming in India, consider the following statements:

1. Natural farming discourages the use of synthetic fertilizers and pesticides.
2. The National Mission on Natural Farming is implemented by the Ministry of Agriculture & Farmers Welfare.
3. Natural farming depends heavily on purchased organic fertilizers from external sources.

Which of the statements given above is/are correct?

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

(c) 2 and 3 only

(d) 1, 2 and 3

Answer: (b)

Explanation:

- **Statement 1 is correct:** The absolute core principle of Natural Farming is to eliminate all chemical or synthetic inputs. It completely discourages the use of synthetic fertilizers, chemical pesticides, and weedicides, relying instead on natural, biological processes.
- **Statement 2 is correct:** The **National Mission on Natural Farming (NMNF)**—which was launched as a separate component by scaling up the *Bhartiya Prakritik Krishi Paddhati* (BPKP)—is implemented as a sub-scheme under the **Ministry of Agriculture & Farmers Welfare**.
- **Statement 3 is incorrect:** Natural farming actively rejects purchased external inputs. Depending heavily on purchased organic fertilizers (like commercial vermicompost, bio-fertilizers, or neem cake) is a characteristic of *Organic Farming*. Natural farming relies strictly on **on-farm, locally prepared formulations** (such as *Jeevamrutha* and *Bijamrutha*) made using indigenous cow dung and urine, making it a "zero-budget" or low-cost model.

4.2. INDIA'S PUSH FOR SELF-RELIANCE: AVIATION, DEFENCE, AND ENVIRONMENT

Context

- Based on the Prime Minister's *Mann Ki Baat* address the month of June has been designated a landmark period for India's aviation and defence sectors due to key milestones in indigenous manufacturing and flight testing.

1. Defence & Aerospace Manufacturing

C-295 Transport Aircraft Project

- **Milestone:** The first made-in-India C-295 transport aircraft completed its maiden flight.
- **The Deal:** The Indian Air Force is procuring 56 aircraft under a ₹21,935-crore contract.
- **Manufacturing Partnership:** 40 of these aircraft are being manufactured domestically by **Tata Advanced Systems Limited (TASL)** in partnership with **Airbus** at a dedicated facility in **Vadodara, Gujarat**.
- **Strategic Impact:** It provides a significant boost to India's MSMEs and domestic aerospace ecosystem.

Long-Range Land-Attack Cruise Missile (LRLACM)

- **Development:** Successfully flight-tested by the **Defence Research and Development Organisation (DRDO)**.
- **Indigenization:** All major subsystems of the cruise missile have been developed indigenously.



Naval Inductions

- **New Warships:** The Indian Navy recently inducted **INS Dunagiri, INS Shanshak, and INS Agrya**.
- **Origin:** These warships were entirely designed and built in India.

2. Environment, Culture, and Biodiversity

Greater Adjutant Stork (*Hargila*)

- **Context:** Efforts by biologist **Purnima Devi Barman** were highlighted for changing public perceptions and conserving Assam's **hargila bird** (Greater Adjutant).

About Hargila (Greater Adjutant Stork)

- ❖ **Scientific Name:** *Leptoptilos dubius*; a large **stork species**.
- ❖ **Habitat:** Wetlands, shallow lakes, drying lake beds, and freshwater flooded forests.
- ❖ **Distribution:** Found in Assam and Bihar (India) and Cambodia.
- ❖ **Behaviour:** Usually **solitary or in small groups**; breeds in winter in colonies.
- ❖ **Diet:** Omnivorous—mainly scavenges but also feeds on frogs, insects, birds, reptiles, and rodents.
- ❖ The greater adjutant is listed as Near Threatened on the **IUCN Red List of Threatened Species**.

Living Root Bridges of Meghalaya

- **Status:** Indigenous community initiatives continue to preserve these ecological wonders.
- **Global Recognition:** India has formally sought **UNESCO World Heritage status** for these living root bridges.

Waste Management (Eco-Bricks)

- **Grassroots Initiative:** Women in the **Rajgarh district of Madhya Pradesh** are actively converting plastic waste into "eco-bricks" to beautify local public spaces.

3. Local & Sports Initiatives

- **Nagaland's 'Baby League':** A grassroots grassroots football development initiative specifically designed for young children aged **5 to 12**.

Q. With reference to the Greater Adjutant Stork (*Hargila*), consider the following statements:

1. Its scientific name is *Leptoptilos dubius*.
2. It is found in Assam, Bihar, and Cambodia.
3. It is listed as **Endangered** in the IUCN Red List.

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:

- **Statement 1 is correct:** Its scientific name is *Leptoptilos dubius*. It belongs to the stork family (*Ciconiidae*).
- **Statement 2 is correct:** Historically distributed widely across South and Southeast Asia, its global breeding populations are now severely restricted and found only in three pockets: **Assam** (Brahmaputra Valley) and **Bhagalpur (Bihar)** in India, and **Cambodia**.
- **Statement 3 is incorrect (Recent Update):** For decades, the bird was classified as Endangered (and at times Critically Endangered) due to rapid population decline. However, owing to highly successful community-led conservation efforts (such as the "Hargila Army" led by Dr. Purnima Devi Barman in Assam and conservation initiatives in Bihar), the global population stabilized and increased. Consequently, the IUCN Red List officially **downlisted the species from Endangered to Near Threatened**.

4.3. WHITE-RUMPED VULTURE ELECTROCUTED IN MUDUMALAI

Context

- A captive-bred, radio-tagged White-rumped vulture released in the Mudumalai Tiger Reserve (MTR) of Tamil Nadu was electrocuted after coming into contact with an overhead power line at Ebbanad village.
- The bird, which failed to acclimatise to the local landscape, had embarked on exploratory flights prior to its death, marking an unfortunate end to the first attempted reintroduction of a captive-bred bird of this species into the South Indian landscape.



About Mudumalai Tiger Reserve (MTR)

- **Location:** Situated at the tri-junction of three states—Tamil Nadu, Karnataka, and Kerala—in the Nilgiris district of Tamil Nadu.
- **Ecological Significance:** It forms an integral part of the **Nilgiri Biosphere Reserve** (India's first biosphere reserve, established in 1986).
- **Contiguous Connectivity:** It shares boundaries with the Wayanad Wildlife Sanctuary (Kerala) to the west and the Bandipur Tiger Reserve (Karnataka) to the north, functioning as a vital ecological corridor connecting the Western and Eastern Ghats.
- **Drainage System:** The **Moyar River**, along with its tributaries, flows through the reserve and serves as its primary water source.
- **Flora & Terrain:** The landscape features undulating terrain covered with 'Elephant Grass', giant bamboo, and unique swampy areas locally known as **Vayals**.

- **Fauna:** It serves as a critical habitat for flagship species like the Bengal Tiger and Asian Elephant, alongside Indian Gaurs, Leopards, and globally threatened avian species like the White-rumped Vulture.
- **Significance of Mudumalai:** MTR and the surrounding Sigur plateau are home to the last sizable and viable breeding population of White-rumped vultures in South India. Conservationists hoped the captive-bred bird would associate with resident flocks and seamlessly adapt.

About White-Rumped Vulture (*Gyps bengalensis*)

Basic Profile

- **Scientific Name:** *Gyps bengalensis*. It is also commonly referred to as the Indian White-backed Vulture or Oriental White-backed Vulture.
- **Physical Features:** It is a medium-sized Old World vulture characterized by an unfeathered head and neck, very broad wings, and short tail feathers. Adults sport a distinctive white neck-ruff and a white patch of feathers on the lower back and upper tail (the "white rump").
- **Feeding Habits:** It is primarily a scavenger that feeds on animal carcasses, utilizing thermal currents to soar high and spot other scavengers feeding.

Habitat and Distribution

- **Global Spread:** Native to South and Southeast Asia, including India, Pakistan, Bangladesh, Nepal, Bhutan, Myanmar, Thailand, Laos, Cambodia, and southern Vietnam.
- **Favorable Habitat:** Predominantly found in plains and less frequently in hilly terrains. It is highly adapted to living in proximity to human habitation and cultivated villages where livestock carcasses are available.

Conservation Status

- **IUCN Red List:** Classified globally as **Critically Endangered**.
- **Population Crash:** In the 1980s, it was considered the most abundant large bird of prey in the world with millions of individuals. As of 2021, the global population plummeted to fewer than 6,000 mature individuals.

Major Threats to Survival

- **Diclofenac Poisoning:** The most devastating threat is the veterinary non-steroidal anti-inflammatory drug (NSAID) **diclofenac**. Vultures feeding on the carcasses of cattle treated with this drug suffer fatal kidney failure.
- **Power Infrastructure:** Uninsulated power transmission lines pose a severe threat of fatal electrocution or collision for large, wide-winged birds.
- **Secondary Poisoning:** Consumption of poisoned baits meant for feral dogs or wild carnivores.
- **Habitat Degradation:** Loss of safe nesting sites and severe food scarcity due to changing livestock disposal practices.

Q. With respect to the White-Rumped Vulture, consider the following statements:

- I. It is a migratory New World scavenger that avoids areas near human cultivation and nests exclusively in high, mountainous alpine terrains.
- II. It is currently classified as Critically Endangered under the IUCN Red List due to severe population decline caused by veterinary diclofenac poisoning.

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

Answer: b

Explanation:

Statement 1 is incorrect: The White-rumped Vulture is an **Old World vulture** native to South and Southeast Asia. It is predominantly **found in plains** and can frequently be seen in villages and cities **near to cultivation**, rather than exclusively in alpine mountain terrains.

Statement 2 is correct: The species holds a **Critically Endangered** status on the IUCN Red List after its global population crashed from millions to less than 6,000 mature individuals, a decline primarily driven by **fatal kidney failure** after consuming livestock treated with the veterinary drug **diclofenac**.

4.4. NAMERI TIGER RESERVE: FOUR-FOLD INCREASE IN TIGER POPULATION

Context

- According to the State Forest Department's recent data validated by the **Wildlife Institute of India (WII)**, the tiger population at the **Nameri Tiger Reserve** in Assam has quadrupled over a three-year period, rising from just 3 tigers in 2022 to 12 by the end of 2025.



Key Highlights & Data Points

- Population Growth:** The four-fold increase builds directly upon the baseline of three striped cats recorded during the **All India Tiger Estimation (AITE) of 2022**.
- Reclamation of Satellite Core:** Tigers have successfully returned to the contiguous **Sonai Rupai Wildlife Sanctuary** (which serves as Nameri's satellite core) after being declared locally extinct there in the early 2000s.
- Kaziranga status:** Known primarily for its one-horned rhinoceros, Kaziranga also has one of India's highest tiger densities (13.44 tigers per 100 sq. km).

Geographic & Ecological Profile of Nameri

- Location:** Covers an area of **344 square km** in the **Sonitpur district** of north-central Assam.
- Inter-State Contiguity:** It shares a continuous northern boundary with the **Pakke Tiger Reserve**, located in Arunachal Pradesh.

- The Jia Bhoroli River flows through the reserve.

Broader Tiger Landscape in Assam

1. **Nameri Tiger Reserve**
2. **Orang Tiger Reserve**
3. **Kaziranga Tiger Reserve** (Also a designated **UNESCO World Heritage Site**)
4. **Manas Tiger Reserve** (Also a designated **UNESCO World Heritage Site**).

About the All India Tiger Estimation (AITE)

- **Conducted every four years.**
- Coordinated by the National Tiger Conservation Authority (NTCA) and the Wildlife Institute of India (WII).

About WII

- Established: 1982
- Location: Dehradun, Uttarakhand
- Ministry: Ministry of Environment, Forest and Climate Change (MoEFCC)
- Type: Autonomous institution

Q. With reference to Nameri Tiger Reserve, consider the following statements:

1. It is located in Assam and shares a boundary with Pakke Tiger Reserve in Arunachal Pradesh.
2. The Jia Bhoroli River flows through the reserve.
3. It is a UNESCO World Heritage Site.

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

The correct answer is **(a) 1 and 2 only**.

Explanation of Statements:

- **Statement 1 is correct:** Nameri Tiger Reserve is located in the Sonitpur district of Assam and shares a continuous northern boundary with the **Pakke Tiger Reserve** in Arunachal Pradesh.
- **Statement 2 is correct:** The **Jia Bhoroli River** (along with its tributaries) flows through the reserve and is considered the lifeline of the national park, providing crucial riverine ecosystems and serving as a major spot for ecotourism activities like river rafting.
- **Statement 3 is incorrect:** Nameri is **not** a UNESCO World Heritage Site. Out of the four tiger reserves in Assam (Kaziranga, Manas, Nameri, and Orang), only **Kaziranga and Manas** hold the designation of UNESCO World Heritage Sites.

4.5. INDIA'S FIRST COMMERCIALY PRODUCED MATCHA: A MILESTONE IN TEA CULTIVATION

Context

- An Assam-based tea estate has successfully auctioned India's first batch of commercially produced Matcha tea. This marks a significant milestone in India's agricultural diversification, bridging traditional Assam tea cultivation heritage with fully automated, state-of-the-art Japanese manufacturing expertise.



What is Matcha and How is it Cultivated?

- **Source Plant:** Derived from the exact same plant as regular tea, *Camellia sinensis*.
- **Shade-Grown Technique:** The tea leaves are intentionally shaded to block 90% of sunlight for 3 to 4 weeks prior to harvesting.
- **Chemical Alteration:** This shading process drastically boosts chlorophyll and amino acid levels, imparting a distinct vibrant green color and unique flavor.
- **Processing:** Harvested leaves are finely ground into a vibrant green powder rather than being processed into traditional loose leaves.
- **Method of Consumption:** Unlike conventional green tea where leaves are steeped and discarded, matcha powder is whisked directly into water and consumed entirely.
- **Nutritional Profile:** It yields significantly higher concentrations of natural antioxidants, amino acids, and caffeine compared to regular green tea.

Historical Evolution of Indian Tea

- **1823 (Discovery):** Robert Bruce discovered wild *Camellia sinensis* plants in the Upper Brahmaputra Valley of Assam.
- **1833 (Monopoly Ends):** The Charter Act ended the British East India Company's trade monopoly with China, prompting a shift toward domestic Indian production.
- **1834 (Institutional Push):** A dedicated **Tea Committee** was established under Governor-General William Bentinck.
- **1838 (First Export):** The first batch of Indian tea from Assam was successfully sent to the United Kingdom for public sale.

Types of Tea Produced in India

India produces diverse tea varieties, differentiated primarily by their processing methods and levels of oxidation:

- **Black Tea:** The most widely produced, consumed, and exported tea variety in India, fully oxidized to develop a strong flavor.
- **CTC (Crush, Tear, Curl) Tea:** Machine-processed to create uniform pellets; heavily utilized for mass domestic consumption and standard tea bags.

- **Orthodox Tea:** Handcrafted using traditional processing methods; renowned for its superior quality, complex flavor profiles, and targeted primarily at export markets.
- **Green Tea:** Minimally processed and unoxidized to retain high natural antioxidant levels; witnessing rising domestic demand due to health awareness.
- **Oolong Tea:** A partially oxidized tea, possessing characteristics of both green and black teas; produced in small volumes specifically for niche markets.
- **White Tea:** The least processed of all varieties, made exclusively from young, unopened tea buds; highly rare, delicate, and produced in severely restricted quantities.

Climatic & Geographical Requirements

Tea is a highly climate-sensitive crop that thrives in tropical and sub-tropical regions.

- **Temperature:** Optimal growth requires a range of **15°C to 23°C**.
- **Rainfall:** Requires **150–300 cm** of annual rainfall, which must be evenly distributed throughout the year.
- **Sunlight:** Needs a warm, humid climate with at least 5 hours of daily sunlight.
- **Soil Parameters:** Thrives in slightly **acidic, calcium-free soil** with a porous sub-soil.
- **Topography:** Sloping terrain is strictly mandatory to ensure proper water drainage, as water stagnation destroys the roots.

Major Producing Regions & Global Standing

- **Leading States:** Assam (largest producer; encompasses Assam Valley and Cachar), West Bengal (Darjeeling, Dooars, Terai), and Tamil Nadu (Nilgiri Hills).
- **Minor Producers:** Kerala, Karnataka, and Himachal Pradesh (specifically the Kangra Valley, renowned for green teas).
- **Global Rank:** India is the **second-largest producer and consumer** of tea globally, and the **third-largest exporter** (trailing Kenya, which exports almost its entire yield, and China).

About the Tea Board of India

- **Statutory Status:** Established as a statutory body under the **Tea Act, 1953**.
- **Nodal Ministry:** Functions under the **Ministry of Commerce**.
- **Headquarters:** Located in **Kolkata**, with major overseas offices in Dubai and Moscow.
- **Composition:** Reconstituted every three years, it comprises 31 members representing producers, traders, governments, and plantation workers.
- **Core Functions:** It controls quality certification, promotes exports, provides financial assistance, and protects the global identity of Indian teas.

Q. With respect to tea cultivation and regulation in India, consider the following statements:

- I. Matcha tea is uniquely produced by exposing the *Camellia sinensis* leaves to continuous, direct sunlight for several weeks prior to harvesting to maximize chlorophyll levels.
- II. The Tea Board of India is a statutory organization that functions under the administrative control of the Ministry of Commerce.
- III. The optimal geographical conditions for tea cultivation include slightly acidic, calcium-free soil and a sloping terrain to ensure continuous water drainage.

How many of the statements given above are correct?

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

Answer: B

Explanation:

- **Statement I is incorrect:** Matcha is cultivated using a specialized **shade-grown technique** where the tea leaves are intentionally shaded to **block 90% of sunlight** for 3 to 4 weeks prior to harvesting. This shading, rather than sunlight exposure, is what drastically boosts chlorophyll and amino acid levels.
- **Statement II is correct:** The Tea Board of India is a **statutory body** established under the Tea Act of 1953, and it operates directly under the **Ministry of Commerce** to regulate and promote the tea industry.
- **Statement III is correct:** Tea is a highly climate-sensitive crop that strictly requires **slightly acidic, calcium-free soil**. Furthermore, a **sloping terrain is mandatory to ensure proper water drainage**, as water stagnation destroys the root system of the plant.

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Prelims Test Series

5.1. INDIA–MALAYSIA–SINGAPORE SUBMARINE CABLE PROJECT UNVEILED

Context

- A major international consortium has signed contracts to launch **the I-2SEA** submarine cable system, a high-capacity subsea project designed to significantly boost digital connectivity and support AI workloads across the India-Southeast Asia corridor.



Key Highlights for UPSC Prelims

- **The Consortium Members:** The project is being built by a collaboration comprising **Microsoft, Singtel, Tata Communications**, and the AI connectivity platform **Lightstorm**.
- **Geographical Links:** The cable system directly connects **India, Malaysia, and Singapore**.
- **Key City Nodes Connected:**
 - **India:** Connects the data centre hubs of **Hyderabad and Chennai**.
 - **Singapore:** Acts as the regional cloud interconnect and AI hub.
 - **Malaysia:** Taps into the emerging data centre corridor in **Kuala Lumpur**.
- **Dual Landings in India:** The cable features two specific landing points on India's east coast:
 1. **Machilipatnam (Andhra Pradesh):** Provides the shortest subsea access routes onward to Hyderabad.
 2. **South Chennai (Tamil Nadu):** A new diverse landing location.
- **Technical Specifications:**
 - **Length:** Approximately **3,600 km** spanning from Singapore to Machilipatnam.
 - **Target Timeline:** Slated to be ready-for-service by **Q4 2029**.
 - **Partners:** **NEC Corporation** has been chosen as the system supplier, while **ASEAN Cables Ship (ACPL)** will serve as the marine installation partner.

Strategic and Economic Significance

- **Catering to AI Infrastructure:** The facility is specifically engineered to handle complex AI training, inference workloads, GPU infrastructure needs, and hyperscaler demands across South and Southeast Asia.
- **Critical City Corridor:** The Singapore-Malaysia-Hyderabad corridor is identified as a strategically critical city pair for regional digital infrastructure.

About Submarine Communication Cables

- They are **fibre-optic cables** laid on the seabed.
- Carry over **95% of international internet traffic**.

- Transmit data using **light signals** through optical fibres.
- Protected with multiple layers of insulation and armour near coastal areas.
- Maintained using specialised cable-laying and repair ships.
- Submarine cables are internationally regulated within the framework of the **United Nations Convention on the Law of the Sea (UNCLOS)**.
- Cable installation and maintenance can disturb marine animals that rely on sound and electromagnetic signals for navigation and communication.

Q. With reference to the India–Singapore-2 (I-S2) submarine cable project, consider the following statements:

1. It is a submarine fibre-optic communication cable connecting India, Malaysia, and Singapore.
2. The project aims to improve connectivity for AI workloads, cloud computing, and data centres.
3. The Indian landing stations are located at Mumbai and Chennai.

Which of the statements given above is/are correct?

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

Answer: B

Explanation:

- **Statement 1 is correct:** As detailed in the provided text from image_d045bf.png, the I-2SEA (or India-Singapore-2) cable system directly connects **India, Malaysia, and Singapore**.
- **Statement 2 is correct:** The text explicitly notes that the facility is designed to cater to the rapidly growing demand from hyperscalers, GPU infrastructure providers, and enterprises running **AI training, inference workloads, cloud interconnect, and data centres** across the region.
- **Statement 3 is incorrect:** The dual landing sites on India's east coast are located at **Machilipatnam** (Andhra Pradesh) and **South Chennai** (Tamil Nadu), not Mumbai. Machilipatnam provides the shortest subsea route to connect the data centre cluster in Hyderabad.

5.2. VIKRAM-1: INDIA'S FIRST PRIVATELY DEVELOPED ORBITAL LAUNCH VEHICLE SET FOR MAIDEN FLIGHT

Context

- **Skyroot Aerospace** is set to launch **Vikram-1**, India's **first privately developed orbital launch vehicle**, from the **Satish Dhawan Space Centre (SDSC), Sriharikota**.
- The maiden mission, named **Mission Aagman**, is scheduled for launch between **July 12 and August 4**, subject to weather, range clearance, and completion of launch preparations.



- The mission follows the successful suborbital test of **Vikram-S** in 2022 and marks a major milestone in India's private space sector.

About Vikram-1 Launch Vehicle

I. Key Features

- **Developer:** Skyroot Aerospace (Hyderabad-based private space startup)
- **Type:** It is a **four-stage**, expendable orbital small-lift launch vehicle, its first three stages are solid stages, while the fourth stage is a liquid stage.
- **Payload Capacity:**
 - Around **300 kg to Low Earth Orbit (LEO)**.
 - Suitable for launching small satellites.
- **Mission:** First orbital mission named **Mission Aagman**.
- **Launch Site:** Satish Dhawan Space Centre (SDSC), Sriharikota.

II. Objective

- Demonstrate the capability of India's private sector to independently place satellites into orbit.
- Offer affordable and dedicated launch services for the global small satellite market.
- Strengthen India's commercial space ecosystem.

Mission Aagman

- Marks the **first orbital mission** of Skyroot Aerospace.
- Planned as a **partially commercial mission**.
- Carries customer payloads along with technology demonstration payloads.
- If successful, commercial launches are expected to begin after two demonstration missions.

Technological Features

- Carbon composite structures for reduced weight.
- Extensive use of **3D-printed rocket components**.
- Fully integrated avionics for:
 - Navigation
 - Guidance
 - Flight control
 - Telemetry
- Designed for rapid production and lower launch costs.

About Skyroot Aerospace

- Founded in **2018**.
- Headquarters: **Hyderabad**.
- First Indian private company to successfully launch a rocket (**Vikram-S**) in **2022**.

- Named its launch vehicles after **Dr. Vikram Sarabhai**, the father of the Indian space programme.

Q. With reference to Vikram-1, consider the following statements:

1. It is India's first privately developed orbital launch vehicle.
2. It is being developed by Agnikul Cosmos.
3. It is designed to place small satellites into Low Earth Orbit (LEO).

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

Explanation:

- **Statement 1 is correct:** As highlighted in the provided text, **Vikram-1** is indeed India's first-ever privately developed **orbital-class** rocket/launch vehicle. Its precursor, Vikram-S (launched in November 2022), was a suborbital rocket.
- **Statement 2 is incorrect:** Vikram-1 is being developed by **Skyroot Aerospace**, a private aerospace manufacturer based in Hyderabad. *Agnikul Cosmos* is another prominent Indian private space startup, but they are developing a different launch vehicle named **Agnibaan**.
- **Statement 3 is correct:** Vikram-1 is a multi-stage, small-lift launch vehicle designed specifically to carry **small satellites** (weighing up to 350 kg) into **Low Earth Orbit (LEO)** at an altitude of approximately 450 km.

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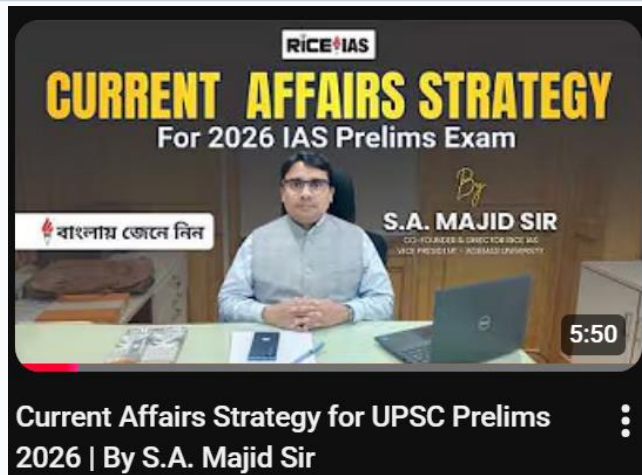
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