



Weekly PIB Summary

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1. GUARDIANS OF INDIA'S MARITIME FRONTIERS



- India's maritime forces protect over **7,500 km of coastline**, island territories, and vast maritime zones.
- The **Indian Navy** is responsible for defending the nation against external maritime threats, maintaining sea control, and ensuring freedom of navigation.
- The **Indian Coast Guard (ICG)** performs law enforcement, maritime safety, search and rescue (SAR), pollution response, anti-smuggling, anti-poaching, and coastal security functions.
- Both organizations work together to safeguard **Sea Lines of Communication (SLOCs)**, offshore energy installations, ports, and the **Exclusive Economic Zone (EEZ)**.
- India conducts anti-piracy patrols, Humanitarian Assistance and Disaster Relief (HADR) missions, and evacuation operations, enhancing its role as a **net security provider** in the Indian Ocean.
- Indigenous naval platforms, advanced surveillance systems, and maritime domain awareness strengthen operational preparedness.

- Maritime cooperation with friendly countries through joint exercises and information sharing contributes to regional peace and stability.
- These efforts support India's vision of **SAGAR (Security and Growth for All in the Region)** and a **free, open, inclusive, and rules-based Indo-Pacific**.

BACKGROUND / CONTEXT

Indian Navy

- I. Maritime branch of the **Indian Armed Forces**.
- II. Functions:
 - A. Defend India's maritime interests.
 - B. Deter external threats.
 - C. Protect Sea Lines of Communication (SLOCs).
 - D. Conduct HADR and maritime diplomacy.
 - E. Secure offshore assets and island territories.

Indian Coast Guard (ICG)

- I. Established under the **Coast Guard Act, 1978**.
- II. Functions under the **Ministry of Defence**.
- III. Responsibilities include:
 - A. Coastal security.
 - B. Maritime law enforcement.
 - C. Search and Rescue (SAR).
 - D. Marine environmental protection.
 - E. Anti-smuggling operations.
 - F. Assistance to fishermen.

SAGAR

- I. **Security and Growth for All in the Region**.
- II. Announced in **2015**.
- III. India's maritime vision promoting:
 - A. Regional cooperation.
 - B. Maritime security.
 - C. Sustainable development.
 - D. Capacity building.

KEY HIGHLIGHTS

- **Maritime Guardians:** Indian Navy and Indian Coast Guard.
- **Primary Objective:** Safeguard India's maritime frontiers and strategic interests.
- **Strategic Importance:** Protects trade routes, energy security, and maritime sovereignty.
- **Economic Importance:** Supports the Blue Economy, fisheries, offshore resources, and maritime trade.
- **Security Role:** Counter-piracy, coastal security, anti-smuggling, anti-terrorism, and maritime surveillance.
- **Diplomatic Role:** Enhances defence cooperation and maritime partnerships in the Indo-Pacific.
- **Challenges:** Maritime terrorism, piracy, illegal fishing, climate-related disasters, cyber threats, and strategic competition.
- **Way Forward:** Modernize naval capabilities, strengthen indigenous shipbuilding, improve Maritime Domain Awareness (MDA), expand coastal surveillance, and deepen regional maritime cooperation.

PRELIMS BOOSTER BOX

- **Indian Coast Guard (ICG):** Established under the **Coast Guard Act, 1978**.
- **Administrative Ministry (ICG):** Ministry of Defence.
- **Indian Navy:** Maritime branch of the Indian Armed Forces.
- **SAGAR: Security and Growth for All in the Region,** India's maritime vision launched in **2015**.
- **Exclusive Economic Zone (EEZ):** Maritime zone extending up to **200 nautical miles** from the baseline under the **United Nations Convention on the Law of the Sea (UNCLOS)**, where a coastal state has sovereign rights over natural resources.

- **Sea Lines of Communication (SLOCs):** Major maritime routes used for international trade and naval movement.
- **Maritime Domain Awareness (MDA):** Comprehensive understanding of activities in the maritime domain affecting security, economy, or environment.
- **Blue Economy:** Sustainable use of ocean resources for economic growth, livelihoods, and ecosystem health.
- **HADR:** Humanitarian Assistance and Disaster Relief operations undertaken during natural disasters and humanitarian crises.
- **Net Security Provider:** A country that contributes proactively to regional peace, stability, and maritime security.

PadhAI-GENERATED UPSC MCQ

Consider the following statements:

1. The **Indian Coast Guard** was established under the **Coast Guard Act, 1978**.
2. The **Exclusive Economic Zone (EEZ)** extends up to **200 nautical miles** from a coastal state's baseline under **UNCLOS**.
3. **SAGAR** stands for **Security and Growth for All in the Region**.

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)

2. CCI IMPOSES PENALTY ON HP INDIA AND CERTAIN RESELLERS FOR ANTI-COMPETITIVE PRACTICES IN SUPPLY OF 'SUPPLIES' PRODUCTS



- The CCI found that HP India and certain resellers had entered into arrangements that restricted competition in the market for printer supplies.
- The anti-competitive conduct involved practices that limited the ability of resellers to compete independently, thereby affecting market competition.
- Such arrangements can lead to reduced consumer choice, higher prices, and barriers to fair market access.
- The Commission imposed monetary penalties and directed the parties to cease and desist from anti-competitive conduct.
- The order underscores the importance of maintaining competitive markets and preventing restrictive trade practices.
- It also serves as a deterrent against businesses engaging in agreements that adversely affect competition.
- The decision strengthens confidence in India's competition law enforcement framework.
- It highlights the role of CCI in promoting market efficiency and consumer welfare.

BACKGROUND / CONTEXT

Competition Commission of India (CCI)

- Established under the **Competition Act, 2002**.
- Became fully operational in **2009**.
- Objective:
 - Prevent practices having an adverse effect on competition.
 - Promote and sustain competition.
 - Protect consumer interests.
 - Ensure freedom of trade.

Competition Act, 2002

The Act addresses:

- **Anti-competitive agreements** (Section 3).
- **Abuse of dominant position** (Section 4).
- **Regulation of combinations (mergers and acquisitions)** (Sections 5 & 6).

Anti-Competitive Agreements

These include agreements that:

- Fix prices.
- Limit production or supply.
- Allocate markets.
- Rig bids.
- Impose certain vertical restrictions that cause an appreciable adverse effect on competition.

Vertical Agreements

- Agreements between enterprises operating at different levels of the supply chain (e.g., manufacturer and distributor/reseller).
- They are assessed under **Section 3(4)** of the Competition Act to determine whether they cause an appreciable adverse effect on competition.

KEY HIGHLIGHTS

- **Regulator:** Competition Commission of India (CCI).
- **Company:** HP India and certain resellers.
- **Issue:** Anti-competitive practices in the supply of printer supplies products.



- **Legal Framework:** Competition Act, 2002.
- **Objective of CCI Action:** Protect competition, consumer interests, and market efficiency.
- **Economic Significance:** Promotes fair pricing, innovation, and efficient markets.
- **Consumer Significance:** Ensures greater consumer choice and prevents unfair market restrictions.
- **Challenges:** Detecting complex anti-competitive arrangements, especially in digital and technology markets.
- **Way Forward:** Strengthen competition compliance, enhance market surveillance, encourage fair business practices, and increase awareness of competition law among businesses.

PRELIMS BOOSTER BOX

- **Competition Commission of India (CCI):** Statutory body established under the **Competition Act, 2002**.
- **Competition Act, 2002:** Replaced the **Monopolies and Restrictive Trade Practices (MRTP) Act, 1969**.
- **Section 3:** Deals with anti-competitive agreements.
- **Section 3(4):** Covers vertical agreements (e.g., manufacturer–distributor arrangements).
- **Section 4:** Deals with abuse of dominant position.
- **Sections 5 & 6:** Regulate combinations (mergers, acquisitions, and amalgamations).
- **Appreciable Adverse Effect on Competition (AAEC):** The legal test used to assess whether an agreement harms competition in the market.
- **Vertical Agreement:** Agreement between enterprises at different stages of the production or distribution chain.
- **Consumer Welfare:** A primary objective of competition law, ensuring fair prices, quality, innovation, and choice.

- **Market Competition:** Encourages efficiency, innovation, and economic growth while preventing monopolistic or restrictive practices.

PadhAI-GENERATED UPSC MCQ

Consider the following statements:

1. The **Competition Commission of India (CCI)** was established under the **Competition Act, 2002**.
2. **Section 3** of the Competition Act deals with **anti-competitive agreements**.
3. **Section 4** of the Competition Act deals with the **abuse of dominant position**.

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)

3. HINDI RESPECTS THE EXISTENCE OF DIVERSE LANGUAGES AND BINDS EVERYONE IN A COMMON THREAD OF UNITY: SHRI GAJENDRA SINGH SHEKHAWAT



- Hindi was described as a language that promotes national integration while respecting the existence and growth of all Indian languages.



- The emphasis was on strengthening **multilingualism**, rather than replacing or diminishing regional languages.
- India's linguistic diversity is viewed as an important component of its cultural and civilizational heritage.
- The statement aligns with the **National Education Policy (NEP) 2020**, which promotes multilingual education and the use of Indian languages.
- Promoting Indian languages contributes to cultural preservation, knowledge dissemination, and inclusive development.
- The Constitution provides safeguards for linguistic minorities and recognizes multiple Indian languages.
- Language is regarded as a medium for strengthening national unity while preserving regional identities.
- The initiative supports wider use of Indian languages in education, governance, technology, and cultural exchange.

BACKGROUND / CONTEXT

Constitutional Provisions on Language

- Article 343**
 - A. Declares **Hindi in Devanagari script** as the **Official Language of the Union**.
 - B. Provides for the continued use of English for official purposes as prescribed by law.
- Article 344**
 - A. Provides for the constitution of the **Official Language Commission** and a Parliamentary Committee on Official Language.
- Articles 345–347**
 - A. Empower States to adopt one or more official languages.
 - B. Provide safeguards relating to language use within States.
- Article 348**

- A. Specifies that proceedings in the **Supreme Court, High Courts**, and authoritative texts of Central laws are generally in **English**, unless Parliament provides otherwise.

V. **Article 350A**

- A. Directs States to provide adequate facilities for instruction in the mother tongue at the primary stage for children belonging to linguistic minority groups.

VI. **Article 350B**

- A. Provides for the **Special Officer for Linguistic Minorities**.

VII. **Article 351**

- A. Directs the Union to promote the spread and development of Hindi while enriching it by drawing upon other Indian languages.

Eighth Schedule

- Recognizes **22 Scheduled Languages**.
- These languages receive constitutional recognition and support for their development.

National Education Policy (NEP) 2020

- Promotes:
 - A. Multilingualism.
 - B. Mother tongue/local language in education.
 - C. Preservation and promotion of Indian languages.
 - D. Development of Indian languages through technology and research.

KEY HIGHLIGHTS

- **Theme:** Hindi as a unifying language while respecting linguistic diversity.
- **Constitutional Basis:** Articles **343–351** and the **Eighth Schedule**.
- **Policy Alignment:** National Education Policy (NEP) 2020.



- **Cultural Significance:** Preserves India's multilingual heritage and promotes unity in diversity.
- **Educational Significance:** Encourages learning in the mother tongue and multilingual education.
- **Governance Significance:** Supports inclusive communication and wider citizen participation.
- **Challenges:** Balancing promotion of Hindi with protection and development of regional and tribal languages.
- **Way Forward:** Strengthen multilingual education, digitize Indian language resources, promote translation and language technologies, and ensure equal opportunities for all Indian languages.

PRELIMS BOOSTER BOX

- **Article 343:** Hindi in Devanagari script is the Official Language of the Union.
- **Article 344:** Official Language Commission and Parliamentary Committee on Official Language.
- **Articles 345–347:** Official languages of States and safeguards relating to languages.
- **Article 348:** Language of the Supreme Court, High Courts, and authoritative texts of Central laws.
- **Article 350A:** Instruction in the mother tongue at the primary stage for linguistic minorities.
- **Article 350B:** Special Officer for Linguistic Minorities.
- **Article 351:** Directive for the development and promotion of Hindi while drawing upon other Indian languages.
- **Eighth Schedule:** Recognizes **22 Scheduled Languages**.
- **NEP 2020:** Promotes multilingualism and education in Indian languages.
- **Official Language vs National Language:** The Constitution of India does not declare any language as the "National Language." Hindi is the **Official Language of the Union**, while

English continues to be used for official purposes as provided by law.

PadhAI-GENERATED UPSC MCQ

Consider the following statements:

1. **Article 343** declares Hindi in the Devanagari script as the **Official Language of the Union**.
2. **Article 351** directs the Union to promote the spread and development of Hindi while enriching it by drawing upon other Indian languages.
3. The **Constitution of India declares Hindi as the National Language of India**.

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)

4. NSFDC'S CONCESSIONAL CREDIT SCHEMES BOOST ENTREPRENEURSHIP AND SOCIO-ECONOMIC EMPOWERMENT OF SCHEDULED CASTES



- NSFDC provides **concessional loans** to eligible Scheduled Caste beneficiaries for self-employment and income-generating activities.



- The schemes support entrepreneurship in sectors such as agriculture, transport, trade, manufacturing, services, and small businesses.
- Financial assistance is routed through **State Channelizing Agencies (SCAs)**, banks, Regional Rural Banks (RRBs), and other implementing agencies.
- Besides credit support, NSFDC also promotes **skill development**, entrepreneurship training, and capacity building.
- The schemes aim to reduce poverty, generate employment, and improve the socio-economic status of Scheduled Castes.
- Special emphasis is placed on supporting **women entrepreneurs**, youth, and marginalized communities.
- The initiative aligns with the Government's objectives of **social justice, financial inclusion, and inclusive growth**.
- By facilitating access to affordable finance, NSFDC helps beneficiaries become self-reliant and economically empowered.

BACKGROUND / CONTEXT

National Scheduled Castes Finance and Development Corporation (NSFDC)

- **Established: 1989.**
- **Administrative Ministry: Ministry of Social Justice and Empowerment.**
- A **Government of India** enterprise (Section 8 company under the Companies Act).
- **Objective:** Promote economic development of Scheduled Castes through concessional finance, skill development, and entrepreneurship support.

Objectives

- Provide concessional credit for self-employment.
- Promote entrepreneurship among Scheduled Castes.

- Facilitate skill development and entrepreneurship training.
- Improve income generation and livelihoods.
- Reduce socio-economic disparities.

Major Areas of Assistance

- Agriculture and allied activities.
- Transport sector.
- Small businesses.
- Manufacturing.
- Services.
- Micro and small enterprises.
- Education loans.
- Skill development programmes.

KEY HIGHLIGHTS

- **Institution:** National Scheduled Castes Finance and Development Corporation (NSFDC).
- **Established: 1989.**
- **Administrative Ministry:** Ministry of Social Justice and Empowerment.
- **Target Group:** Eligible Scheduled Caste beneficiaries.
- **Nature of Assistance:** Concessional credit, entrepreneurship promotion, skill development, and self-employment support.
- **Economic Significance:** Enhances financial inclusion, employment generation, and entrepreneurship.
- **Social Significance:** Promotes social justice and economic empowerment of marginalized communities.
- **Challenges:** Credit awareness, timely loan disbursement, market access, and enterprise sustainability.
- **Way Forward:** Expand digital loan delivery, strengthen entrepreneurship mentoring, improve market linkages, integrate with skill development initiatives, and enhance financial literacy among beneficiaries.

PRELIMS BOOSTER BOX

- **NSFDC:** National Scheduled Castes Finance and Development Corporation.
- **Established:** 1989.
- **Administrative Ministry:** Ministry of Social Justice and Empowerment.
- **Legal Status:** Section 8 company under the **Companies Act, 2013** (originally incorporated under the Companies Act, 1956; it now continues under the 2013 Act).
- **Target Beneficiaries:** Scheduled Castes.
- **State Channelizing Agencies (SCAs):** State-level agencies through which NSFDC implements most of its schemes.
- **Concessional Credit:** Loans provided at interest rates lower than prevailing market rates.
- **Financial Inclusion:** Ensuring access to affordable financial services for all sections of society.
- **Entrepreneurship Development:** Programmes that support enterprise creation through finance, training, and market linkages.
- **Article 46:** Directive Principle directing the State to promote the educational and economic interests of **Scheduled Castes, Scheduled Tribes, and other weaker sections** and protect them from social injustice and exploitation.

PadhAI-GENERATED UPSC MCQ

Consider the following statements:

1. The **National Scheduled Castes Finance and Development Corporation (NSFDC)** functions under the **Ministry of Social Justice and Empowerment**.
2. NSFDC provides **concessional credit** to eligible Scheduled Caste beneficiaries for self-employment and entrepreneurship.
3. **Article 46** of the Constitution directs the State to promote the educational and economic interests of Scheduled Castes and other weaker sections.

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)

5. SIGNIFICANT SUCCESS IN PROMOTING ENTREPRENEURSHIP, SELF-EMPLOYMENT AND SOCIO-ECONOMIC EMPOWERMENT OF ELIGIBLE SC PERSONS THROUGH CONCESSIONAL CREDIT-BASED SCHEMES OF NSFDC



- NSFDC provides **concessional loans** to eligible Scheduled Caste beneficiaries for self-employment and income-generating activities.
- Financial assistance supports sectors such as agriculture, transport, manufacturing, trade, services, and micro-enterprises.
- Loans are routed through **State Channelizing Agencies (SCAs)**, banks, Regional Rural Banks (RRBs), and other implementing agencies.
- Apart from credit, NSFDC offers **skill development**, entrepreneurship training, financial literacy, and capacity-building programmes.



- Special emphasis is placed on supporting **women entrepreneurs**, youth, and other marginalized sections within the Scheduled Castes.
- The schemes help reduce poverty, create employment opportunities, and improve beneficiaries' income levels.
- The initiative advances the constitutional goal of **social justice** and promotes inclusive economic growth.
- It contributes to building self-reliance among Scheduled Caste entrepreneurs.

BACKGROUND / CONTEXT

National Scheduled Castes Finance and Development Corporation (NSFDC)

- **Established:** 1989.
- **Administrative Ministry:** Ministry of Social Justice and Empowerment.
- A **Government of India enterprise (Section 8 Company)**.
- **Objective:** Promote economic development of Scheduled Castes through concessional finance, entrepreneurship, and skill development.

Major Areas of Assistance

- Agriculture and allied activities.
- Transport sector.
- Manufacturing.
- Trade and commerce.
- Service sector.
- Micro and small enterprises.
- Education loans.
- Skill development programmes.

Objectives

- Promote entrepreneurship.
- Facilitate access to affordable institutional credit.
- Enhance self-employment opportunities.
- Improve socio-economic conditions.

- Encourage sustainable livelihoods.

KEY HIGHLIGHTS

- **Institution:** National Scheduled Castes Finance and Development Corporation (NSFDC).
- **Established:** 1989.
- **Administrative Ministry:** Ministry of Social Justice and Empowerment.
- **Target Beneficiaries:** Eligible Scheduled Caste persons.
- **Nature of Assistance:** Concessional credit, entrepreneurship promotion, skill development, and self-employment support.
- **Economic Significance:** Enhances entrepreneurship, employment generation, and financial inclusion.
- **Social Significance:** Promotes social justice, economic empowerment, and inclusive development.
- **Challenges:** Limited awareness, delays in credit delivery, market access constraints, and enterprise sustainability.
- **Way Forward:** Expand digital loan delivery, strengthen entrepreneurship mentoring, improve market linkages, integrate with Skill India and MSME initiatives, and enhance financial literacy among beneficiaries.

PRELIMS BOOSTER BOX

- **NSFDC:** National Scheduled Castes Finance and Development Corporation.
- **Established:** 1989.
- **Administrative Ministry:** Ministry of Social Justice and Empowerment.
- **Legal Status:** Section 8 Company under the Companies Act.
- **State Channelizing Agencies (SCAs):** Primary state-level agencies implementing NSFDC schemes.
- **Concessional Credit:** Loans provided at interest rates lower than prevailing market rates.



- **Article 46:** Directs the State to promote the educational and economic interests of **Scheduled Castes, Scheduled Tribes, and other weaker sections**, and protect them from social injustice and exploitation.
- **Article 338:** Provides for the **National Commission for Scheduled Castes (NCSC)**.
- **Financial Inclusion:** Ensuring access to affordable financial services for all sections of society.
- **Entrepreneurship Development:** Promotion of enterprise creation through finance, training, and market support.

PadhAI-GENERATED UPSC MCQ

Consider the following statements:

1. The **National Scheduled Castes Finance and Development Corporation (NSFDC)** functions under the **Ministry of Social Justice and Empowerment**.
2. NSFDC provides **concessional credit** and entrepreneurship support to eligible Scheduled Caste beneficiaries.
3. **Article 46** of the Constitution directs the State to promote the educational and economic interests of Scheduled Castes, Scheduled Tribes, and other weaker sections.

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)

1. INDIA–AUSTRALIA CIVIL NUCLEAR COOPERATION



- India and Australia cooperate in the peaceful uses of nuclear energy under the **India–Australia Civil Nuclear Cooperation Agreement**.
- Australia supplies **uranium** to India for use in **civilian nuclear power reactors** under international safeguards.
- The partnership contributes to India's long-term **energy security**, diversification of fuel sources, and transition to low-carbon energy.
- Cooperation is governed by strict safeguards to ensure nuclear material is used only for peaceful purposes.
- Both countries support international nuclear safety, security, and non-proliferation frameworks while recognizing India's responsible nuclear record.
- Civil nuclear cooperation complements broader collaboration in clean energy, critical minerals, science and technology, and strategic affairs.
- The partnership strengthens bilateral relations under the **Comprehensive Strategic Partnership (CSP)**.

- It also contributes to India's objective of expanding clean energy generation while reducing dependence on fossil fuels.

BACKGROUND / CONTEXT

India–Australia Civil Nuclear Cooperation

Agreement

- **Signed: 2014.**
- **Entered into Force: 2015.**
- Enables Australia to export **uranium** to India for peaceful civilian purposes.
- Requires all supplied nuclear material to remain under **International Atomic Energy Agency (IAEA)** safeguards.

Why Australia is Important

- Australia possesses some of the **world's largest uranium reserves**.
- It is a reliable supplier of uranium for peaceful nuclear energy programmes.
- The partnership enhances India's long-term fuel security for nuclear power generation.

India's Civil Nuclear Programme

- Based on the **Three-Stage Nuclear Power Programme** proposed by **Dr. Homi J. Bhabha**:
 1. Pressurized Heavy Water Reactors (PHWRs).
 2. Fast Breeder Reactors (FBRs).
 3. Thorium-based reactors utilizing India's abundant thorium reserves.

KEY HIGHLIGHTS

- **Agreement:** India–Australia Civil Nuclear Cooperation Agreement.
- **Signed:** 2014.
- **Operational Since:** 2015.
- **Major Focus:** Peaceful use of nuclear energy and uranium supply.
- **Strategic Significance:** Strengthens the India–Australia Comprehensive Strategic Partnership.



- **Energy Significance:** Enhances fuel security and supports India's clean energy transition.
- **Environmental Significance:** Nuclear power provides low-carbon baseload electricity, aiding climate mitigation.
- **Challenges:** High capital costs, nuclear waste management, public acceptance, and ensuring robust safety standards.
- **Way Forward:** Expand cooperation in nuclear fuel supply, reactor technologies, research, nuclear safety, and clean energy innovation while strengthening international safeguards.

PRELIMS BOOSTER BOX

- **India–Australia Civil Nuclear Cooperation Agreement:** Signed in **2014**; entered into force in **2015**.
- **Comprehensive Strategic Partnership (CSP):** Established between India and Australia in **2020** to deepen cooperation across defence, trade, technology, energy, and critical minerals.
- **IAEA (International Atomic Energy Agency):** Autonomous international organization promoting the peaceful use of nuclear energy and verifying compliance with nuclear safeguards.
- **NSG (Nuclear Suppliers Group):** A multilateral export control regime that seeks to prevent nuclear proliferation while facilitating peaceful nuclear trade.
- **India–US Civil Nuclear Agreement (123 Agreement):** Signed in **2007**, paving the way for international civil nuclear cooperation with India.
- **Three–Stage Nuclear Power Programme:** Designed by **Dr. Homi J. Bhabha** to utilize India's limited uranium and abundant thorium resources.
- **PHWR (Pressurized Heavy Water Reactor):** The mainstay of India's current nuclear power generation.

- **Fast Breeder Reactor (FBR):** Produces more fissile material than it consumes, forming the second stage of India's nuclear programme.
- **Thorium:** India possesses one of the world's largest reserves of thorium, making it central to the third stage of the nuclear programme.

PadhAI-GENERATED UPSC MCQ

Consider the following statements:

1. The **India–Australia Civil Nuclear Cooperation Agreement** was signed in **2014** and entered into force in **2015**.
2. Under the agreement, Australia supplies uranium to India for use in civilian nuclear facilities subject to **IAEA safeguards**.
3. India's **Three–Stage Nuclear Power Programme** was conceived by **Dr. Homi J. Bhabha**.

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)

2. NEW ULTRA-SENSITIVE AMMONIA SENSOR ENABLES PORTABLE, SELF-POWERED WEARABLE DEVICES FOR TOXIC GAS DETECTION





- I. The newly developed sensor can detect **trace amounts of ammonia** with high sensitivity and rapid response.
- II. It is designed to operate as a **self-powered wearable device**, reducing dependence on external power sources.
- III. The technology has potential applications in:
 - A. Industrial safety.
 - B. Occupational health.
 - C. Environmental monitoring.
 - D. Medical diagnostics (e.g., breath analysis).
- IV. Wearable sensors can continuously monitor air quality and alert users before ammonia reaches hazardous levels.
- V. The innovation integrates **advanced nanomaterials** and flexible electronics, enabling lightweight and portable devices.
- VI. The sensor supports the growing field of **Internet of Things (IoT)**-based health and environmental monitoring.
- VII. Such technologies contribute to safer workplaces and improved public health.
- VIII. The development showcases India's progress in advanced materials, nanotechnology, and sensor research.

BACKGROUND / CONTEXT

Ammonia (NH₃)

- I. A **colourless gas** with a characteristic pungent smell.
- II. Widely used in:
 - A. Fertilizer production.
 - B. Refrigeration systems.
 - C. Chemical industries.
 - D. Pharmaceuticals.
- III. At high concentrations, ammonia is **toxic**, causing irritation to the eyes, skin, and respiratory tract and, in severe cases, life-threatening health effects.

Gas Sensors

Gas sensors detect the presence and concentration of gases in the environment.

Applications include:

- Industrial safety.
- Air quality monitoring.
- Healthcare diagnostics.
- Smart wearables.
- Environmental surveillance.

Self-Powered Sensors

- Generate the required electrical energy from the environment or body movements (e.g., piezoelectric or triboelectric effects).
- Eliminate or reduce the need for conventional batteries.

KEY HIGHLIGHTS

- **Innovation:** Ultra-sensitive ammonia gas sensor.
- **Technology:** Wearable, flexible, self-powered sensing device.
- **Applications:** Industrial safety, healthcare, environmental monitoring, and IoT-enabled smart systems.
- **Scientific Significance:** Advances nanotechnology, flexible electronics, and sensor engineering.
- **Health Significance:** Enables early detection of toxic ammonia exposure and improves workplace safety.
- **Economic Significance:** Supports indigenous development of advanced sensing technologies and wearable electronics.
- **Challenges:** Large-scale manufacturing, long-term durability, calibration, and cost-effective commercialization.
- **Way Forward:** Improve sensor stability, integrate with AI and IoT platforms, expand detection to multiple hazardous gases, and promote commercialization through industry-research collaboration.

PRELIMS BOOSTER BOX

- **Ammonia (NH₃):** A colourless, pungent, alkaline gas widely used in fertilizer production and industrial processes.
- **Nanotechnology:** Manipulation of materials at the nanoscale (1–100 nanometres) to achieve enhanced physical and chemical properties.
- **Wearable Electronics:** Smart electronic devices designed to be worn on the body for continuous monitoring or communication.
- **Internet of Things (IoT):** A network of interconnected devices that collect, exchange, and process data over the internet.
- **Flexible Electronics:** Electronic circuits fabricated on flexible substrates, allowing bending and stretching.
- **Piezoelectric Effect:** Generation of electrical charge in response to mechanical stress.
- **Triboelectric Effect:** Generation of electrical charge through friction or contact between different materials.
- **Gas Sensor:** A device that detects and measures the concentration of specific gases in the environment.
- **Occupational Safety:** Measures adopted to protect workers from hazards in the workplace.
- **Environmental Monitoring:** Continuous observation and measurement of environmental parameters such as air, water, and soil quality.

PadhAI-GENERATED UPSC MCQ

Consider the following statements:

1. **Ammonia (NH₃)** is a colourless gas with a pungent odour and is widely used in fertilizer production.
2. **Self-powered sensors** can generate the electrical energy required for operation from ambient sources or body movements.
3. **Nanotechnology** deals with the manipulation of materials typically in the size range of **1–100 nanometres**.

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)

3. NESAC'S SPACE-BASED APPLICATIONS STRENGTHEN BORDER MANAGEMENT AND DRIVE DEVELOPMENT ACROSS THE NORTHEAST



- NESAC utilizes **satellite remote sensing, Geographic Information Systems (GIS), Global Navigation Satellite Systems (GNSS), and communication technologies** to support governance and development in the Northeast.
- Space-based applications assist in **border area mapping**, infrastructure planning, and monitoring of strategic regions.
- NESAC provides crucial support for **disaster management**, including flood forecasting, landslide monitoring, forest fire detection, and damage assessment.
- The Centre contributes to agriculture, water resource management, forestry, urban planning, and environmental conservation through geospatial technologies.



- It supports planning and implementation of developmental projects in the Northeastern States by providing geospatial decision-support systems.
- Space-based data also aid in improving connectivity, infrastructure development, and climate resilience in the region.
- The initiative reflects India's growing use of space technology for governance and sustainable development.
- NESAC's work aligns with the vision of leveraging space technology for **national security, regional development**, and **Atmanirbhar Bharat**.

BACKGROUND / CONTEXT

North Eastern Space Applications Centre (NESAC)

- **Established: 2000.**
- **Location: Shillong, Meghalaya.**
- A **joint initiative** of the **Indian Space Research Organisation (ISRO)** and the **North Eastern Council (NEC)**.
- Functions as a regional centre for the application of space technology in the Northeastern States.

Major Areas of Work

- Remote sensing.
- Geographic Information Systems (GIS).
- Satellite communication.
- Disaster risk reduction.
- Agriculture and horticulture.
- Forestry and biodiversity.
- Water resources.
- Infrastructure planning.
- Border area management.
- Climate and environmental monitoring.

Key Technologies

- **Remote Sensing:** Collection of information about Earth's surface using satellite or airborne sensors.
- **GIS (Geographic Information System):** Computer-based system for capturing, storing, analyzing, and displaying spatial data.
- **GNSS (Global Navigation Satellite System):** Satellite-based navigation systems such as **NavIC**, GPS, Galileo, and GLONASS.

KEY HIGHLIGHTS

- **Institution:** North Eastern Space Applications Centre (NESAC).
- **Established:** 2000.
- **Location:** Shillong, Meghalaya.
- **Parent Organisations:** ISRO and North Eastern Council (NEC).
- **Primary Objective:** Apply space technology for governance, border management, disaster management, and sustainable development in Northeast India.
- **Strategic Significance:** Strengthens border surveillance, infrastructure planning, and national security.
- **Developmental Significance:** Supports agriculture, water management, urban planning, and environmental conservation.
- **Challenges:** Difficult terrain, extreme weather conditions, data integration, and last-mile implementation.
- **Way Forward:** Expand high-resolution geospatial mapping, strengthen AI-enabled geospatial analytics, integrate **NavIC**-based services, enhance inter-agency coordination, and promote capacity building in geospatial technologies.

PRELIMS BOOSTER BOX

- **NESAC:** North Eastern Space Applications Centre.
- **Established: 2000.**



- **Location: Shillong, Meghalaya.**
- **Joint Initiative: Indian Space Research Organisation (ISRO) and North Eastern Council (NEC).**
- **Remote Sensing:** Acquisition of information about Earth's surface without physical contact, primarily through satellites or aircraft.
- **GIS (Geographic Information System):** Technology used for collection, analysis, and visualization of spatial and geographic data.
- **GNSS:** Global Navigation Satellite System.
- **NavIC (Navigation with Indian Constellation):** India's indigenous regional satellite navigation system developed by **ISRO**, providing positioning, navigation, and timing services over India and surrounding regions.
- **North Eastern Council (NEC):** A statutory regional planning body established under the **North Eastern Council Act, 1971**, functioning under the **Ministry of Development of North Eastern Region (MDoNER)**.
- **Geospatial Technology:** Technologies such as remote sensing, GIS, and satellite navigation used for mapping, planning, monitoring, and decision-making.

PadhAI-GENERATED UPSC MCQ

Consider the following statements:

1. The **North Eastern Space Applications Centre (NESAC)** is a joint initiative of **ISRO** and the **North Eastern Council (NEC)**.
2. **NavIC** is India's indigenous regional satellite navigation system.
3. **Remote sensing** involves collecting information about the Earth's surface without making physical contact with it.

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)

4. MINISTRY OF MINES TO LAUNCH EIGHTH TRANCHE OF AUCTION OF CRITICAL AND STRATEGIC MINERAL BLOCKS



- I. The **8th Tranche** includes **20 mineral blocks**, comprising **13 newly identified blocks** and **7 blocks re-auctioned** after previous attempts.
- II. The mineral portfolio includes:
 - A. **Lithium**
 - B. **Rare Earth Elements (REEs)**
 - C. **Graphite**
 - D. **Molybdenum**
 - E. **Vanadium**
 - F. **Gallium**
 - G. **Titanium**
 - H. **Tungsten**
 - I. **Phosphorite**
 - J. **Potash**
 - K. **Cesium**
 - L. **Rubidium**
 - M. **Glaucanite**
- III. These minerals are essential for:
 - A. Electric vehicles (EVs)
 - B. Renewable energy technologies
 - C. Battery manufacturing
 - D. Defence systems
 - E. Electronics and semiconductors
 - F. Fertilizer production



- G. Aerospace and advanced manufacturing.
- IV. With the completion of seven auction tranches, **56 out of 88** critical and strategic mineral blocks offered have been successfully auctioned, reflecting growing investor confidence.
- V. During **FY 2025–26**, the Ministry achieved a record by auctioning **212 mineral blocks**, including **22 critical and strategic mineral blocks**—the highest in any financial year since the auction regime began.
- VI. Recent amendments to the **Mineral (Auction) Rules, 2026** simplify timelines, improve flexibility in lease execution, and provide faster refunds where auctions are annulled, thereby improving ease of doing business.

BACKGROUND / CONTEXT

Critical Minerals

Critical minerals are minerals that are:

- Essential for economic development and national security.
- Vulnerable to supply chain disruptions.
- Difficult to substitute.

National Critical Mineral Mission (NCMM)

- I. Aims to:
 - A. Secure domestic availability of critical minerals.
 - B. Promote exploration and mining.
 - C. Reduce import dependence.
 - D. Strengthen mineral processing and recycling.
 - E. Support clean energy and strategic industries.

Auction of Mineral Blocks

- Conducted under the **Mines and Minerals (Development and Regulation) Act, 1957 (MMDR Act)**.

- Auctions are undertaken through a **transparent online competitive bidding process**.
- Intended to ensure efficient allocation of mineral resources while maximizing revenue and promoting private investment.

KEY HIGHLIGHTS

- **Event:** Eighth Tranche of Critical and Strategic Mineral Block Auctions.
- **Implementing Ministry:** Ministry of Mines.
- **Blocks Offered:** 20 across **nine States**.
- **Minerals Covered:** Lithium, REEs, Graphite, Tungsten, Gallium, Titanium, Vanadium, Potash, Phosphorite, Cesium, Rubidium, Molybdenum, and Glauconite.
- **Strategic Significance:** Strengthens India's critical mineral security and supply chains.
- **Economic Significance:** Supports EVs, renewable energy, semiconductors, defence manufacturing, and industrial growth.
- **Environmental Significance:** Facilitates the clean energy transition through secure access to battery and renewable energy minerals.
- **Challenges:** Exploration risks, environmental clearances, technology gaps, and dependence on imported processing technologies.
- **Way Forward:** Accelerate exploration, strengthen domestic mineral processing and recycling, encourage private investment, diversify global supply chains, and deepen international partnerships for critical minerals.

PRELIMS BOOSTER BOX

- **Critical Minerals:** Minerals essential for economic security, strategic industries, and clean energy with high supply risk.
- **National Critical Mineral Mission (NCMM):** Aims to secure India's critical mineral value chain through exploration, mining, processing, recycling, and overseas partnerships.
- **MMDR Act, 1957:** Governs regulation and development of mines and minerals in India.



- **Mineral (Auction) Rules, 2026:** Streamline auction procedures and improve ease of doing business.
- **Lithium:** Key mineral for rechargeable batteries used in EVs and energy storage systems.
- **Rare Earth Elements (REEs):** A group of 17 elements essential for electronics, magnets, defence equipment, and renewable energy technologies.
- **Graphite:** Critical anode material in lithium-ion batteries.
- **Gallium:** Used in semiconductors, LEDs, and advanced electronics.
- **Tungsten:** High-strength metal used in defence, aerospace, and industrial tools.
- **Vanadium:** Used in high-strength steel alloys and vanadium redox flow batteries.

PadhAI-GENERATED UPSC MCQ

Consider the following statements:

1. Critical minerals are those that are essential for economic security and are vulnerable to supply disruptions.
2. The auction of mineral blocks in India is conducted under the **Mines and Minerals (Development and Regulation) Act, 1957**.
3. Lithium, Graphite, and Rare Earth Elements are considered important for electric vehicle batteries and clean energy technologies.

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)

5. 'SCALING URBAN CLIMATE RESILIENCE: THE CAPACITIES LEGACY AND WAY FORWARD'



- The **CapaCITIES Programme** focused on enhancing the institutional and technical capacities of urban local bodies (ULBs) to address climate change challenges.
- It supported cities in preparing climate-resilient urban plans through improved planning, risk assessment, and data-driven decision-making.
- The programme promoted sustainable urban development by encouraging climate-resilient infrastructure, green mobility, and nature-based solutions.
- Capacity-building initiatives included training of urban officials, knowledge sharing, and adoption of best practices in climate governance.
- It emphasized integrating climate considerations into city master plans and development projects.
- The programme contributed to strengthening disaster preparedness, reducing climate risks, and improving urban resilience.
- The event also discussed the future roadmap for scaling climate resilience across Indian cities.

- These efforts align with India's commitments under the **Paris Agreement** and the **Sustainable Development Goals (SDGs)**.

BACKGROUND / CONTEXT

Urban Climate Resilience

Urban climate resilience refers to the ability of cities to:

- Prepare for climate-related risks.
- Absorb and recover from climate shocks.
- Adapt to long-term climate change.
- Sustain essential services and infrastructure.

CapaCITIES Programme

- I. A capacity-building initiative aimed at integrating climate resilience into urban governance and planning.
- II. Focuses on:
 - A. Institutional strengthening.
 - B. Climate-sensitive urban planning.
 - C. Knowledge sharing.
 - D. Capacity development of Urban Local Bodies (ULBs).

Related Government Initiatives

National Mission on Sustainable Habitat (NMSH)

- I. One of the **eight missions** under the **National Action Plan on Climate Change (NAPCC)**.
- II. Promotes:
 - A. Sustainable urban planning.
 - B. Energy-efficient buildings.
 - C. Public transport.
 - D. Waste management.

Smart Cities Mission

- Promotes sustainable, technology-driven, and citizen-centric urban development.

AMRUT 2.0

- Focuses on universal water supply, sewerage, and urban infrastructure with an emphasis on sustainability.

KEY HIGHLIGHTS

- **Event:** Scaling Urban Climate Resilience: The CapaCITIES Legacy and Way Forward.
- **Focus:** Strengthening climate resilience in Indian cities.
- **Primary Objective:** Build institutional capacity for climate-responsive urban governance.
- **Environmental Significance:** Improves climate adaptation, disaster resilience, and sustainable urban ecosystems.
- **Governance Significance:** Enhances planning, inter-agency coordination, and evidence-based decision-making.
- **Economic Significance:** Reduces climate-related losses and supports sustainable urban growth.
- **Challenges:** Rapid urbanization, financing gaps, limited technical capacity, and increasing climate risks.
- **Way Forward:** Mainstream climate resilience into urban planning, expand capacity-building programmes, promote nature-based solutions, leverage climate finance, and strengthen data-driven governance.

PRELIMS BOOSTER BOX

- **Urban Climate Resilience:** The ability of cities to anticipate, prepare for, adapt to, and recover from climate-related shocks and stresses.
- **Urban Local Bodies (ULBs):** Institutions of urban self-government constituted under the **74th Constitutional Amendment Act, 1992**.
- **74th Constitutional Amendment Act, 1992:** Granted constitutional status to municipalities and strengthened urban local governance.
- **National Mission on Sustainable Habitat (NMSH):** One of the **eight missions** under the **National Action Plan on Climate Change (NAPCC)**.
- **National Action Plan on Climate Change (NAPCC):** Launched in **2008**, comprising eight national missions to address climate change.



- **Smart Cities Mission:** Launched in **2015** to promote sustainable and smart urban development.
- **AMRUT 2.0:** Focuses on water security, sewerage, and sustainable urban infrastructure.
- **Nature-based Solutions (Nbs):** Actions that protect, restore, or sustainably manage ecosystems to address societal challenges such as climate change while benefiting biodiversity and human well-being.
- **Paris Agreement (2015):** International treaty under the **UNFCCC** aimed at limiting global warming and strengthening climate resilience.
- **SDG 11: Sustainable Cities and Communities**—promotes inclusive, safe, resilient, and sustainable urban development.

PadhAI-GENERATED UPSC MCQ

Consider the following statements:

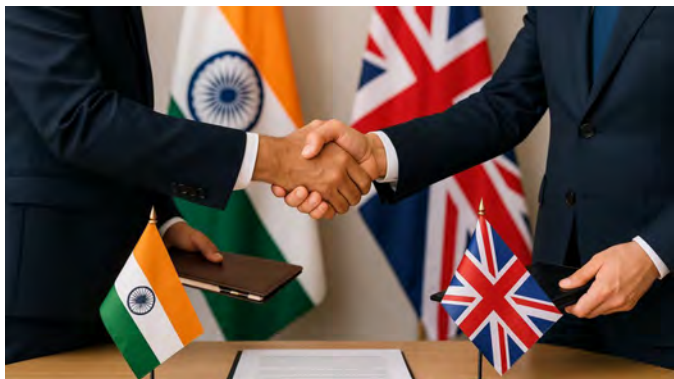
1. The **National Mission on Sustainable Habitat (NMSH)** is one of the **eight missions** under the **National Action Plan on Climate Change (NAPCC)**.
2. The **74th Constitutional Amendment Act, 1992** provides the constitutional framework for **Urban Local Bodies (ULBs)**.
3. **Nature-based Solutions (Nbs)** involve protecting, restoring, or sustainably managing ecosystems to address challenges such as climate change.

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)

1. INDIA-UK COMPREHENSIVE ECONOMIC AND TRADE AGREEMENT (CETA) COMES INTO EFFECT



- The India-UK CETA provides preferential market access for goods and services, facilitating greater bilateral trade and investment.
- It aims to reduce or eliminate tariffs on a wide range of products, making exports more competitive.
- The agreement promotes cooperation in sectors such as information technology, financial services, professional services, pharmaceuticals, textiles, automobiles, education, and clean energy.
- It enhances opportunities for Indian professionals and businesses through improved mobility and easier access to the UK market, subject to the agreed provisions.
- The agreement seeks to strengthen resilient supply chains, encourage innovation, and support MSMEs in accessing international markets.
- It includes provisions to promote transparent trade practices, regulatory cooperation, and sustainable economic growth.
- CETA is expected to generate employment, boost exports, attract investment, and deepen economic integration between India and the UK.

- The agreement reinforces India's strategy of expanding high-quality trade partnerships with major global economies.

BACKGROUND / CONTEXT

India-UK Comprehensive Economic and Trade Agreement (CETA)

- I. A comprehensive bilateral trade agreement covering:
 - A. Trade in goods.
 - B. Trade in services.
 - C. Investment.
 - D. Digital trade.
 - E. Intellectual Property Rights (IPR).
 - F. Government procurement.
 - G. Customs cooperation.
 - H. MSME cooperation.
- II. Seeks to enhance bilateral economic integration and facilitate easier movement of trade and investment.

India-UK Economic Relations

- I. The UK is one of India's major trading and investment partners.
- II. Cooperation extends to:
 - A. Trade and investment.
 - B. Defence and security.
 - C. Education and research.
 - D. Science and technology.
 - E. Climate action.
 - F. Innovation and critical technologies.

Comprehensive Strategic Partnership (CSP)

- Established in **2021**.
- Provides the framework for deeper cooperation across trade, defence, technology, climate, and people-to-people ties.

KEY HIGHLIGHTS

- **Agreement:** India-UK Comprehensive Economic and Trade Agreement (CETA).



- **Partner Countries:** India and the United Kingdom.
- **Primary Objective:** Expand bilateral trade, investment, and economic cooperation.
- **Economic Significance:** Enhances exports, investment flows, employment generation, and supply chain resilience.
- **Strategic Significance:** Strengthens the India–UK Comprehensive Strategic Partnership.
- **Business Significance:** Improves market access and creates opportunities for MSMEs and service providers.
- **Challenges:** Effective implementation, regulatory harmonization, addressing non-tariff barriers, and ensuring benefits for sensitive sectors.
- **Way Forward:** Maximize utilization of tariff concessions, strengthen export competitiveness, support MSMEs, deepen innovation partnerships, and monitor effective implementation of the agreement.

PRELIMS BOOSTER BOX

- **CETA:** Comprehensive Economic and Trade Agreement.
- **Free Trade Agreement (FTA):** An agreement between countries to reduce or eliminate tariffs and other trade barriers while facilitating trade and investment.
- **Tariff:** A tax imposed on imported goods.
- **Non-Tariff Barriers (NTBs):** Trade restrictions other than tariffs, such as technical standards, quotas, and licensing requirements.
- **Rules of Origin (RoO):** Criteria used to determine the national source of a product for preferential tariff treatment.
- **MSMEs:** Micro, Small and Medium Enterprises, which play a vital role in employment generation and exports.
- **Comprehensive Strategic Partnership (CSP):** Framework launched in 2021 to deepen India–UK cooperation across multiple sectors.

- **Balance of Trade:** Difference between the value of a country's exports and imports.
- **Trade in Services:** Cross-border exchange of services such as IT, finance, education, tourism, and healthcare.
- **WTO (World Trade Organization):** International organization that regulates global trade rules and promotes free and fair trade.

PadhAI-GENERATED UPSC MCQ

Consider the following statements:

1. A **Comprehensive Economic and Trade Agreement (CETA)** may cover trade in goods, services, investment, and other areas of economic cooperation.
2. **Rules of Origin** determine whether a product qualifies for preferential tariff treatment under a trade agreement.
3. **Non-Tariff Barriers (NTBs)** include quotas, technical standards, and licensing requirements.

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)

2. ATAL INNOVATION MISSION SPEARHEADS INDIA'S FRONTIER INNOVATION PUSH AT REGIONAL AIM SUMVAAD – NORTH EAST CHAPTER 2026



- **AIM SUMVAAD – North East Chapter 2026** served as a platform for dialogue among startups, incubators, educational institutions, investors, and government agencies.
- The event focused on promoting **frontier technologies** such as Artificial Intelligence (AI), Robotics, Internet of Things (IoT), Biotechnology, Space Technology, and Deep Tech.
- It highlighted the importance of innovation-led economic growth and entrepreneurship in the Northeastern States.
- Discussions emphasized strengthening startup incubation, mentoring, access to finance, and industry-academia collaboration.
- The programme showcased successful innovations emerging from the region and encouraged youth participation in entrepreneurship.
- The initiative supports capacity building through **Atal Tinkering Labs (ATLs)** and **Atal Incubation Centres (AICs)**.

- It aligns with the Government's vision of **Viksit Bharat, Startup India, Digital India**, and **Atmanirbhar Bharat**.
- The event reinforced the role of innovation in generating employment, solving local challenges, and driving sustainable regional development.

BACKGROUND / CONTEXT

Atal Innovation Mission (AIM)

- **Launched: 2016.**
- **Implemented by: NITI Aayog.**
- Flagship initiative to promote a culture of **innovation and entrepreneurship** across India.

Objectives

- Foster innovation in schools, universities, and startups.
- Build a vibrant startup ecosystem.
- Support incubation and entrepreneurship.
- Promote problem-solving using emerging technologies.
- Encourage collaboration between academia, industry, and government.

Major Components

- **Atal Tinkering Labs (ATLs):** Innovation workspaces in schools to promote STEM education and design thinking.
- **Atal Incubation Centres (AICs):** Support startups through incubation, mentoring, and infrastructure.
- **Atal Community Innovation Centres (ACICs):** Promote innovation in underserved and rural regions.
- **Mentor India Programme:** Connects industry experts with students and innovators.
- **AIM SUMVAAD:** A dialogue platform for knowledge sharing and collaboration among innovation ecosystem stakeholders.

KEY HIGHLIGHTS

- **Programme:** AIM SUMVAAD – North East Chapter 2026.



- **Organiser:** Atal Innovation Mission (AIM), NITI Aayog.
- **Focus:** Frontier technologies, startups, and innovation ecosystem development.
- **Regional Significance:** Strengthens entrepreneurship and innovation capacity in Northeast India.
- **Economic Significance:** Promotes startups, job creation, and technology-driven economic growth.
- **Educational Significance:** Encourages STEM education, innovation, and entrepreneurship among students.
- **Challenges:** Limited access to venture capital, infrastructure gaps, technology commercialization, and industry linkages.
- **Way Forward:** Expand incubation infrastructure, strengthen industry-academia partnerships, improve access to funding, promote deep-tech startups, and enhance innovation capacity in Tier-II, Tier-III, and Northeastern regions.

PRELIMS BOOSTER BOX

- **Atal Innovation Mission (AIM):** Flagship innovation initiative launched in **2016** under **NITI Aayog**.
- **NITI Aayog:** Established on **1 January 2015**, replacing the Planning Commission as India's premier public policy think tank.
- **Atal Tinkering Labs (ATLs):** Innovation labs in schools promoting STEM learning, design thinking, and problem-solving.
- **Atal Incubation Centres (AICs):** Incubation centres supporting startups through mentoring, infrastructure, and business development.
- **Atal Community Innovation Centres (ACICs):** Promote innovation and entrepreneurship in underserved, rural, and aspirational regions.
- **Startup India:** Launched in **2016** to promote innovation, entrepreneurship, and startup growth.

- **Deep Tech:** Technology based on substantial scientific or engineering advances, including AI, quantum computing, biotechnology, advanced materials, and space technology.
- **STEM:** Science, Technology, Engineering, and Mathematics.
- **Innovation Ecosystem:** Network of institutions, startups, investors, academia, industry, and government that fosters innovation and entrepreneurship.
- **Atmanirbhar Bharat:** Vision of building a self-reliant India through innovation, manufacturing, and technological advancement.

PadhAI-GENERATED UPSC MCQ

Consider the following statements:

1. The **Atal Innovation Mission (AIM)** is implemented by **NITI Aayog**.
2. **Atal Tinkering Labs (ATLs)** are established to promote innovation, STEM education, and design thinking among school students.
3. **Atal Community Innovation Centres (ACICs)** aim to promote innovation and entrepreneurship in underserved regions.

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)



3. LOK SABHA SPEAKER DEFINES LEGISLATURES AS 'SCHOOLS OF DEMOCRACY' WHERE LAWMAKERS LEARN VALUES OF DIALOGUE, CONSENSUS, AND SERVICE



- Legislatures are the cornerstone of representative democracy, providing a platform for debate, deliberation, and law-making.
- The Speaker emphasized that democratic institutions nurture values such as dialogue, consensus-building, respect for diverse opinions, and service to citizens.
- Effective legislative functioning strengthens accountability of the Executive through discussions, questions, debates, and committee oversight.
- Parliamentary proceedings provide a mechanism for resolving differences through constitutional means rather than confrontation.
- Legislatures also perform key functions of law-making, financial control, and representation of public interests.
- The statement underscores the importance of maintaining parliamentary decorum, constructive debate, and informed decision-making.
- Strong legislatures are essential for protecting constitutional values, fundamental rights, and democratic accountability.

- The remarks reinforce India's commitment to parliamentary democracy and participatory governance.

BACKGROUND / CONTEXT

Parliamentary Democracy in India

- India follows the **Parliamentary System of Government** based on the **Westminster model**.
- Parliament consists of:
 - The President**
 - Lok Sabha (House of the People)**
 - Rajya Sabha (Council of States)**

Functions of the Legislature

- Enacts laws.
- Exercises financial control through the Budget process.
- Holds the Executive accountable.
- Represents citizens and diverse interests.
- Debates matters of national importance.
- Amends the Constitution under **Article 368**.

Role of the Lok Sabha Speaker

- Presides over the proceedings of the Lok Sabha.
- Maintains order and decorum in the House.
- Interprets and enforces the Rules of Procedure.
- Decides on the admissibility of motions and questions.
- Acts as the final authority in matters relating to the **Tenth Schedule (Anti-Defection Law)**, subject to judicial review.

KEY HIGHLIGHTS

- Theme:** Legislatures as "Schools of Democracy."
- Core Values:** Dialogue, consensus, constitutionalism, accountability, and public service.
- Institutional Significance:** Strengthens representative democracy and rule of law.
- Governance Significance:** Ensures executive accountability and citizen representation.



- **Constitutional Significance:** Upholds constitutional values and democratic institutions.
- **Democratic Significance:** Encourages informed debate, peaceful resolution of differences, and participatory governance.
- **Challenges:** Frequent disruptions, declining quality of debates, reduced sitting days, and limited scrutiny of legislation.
- **Way Forward:** Strengthen parliamentary committees, improve legislative research support, encourage constructive debate, increase sitting days, and promote greater public engagement with legislative processes.

PRELIMS BOOSTER BOX

- **Article 79:** Parliament consists of the **President, Lok Sabha, and Rajya Sabha.**
- **Article 93:** Provides for the election of the **Speaker and Deputy Speaker of the Lok Sabha.**
- **Article 105:** Defines the powers, privileges, and immunities of Parliament and its members.
- **Article 107:** Deals with the introduction and passage of **ordinary Bills.**
- **Article 110:** Defines a **Money Bill.**
- **Article 111:** Assent of the President to Bills passed by Parliament.
- **Article 118:** Parliament may make rules for regulating its procedure and conduct of business.
- **Article 368:** Procedure for amendment of the Constitution.
- **Tenth Schedule:** Contains provisions relating to **disqualification on the ground of defection (Anti-Defection Law).**
- **Department-related Parliamentary Standing Committees (DRSCs):** Examine Bills, scrutinize Demands for Grants, and oversee the functioning of Ministries, thereby strengthening legislative oversight.

PadhAI-GENERATED UPSC MCQ

Consider the following statements:

1. **Article 79** provides that the Parliament of India consists of the **President, Lok Sabha, and Rajya Sabha.**
2. **Article 93** provides for the election of the **Speaker and Deputy Speaker of the Lok Sabha.**
3. The **Tenth Schedule** of the Constitution deals with **disqualification of legislators on the ground of defection.**

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)

4. WORLD YOUTH SKILLS DAY 2026: "THE FUTURE BELONGS TO THOSE WHO LEARN, ADAPT AND INNOVATE"



- World Youth Skills Day underscores the importance of equipping young people with skills for employment, entrepreneurship, and sustainable development.



- The Government highlighted the need to develop **future-ready skills** in areas such as Artificial Intelligence (AI), digital technologies, green jobs, advanced manufacturing, and emerging technologies.
- Emphasis was laid on **lifelong learning**, adaptability, and innovation to meet changing labour market demands.
- Skill development initiatives aim to improve employability, productivity, and economic growth while supporting the vision of **Viksit Bharat 2047**.
- The event also stressed stronger industry-academia collaboration, apprenticeship opportunities, and vocational education.
- Entrepreneurship and innovation were identified as key drivers of job creation and economic resilience.
- The initiative aligns with India's demographic dividend by empowering youth with market-relevant skills.
- It also contributes to achieving the **Sustainable Development Goals (SDGs)**, particularly quality education and decent work.

BACKGROUND / CONTEXT

World Youth Skills Day (WYSD)

- **Observed:** 15 July every year.
- **Declared by:** United Nations General Assembly (UNGA) in 2014.
- **First Observed:** 2015.
- **Objective:** Raise awareness about the importance of equipping youth with skills for employment, decent work, entrepreneurship, and lifelong learning.

Major Skill Development Initiatives in India

Skill India Mission

- **Launched:** 2015.
- Seeks to create a skilled workforce aligned with industry requirements.

Pradhan Mantri Kaushal Vikas Yojana (PMKVY)

- Flagship skill certification scheme.
- Focuses on industry-relevant skill training and Recognition of Prior Learning (RPL).

National Skill Development Corporation (NSDC)

- A **not-for-profit company** established in 2008.
- Promotes private sector participation in skill development.

National Education Policy (NEP) 2020

- Encourages vocational education, multidisciplinary learning, and skill integration at all levels.

KEY HIGHLIGHTS

- **Occasion:** World Youth Skills Day 2026.
- **Date:** 15 July.
- **Theme:** Empowering youth through learning, adaptability, and innovation.
- **Primary Focus:** Future-ready skills, lifelong learning, digital competencies, and entrepreneurship.
- **Economic Significance:** Enhances employability, productivity, innovation, and economic competitiveness.
- **Social Significance:** Harnesses India's demographic dividend and promotes inclusive development.
- **Educational Significance:** Strengthens vocational education, apprenticeships, and industry-oriented training.
- **Challenges:** Skill mismatch, digital divide, unequal access to quality training, and rapidly evolving technology.
- **Way Forward:** Expand industry partnerships, strengthen apprenticeship programmes, integrate AI and digital skills into curricula, promote lifelong learning, and improve access to quality skilling in rural and underserved areas.

PRELIMS BOOSTER BOX

- **World Youth Skills Day (WYSD):** Observed annually on **15 July**.
- **Declared By: United Nations General Assembly (UNGA)** in **2014**.
- **First Observed: 2015**.
- **Skill India Mission:** Launched in **2015** to create an industry-ready skilled workforce.
- **Pradhan Mantri Kaushal Vikas Yojana (PMKVY):** Flagship scheme for short-term skill training and certification.
- **National Skill Development Corporation (NSDC):** Established in **2008** as a public-private partnership to promote skill development.
- **National Education Policy (NEP) 2020:** Promotes vocational education, experiential learning, and multidisciplinary education.
- **Recognition of Prior Learning (RPL):** Framework for assessing and certifying skills acquired through informal or non-formal learning.
- **Demographic Dividend:** Economic growth potential arising from a large working-age population.
- **SDG 8: Decent Work and Economic Growth; SDG 4: Quality Education.**

PadhAI-GENERATED UPSC MCQ

Consider the following statements:

1. **World Youth Skills Day** is observed every year on **15 July**.
2. The **National Skill Development Corporation (NSDC)** was established in **2008** to promote skill development through public-private partnership.
3. **Recognition of Prior Learning (RPL)** is a mechanism for assessing and certifying skills acquired through informal or non-formal learning.

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)

5. INDIAN PHARMACOPOEIA COMMISSION SIGNS MoU WITH UTTAR PRADESH PHARMA COUNCIL (UPPPC) TO STRENGTHEN QUALITY, INNOVATION, AND REGULATORY EXCELLENCE IN HEALTHCARE



- The MoU seeks to promote collaboration in **drug quality assurance, pharmaceutical research, innovation, and capacity building**.
- It focuses on strengthening regulatory standards and promoting the adoption of **Indian Pharmacopoeia** standards across the pharmaceutical sector.
- The partnership will facilitate training programmes, technical cooperation, and knowledge sharing among industry, academia, and regulatory institutions.
- It aims to improve laboratory capabilities and support quality testing of medicines.
- The collaboration encourages research and innovation in pharmaceutical sciences and regulatory practices.



- The initiative will help improve compliance with national and international quality standards.
- It is expected to enhance the global competitiveness of India's pharmaceutical industry.
- The partnership aligns with India's objective of ensuring **safe, effective, and quality medicines** for all.

BACKGROUND / CONTEXT

Indian Pharmacopoeia Commission (IPC)

- **Established:** 2009.
- **Headquarters:** Ghaziabad, Uttar Pradesh.
- **Administrative Ministry:** Ministry of Health and Family Welfare.
- An autonomous institution responsible for setting standards for drugs marketed in India.

Functions of IPC

- Publishes the **Indian Pharmacopoeia (IP)**.
- Develops standards for the identity, purity, strength, and quality of medicines.
- Acts as the **National Coordination Centre (NCC)** for the **Pharmacovigilance Programme of India (PvPI)**.
- Supports drug quality testing and regulatory science.

Indian Pharmacopoeia (IP)

- Official book of drug standards in India.
- Specifies quality standards for pharmaceutical substances, dosage forms, and medical products.
- Used by manufacturers, regulators, and testing laboratories to ensure medicine quality.

KEY HIGHLIGHTS

- **MoU Partners:** Indian Pharmacopoeia Commission (IPC) and Uttar Pradesh Pharma Council (UPPPC).
- **Primary Objective:** Strengthen pharmaceutical quality, innovation, and regulatory excellence.

- **Focus Areas:** Drug quality assurance, research, laboratory strengthening, skill development, and regulatory cooperation.
- **Healthcare Significance:** Improves the safety, efficacy, and quality of medicines.
- **Economic Significance:** Enhances the competitiveness of India's pharmaceutical industry and supports pharmaceutical exports.
- **Scientific Significance:** Promotes regulatory science, pharmaceutical innovation, and quality assurance.
- **Challenges:** Harmonization with global standards, capacity building, quality compliance among MSMEs, and rapid technological changes.
- **Way Forward:** Strengthen quality infrastructure, expand regulatory training, promote industry-academia collaboration, adopt advanced analytical technologies, and align with international best practices.

PRELIMS BOOSTER BOX

- **Indian Pharmacopoeia Commission (IPC):** Autonomous institution under the **Ministry of Health and Family Welfare**, established in 2009.
- **Headquarters:** Ghaziabad, Uttar Pradesh.
- **Indian Pharmacopoeia (IP):** Official compendium prescribing standards for the identity, purity, strength, and quality of medicines in India.
- **Pharmacovigilance Programme of India (PvPI):** National programme for monitoring the safety of medicines, coordinated by the **Indian Pharmacopoeia Commission**.
- **Central Drugs Standard Control Organisation (CDSCO):** India's national drug regulatory authority headed by the **Drugs Controller General of India (DCGI)**.
- **Drugs Controller General of India (DCGI):** Heads CDSCO and is responsible for the approval of new drugs, clinical trials, and regulation of pharmaceuticals in India.



- **Good Manufacturing Practices (GMP):** Standards that ensure medicines are consistently produced and controlled according to quality standards.
- **Regulatory Science:** Application of scientific methods to evaluate the safety, quality, and efficacy of medical products.
- **Pharmacopoeia:** An official publication containing standards and specifications for medicines and pharmaceutical substances.
- **Atmanirbhar Bharat:** Government initiative aimed at promoting self-reliance in key sectors, including pharmaceuticals and healthcare.

PadhAI-GENERATED UPSC MCQ

Consider the following statements:

1. The **Indian Pharmacopoeia Commission (IPC)** functions under the **Ministry of Health and Family Welfare**.
2. The **Indian Pharmacopoeia (IP)** prescribes official standards for the quality of medicines in India.
3. The **Pharmacovigilance Programme of India (PvPI)** is coordinated by the **Indian Pharmacopoeia Commission**.

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)

1. INDIA'S FIRST HYDROGEN-POWERED TRAIN: ADVANCING GREEN RAIL MOBILITY



- The hydrogen-powered train will operate using **hydrogen fuel cell technology**, generating electricity through the electrochemical reaction of hydrogen and oxygen.
- The only by-products of the process are **water and heat**, making it a zero tailpipe emission technology.
- The project is initially planned for operation on selected heritage and non-electrified railway routes.
- Hydrogen-powered trains offer a cleaner alternative to diesel locomotives, especially where railway electrification is not economically feasible.
- The initiative is expected to reduce greenhouse gas emissions, improve energy efficiency, and promote the adoption of green hydrogen in the transport sector.
- The project also encourages indigenous development of hydrogen technologies under the **Atmanirbhar Bharat** initiative.
- It strengthens India's transition towards sustainable and low-carbon transportation.
- The initiative complements broader efforts to develop a domestic **green hydrogen ecosystem**.

BACKGROUND / CONTEXT

Hydrogen Fuel Cell Train

- A hydrogen fuel cell train uses **fuel cells** to convert hydrogen into electricity through an electrochemical process.
- The electricity powers electric traction motors.
- **By-products:** Water vapour and heat.
- Unlike diesel engines, fuel cells produce **no direct carbon dioxide emissions**.

National Green Hydrogen Mission

- **Launched:** 2023.
- **Nodal Ministry:** Ministry of New and Renewable Energy (MNRE).
- **Objective:** Make India a global hub for the production, utilization, and export of **green hydrogen** and its derivatives.

Indian Railways and Decarbonization

- I. Indian Railways aims to become a **Net Zero Carbon Emitter by 2030**.
- II. Key initiatives include:
 - A. 100% railway electrification.
 - B. Renewable energy adoption.
 - C. Energy-efficient technologies.
 - D. Hydrogen-powered trains.
 - E. Biofuel and alternative fuel initiatives.

KEY HIGHLIGHTS

- **Project:** India's first hydrogen-powered train.
- **Implementing Agency:** Indian Railways.
- **Technology:** Hydrogen fuel cell propulsion.
- **Primary Objective:** Promote zero-emission rail transport and green mobility.
- **Environmental Significance:** Reduces greenhouse gas emissions and air pollution.
- **Energy Significance:** Supports clean energy transition and hydrogen economy.
- **Economic Significance:** Promotes indigenous hydrogen technology and reduces fossil fuel dependence.



- **Challenges:** High production cost of green hydrogen, storage infrastructure, fuel cell costs, and scaling up hydrogen supply chains.
- **Way Forward:** Expand green hydrogen production, develop refuelling infrastructure, encourage domestic manufacturing of fuel cells, and integrate hydrogen technology into public transport systems.

PRELIMS BOOSTER BOX

- **Hydrogen Fuel Cell:** Converts hydrogen and oxygen into electricity through an electrochemical reaction, producing **water and heat** as by-products.
- **Green Hydrogen:** Hydrogen produced using renewable electricity through the **electrolysis of water**, with negligible carbon emissions.
- **Grey Hydrogen:** Produced from natural gas or coal without carbon capture; associated with significant CO₂ emissions.
- **Blue Hydrogen:** Produced from fossil fuels with **Carbon Capture, Utilisation and Storage (CCUS)** technologies.
- **National Green Hydrogen Mission:** Launched in **2023** under the **Ministry of New and Renewable Energy (MNRE)**.
- **Electrolysis:** Process of splitting water into hydrogen and oxygen using electricity.
- **Fuel Cell:** An electrochemical device that continuously converts chemical energy into electrical energy without combustion.
- **Net Zero Emissions:** Achieving a balance between greenhouse gas emissions produced and those removed from the atmosphere.
- **Indian Railways' Net Zero Target: 2030.**
- **Hydrogen Economy:** An economic system where hydrogen serves as a major clean energy carrier for transport, industry, and power generation.

PadhAI-GENERATED UPSC MCQ

Consider the following statements:

1. A **hydrogen fuel cell** generates electricity through an electrochemical reaction between hydrogen and oxygen.
2. **Green hydrogen** is produced by electrolysis of water using renewable energy.
3. The **National Green Hydrogen Mission** is implemented by the **Ministry of New and Renewable Energy (MNRE)**.

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)

2. INDIAN NAVY SET TO COMMISSION THE LATEST ANTI-SUBMARINE WARFARE SHALLOW WATER CRAFT (ASW-SWC) 'MALVAN'



- I. **INS Malvan** is part of the **Anti-Submarine Warfare Shallow Water Craft (ASW-SWC)** programme of the Indian Navy.
- II. The vessel is designed for **detecting, tracking, and neutralising enemy submarines** operating in shallow coastal waters.
- III. Besides anti-submarine operations, the ship can undertake:
 - A. Coastal surveillance.
 - B. Search and rescue (SAR).



- C. Low-intensity maritime operations.
- D. Mine-laying (where required).
- IV. It is equipped with advanced **sonars, underwater sensors, lightweight torpedoes, and anti-submarine rockets**.
- V. The induction enhances India's maritime security and complements the Navy's coastal defence architecture.
- VI. The project promotes indigenous shipbuilding and defence manufacturing under **Aatmanirbhar Bharat** and **Make in India**.
- VII. The vessel strengthens India's preparedness against emerging underwater threats in the **Indian Ocean Region (IOR)**.
- VIII. It reflects India's focus on modernizing naval capabilities and safeguarding maritime interests.

BACKGROUND / CONTEXT

ASW Shallow Water Craft (ASW-SWC)

- I. A class of indigenously built warships designed specifically for **anti-submarine warfare in shallow coastal waters**.
- II. Built for:
 - A. Detection and destruction of submarines.
 - B. Coastal patrol.
 - C. Maritime surveillance.
 - D. Search and Rescue (SAR).
 - E. Protection of ports and offshore installations.

Key Features

- Advanced hull-mounted sonar.
- Lightweight torpedoes.
- Anti-submarine rocket systems.
- Modern electronic warfare and communication systems.
- High manoeuvrability for shallow-water operations.

Importance of Anti-Submarine Warfare (ASW)

- Detects and neutralizes hostile submarines.
- Protects sea lines of communication (SLOCs).
- Secures ports, harbours, and offshore infrastructure.
- Enhances maritime domain awareness.
- Strengthens deterrence in the Indian Ocean Region.

KEY HIGHLIGHTS

- **Vessel:** INS Malvan.
- **Type:** Anti-Submarine Warfare Shallow Water Craft (ASW-SWC).
- **Operator:** Indian Navy.
- **Primary Role:** Anti-submarine warfare in shallow coastal waters.
- **Strategic Significance:** Enhances coastal security, underwater surveillance, and maritime deterrence.
- **Defence Significance:** Strengthens indigenous naval capability and force modernization.
- **Economic Significance:** Promotes domestic shipbuilding and defence manufacturing.
- **Challenges:** Rapidly evolving underwater warfare technologies, maintenance of advanced sensors, and expanding submarine activity in the Indian Ocean.
- **Way Forward:** Accelerate induction of indigenous naval platforms, integrate AI-enabled underwater surveillance, strengthen maritime domain awareness, and expand indigenous defence production.

PRELIMS BOOSTER BOX

- **ASW: Anti-Submarine Warfare**—operations to detect, track, and neutralize enemy submarines.
- **ASW-SWC: Anti-Submarine Warfare Shallow Water Craft**, designed for operations in littoral and coastal waters.



- **Indian Ocean Region (IOR):** A strategically important maritime region connecting major global trade routes.
- **Sea Lines of Communication (SLOCs):** Primary maritime routes essential for international trade, energy supplies, and naval movement.
- **Sonar (Sound Navigation and Ranging):** Uses sound waves to detect and locate underwater objects such as submarines.
- **Lightweight Torpedo:** A guided underwater weapon primarily used against submarines.
- **Maritime Domain Awareness (MDA):** Effective understanding of activities in the maritime domain that could impact security, safety, economy, or the environment.
- **Aatmanirbhar Bharat in Defence:** Government initiative to promote indigenous design, development, and manufacturing of defence equipment.
- **Make in India (Defence):** Initiative to enhance domestic defence production and reduce import dependence.
- **Search and Rescue (SAR):** Operations to locate and assist persons in distress at sea.

PadhAI-GENERATED UPSC MCQ

Consider the following statements:

1. **Anti-Submarine Warfare (ASW)** involves operations to detect and neutralize hostile submarines.
2. **Sonar** uses sound waves to detect underwater objects.
3. **Sea Lines of Communication (SLOCs)** are important maritime routes critical for global trade and strategic movement.

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)

3. INDIA ACHIEVES MAJOR MILESTONE AT CODEX COMMISSION WITH ADOPTION OF THREE GLOBAL STANDARDS FOR SPICES



- The **Codex Alimentarius Commission** adopted three international standards for spices, with India playing a key role in their development.
- The standards aim to ensure **quality, safety, authenticity, and fair trade practices** in the global spice market.
- Harmonized standards reduce technical barriers to trade and improve market access for exporters.
- The adoption is expected to enhance the global competitiveness of Indian spices by promoting uniform quality benchmarks.
- The initiative supports consumer protection by ensuring safe and high-quality spice products.
- India, being the world's largest producer, consumer, and exporter of several spices, stands to benefit significantly from these internationally recognized standards.
- The achievement reflects India's growing influence in global food standard-setting processes.
- It also aligns with the objective of increasing agricultural exports and strengthening India's food processing sector.

BACKGROUND / CONTEXT

Codex Alimentarius Commission (CAC)

- **Established:** 1963.
- **Created by:** Food and Agriculture Organization (FAO) and World Health Organization (WHO).
- Develops **international food standards, guidelines, and codes of practice** to protect consumer health and ensure fair practices in food trade.
- The collection of standards is known as the **Codex Alimentarius** ("Food Code").

Codex Committee on Spices and Culinary Herbs (CCSCH)

- **Host Country:** India.
- Established in **2013** under the Codex Alimentarius Commission.
- Develops international standards for spices and culinary herbs to facilitate safe and fair global trade.

Spices Board India

- **Established:** 1987 under the **Spices Board Act, 1986**.
- **Administrative Ministry:** Ministry of Commerce and Industry.
- Responsible for the promotion, development, quality improvement, and export of Indian spices.

KEY HIGHLIGHTS

- **Organisation:** Codex Alimentarius Commission (CAC).
- **Achievement:** Adoption of three global standards for spices.
- **India's Role:** Active contributor and host of the Codex Committee on Spices and Culinary Herbs (CCSCH).
- **Economic Significance:** Enhances spice exports, improves market access, and strengthens India's global leadership in the spice trade.

- **Consumer Significance:** Ensures food safety, quality assurance, and consumer protection.
- **Trade Significance:** Reduces technical barriers to international trade through harmonized standards.
- **Challenges:** Ensuring compliance by small producers, traceability, quality certification, and meeting stringent export requirements.
- **Way Forward:** Strengthen quality testing infrastructure, improve farmer awareness, promote Good Agricultural Practices (GAP), enhance traceability, and expand value-added spice exports.

PRELIMS BOOSTER BOX

- **Codex Alimentarius Commission (CAC):** Established in **1963** by the **FAO** and **WHO** to develop international food standards.
- **Codex Alimentarius:** Collection of internationally recognized food standards, guidelines, and codes of practice.
- **FAO: Food and Agriculture Organization** of the United Nations, established in **1945**.
- **WHO: World Health Organization**, established in **1948**.
- **Codex Committee on Spices and Culinary Herbs (CCSCH):** Established in **2013**; **India** is the host country.
- **Spices Board India:** Constituted under the **Spices Board Act, 1986** and established in **1987** under the **Ministry of Commerce and Industry**.
- **Good Agricultural Practices (GAP):** Sustainable farming practices that ensure food safety, quality, environmental protection, and worker welfare.
- **Technical Barriers to Trade (TBT):** Non-tariff measures such as standards, testing, certification, and labeling requirements that may affect international trade.
- **Traceability:** Ability to track a food product through all stages of production, processing, and distribution.



- **India's Position:** India is among the **world's largest producer, consumer, and exporter of spices**, exporting over **200 varieties of spices and spice products**.

PadhAI-GENERATED UPSC MCQ

Consider the following statements:

1. The **Codex Alimentarius Commission (CAC)** was established jointly by the **FAO** and the **WHO**.
2. **India** hosts the **Codex Committee on Spices and Culinary Herbs (CCSCH)**.
3. The **Spices Board India** functions under the **Ministry of Commerce and Industry**.

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)

4. ICMR STUDY FINDS DRONE-ENABLED TB SAMPLE TRANSPORT CAN REDUCE DIAGNOSIS TIME AND PATIENT EXPENSES IN REMOTE TELANGANA



- The study evaluated the use of drones to transport **TB sputum samples** from remote health facilities to diagnostic laboratories.

- Under the drone model, **diagnosis time was reduced from around 15 days to about 5 days**, enabling earlier treatment initiation.
- Patient **out-of-pocket expenditure** fell sharply as repeated travel to distant diagnostic centres was avoided.
- The project was implemented under **ICMR's i-DRONE initiative**, demonstrating the role of drone technology in strengthening healthcare delivery in difficult-to-reach regions.
- Drone logistics can improve access to timely diagnosis for populations in geographically isolated and underserved areas.
- The findings support the integration of drone technology into the **National TB Elimination Programme (NTEP)**, particularly in hilly, tribal, and remote regions.
- The initiative aligns with India's efforts to leverage digital and emerging technologies for achieving **Universal Health Coverage (UHC)**.
- It also contributes to India's goal of eliminating tuberculosis through faster diagnosis and treatment.

BACKGROUND / CONTEXT

i-DRONE Initiative

- A flagship initiative of the **Indian Council of Medical Research (ICMR)**.
- Demonstrates the use of **drone technology** for transporting medical supplies, diagnostic samples, vaccines, and medicines.
- Aims to improve healthcare accessibility in remote and inaccessible regions.

National TB Elimination Programme (NTEP)

- Formerly known as the **Revised National Tuberculosis Control Programme (RNTCP)**.
- **Nodal Ministry:** Ministry of Health and Family Welfare.
- Objective: Eliminate tuberculosis in India through early diagnosis, universal access to quality treatment, and patient support.

Tuberculosis (TB)

- Caused by the bacterium ***Mycobacterium tuberculosis***.
- Primarily affects the lungs (**pulmonary TB**) but can involve other organs.
- Spreads through **airborne droplets** when an infected person coughs, sneezes, or speaks.
- TB is **preventable and curable** with timely diagnosis and appropriate treatment.

KEY HIGHLIGHTS

- **Study:** Drone-enabled transport of TB sputum samples.
- **Lead Agency:** Indian Council of Medical Research (ICMR).
- **Location:** Yadadri-Bhuvanagiri district, Telangana.
- **Partners:** AIIMS Bibinagar and District TB Office under NTEP.
- **Primary Outcome:** Reduced diagnosis time and patient expenditure.
- **Healthcare Significance:** Enables earlier diagnosis, timely treatment, and improved access in remote areas.
- **Technological Significance:** Demonstrates the potential of drones in strengthening public health logistics.
- **Challenges:** Regulatory approvals, drone infrastructure, weather constraints, payload limitations, and scalability.
- **Way Forward:** Integrate drone logistics into national health programmes, expand operations to other difficult terrains, strengthen digital health infrastructure, and establish standard operating procedures for medical drone operations.

PRELIMS BOOSTER BOX

- **ICMR (Indian Council of Medical Research):** Apex body for biomedical research in India under the **Department of Health Research, Ministry of Health and Family Welfare**.

- **i-DRONE Initiative:** Uses drones to transport vaccines, medicines, blood products, and diagnostic samples to improve healthcare delivery.
- **NTEP (National TB Elimination Programme):** India's flagship programme for tuberculosis elimination.
- **RNTCP:** Revised National Tuberculosis Control Programme; renamed as **NTEP** in 2020.
- **Tuberculosis (TB):** Infectious disease caused by ***Mycobacterium tuberculosis***.
- **Sputum Sample:** Mucus coughed up from the lungs, commonly used for TB diagnosis.
- **NAAT (Nucleic Acid Amplification Test):** Molecular diagnostic technique used for rapid detection of TB and drug resistance.
- **Universal Health Coverage (UHC):** Ensures access to quality health services without financial hardship.
- **Drone Rules, 2021:** Simplified regulatory framework for drone operations in India.
- **SDG 3:** Ensure healthy lives and promote well-being for all at all ages, including ending the TB epidemic.

PadhAI-GENERATED UPSC MCQ

Consider the following statements:

1. The **i-DRONE initiative** is led by the **Indian Council of Medical Research (ICMR)** to improve healthcare delivery using drone technology.
2. **Tuberculosis** is caused by the bacterium ***Mycobacterium tuberculosis***.
3. The **National TB Elimination Programme (NTEP)** was formerly known as the **Revised National Tuberculosis Control Programme (RNTCP)**.

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)

5. STRENGTHENING RURAL CREDIT FOR INCLUSIVE GROWTH IN INDIA



- Rural credit plays a crucial role in providing farmers, rural entrepreneurs, Self-Help Groups (SHGs), and small businesses with access to affordable finance.
- The Government has expanded institutional credit through commercial banks, Regional Rural Banks (RRBs), cooperative banks, and Small Finance Banks.
- Major initiatives such as the **Kisan Credit Card (KCC)** scheme have improved farmers' access to short-term crop loans and working capital.
- Financial inclusion programmes, including the **Pradhan Mantri Jan Dhan Yojana (PMJDY)** and digital payment infrastructure, have strengthened rural banking access.
- Rural credit supports agricultural modernization, mechanization, allied activities, MSMEs, and rural infrastructure development.
- Priority Sector Lending (PSL) norms ensure adequate credit flow to agriculture and other underserved sectors.
- Strengthening rural credit contributes to poverty reduction, employment generation, and inclusive economic growth.

- The initiative aligns with the vision of **Viksit Bharat, Atmanirbhar Bharat**, and sustainable rural transformation.

BACKGROUND / CONTEXT

Rural Credit

- I. Refers to institutional and non-institutional loans provided to:
 - A. Farmers.
 - B. Agricultural labourers.
 - C. Rural artisans.
 - D. Rural entrepreneurs.
 - E. Self-Help Groups (SHGs).
 - F. Rural MSMEs.

Sources of Institutional Rural Credit

- Commercial Banks.
- Regional Rural Banks (RRBs).
- Cooperative Banks.
- Small Finance Banks.
- NABARD-supported financial institutions.

National Bank for Agriculture and Rural Development (NABARD)

- **Established: 1982.**
- Apex development financial institution for agriculture and rural development.
- Promotes sustainable rural prosperity through credit planning, refinancing, and institutional development.

MAJOR GOVERNMENT INITIATIVES

Kisan Credit Card (KCC)

- Provides timely and affordable short-term credit to farmers.
- Covers crop cultivation, allied activities, and working capital needs.

Priority Sector Lending (PSL)

- I. Mandated by the **Reserve Bank of India (RBI)**.
- II. Requires banks to lend a specified proportion of credit to priority sectors such as:
 - A. Agriculture.



- B. MSMEs.
- C. Education.
- D. Housing.
- E. Renewable energy.

Pradhan Mantri Jan Dhan Yojana (PMJDY)

- **Launched: 2014.**
- Expands access to banking, savings, credit, insurance, and pension services.

Self-Help Group (SHG)–Bank Linkage

Programme

- Implemented by **NABARD**.
- Promotes financial inclusion and women's empowerment through group-based lending.

KEY HIGHLIGHTS

- **Focus:** Expanding rural institutional credit.
- **Primary Objective:** Promote inclusive growth and financial inclusion.
- **Economic Significance:** Increases agricultural investment, productivity, and rural entrepreneurship.
- **Social Significance:** Reduces dependence on informal moneylenders and empowers vulnerable communities.
- **Financial Significance:** Strengthens formal banking penetration and digital financial inclusion.
- **Challenges:** Limited credit access for tenant farmers, regional disparities, rising NPAs, low financial literacy, and climate-related credit risks.
- **Way Forward:** Expand digital lending, strengthen farmer credit assessment, improve financial literacy, enhance SHG financing, promote climate-resilient agricultural credit, and leverage fintech for last-mile banking services.

PRELIMS BOOSTER BOX

- **NABARD: National Bank for Agriculture and Rural Development**, established in **1982**; apex

development financial institution for agriculture and rural development.

- **Kisan Credit Card (KCC):** Introduced in **1998** to provide timely and affordable credit to farmers.
- **Regional Rural Banks (RRBs):** Established under the **Regional Rural Banks Act, 1976** to provide banking services in rural areas.
- **Priority Sector Lending (PSL):** RBI policy requiring banks to lend a prescribed share of credit to priority sectors.
- **Pradhan Mantri Jan Dhan Yojana (PMJDY):** Launched in **2014** to promote universal financial inclusion.
- **SHG–Bank Linkage Programme:** Launched by **NABARD** in **1992** to connect Self-Help Groups with formal banking institutions.
- **Self-Help Group (SHG):** A voluntary group, usually comprising 10–20 members (primarily women), that promotes savings and access to credit.
- **Financial Inclusion:** Ensuring affordable access to financial services such as banking, credit, insurance, and pensions.
- **Agriculture Infrastructure Fund (AIF):** Central Sector Scheme launched in **2020** to provide medium- to long-term financing for post-harvest agricultural infrastructure.
- **Inclusive Growth:** Economic growth that creates opportunities for all sections of society and ensures equitable distribution of its benefits.

PadhAI-GENERATED UPSC MCQ

Consider the following statements:

1. **NABARD** was established in **1982** as the apex development financial institution for agriculture and rural development.
2. The **Kisan Credit Card (KCC)** scheme was introduced to provide timely institutional credit to farmers.



3. The **SHG–Bank Linkage Programme** is implemented by **NABARD** to promote financial inclusion through Self-Help Groups.

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)

1. BHARAT TEX 2026: WHERE EVERY THREAD OPENS A NEW OPPORTUNITY



- Bharat Tex 2026 is a comprehensive global textile platform covering the entire textile value chain—from fibre and yarn to fabrics, garments, technical textiles, machinery, and fashion.
- The event aims to promote '**Farm to Fibre, Fibre to Factory, Factory to Fashion, Fashion to Foreign Markets**', reflecting India's integrated textile strategy.
- It showcases India's strengths in handlooms, handicrafts, apparel, technical textiles, sustainable manufacturing, and textile machinery.
- The platform facilitates **B2B meetings, investment opportunities, technology transfer, innovation, and international collaborations**.
- Special emphasis is placed on **technical textiles, sustainable production, circular economy practices, digitalization, and smart manufacturing**.
- Bharat Tex supports the vision of increasing textile exports, generating employment, and

strengthening India's position in global value chains.

- The event also highlights initiatives supporting MSMEs, artisans, startups, women entrepreneurs, and traditional textile clusters.
- It aligns with the objectives of **Make in India, Atmanirbhar Bharat, PM MITRA Parks**, and the **National Technical Textiles Mission (NTTM)**.

BACKGROUND / CONTEXT

Bharat Tex

- A flagship global textile event supported by the **Ministry of Textiles** and leading textile industry bodies.
- Serves as a one-stop platform for:
 - Textile trade.
 - Investment promotion.
 - Innovation.
 - Technology adoption.
 - Global buyer-seller interactions.
- Covers the complete textile and apparel value chain.

India's Textile Sector

- One of the **largest employers** in the country after agriculture.
- Contributes significantly to:
 - Manufacturing output.
 - Exports.
 - GDP.
 - Employment generation.
- India is among the world's leading producers of:
 - Cotton.
 - Jute.
 - Silk.
 - Man-made fibres.
 - Handloom and handicraft products.

MAJOR GOVERNMENT INITIATIVES

PM MITRA Parks

- **PM Mega Integrated Textile Region and Apparel (PM MITRA) Parks Scheme.**
- Develops integrated world-class textile manufacturing parks with plug-and-play infrastructure.

National Technical Textiles Mission (NTTM)

- **Launched: 2020.**
- Promotes research, innovation, exports, and domestic production of technical textiles.

Production Linked Incentive (PLI) Scheme for Textiles

- Supports domestic manufacturing of **MMF apparel, MMF fabrics, and technical textiles.**

SAMARTH Scheme

- Skill development programme for the textile and apparel sector.

KEY HIGHLIGHTS

- **Event:** Bharat Tex 2026.
- **Sector:** Textiles and apparel.
- **Objective:** Promote exports, investment, innovation, sustainability, and global partnerships.
- **Economic Significance:** Enhances manufacturing, exports, employment, and India's integration into global value chains.
- **Social Significance:** Supports artisans, weavers, MSMEs, women entrepreneurs, and rural livelihoods.
- **Environmental Significance:** Encourages sustainable textiles, circular economy practices, and resource-efficient manufacturing.
- **Challenges:** Global competition, fragmented supply chains, rising input costs, sustainability compliance, and technology adoption.
- **Way Forward:** Expand technical textiles, strengthen fibre diversification, modernize

textile infrastructure, promote branding of Indian textiles, enhance R&D, and improve global market access through trade agreements.

PRELIMS BOOSTER BOX

- **Bharat Tex:** India's flagship global textile exhibition showcasing the complete textile value chain.
- **Ministry of Textiles:** Nodal ministry for policy, development, and promotion of India's textile sector.
- **PM MITRA Parks: PM Mega Integrated Textile Region and Apparel Parks Scheme,** launched in **2021** to create integrated textile manufacturing ecosystems.
- **National Technical Textiles Mission (NTTM):** Approved in **2020** to promote research, innovation, exports, and domestic production of technical textiles.
- **Technical Textiles:** Textile materials designed primarily for functional and industrial applications rather than aesthetics (e.g., medical, geotextiles, defence, automotive, agriculture).
- **PLI Scheme for Textiles:** Promotes large-scale manufacturing of **Man-Made Fibre (MMF)** apparel, MMF fabrics, and technical textiles.
- **SAMARTH (Scheme for Capacity Building in Textile Sector):** Skill development initiative for the textile and apparel industry.
- **Cotton Corporation of India (CCI):** Public sector undertaking under the **Ministry of Textiles** that supports cotton procurement and price stabilization.
- **Textile Value Chain:** Fibre → Yarn → Fabric → Processing → Garments → Retail/Exports.
- **Circular Economy:** Economic model focused on reducing waste through reuse, recycling, repair, and resource efficiency.

PadhAI-GENERATED UPSC MCQ

Consider the following statements:



1. The **National Technical Textiles Mission (NTTM)** was launched to promote research, innovation, and exports in technical textiles.
2. **PM MITRA Parks** aim to develop integrated textile manufacturing ecosystems with world-class infrastructure.
3. **Technical textiles** are primarily designed for functional and industrial applications rather than decorative purposes.

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)

2. PROBATIONERS OF THE INDIAN FOREST SERVICE (IFS) CALL ON THE PRESIDENT OF INDIA



- The interaction formed part of the training programme of IFS probationers before they assume field responsibilities.
- The President highlighted that IFS officers are custodians of India's rich forest and wildlife resources.
- Officers were encouraged to balance **environmental conservation with developmental needs** through sustainable forest management.

- Emphasis was laid on protecting biodiversity, mitigating climate change, restoring degraded ecosystems, and involving local communities in conservation efforts.
- The President stressed the importance of scientific forest management, technology adoption, and participatory governance.
- The interaction reinforced the constitutional duty of protecting forests and the environment for future generations.
- The event reflects the Government's continued focus on strengthening environmental governance and conservation institutions.
- Well-trained forest officers are vital for achieving India's commitments under global climate and biodiversity agreements.

BACKGROUND / CONTEXT

Indian Forest Service (IFS)

- One of the **three All India Services** under **Article 312** of the Constitution.
- **Constituted: 1966** under the **All India Services Act, 1951**.
- **Cadre Controlling Authority: Ministry of Environment, Forest and Climate Change (MoEFCC)**.
- Recruitment is conducted by the **Union Public Service Commission (UPSC)** through the Civil Services Examination.

Training of IFS Officers

- I. Initial training is conducted at the **Indira Gandhi National Forest Academy (IGNFA), Dehradun**.
- II. Training includes:
 - A. Forest management.
 - B. Wildlife conservation.
 - C. Biodiversity.
 - D. Climate change.
 - E. Remote sensing and GIS.
 - F. Forest laws and governance.

- G. Community-based forest management.

Major Responsibilities of IFS Officers

- Forest conservation and management.
- Wildlife protection.
- Biodiversity conservation.
- Implementation of forest and environmental laws.
- Afforestation and ecosystem restoration.
- Sustainable management of forest resources.
- Human-wildlife conflict mitigation.
- Climate change adaptation and mitigation initiatives.

KEY HIGHLIGHTS

- **Event:** IFS probationers called on the President of India.
- **Service:** Indian Forest Service (IFS).
- **Training Academy:** Indira Gandhi National Forest Academy (IGNFA), Dehradun.
- **Cadre Controlling Ministry:** Ministry of Environment, Forest and Climate Change (MoEFCC).
- **Environmental Significance:** Strengthens forest governance, biodiversity conservation, and ecological security.
- **Climate Significance:** Supports carbon sequestration, ecosystem restoration, and climate resilience.
- **Governance Significance:** Enhances implementation of forest policies and environmental laws.
- **Challenges:** Deforestation, forest degradation, climate change, human-wildlife conflict, and illegal wildlife trade.
- **Way Forward:** Promote sustainable forest management, strengthen community participation, expand technology-based monitoring, improve forest restoration, and enhance climate-resilient conservation strategies.

PRELIMS BOOSTER BOX

- **Indian Forest Service (IFS):** One of the **three All India Services** under **Article 312** of the Constitution.
- **Established: 1966** under the **All India Services Act, 1951**.
- **Cadre Controlling Authority: Ministry of Environment, Forest and Climate Change (MoEFCC).**
- **Training Academy: Indira Gandhi National Forest Academy (IGNFA), Dehradun.**
- **Article 48A (Directive Principles):** Directs the State to protect and improve the environment and safeguard forests and wildlife.
- **Article 51A(g) (Fundamental Duty):** It is the duty of every citizen to protect and improve the natural environment, including forests, lakes, rivers, and wildlife.
- **Forest (Conservation) Act, 1980:** Regulates the diversion of forest land for non-forest purposes (now amended as the **Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980**).
- **National Forest Policy, 1988:** Emphasizes ecological stability, biodiversity conservation, and people's participation in forest management.
- **Joint Forest Management (JFM):** Participatory approach involving local communities in forest protection and management.
- **India State of Forest Report (ISFR):** Biennial assessment of forest and tree cover published by the **Forest Survey of India (FSI).**

PadhAI-GENERATED UPSC MCQ

Consider the following statements:

1. The **Indian Forest Service (IFS)** is one of the **three All India Services** constituted under **Article 312** of the Constitution.
2. The **Indira Gandhi National Forest Academy (IGNFA)** at Dehradun is the premier training institution for IFS probationers.

3. **Article 51A(g)** of the Constitution makes it a Fundamental Duty of every citizen to protect and improve the natural environment.

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)

3. MAHARASHTRA LEGISLATURE MOVES TOWARDS IMPLEMENTATION OF NeVA (NATIONAL e-VIDHAN APPLICATION)



- **NeVA (National e-Vidhan Application)** is a **Mission Mode Project (MMP)** under the **Digital India Programme** for digitizing the functioning of State Legislatures.
- The Maharashtra Legislature's adoption of NeVA will enable **paperless legislative proceedings**, reducing reliance on printed documents.
- Members will be able to access legislative business, Bills, questions, notices, committee reports, and other documents electronically through secure digital platforms.
- The platform facilitates real-time sharing of legislative information, improving the efficiency of House proceedings.

- NeVA promotes transparency by making legislative information more accessible to legislators and citizens.
- It also contributes to environmental sustainability by reducing paper consumption.
- The initiative strengthens good governance through digital transformation and improved legislative productivity.
- Maharashtra joins other States adopting NeVA to create a unified digital legislative ecosystem across India.

BACKGROUND / CONTEXT

National e-Vidhan Application (NeVA)

- A **Mission Mode Project** under the **Digital India Programme**.
- **Nodal Ministry: Ministry of Parliamentary Affairs.**
- Developed under the **Digital India** initiative to transform State Legislatures into **paperless legislatures**.

Objectives of NeVA

- Digitize legislative business.
- Promote paperless functioning.
- Improve transparency and accessibility.
- Enhance efficiency of legislative proceedings.
- Enable seamless sharing of legislative information.

Major Features

- I. Electronic access to:
 - A. Bills.
 - B. Questions and Answers.
 - C. List of Business.
 - D. Notices.
 - E. Committee Reports.
 - F. Legislative documents.
- II. Secure digital platform for Members of the Legislature.
- III. Real-time updates during House proceedings.

KEY HIGHLIGHTS

- **Initiative:** Implementation of the National e-Vidhan Application (NeVA).
- **State:** Maharashtra.
- **Nodal Ministry:** Ministry of Parliamentary Affairs.
- **Primary Objective:** Digitize and modernize legislative functioning.
- **Governance Significance:** Enhances transparency, efficiency, and accessibility in legislative processes.
- **Environmental Significance:** Reduces paper usage and promotes sustainable governance.
- **Technological Significance:** Supports e-Governance and Digital India through paperless legislatures.
- **Challenges:** Digital infrastructure, cybersecurity, capacity building, and change management.
- **Way Forward:** Complete digital integration of legislative processes, strengthen cybersecurity, train legislators and staff, and expand interoperability with other e-Governance platforms.

PRELIMS BOOSTER BOX

- **NeVA (National e-Vidhan Application):** A **Mission Mode Project (MMP)** under the **Digital India Programme** for digitizing the functioning of State Legislatures.
- **Nodal Ministry:** Ministry of Parliamentary Affairs.
- **Digital India Programme:** Launched on **1 July 2015** to transform India into a digitally empowered society and knowledge economy.
- **Mission Mode Project (MMP):** High-priority e-Governance project aimed at delivering specific public services electronically.
- **Paperless Legislature:** A legislature where legislative documents and proceedings are managed electronically rather than through physical paper.

- **Article 168:** Provides that every State shall have a Legislature consisting of the **Governor** and, in some States, one or two Houses.
- **Article 174:** Empowers the Governor to summon, prorogue, and dissolve the State Legislature (Legislative Assembly).
- **e-Governance:** Use of Information and Communication Technology (ICT) to improve government efficiency, transparency, and service delivery.
- **Good Governance:** Characterized by transparency, accountability, participation, responsiveness, and efficiency in public administration.
- **Digital Public Infrastructure (DPI):** Digital systems and platforms that enable efficient delivery of public services and governance.

PadhAI-GENERATED UPSC MCQ

Consider the following statements:

1. The **National e-Vidhan Application (NeVA)** is a **Mission Mode Project** under the **Digital India Programme**.
2. The **Ministry of Parliamentary Affairs** is the nodal ministry for implementing NeVA.
3. The primary objective of NeVA is to enable **paperless functioning of State Legislatures**.

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)

4. NCAHP RELEASES COMPETENCY-BASED CURRICULUM FOR DIPLOMA IN MEDICAL LABORATORY TECHNOLOGY TO STRENGTHEN ALLIED HEALTHCARE EDUCATION



- The competency-based curriculum focuses on developing practical knowledge, technical skills, ethical conduct, and patient-centric healthcare delivery.
- It aims to standardize DMLT education across institutions, ensuring uniform quality and learning outcomes.
- Greater emphasis is placed on **hands-on laboratory training**, clinical exposure, and competency assessment rather than rote learning.
- The curriculum aligns laboratory education with the evolving needs of modern diagnostic services and healthcare institutions.
- It promotes quality assurance, biosafety, infection control, laboratory ethics, and effective communication skills.
- The initiative seeks to bridge the gap between academia and industry by preparing graduates who are immediately employable.

- The curriculum supports capacity building in India's diagnostic and public health infrastructure.
- It contributes to improving the quality of allied healthcare professionals, thereby strengthening healthcare delivery nationwide.

BACKGROUND / CONTEXT

National Commission for Allied and Healthcare Professions (NCAHP)

- A statutory body established under the **National Commission for Allied and Healthcare Professions Act, 2021**.
- **Administrative Ministry:** Ministry of Health and Family Welfare.
- Regulates education, professional standards, and registration of allied and healthcare professionals in India.

Objectives of NCAHP

- Standardize allied healthcare education.
- Maintain professional and ethical standards.
- Develop competency-based curricula.
- Facilitate professional registration through Central and State Registers.
- Improve quality of healthcare services through skilled allied health professionals.

Competency-Based Curriculum (CBC)

A competency-based curriculum emphasizes:

- Practical and clinical competencies.
- Skill-based assessment.
- Outcome-oriented learning.
- Professional ethics and communication.
- Patient safety and quality assurance.

Medical Laboratory Technology (MLT)

Medical Laboratory Technologists assist in:

- Clinical laboratory investigations.
- Sample collection and processing.
- Diagnostic testing.
- Quality control in laboratories.



- Disease surveillance and public health programmes.

KEY HIGHLIGHTS

- **Initiative:** Competency-Based Curriculum for Diploma in Medical Laboratory Technology (DMLT).
- **Released By:** National Commission for Allied and Healthcare Professions (NCAHP).
- **Objective:** Standardize medical laboratory education and strengthen allied healthcare workforce.
- **Healthcare Significance:** Improves diagnostic quality, patient safety, and laboratory services.
- **Educational Significance:** Promotes outcome-based, skill-oriented, and competency-driven learning.
- **Economic Significance:** Enhances employability and addresses the growing demand for skilled laboratory professionals.
- **Challenges:** Faculty training, infrastructure gaps, uniform implementation, and continuous curriculum updation.
- **Way Forward:** Strengthen laboratory infrastructure, establish robust accreditation mechanisms, promote continuous professional development, integrate digital diagnostics, and ensure nationwide adoption of competency-based education.

PRELIMS BOOSTER BOX

- **NCAHP: National Commission for Allied and Healthcare Professions**, established under the **NCAHP Act, 2021** to regulate allied healthcare education and professions.
- **Administrative Ministry: Ministry of Health and Family Welfare.**
- **Competency-Based Curriculum (CBC):** Outcome-oriented curriculum emphasizing knowledge, practical skills, attitudes, and professional competencies.
- **Medical Laboratory Technology (MLT):** Allied healthcare discipline dealing with laboratory

diagnosis of diseases through analysis of biological samples.

- **DMLT: Diploma in Medical Laboratory Technology**, which trains professionals in clinical laboratory techniques and diagnostics.
- **Allied Healthcare Professionals:** Qualified professionals who support diagnosis, treatment, rehabilitation, and preventive healthcare across multiple disciplines.
- **Quality Assurance (QA):** Procedures that ensure the accuracy, reliability, and consistency of laboratory test results.
- **Biosafety:** Measures adopted to prevent exposure to infectious agents and ensure safe laboratory practices.
- **National Commission for Allied and Healthcare Professions Act, 2021:** Provides for regulation of allied healthcare education, maintenance of standards, and establishment of Central and State Registers.
- **Ten Professional Categories:** The NCAHP regulates **10 categories** of allied and healthcare professions, including **Medical Laboratory and Life Sciences**.

PadhAI-GENERATED UPSC MCQ

Consider the following statements:

1. The **National Commission for Allied and Healthcare Professions (NCAHP)** was established under the **National Commission for Allied and Healthcare Professions Act, 2021**.
2. A **competency-based curriculum** emphasizes practical skills, outcome-based learning, and professional competencies.
3. **Medical Laboratory Technology** is one of the professional categories regulated by the **NCAHP**.

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)

5. UNION MINISTER SHRI PIYUSH GOYAL ENGAGES WITH LEADING FINNISH TECHNOLOGY AND INDUSTRIAL COMPANIES TO DEEPEN INDIA–FINLAND PARTNERSHIP



- I. The Minister engaged with major Finnish companies to encourage greater investments and technology collaborations in India.
- II. Discussions covered sectors such as:
 - A. Advanced manufacturing.
 - B. Clean and green technologies.
 - C. Telecommunications and digital infrastructure.
 - D. Artificial Intelligence (AI).
 - E. Renewable energy.
 - F. Circular economy.
 - G. Smart mobility.
- III. India highlighted its strengths as a global manufacturing hub with a large domestic market, skilled workforce, and business-friendly reforms.
- IV. Finnish companies were invited to participate in flagship initiatives such as **Make in India**, **Digital India**, **Startup India**, and **Production Linked Incentive (PLI)** schemes.
- V. The engagement sought to strengthen bilateral trade, investment, innovation, and research collaboration.

- VI. Both sides emphasized sustainable industrial development, green transition, and resilient global supply chains.
- VII. The interactions are expected to deepen long-term economic and technological cooperation between the two countries.

BACKGROUND / CONTEXT

India–Finland Bilateral Relations

India and Finland share warm and friendly relations based on:

- Trade and investment.
- Science and technology.
- Education and research.
- Digitalization.
- Renewable energy.
- Circular economy.
- Innovation and startup ecosystems.
- Sustainable development.

Economic Cooperation

Key areas of collaboration include:

- Information and Communication Technology (ICT).
- 5G and 6G technologies.
- Artificial Intelligence (AI).
- Quantum technologies.
- Clean energy.
- Smart manufacturing.
- Forest-based bioeconomy.
- Green hydrogen and climate technologies.

Finland's Strengths

- Advanced telecommunications.
- Clean technology.
- Digital innovation.
- Education and skill development.
- Sustainable industrial solutions.
- Circular economy leadership.

KEY HIGHLIGHTS

- **Countries:** India and Finland.



- **Focus Areas:** Technology, manufacturing, innovation, sustainability, digital economy, and investments.
- **Economic Significance:** Promotes bilateral trade, foreign investment, technology transfer, and industrial cooperation.
- **Strategic Significance:** Strengthens resilient supply chains and partnerships in emerging technologies.
- **Environmental Significance:** Expands cooperation in clean energy, circular economy, and green industrialization.
- **Innovation Significance:** Encourages joint R&D, startup collaboration, and advanced technology partnerships.
- **Challenges:** Global economic uncertainties, evolving technology standards, supply-chain disruptions, and regulatory differences.
- **Way Forward:** Expand bilateral investment, strengthen innovation ecosystems, promote joint research, deepen collaboration in clean technologies and digital infrastructure, and leverage India's manufacturing ecosystem for global markets.

PRELIMS BOOSTER BOX

- **Capital of Finland:** Helsinki.
- **Currency:** Euro (€).
- **European Union (EU):** Finland has been a member since **1995**.
- **NATO:** Finland became a member of **NATO** in **2023**.
- **Make in India:** Launched in **2014** to promote manufacturing and attract investments.
- **Production Linked Incentive (PLI) Scheme:** Introduced in **2020** to boost domestic manufacturing in strategic sectors.
- **Digital India:** Launched on **1 July 2015** to transform India into a digitally empowered society.

- **Circular Economy:** Economic model focused on reducing waste through reuse, recycling, remanufacturing, and efficient resource use.
- **Green Hydrogen:** Hydrogen produced using renewable energy through electrolysis with minimal carbon emissions.
- **India–Nordic Cooperation:** India engages with Nordic countries (Denmark, Finland, Iceland, Norway, and Sweden) through the **India–Nordic Summit**, focusing on innovation, sustainability, climate action, and technology.

PadhAI-GENERATED UPSC MCQ

Consider the following statements:

1. **Finland** became a member of **NATO** in **2023**.
2. The **Production Linked Incentive (PLI) Scheme** was introduced in **2020** to promote domestic manufacturing in strategic sectors.
3. The **India–Nordic Summit** provides a platform for cooperation between India and the Nordic countries in areas such as innovation, sustainability, and technology.

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)