

OFFICERS IAS ACADEMY™

OFFICERS' PULSE



September 2026 (Digest)

CURRENT AFFAIRS
MONTHLY

The **PULSE** of UPSC at your fingertips.

Foreword

Officers Pulse Digest is a comprehensive monthly current affairs magazine that serves as a complete resource for UPSC CSE Prelims. It includes significant topics from sources like **The Hindu, Indian Express, Business Standard, Yojana, Kurukshetra, Down to Earth**, and more.

Although “**Officers Pulse- Digest**” is primarily oriented towards Prelims, reading “Officers Pulse- In depth” along with it is crucial for effectively tackling the Prelims examination.

CONTENT

POLITY 4

NATIONAL REGISTER OF CITIZENS	4
ARTICLE 32	4
ARTICLE 142	5
ONE NATION, ONE ELECTION	6
BY-ELECTION	7
CHIEF ELECTION COMMISSIONER AND OTHER ELECTION COMMISSIONERS ACT, 2023	7
FRONTIER NAGALAND TERRITORIAL AUTHORITY BILL, 2026	8
LADAKH: ARTICLE 371-K PROPOSED AS ALTERNATIVE TO SIXTH SCHEDULE STATUS	9
COMPETITION COMMISSION OF INDIA	9
NATIONAL COMMISSION FOR PROTECTION OF CHILD RIGHTS	10
CENTRAL BUREAU OF INVESTIGATION ...	10
FSSAI	11
UNLAWFUL ACTIVITIES PREVENTION ACT	12
CABINET COMMITTEE ON ECONOMIC AFFAIRS (CCEA)	13
Draft Petroleum (Amendment) Bill, 2026	13

ECONOMY 15

NATIONAL INVESTMENT AND INFRASTRUCTURE FUND LTD (NIIF) 15
INDIA POST PAYMENTS BANK (IPPB) 15
CONSTRUCTION & INFRASTRUCTURE EQUIPMENT (CIE) SCHEME 17

NATIONAL FINANCIAL REPORTING AUTHORITY (NFRA)	17
NRI ACCOUNTS	18
DOUBLE DEFLATION	19
MERCHANT DISCOUNT RATE (MDR).....	19
INDIA'S NEW GDP SERIES: BASE YEAR 2022-23	20
CORE INVESTMENT COMPANIES (CICS)	21
GLOBAL GENDER GAP INDEX 2026	21
NPCI'S NEW UPI & AI INITIATIVES	22
VARIABLE RATE REVERSE REPO (VRRR)	23
PUBLIC INSURANCE REGISTRY	24
VISHWAS 2026	24
DIRECTORATE OF REVENUE INTELLIGENCE	25

ENVIRONMENT 26

TRISHULI RIVER	26
WATER HYACINTH.....	26
PICHAVARAM MANGROVES	27
ONE HORNED RHINO	28
ORANGUTANS	29
RED-CROWNED ROOFED TURTLE & INDIAN PEACOCK TURTLES	29
AGASTHYAMALAI BIOSPHERE RESERVE	30
NANDANKANAN ZOOLOGICAL PARK	31
EL NINO	31

COMMISSION FOR AIR QUALITY MANAGEMENT	32
BIO NIVESH PLATFORM	33
NATIONAL COASTAL MISSION 2.0	33
DRYLAND AGRICULTURE	34
DEEP SEA MINING	35
NEXT-GENERATION AQUACULTURE	36
DEEP-SEA FISHING	37

SCIENCE AND TECHNOLOGY 38

LARGE HADRON COLLIDER (LHC)	38
DARK MATTER	38
UNSEEN WHIRLPOOLS ON THE SUN'S SURFACE	39
GSLV-F17 and EOS-05	40
ASTRORAD VEST	41
LUMPY SKIN DISEASE	41
BIOSIMILARS	42
NATIONAL HPV VACCINATION CAMPAIGN	43
SARAL AI	43
META MUSE AI AGENT	44
GALLIUM NITRIDE (GAN) TECHNOLOGY	44
RESEARCH, DEVELOPMENT AND INNOVATION (RDI) FUND	45
INDIA'S FIRST LNG-POWERED TRAIN	45
INDIA ELECTRIC MOBILITY INDEX (IEMI)	46
GREEN E-METHANOL	47

INTERNATIONAL RELATIONS ...48

26th SHANGHAI COOPERATION ORGANISATION (SCO) SUMMIT	48
INDIA - UZBEKISTAN CO-OPERATION	49

INDIA - BELGIUM DEFENCE CO-OPERATION	49
UNITED NATIONS CONVENTION ON THE LAW OF THE SEA (UNCLOS)	50
G20 INNOVATION MINISTERS' MEETING	51
INDIA - MERCOSUR PTA	52
LAKE ONTARIO	52
CEUTA MIGRANT CRISIS	53
OPERATION DEEP MANIFEST	53
EAST ASIA SUMMIT (EAS)	54
EXERCISE KAZIND-2026	54
EXERCISE NOMADIC ELEPHANT	55
SLINEX - 26	55
COLOMBO SECURITY CONCLAVE	56
CHAGOS ISLANDS	56
SOHAR PORT	57
FALKLANDS	57
PORT OF MOKHA	58

SCHEMES AND INITIATIVES 59

PM-SETU	59
PM VISHWAKARMA	59
PRADHAN MANTRI KHANIJ KSHETRA KALYAN YOJANA (PMKKKY)	59
PRADHAN MANTRI MATSYA KISAN SAMRIDHI SAH-YOJANA (PM-MKSSY)	60
ATAL VAYO ABHYUDAY YOJANA (AVYAY)	61
DEEN DAYAL UPADHYAYA GRAMEEN KAUSHALYA YOJANA 2.0, ...	61

ART AND CULTURE 63

BAIGA TRIBE	63
LOTHAL	63
SWAMI VIVEKANANDA	64

VINOBA BHAVE 65

MY BHARAT PLATFORM 65

MISCELLANEOUS 67

WHO RC79 67

ASIA-PACIFIC POSTAL UNION (APPU) 67

APNIC 62 AND NIXI 68

DIGITAL INDIA BHASHINI 68

ICMR–NATIONAL INSTITUTE OF
NUTRITION (NIN) 69

DARK PATTERNS 69

BHARAT TAXI 70

RUTAG 2.0 70

POLITY

NATIONAL REGISTER OF CITIZENS

Why in the news?

The central government deferred Census operations in Manipur on August 31, 2026, after local organizations demanded an updated National Register of Citizens (NRC) before any population count.

About



- The **National Register of Citizens (NRC)** is a record containing the names of **Indian citizens residing in India**. It aims to identify persons who are **not Indian citizens, including illegal immigrants, as per law**, and there have been demands for its **nationwide implementation**.
- It is linked to the **Citizenship Act, 1955, Foreigners Act, 1946, and Passport (Entry into India) Act, 1920**.
- The only **nationwide NRC** was prepared after the **1951 Census**. **Assam** is the only state where the NRC has been updated under the supervision of the **Supreme Court**.
- The **Registrar General and Census Commissioner of India** is the nodal authority for the NRC.
- **Assam is currently the only state** with an active NRC, while Section 14A of the Citizenship Act, 1955 provides the legal framework for maintaining a National Register of Indian Citizens at the national level.

NRC	NPR
Records Indian citizens.	Records usual residents of India.
Focuses on citizenship status	Focuses on residence/population data.
Prepared under the Citizenship Act, 1955 and relevant rules.	Prepared under the Citizenship Rules, 2003.

ARTICLE 32

Why in the news?

The SC rejected a PIL seeking mandatory disclosure of ethanol percentage on petrol pumps and fuel bills, saying the petitioner should approach the competent High Court, rather than directly invoking Article 32.

About

- **Article 32** is contained in **Part III (Fundamental Rights)** of the Constitution.
- It guarantees the **right to move the Supreme Court** for enforcement of Fundamental Rights.
- Dr. B.R. Ambedkar described Article 32 as the **"heart and soul of the Constitution."**
- The Supreme Court has **original jurisdiction** under Article 32 for enforcement of Fundamental Rights.
- **Article 32** is the **protector and guarantor** of Fundamental Rights.
- It ensures that **government or State actions remain accountable** and do not arbitrarily deprive citizens of their constitutional freedoms.
- It empowers the Supreme Court to issue **legal orders or writs** to protect and restore infringed Fundamental Rights.

Under Article 32(2), the Supreme Court can issue the following writs

- **Habeas Corpus** ("To have the body"): Protects against illegal or arbitrary detention by commanding the production of a detainee.
- **Mandamus** ("We command"): Directs public officials or bodies to perform neglected legal duties.
- **Prohibition** ("To forbid"): Prevents lower courts or quasi-judicial bodies from exceeding jurisdiction.
- **Certiorari** ("To be certified"): Quashes orders passed in excess or absence of jurisdiction.
- **Quo-Warranto** ("By what authority"): Inquires into the legality of a person's claim to public office.

Article 32 vs Article 226

Aspect	Article 32	Article 226
 Court	Supreme Court of India	High Courts of the States
 Scope (rights enforced)	Enforcement of Fundamental Rights only	Enforcement of Fundamental Rights and other legal rights
 Who can approach	Any person whose Fundamental Rights are violated	Any person (aggrieved)
 Territorial jurisdiction	Entire territory of India	Within the territorial jurisdiction of the High Court
 Whether it is itself a Fundamental Right	Yes. Right to constitutional remedies under Article 32 is itself a Fundamental Right.	No. It is a statutory power (not a Fundamental Right).
 Remedy type	Constitutional remedy	Writ jurisdiction (equitable and discretionary)

Important SC judgements related to Article 32

- **Daryao v. State of U.P. (1961)** – Recognised the **right to approach the Supreme Court under Article 32 as a Fundamental Right**.
- **Rudul Sah v. State of Bihar (1983)** – Established **compensation as a constitutional remedy** for violation of Fundamental Rights under Article 32.
- **Bandhua Mukti Morcha v. Union of India (1984)** – Expanded **PIL under Article 32**, enabling disadvantaged groups to seek judicial remedies.
- **L. Chandra Kumar v. Union of India (1997)** – Held that **judicial review under Articles 32 and 226** is an essential part of the **basic structure** of the Constitution.

ARTICLE 142

Why in the news?

SC quashes FIRs against NEET-UG protesters - The Supreme Court used its Article 142 powers to quash FIRs against students involved in nationwide protests over NEET-UG 2026 paper leaks, stressing complete justice.

About

- **Article 142** gives the **Supreme Court** special powers to ensure **complete justice** in cases before it.
- **Article 142(1)** allows the Court to pass necessary **orders or decrees** to ensure complete justice. Such orders are **enforceable throughout India**.
- **Article 142(2)** gives the Court powers relating to **attendance of witnesses, production of documents and contempt of court**.
- It is an **extraordinary power** available only to the **Supreme Court**; High Courts do not have an equivalent power under Article 226.
- It helps the Court **address gaps in existing laws** and provide suitable remedies in exceptional situations.
- **It is subject to constitutional limitations** and cannot be used to violate Fundamental Rights or other constitutional provisions.
- **It is discretionary in nature**, meaning the Supreme Court decides when its use is necessary to achieve complete justice.
- **It cannot ordinarily be used to replace legislation** or create a completely new legal framework where Parliament has specifically legislated.

Important Judgements – Article 142

- **Prem Chand Garg v. Excise Commissioner (1963)** – Article 142 is subject to **constitutional limitations** and cannot violate Fundamental Rights.
- **Union Carbide Corporation v. Union of India (1991)** – Recognised the Supreme Court's **wide powers to ensure complete justice** under Article 142.
- **Shilpa Sailesh v. Varun Sreenivasan (2023)** – Supreme Court can use Article 142 to **dissolve a marriage on the ground of irretrievable breakdown** in appropriate cases.

Prelims PYQ -UPSC CSE 2019

With reference to the Constitution of India, prohibitions or limitations or provisions contained in ordinary laws cannot act as prohibitions or limitations on the constitutional powers under Article 142. It could mean which one of the following?

- The decisions taken by the Election Commission of India while discharging its duties cannot be challenged in any court of law.
- The Supreme Court of India is not constrained in the exercise of its powers by laws made by Parliament.
- In the event of grave financial crisis in the country, the President can declare Financial Emergency without the advice of the Cabinet.
- State Legislatures cannot make laws on certain matters without the concurrence of Parliament

Answer: (b)

ONE NATION, ONE ELECTION

Why in the news?

The debate over **One Nation, One Election or simultaneous elections** continues, particularly around building political and constitutional consensus.

About

- **One Nation, One Election (ONOE)** refers to the proposal to **hold elections to the Lok Sabha and State Legislative Assemblies simultaneously**, by aligning their electoral cycles.
- India followed simultaneous elections from **1951–52 to 1967**.
- The **High-Level Committee headed by former President Ram Nath Kovind** was constituted in **2023** to examine simultaneous elections.
- The proposed framework envisages synchronising **Lok Sabha and State Assembly elections first**, followed by **Panchayat and Municipal elections**.
- The High-Level Committee proposed holding local-body elections within **100 days** of the Lok Sabha and Assembly elections.

Legislative framework and current status

- **The Bills:** The government introduced **The Constitution (129th Amendment) Bill, 2024** and the **Union Territories Laws (Amendment) Bill, 2024** in the Lok Sabha.
- **Mechanism:** Under proposed Article 82A, **State Assembly terms would be adjusted** to expire concurrently with the Lok Sabha cycle following a presidential notification.
- **The Constitution (129th Amendment) Bill, 2024** is a **Constitution Amendment Bill** and therefore requires a **special majority** in each House of Parliament.
- **Special majority** means: **majority of the total membership of the House + at least two-thirds of members present and voting**.
- **No joint sitting** is permitted for a Constitution Amendment Bill.
- **State ratification:** The proposed ONOE amendments deal with Articles **82A, 83, 172 and 327**. Whether ratification by at least half of the States is required depends on the constitutional provisions ultimately amended; Article 368 requires such ratification for amendments affecting specified federal provisions.

Constitutional Provisions Related to Elections

- **Part XV (Articles 324–329):** Constitutional framework for elections.
- **Article 324:** Powers of the Election Commission of India (ECI).
- **Article 325:** One general electoral roll; prohibits exclusion on specified grounds.
- **Article 326:** Elections based on adult suffrage.
- **Articles 82 and 170:** Delimitation and readjustment of constituencies.
- **Article 172:** Five-year term of State Legislative Assemblies, unless dissolved earlier.

BY-ELECTION

Why in the news?

EC announces byelections to six seats on October 6.

About

- A **by-election** is held to fill a **vacant seat** in the Lok Sabha, Rajya Sabha or State Legislature before the normal term ends.
- A seat may become vacant due to the **death, resignation or disqualification** of a sitting member, or if the election is declared **void**.
- Under the **Representation of the People Act, 1951**, a by-election should generally be held **within 6 months** of the vacancy.
- A by-election is **not required** when the remaining term is **less than one year**.
- It may also be avoided if the **Election Commission of India**, in consultation with the Central Government, considers holding the election within six months **difficult in exceptional circumstances**.
- **Article 324** gives the Election Commission the power to **supervise, direct and control elections**, including by-elections.

Reasons for a By-election

- **Death** of a sitting MP/MLA.
- **Resignation** of the elected member.
- **Disqualification** of the member, such as for defection or certain criminal convictions.

- **Election declared void** by a court.
- **Any other vacancy** arising before the normal term of the House ends.

CHIEF ELECTION COMMISSIONER AND OTHER ELECTION COMMISSIONERS ACT, 2023

Why in the news?

The Supreme Court considered challenges concerning the **Chief Election Commissioner and other Election Commissioners (Appointment, Conditions of Service and Term of Office) Act, 2023**. The composition of the selection panel and the role of the Union government were central to the judicial discussion.

About

The Chief Election Commissioner and Other Election Commissioners Act, 2023 regulates the appointment, salary, tenure, and service conditions of the Chief Election Commissioner (CEC) and other Election Commissioners (ECs) in India. It replaced the earlier 1991 Act and came into force on January 2, 2024.

Key Provisions

- **Appointment:** Appointed by the President of India on the recommendation of a Selection Committee.
- **Selection Committee Composition:** Consists of the **Prime Minister (Chair)**, the **Leader of the Opposition** (or the leader of the single largest opposition party in the Lok Sabha), and a nominated **Union Cabinet Minister**.
- **Search Committee:** A separate 5-person panel headed by the Minister of Law and Justice prepares a panel of candidates for the Selection Committee.

Qualification

- The Chief Election Commissioner and Election Commissioners must be holding or have held a post **equivalent to the rank of Secretary to the Government of India**.
- They must be persons of integrity.

- They must possess knowledge of and experience in the management and conduct of elections.

Term of Office

- The Chief Election Commissioner and Election Commissioners hold office for **six years** from the date they assume office or until attaining the age of 65 years, whichever is earlier.
- They are **not eligible for reappointment**.
- Where an Election Commissioner is appointed as the Chief Election Commissioner, the combined tenure as EC and CEC cannot exceed six years.

Removal

- The CEC can be removed from office only in the manner and on the **grounds similar to a Supreme Court Judge**.
- Other Election Commissioners can be removed on the recommendation of the CEC.
- The Chief Election Commissioner and Election Commissioners may resign by submitting a written resignation addressed to the President.



- **25 January 1950:** ECI started as a single-member body.
- **16 October 1989:** Became three-member.
- **1 January 1990:** Reverted to single-member.
- **1 October 1993:** Became three-member again and continues so today.

- **Article 324** → Provides for the Election Commission of India.
- ECI consists of the **CEC and such number of ECs as the President may fix**.
- The **President appoints** the CEC and ECs, subject to any law made by Parliament.

FRONTIER NAGALAND TERRITORIAL AUTHORITY BILL, 2026

Why in News?

The Nagaland Assembly passed the **Frontier Nagaland Territorial Authority (FNTA) Bill, 2026**, proposing an autonomous authority for six eastern districts under **Article 371A**.

About

- The Bill aims to promote **greater decentralisation and self-governance** in Eastern Nagaland through the creation of the **Frontier Nagaland Territorial Authority (FNTA)** covering **Tuensang, Mon, Longleng, Kiphire, Noklak and Shamator**.
- It operates **within the State of Nagaland** while protecting the constitutional safeguards under **Article 371A**.

Key Features

- **Legislative, administrative and financial powers** for the regional authority.
- **Planning & Finance:** Separate planning and financial mechanisms to prepare development plans based on regional needs.
- **Financial Support:** State funding based on **population and area**, along with **Special Development Grants from the Centre**.
- **Development Focus:** Infrastructure, education, healthcare, employment and economic development.
- **Decentralised Governance:** Greater participation of Eastern Nagaland in **decision-making and development planning**.
- **Constitutional Safeguards:** **Article 371A** and Nagaland's special constitutional status remain protected.

Nagaland

- **State Formation:** 1 December 1963; 16th state of India.
- **Capital:** Kohima.
- **Article 371A:** Provides special constitutional protection to Naga customs, customary law and ownership of land and its resources.
- **13th Constitutional Amendment Act, 1962:** Introduced Article 371A.
- **Special Provision:** Parliamentary laws on specified protected matters apply only if the Nagaland Legislative Assembly so decides by resolution.

Sixth Schedule

- The Sixth Schedule is contained in the **Constitution under Articles 244(2) and 275(1)**.
- It provides for **Autonomous District Councils (ADCs)** and Regional Councils.
- Currently applicable to tribal areas in **Assam, Meghalaya, Tripura and Mizoram**.
- ADCs have powers relating to **legislation, administration, justice and finances**.
- **Ladakh is not currently covered under the Sixth Schedule.**

LADAKH: ARTICLE 371-K PROPOSED AS ALTERNATIVE TO SIXTH SCHEDULE STATUS

Why in News?

The Centre has proposed **inserting Article 371-K** into the Constitution as an alternative to Ladakh's demand for Sixth Schedule status.

About

Ladakh became a Union Territory without a legislature in 2019 under the **Jammu and Kashmir Reorganisation Act, 2019**, and the Centre has proposed a **Ladakh-specific constitutional provision, Article 371-K**, to provide greater local representation while retaining Union control.

Proposed Article 371-K

- Provides for a **directly elected legislative body** for Ladakh.
- Proposed jurisdiction includes matters related to **land, culture, language, forests, environment and natural resources**.
- Ladakh would **continue as a Union Territory**.
- The proposed body would function alongside existing **Ladakh Autonomous Hill Development Councils (LAHDCs)** and Panchayats.
- **Law and order and other key powers** would remain with the Union Government/Lieutenant Governor, subject to the final framework.

COMPETITION COMMISSION OF INDIA

Why in the news?

The Competition Commission of India (CCI) approved the acquisition of Aseem Infrastructure Finance Limited by TPG Nicobar SG Pte. Ltd.

About

- The Competition Commission of India (CCI) is the **nation's premier market regulator** that enforces fair trade rules as a **statutory and quasi-judicial body** operating under the **Competition Act, 2002**.
- The CCI actively prevents monopolistic behavior, safeguards consumer welfare, and **promotes fair competition** across Indian markets.

Composition & Appointment

- It comprises a **Chairperson and six members**.
- Members are appointed by the **Central Government** for a **5-year term** (up to the age of 65).
- Appointments to the CCI require a minimum of 15 years of professional experience in areas like international trade, finance, or law.

Objectives

- To **eliminate practices having adverse effects** on competition, promote and sustain competition.

- To protect the interests of consumers and ensure freedom of trade in the markets of India.
- To give opinion on competition issues on a reference received from a statutory authority established under any law.
- To undertake competition advocacy, create public awareness and impart training on competition issues.

Functions & Powers

- **Prohibiting Anti-Competitive Agreements.**
- Prevents large firms or multinational corporations from using their dominant market share to eliminate competitors or exploit consumers (e.g., predatory pricing).
- The CCI **can initiate investigations on its own motion**, via a government reference, or based on consumer complaints. It holds the civil powers of a court to summon evidence.
- It can **investigate conduct originating outside India** if it impacts domestic market competition.

Appellate Mechanism

Appeals against CCI orders were originally handled by the Competition Appellate Tribunal (COMPAT). In 2017, the government merged it, making the **National Company Law Appellate Tribunal (NCLAT)** the competent appellate body.

NATIONAL COMMISSION FOR PROTECTION OF CHILD RIGHTS

Why in the news?

The National Commission for Protection of Child Rights (NCPCR) has rescued over 3,800 children from child labour under a sustained campaign launched in June.

About

- National commission for Protection of child rights is an **apex statutory body** dedicated to **ensuring that all national laws, policies, and administrative programs align with the child rights framework** outlined in the Constitution of India and the UN Convention

on the Rights of the Child.

- It views a child as anyone in the **0 to 18 years** age bracket.
- It operates under the administrative supervision of the **Ministry of Women and Child Development (MWCD)**.

Composition and appointment

- It comprises a **Chairperson and six members (at least two should be women)**.
- The Chairperson and members are appointed by the Central Government for a term of 3 years.
- The maximum age limit is **65 years for the Chairperson** and **60 years for members**. A person can serve a maximum of two terms.

Functions and Power

- Investigate complaints and cases involving violations of child-related laws such as the **RTE Act, POCSO Act, and Juvenile Justice Act**.
- Submit annual and periodic reports to the Central Government on the status of child rights and recommend necessary measures.
- Review legal safeguards, protect vulnerable children, inspect institutions and promote awareness.
- The Commission holds the **powers of a Civil Court** while trying a suit under the Code of Civil Procedure, 1908.
- Summon and enforce attendance, demand documents and records, receive evidence, recommend prosecution and relief.

CENTRAL BUREAU OF INVESTIGATION

Why in the news?

The CBI has booked a U.S.-based group for alleged violations of the FCRA, 2010.

About

- The Central Bureau of Investigation (CBI) is **India's premier investigative agency**. It handles high-profile cases involving **anti-corruption, economic offences, and serious organized crimes**.
- The CBI is **not** created by the Constitution, nor

is it established by a dedicated Act of Parliament.

- It derives its legal powers to investigate from the **Delhi Special Police Establishment (DSPE) Act, 1946**
- The CBI was officially set up in **1963** via a resolution passed by the Ministry of Home Affairs. This was highly recommended by the **Santhanam Committee on Prevention of Corruption** (1962–1964)
- It operates under the **Ministry of Personnel, Public Grievances and Pensions (DoPT)**.
- For offences under the **Prevention of Corruption Act, 1988**, its superintendence rests with the **Central Vigilance Commission (CVC)**.

Appointment

- The **CBI Director** is appointed by the **Appointments Committee of the Cabinet (ACC)** on the recommendation of a Selection Committee under the **DSPE Act, 1946**.
- **Selection Committee:**
 - Prime Minister – Chairperson
 - Leader of Opposition in Lok Sabha / leader of the largest opposition party – Member
 - Chief Justice of India / nominated Supreme Court Judge – Member
- The **CBI Director's initial tenure is 2 years**, which may be extended **one year at a time, up to a maximum of 5 years**.

Jurisdiction

- **Police and Public Order** are State subjects under the **Seventh Schedule**.
- Therefore, CBI requires **State consent under Section 6 of the DSPE Act** to investigate cases within a State.
- **General Consent:** Allows CBI to investigate specified cases without seeking permission for each case.
- **Specific Consent:** Required for individual cases when a State has withdrawn general consent.

Functions

- **Anti-Corruption:** Investigates corruption cases involving Central Government employees and PSUs.
- **Special Crimes:** Investigates serious crimes such as terrorism, mass murders and organised crime.
- **Economic Offences:** Investigates major financial frauds, bank scams, cybercrime and smuggling.
- **INTERPOL Coordination:** Acts as India's **National Central Bureau (NCB)** and coordinates with INTERPOL and foreign agencies.

FOOD SAFETY AND STANDARDS AUTHORITY OF INDIA(FSSAI)

Why in the news?

SC seeks clarity on FSSAI's warning label norms. FSSAI has proposed prominent red, hexagonal front-of-pack warning labels for packaged foods high in specified nutrients of concern. The thresholds for determining "high" levels are based on the Dietary Guidelines for Indians, 2024, issued by **ICMR-National Institute of Nutrition (NIN)**.

About

- FSSAI is the **main food-safety regulator** in India.
- It is an **autonomous body under the Ministry of Health and Family Welfare**.
- It was established under the **Food Safety and Standards Act, 2006**.
- It sets **science-based food standards** and regulates food businesses.
- It consists of a **Chairperson and 22 members**, with **one-third being women**.

What does FSSAI do?

- Sets **food safety and hygiene standards**.
- Provides **licences and registration** to food businesses.
- Regulates the **manufacture, storage, distribution, sale and import** of food.

- Tests food samples for **adulteration and harmful substances**.

Legislative Framework

Food Safety and Standards Act, 2006

- Consolidated various food-related laws into a **single legal framework**.
- Established FSSAI to regulate **food safety and standards** across India.

FSSAI Food Labels

- **Principal Display Panel (PDP):** Front of the package showing details such as product name, quantity, veg/non-veg logo and FSSAI logo.
- **Information Panel:** Side/back of the package containing **ingredients, nutritional information and other details**.
- **Proposed warning label:** Red hexagonal symbol to indicate packaged foods high in **sugar, salt or saturated fat**.

Government Initiatives

- **Eat Right India:** Promotes safe and healthy food choices.
- **RUCO:** Collects used cooking oil for **biodiesel production**.
- **SFSI:** Ranks States/UTs on **food-safety performance**.
- **FoSTaC:** Provides **food-safety training and certification**.
- **Hygiene Rating:** Rates food establishments based on **hygiene standards**.
- **Food Safety on Wheels:** Mobile units for **food testing and awareness**.

UNLAWFUL ACTIVITIES PREVENTION ACT

Why in the news?

The Supreme Court granted interim bail to a UAPA accused after nearly six years in custody, highlighting concerns regarding prolonged pre-trial incarceration, speedy trial and personal liberty under Article 21.

About

- UAPA is India's major law to deal with **unlawful and terrorist activities**.
- It was enacted in **1967** to protect India's **sovereignty and territorial integrity**.
- Major amendments in **2004, 2008 and 2019** strengthened its anti-terror provisions.
- It applies to **the whole of India** and, in certain circumstances, to offences committed outside India.
- It allows the government to declare **organisations and individuals as terrorists**.
- It provides for punishment up to **life imprisonment or death penalty** for certain offences.

What does UAPA cover?

- **Terrorist activities**
- **Terrorist financing**
- **Recruitment and training of terrorists**
- **Harbouring terrorists**
- Activities threatening **India's sovereignty and territorial integrity**
- **Freezing, seizure and attachment** of terrorist funds and property.

Landmark Judgements

- **Union of India v. K.A. Najeed (2021):** SC said Section 43D(5) isn't the only rule for bail; courts can grant bail if the right to speedy trial is violated.
- **National Investigation Agency v. Zahoor Ahmad Shah Watali:** Established that normal bail standards don't apply to UAPA cases, and Section 43D(5) restrictions must be followed.
- **Mohammed Asarudeen vs. Union of India (May 2025):** The Supreme Court ruled that courts cannot issue blanket orders to block the disclosure of witness statements in UAPA cases.

UAPA & Bail

- **Section 43D(5)** makes bail difficult in UAPA cases.
- Bail can be denied when the court finds that

the accusation appears **prima facie true**.

- UAPA permits extension of the investigation period, allowing detention for up to **180 days** before filing of the charge sheet, subject to statutory conditions.
- However, **Article 21 continues to protect personal liberty and speedy trial**. Constitutional courts can grant bail where continued detention becomes unjustifiable because of excessive delay.

Important Judgements

- **NIA v. Zahoor Ahmad Shah Watali (2019):** Laid down a strict approach to bail under Section 43D(5).
- **Union of India v. K.A. Najeeb (2021):** Held that prolonged incarceration and unreasonable delay in trial can justify bail despite statutory restrictions, in appropriate cases.
- **Recent Supreme Court position (2026):** Prolonged custody is important but does not automatically mean bail; courts must consider the facts, seriousness of the offence, strength of the case and progress of the trial.

CABINET COMMITTEE ON ECONOMIC AFFAIRS (CCEA)

Why in News?

The **Cabinet Committee on Economic Affairs (CCEA)** approved major railway multitracking projects worth about **₹10,021 crore**, covering 17 districts across Tamil Nadu, Andhra Pradesh, Karnataka and Telangana.

About

- It is an **extra-constitutional executive body** functioning as a **Cabinet Committee**.
- It is **headed by the Prime Minister**.
- It takes decisions on major **economic, investment and development-related matters**.

Key Functions

- **Economic Policy:** Reviews major economic trends and policy issues.
- **Prices:** Deals with **agricultural and industrial prices** and essential commodities.
- **Public Investment:** Considers major **public-sector investment proposals**.
- **Disinvestment:** Handles **disinvestment and restructuring of CPSEs**.
- **Development:** Deals with **rural development and PDS-related matters**.
- **International Trade:** Considers important **WTO-related economic issues**.
- **Review:** Its decisions **can be reviewed by the Cabinet**.

Cabinet Committees and Their Heads

- Appointments Committee of the Cabinet: Prime Minister
- Cabinet Committee on Accommodation: Home Minister
- Cabinet Committee on Economic Affairs: Prime Minister
- Cabinet Committee on Parliamentary Affairs: Defence Minister
- Cabinet Committee on Political Affairs: Prime Minister
- Cabinet Committee on Security: Prime Minister
- Cabinet Committee on Investment and Growth: Prime Minister
- Cabinet Committee on Employment and Skill Development: Prime Minister

DRAFT PETROLEUM (AMENDMENT) BILL, 2026

Why in the News?

The **Ministry of Petroleum and Natural Gas** released the **Draft Petroleum (Amendment) Bill, 2026** for public consultation, proposing changes to the **Petroleum Act, 1934**.

About

The **Draft Bill** aims to **modernise the petroleum**

regulatory framework, simplify compliance and promote ease of doing business by amending the Petroleum Act, 1934, with decriminalisation of minor violations, graded penalties and stricter punishment for serious offences.

Key Provisions of the Bill

- **Licence violations:** Breach of licence conditions will be treated as a **civil contravention**.
- **Civil penalties:** Up to **₹2.5 crore** for the first contravention and **₹5 crore** for subsequent contraventions.
- **Unauthorised activities:** Unlicensed production, import, storage, refining, transportation or blending of petroleum products may attract **up to 3 years' imprisonment or a fine of ₹25 crore, or both**.
- **Fraudulent licensing:** Fraud, misrepresentation or impersonation in obtaining or using a licence may attract **up to 5 years' imprisonment**.
- **Critical Petroleum Infrastructure:** The Central Government may notify specified petroleum infrastructure as **critical infrastructure**.
- **Damage to critical infrastructure:** Damage to notified critical petroleum infrastructure may attract **up to 10 years' imprisonment and a fine of ₹25 crore**.
- **Pilferage:** Specific penalties will be prescribed for **pilferage of petroleum** and related offences.
- **Safety compliance:** Penalties will apply for **failure to report accidents and violations of prescribed safety requirements**.
- **Confiscation:** Petroleum, containers, facilities, equipment and materials involved in offences may be **confiscated**.
- **Legal procedure:** Criminal proceedings will be aligned with the **Bharatiya Nagarik Suraksha Sanhita (BNSS), 2023**

ECONOMY

NATIONAL INVESTMENT AND INFRASTRUCTURE FUND LTD (NIIF)

Why in News?

National Investment and Infrastructure Fund Limited (NIIF), India's sovereign-anchored alternative asset manager, announced that its NIIF Infrastructure Fund II raised ₹19,000 crore (about \$2 billion) in its first close, against a target corpus of ₹30,000 crore (about \$3.2 billion).

About NIIF

- National Investment and Infrastructure Fund (NIIF) was established in 2015 as India's sovereign-anchored investment platform to mobilise long-term capital for infrastructure and other nationally important sectors.
- It is professionally managed by National Investment and Infrastructure Fund Limited (NIIFL).
- The Government of India holds 49% stake in NIIF.
- NIIF is registered with SEBI as a Category II Alternative Investment Fund (AIF).
- It is designed to catalyse private and institutional investment rather than depend entirely on government budgetary resources.
- NIIF invests across infrastructure, private markets, growth equity and climate-related investments.
- It can invest in greenfield, brownfield and stalled projects.

NIIF Infrastructure Fund II

- It is the second infrastructure-focused fund under NIIF and the successor to its first flagship infrastructure fund.
- Target corpus: ₹30,000 crore (~\$3.2 billion)..
- The first close represents over 60% of the target corpus.
- Focus: energy, transport, digital infrastructure, urban infrastructure and

Significance

- **Catalyses private investment:** Government participation helps attract large-scale **domestic and foreign institutional capital** into infrastructure.
- **Provides long-term financing:** Supports infrastructure projects that require **patient, long-term equity capital** and have long gestation periods.
- **Reduces pressure on public finances:** By **crowding in private and institutional investment**, it reduces excessive dependence on direct government expenditure.
- **Supports emerging sectors:** Promotes investment in **digital infrastructure, e-mobility, urban infrastructure and energy transition**, supporting India's future growth priorities.

Prelims PYQ -UPSC CSE 2017

With reference to 'National Investment and Infrastructure Fund', which of the following statements is/are correct?

1. It is an organ of NITI Aayog.
2. It has a corpus of ₹4,00,000 crore at present.

Select the correct answer using the code given below:

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

Answer: (D) Neither 1 nor 2

INDIA POST PAYMENTS BANK (IPPB)

Why in News?

India Post Payments Bank (IPPB) celebrated its 9th Foundation Day on 1 September 2026 and launched the DakPay Sound Box and new digital platforms.

About IPPB:

- India Post Payments Bank (IPPB) was launched on 1 September 2018 under the Department of Posts, Ministry of Communications.
- It is a 100% Government of India-owned payments bank.
- It was established with the vision of creating an accessible, affordable and trusted bank for all citizens, particularly the unbanked and underbanked.
- It leverages the extensive network of India Post to provide last-mile banking services, particularly in rural and remote areas.
- Its pilot branches were initially opened at Ranchi, Jharkhand and Raipur, Chhattisgarh.

Digital Technology Used by IPPB:

- **India Stack** – Enables paperless, presence-less and digital delivery of banking and identity-based services.
- **CBS-integrated smartphones** – Allow postal staff to access the Core Banking System and provide banking services at customers' doorsteps.
- **Biometric devices** – Enable secure customer authentication using fingerprints/biometrics.
- **Aadhaar-based authentication** – Uses Aadhaar for identity verification and Aadhaar-enabled banking transactions.
- **QR-based transactions** – Enables quick digital payments and account-based transactions without physical cash.
- **Mobile banking** – Allows customers to access banking services and make transactions through mobile devices.
- **Micro-ATMs** – Portable devices used by postal staff/Banking Correspondents for cash withdrawal, deposits and other basic banking services.

Important Initiatives

- **Niveshak Didi**-An initiative aimed at promoting financial literacy and empowering women beneficiaries.

- **Antyodaya Shramik Suraksha Yojana**-Provides low-cost insurance-related protection to eligible workers, including those registered on the e-Shram portal.
- **Surakshit Savings Account**-Provides cyber-insurance coverage of ₹25,000 against risks such as phishing, spoofing and SIM-jacking.
- **Sampoorna Savings Account**-Combines savings with health and cyber-protection benefits.

What is a Payments Bank?

- Payments Banks are differentiated banks introduced by the Reserve Bank of India (RBI) to promote financial inclusion.
- The idea was recommended by the Nachiket Mor Committee.
- They provide a limited range of banking services, particularly for small savers, migrant workers, low-income households and small businesses.

Payments Banks can:

- Accept demand deposits — savings and current accounts.
- Facilitate remittances and fund transfers.
- Provide ATM/debit cards.
- Offer digital/mobile banking services.
- Provide payment and other permitted banking services.

What can Payments Banks NOT do?

- Cannot undertake lending activities.
- Cannot issue credit cards.
- Cannot accept time deposits such as fixed deposits/term deposits as a payments bank.
- Cannot set up subsidiaries for undertaking non-banking financial services activities.

Deposit Limit

- The maximum balance that can be held by an individual customer in a payments bank account is ₹2 lakh.
- NRI deposits cannot be accepted by payments banks.

Prelims PYQ -UPSC CSE 2016

The establishment of 'Payment Banks' is being allowed in India to promote financial inclusion. Which of the following statements is/are correct in this context?

1. Mobile telephone companies and supermarket chains that are owned and controlled by residents are eligible to be promoters of Payment Banks.
2. Payment Banks can issue both credit cards and debit cards.
3. Payment Banks cannot undertake lending activities.

Select the correct answer using the code given below:

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

Answer: (B) 1 and 3 only.

CONSTRUCTION & INFRASTRUCTURE EQUIPMENT (CIE) SCHEME

Why in News?

The Construction and Infrastructure Equipment (CIE) Scheme, announced in the Union Budget 2026–27, aims to boost local manufacturing, strengthen domestic supply chains and reduce dependence on imported construction and infrastructure equipment.

About the CIE Scheme:

- The Construction and Infrastructure Equipment scheme is **implemented by the Ministry of Heavy Industries (MHI)**.
- It has a **total outlay of ₹14,300 crore over seven years**, with an initial allocation of **₹200 crore for 2026–27**.
- It aims to promote **domestic manufacturing of construction and infrastructure equipment** and reduce dependence on imports.

- It focuses on advanced equipment such as **tunnel-boring machines (TBMs), cranes, lifts and firefighting equipment**.
- It seeks to increase **domestic value addition** and develop indigenous manufacturing and technological capabilities. **vate investment and participation of MSMEs** in the construction-equipment ecosystem.
- It aims to strengthen domestic supply chains, generate employment and enhance India's **competitiveness and export potential**.

Construction Sector:

- **GVA:** Construction contributes around **7.8% of India's GVA**.
- **Employment:** Construction accounts for **13% of total employment** (PLFS 2022–23).
- **Workforce:** The broader construction/EPC ecosystem employs **over 85 million people** across organised and unorganised activities.

NATIONAL FINANCIAL REPORTING AUTHORITY (NFRA)

Why in News?

The National Financial Reporting Authority (NFRA) constituted an Advisory Committee on Audit Quality, Assurance and Technology, strengthening the corporate financial reporting framework.

About NFRA:

- The **National Financial Reporting Authority (NFRA)** is an independent regulatory body established under **Section 132(1) of the Companies Act, 2013** to regulate accounting and auditing standards in India.
- It was **established on 1 October 2018** by the Central Government.
- It functions under the **Ministry of Corporate Affairs (MCA)** and serves as a statutory and independent regulator of auditing.
- It is headquartered in **New Delhi**.
- Its main aim is to improve the **quality, transparency and reliability of financial**

reporting and auditing and protect the interests of investors and the public.

Composition:

- **Chairperson:** Appointed by the Central Government and must have expertise in accountancy, auditing, finance or law.
- **Members:** Maximum 15 members, including the Chairperson.
- Members must maintain independence and avoid conflicts of interest.
- Full-time members cannot be associated with an audit firm during their tenure and for 2 years after leaving office.

Powers of NFRA:

- **Investigation:** Can investigate professional or other misconduct by members/firms of Chartered Accountants in cases falling within its jurisdiction.
- **Civil-court powers:** Has powers similar to those of a civil court under the Code of Civil Procedure, 1908 for matters such as summoning persons and requiring documents.
- **Penalties:** Can impose penalties where professional or other misconduct is established.
- **Auditor-related action:** Can take regulatory action, including debarment of auditors, as provided under the law.
- **Appeal:** A person aggrieved by an NFRA order can appeal to the NFRA Appellate Authority.

NRI ACCOUNTS

Why in the News?

The NPCI permitted NRI accounts linked to international mobile numbers from 10 countries to onboard and transact through UPI, subject to FEMA and RBI regulations.

Countries initially covered: Singapore, Australia, Canada, Hong Kong, Oman, Qatar, USA, Saudi Arabia, UAE and UK.

About NRI Accounts:

Non-Resident Indians (NRIs) can maintain three major types of accounts in India:

- NRE Account – Non-Resident (External) Rupee Account
- NRO Account – Non-Resident (Ordinary) Rupee Account
- FCNR(B) Account – Foreign Currency Non-Resident (Bank) Account

	NRE Account (Non-Resident External)	NRO Account (Non-Resident Ordinary)	FCNR(B) Account (Foreign Currency Non-Resident (Bank))
 Purpose	To hold foreign earnings in India.	To manage income earned in India.	To hold foreign currency earnings in India.
 Currency	Indian Rupee (₹)	Indian Rupee (₹)	Foreign currency (USD, GBP, EUR, JPY, etc.)
 Type of account	Savings / Current / Term Deposit	Savings / Current / Term Deposit	Only Term Deposit
 Interest (tax treatment)	Tax-free in India (for eligible NRIs).	Taxable in India (as per applicable slab).	Tax-free in India (for eligible NRIs).
 Exchange-rate risk	Yes (funds are in INR).	Yes (funds are in INR).	No exchange-rate risk (for the depositor).
 Repatriation	Principal and interest freely repatriable.	Interest freely repatriable; principal subject to RBI limits/conditions.	Principal and interest freely repatriable.
 Key point	Foreign income → Rupee account	Indian income → Rupee account	Foreign currency income → Foreign currency account

UPSC CSE -Prelims 2011

With reference to the Non-Resident Indian (NRI) deposits, consider the following statements:

1. Non-Resident External (NRE) accounts are maintained in Indian rupees.
2. Non-Resident Ordinary (NRO) accounts are maintained in Indian rupees.
3. Foreign Currency Non-Resident (Bank) [FCNR(B)] accounts are maintained in foreign currency.

Which of the statements given above is/are correct?

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

Answer: (D) 1, 2 and 3.

DOUBLE DEFLATION

Why in News?

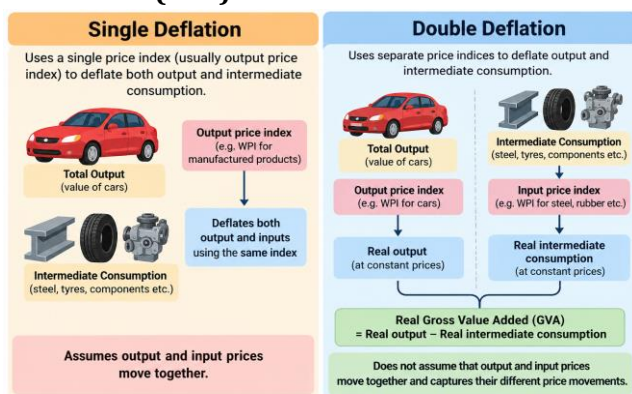
India's **7.8% real GDP growth in Q1 FY 2026-27** sparked debate over the revised GDP methodology. MoSPI defended the estimate, citing the **2022-23 base year, PPI and double-deflation method**.

About Deflation:

- **Deflation** refers to adjusting nominal values for changes in prices to obtain **real or volume measures**.
- **Nominal value:** Value measured at current prices.
- **Real value:** Value measured after removing the impact of price changes.

About Double Deflation:

- **Double deflation** is a method where **output and intermediate consumption are deflated separately** using appropriate price indices.
- Unlike single deflation, it does not assume that output and input prices move together.
- It therefore captures differences in the price movements of **outputs and inputs**.
- **Real output** reflects changes in the volume of production after removing the effect of changes in output prices.
- **Real intermediate consumption** reflects changes in the volume of inputs after removing changes in input prices.
- The difference between the two provides a more accurate measure of **real Gross Value Added (GVA)**.



MERCHANT DISCOUNT RATE (MDR)

Why in News?

The Government has proposed keeping **UPI transactions up to ₹2,000 free for consumers**, while considering a **nominal MDR on selected high-value merchant transactions** to ensure the financial sustainability of the digital payments ecosystem.

About MDR:

Merchant Discount Rate (MDR) is the fee charged to a merchant for accepting a digital payment. It is generally calculated as a percentage of the transaction value and is deducted from the amount received by the merchant.

Why is MDR important?

MDR helps cover the costs of the payment ecosystem, including banks, payment processors, payment networks and other infrastructure providers involved in processing a digital transaction.

Proposed Changes:

The proposed UPI MDR framework is **not a blanket charge on UPI**. It is designed mainly for selected **Person-to-Merchant (P2M)** transactions.

- **P2P transactions remain completely free**, regardless of the amount transferred.
- **P2M transactions up to ₹2,000 remain MDR-free**, so everyday small-value payments are protected.
- For **P2M transactions above ₹2,000**, an MDR of **0.4%** will apply. This is a charge within the payment ecosystem and **not a fee payable by the consumer**.
- For transactions of **₹75,000 or more**, the MDR is capped at **₹300 per transaction**.
- **Small merchants**, including street vendors and neighbourhood shops receiving up to **₹1 lakh per month through UPI QR under the P2PM category**, continue to receive zero-MDR treatment.
- Certain essential and thin-margin sectors such as **railways, telecom, insurance, fuel and**

agricultural inputs will have a **flat ₹5 MDR** for transactions above ₹2,000.

- Payments related to **mutual funds, securities, stockbrokers and dealers** attract a lower **0.02% MDR**, capped at ₹300.
- Overall, the Government estimates that around **96% of P2M transactions will remain unaffected.**

UPSC CSE Prelims - 2018

What does the term “**Merchant Discount Rate (MDR)**” refer to?

- Incentive given by a bank to merchants for accepting debit-card payments
- Amount paid back by banks to customers using debit cards
- Charge levied on a merchant by a bank for accepting payments through debit cards
- Government incentive to merchants for promoting digital payments

Answer: (C)

INDIA'S NEW GDP SERIES: BASE YEAR 2022-23

Why in News?

MoSPI has released a new National Accounts series, revising the GDP base year from 2011-12 to 2022-23. The new series uses improved data sources, deflation methods and the **Supply and Use Table (SUT)** framework to better reflect India's current economy.

About:

- **Base Year:** A reference year whose prices are used to calculate real GDP and measure changes in the volume of economic activity.
- **Rebasing:** Updating the base year so that GDP reflects the current structure of the economy, changing consumption patterns, relative prices and emerging sectors.
- Old base year: 2011-12
- New base year: 2022-23

Why 2022-23?

- It is considered a relatively **normal year after COVID-19 disruptions.**
- 2019-20 and 2020-21 were affected by lockdowns, supply-chain disruptions and unusual consumption and production patterns.

Major Methodological Changes

- **Better Data Sources:** The new series uses more recent and detailed data from **PLFS, ASUSE, GST, e-Vahan, MCA filings** and other administrative sources. This improves the measurement of economic activities, especially in the **unincorporated and household sectors.**
- **Double Deflation:** **Manufacturing and agriculture** use **Double Deflation**, where output and intermediate consumption are deflated separately using appropriate price indices. This gives a better estimate of **GVA at constant prices.**
- **Volume/Single Extrapolation:** Where Double Deflation is not feasible, **volume/single extrapolation** is used to estimate real growth.
- **Supply and Use Table (SUT):** SUT tracks the **supply of goods and services** (domestic production + imports) and their use as **intermediate consumption, final consumption, investment and exports.** It helps reduce discrepancies between production and expenditure estimates.

GDP – Market value of final goods and services produced **within the country.**

GVA – Value added by producers after deducting **Intermediate Consumption** from total output.

NDP – GDP minus **Consumption of Fixed Capital (Depreciation).**

NNP – NDP plus **Net Factor Income from Abroad (NFIA).**

Nominal GDP – GDP measured at **current prices.**

Real GDP – GDP measured at **constant prices**, eliminating the effect of price changes.

GDP Deflator – Measures the overall **price change in goods and services included in GDP.**

CORE INVESTMENT COMPANIES (CICs)

Why in News?

The RBI has rejected Tata Sons' application to surrender its CIC registration, meaning Tata Sons remains subject to the RBI's CIC framework and may have to proceed with mandatory listing under applicable regulations.

What is a Core Investment Company?

A CIC is a type of NBFC whose primary function is to hold investments in companies belonging to the same group, rather than undertake ordinary lending or trading activities.

Key Criteria:

Under the RBI's CIC framework, a company qualifies as a CIC if:

- 90% or more of its net assets are invested in group companies.
- 60% or more of net assets are invested in equity shares of group companies (including qualifying compulsorily convertible instruments) and permitted InvIT sponsor holdings.
- It does not trade in its group-company investments, except through strategic/block sales for dilution or disinvestment.
- It can undertake only specified financial activities such as investing in bank deposits/Government securities, lending to group companies and issuing guarantees for group companies.
- A CIC is not permitted to accept public deposits.

Registration:

A CIC with assets of ₹100 crore or more that raises or holds public funds is required to register with the RBI. CICs below ₹100 crore, or those above ₹100 crore that do not access public funds, can fall under the "Unregistered CIC" category subject to RBI conditions.

Why are CICs important?

CICs are commonly used by large business groups as holding companies to consolidate and manage their investments across group entities. RBI regulation aims to prevent excessive leverage, complex group structures and concentration of financial risks.

GLOBAL GENDER GAP INDEX 2026

Why in News?

India retained its 131st rank out of 145 countries in the Global Gender Gap Index 2026, released by the World Economic Forum (WEF), with an overall gender parity score of 64.5%.

About the Global Gender Gap Index:

- The **Global Gender Gap Index (GGGI)** is released by the **World Economic Forum (WEF)** and was first launched in **2006**.
- It measures the **relative gap between women and men**, rather than the overall level of development.
- It uses a **0–100% scale**, where **100% represents complete gender parity**.

It measures gender gaps across 4 dimensions:

Dimension	What it measures
Economic Participation & Opportunity	Labour-force participation, wage equality, professional/technical jobs, leadership
Educational Attainment	Literacy and enrolment in primary, secondary and tertiary education
Health & Survival	Sex ratio at birth and healthy life expectancy
Political Empowerment	Representation in Parliament, ministerial positions and head of state

India's performance:

India's major weakness is economic participation and political empowerment, while education and health show much higher parity.

India's performance:

Dimension	India's parity
Educational Attainment	96.6%
Health & Survival	95.6%
Political Empowerment	24.5%

Economic participation and overall performance:

Dimension	India's parity
Economic Participation & Opportunity	41.2%
Overall	64.5%
Rank	131/145

Global highlights:

- **Iceland ranked first**, having closed approximately **93% of its overall gender gap**.
- **Finland and Norway** were among the other highest-performing countries in achieving gender parity.
- **Chad ranked 145th**, recording the largest overall gender gap among the countries assessed.
- The **global average gender-gap closure stood at 69.2%**.
- At the current pace of progress, achieving **global gender parity could take around 120 years**.
- Women account for **less than one-fifth of AI engineers globally**, highlighting a growing gender gap in emerging technologies.

India's Trend:

Score trend:

- **2006–2026:** India's overall score improved from around **60% to 64.5%**, indicating gradual long-term progress in closing the gender gap.

- **2019:** India recorded its **highest score in the recent period at 66.8%**.
- **2026:** India's score stood at **64.5%**, reflecting some fluctuation from the 2019 level.
- **Overall trend:** India has made **long-term progress in improving gender parity**, although progress has not been uniform across years.

UPSC CSE - Prelims 2017

Which of the following gives 'Global Gender Gap Index' ranking to the countries of the world?

- World Economic Forum
- UN Human Rights Council
- UN Women
- World Health Organization

Answer: **(A)**

NPCI'S NEW UPI & AI INITIATIVES

Why in News?

At the Global Fintech Fest 2026, NPCI showcased MyUPI, FiMI, AtOM (Agentic Orchestration and Messaging) and UPI Tap & Pay.

About:

MyUPI

- **MyUPI** is an AI-powered conversational platform developed by **NPCI** to provide a single interface for managing UPI services.
- It enables users to view **UPI transaction history** across linked bank accounts and UPI applications.
- Users can **view, pause, resume or cancel eligible UPI AutoPay mandates**.
- It allows users to **raise and track eligible UPI complaints**.
- **Pay Safe** enables users to verify the payee before making a payment.
- Users can **delink their mobile number** from receiving UPI payments.
- It supports **English, Hindi, Telugu, Bengali and Tamil**.

FiMI

- **FiMI (Finance Model for India)** is NPCI's customised **Small Language Model (SLM)** designed for financial and UPI-related interactions.
- It provides the AI capabilities underlying **MyUPI**.

AtOM

- **AtOM (Agentic Orchestration and Messaging)** is an NPCI framework for **coordination, orchestration and communication among AI agents** in the digital-payment ecosystem.
- Unlike MyUPI, it is focused on **agent-to-agent interaction** rather than direct user interaction.

UPI Tap & Pay

- **UPI Tap & Pay** is an **NFC-based contactless UPI payment facility**.
- Users can make payments by **tapping an NFC-enabled smartphone on a compatible PoS terminal**.
- The UPI app need not be opened, and **mobile data is not required on the smartphone**.
- Payments up to **₹5,000 can be made without entering a UPI PIN**; transactions above ₹5,000 require UPI PIN authentication.

VARIABLE RATE REVERSE REPO (VRRR)

Why in News?

The Reserve Bank of India (RBI) used **Variable Rate Reverse Repo (VRRR) auctions** to absorb surplus liquidity from the banking system; one such operation absorbed ₹6.02 lakh crore through two 3-day auctions.

About

- **Variable Rate Reverse Repo (VRRR)** is a monetary policy tool used by the **RBI to absorb excess liquidity** from the banking system.

- Banks with surplus funds can **temporarily park their money with the RBI** through VRRR auctions.
- Unlike the **fixed Reverse Repo Rate**, the interest rate under VRRR is **determined through competitive auctions**.
- It helps prevent excess liquidity from pushing **short-term interest rates below the policy Repo Rate** and supports **monetary policy transmission**.

Example:

- If banks have **₹100 crore of surplus funds**, the RBI can conduct a **VRRR auction**, allowing banks to park a portion of this money with the RBI temporarily.

Monetary Policy Quantitative Tools

The RBI uses quantitative/ liquidity-management instruments to influence the **overall availability and cost of money and credit** in the economy.

- **Repo Rate:** Rate at which RBI provides short-term liquidity to banks against eligible securities; it is the **policy rate**.
- **Reverse Repo Rate:** Fixed rate at which RBI absorbs liquidity from banks against eligible securities.
- **VRR (Variable Rate Repo):** Auction-based tool used to **inject short-term liquidity**.
- **VRRR (Variable Rate Reverse Repo):** Auction-based tool used to **absorb surplus liquidity**.
- **Standing Deposit Facility (SDF):** Allows banks to park funds with RBI **without collateral**.
- **Marginal Standing Facility (MSF):** Allows eligible banks to obtain overnight funds from RBI against their SLR portfolio within the prescribed limit; serves as the **ceiling of the LAF corridor**.
- **Cash Reserve Ratio (CRR):** Proportion of a bank's Net Demand and Time Liabilities (NDTL) that must be maintained as cash balance with RBI.
- **Statutory Liquidity Ratio (SLR):** Proportion of liabilities that banks must maintain in specified liquid assets, such as government securities, cash and gold.
- **Open Market Operations (OMOs):** RBI's outright purchase or sale of government securities to inject or absorb **durable liquidity**.
- **Bank Rate:** It is the rate at which the RBI lends long-term funds to scheduled commercial banks **without requiring any collateral**.

UPSC CSE PRELIMS PYQ – 2015

With reference to the Indian economy, consider the following:

1. Bank rate
2. Open market operations
3. Public debt
4. Public revenue

Which of the above is/are component/components of Monetary Policy?

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

Answer: (C) 1 and 2

PUBLIC INSURANCE REGISTRY

Why in News?

The Insurance Regulatory and Development Authority of India (IRDAI) proposed a Public Insurance Registry (PIR) through a consultation paper.

About

- PIR is proposed as a common digital infrastructure for the **insurance ecosystem**.
- It will enable **insurers, reinsurers, intermediaries, policyholders, financial institutions and government departments** to discover, verify and exchange insurance information.
- It will follow a **federated architecture**, under which data remains with the **source institution** rather than being stored in one central database.
- IRDAI will be the **regulator and anchor** of the proposed registry.
- The **Insurance Information Bureau (IIB)** is proposed to be transformed into a **wholly owned, not-for-profit subsidiary** of IRDAI to manage the registry.
- PIR will establish **common data standards and digital protocols** to enable interoperability among different insurance systems.

- It can provide policyholders with a **consolidated view of insurance policies, claims, nominees and renewals**.
- It can help insurers improve **underwriting, risk assessment and fraud detection** through verified information.
- Integration with platforms such as **VAHAN and e-DAR** can support faster **motor insurance claim settlement**.
- PIR aims to reduce **information asymmetry, duplication and verification-related delays** in the insurance ecosystem.
- It is expected to support **insurance penetration, transparency, portability and financial inclusion**.

IRDAI

- **Insurance Regulatory and Development Authority of India (IRDAI)** is the statutory regulator of India's insurance sector.
- Established in **1999** under the **IRDA Act, 1999**.
- Headquartered in **Hyderabad, Telangana**.

VISHWAS 2026

Why in News?

The Employees' Provident Fund Organisation (EPFO) highlighted VISHWAS, 2026, a one-time scheme to settle **EPF damages and penalties** and reduce litigation.

About

- VISHWAS, 2026 is a **one-time dispute-resolution scheme** of the EPFO under the **Ministry of Labour and Employment**.
- It provides a mechanism for settlement of **damages/penalties imposed for default in payment of provident-fund contributions**.
- The scheme operates under the **Employees' Provident Fund Scheme, 2026**.
- The scheme provides **reduced/concessional rates of damages** depending on the duration of default.

- It was notified in **June 2026** and is available for 6 months.
- It applies to **defaults pertaining to periods before 14 June 2024**.
- It covers damages under **Section 14B of the Employees' Provident Funds and Miscellaneous Provisions Act, 1952**.
- It also covers corresponding damages under **Section 128 of the Code on Social Security, 2020**.
- **Statutory interest** payable for the default must be **fully paid** to avail the scheme.
- It can cover cases where the damages order is **under judicial challenge**, subject to the conditions of the scheme.
- It can also cover cases where a damages order has been passed but **recovery is pending or incomplete**.
- Cases involving **fraud, misappropriation or deliberate falsification of records** are excluded.
- Cases in which the damages have already been **fully recovered** are excluded.
- An establishment opting for settlement has to **forego further appeal** in respect of the dispute settled under the scheme.
- The scheme seeks to **reduce litigation, facilitate settlement of legacy disputes and improve compliance** with provident-fund obligations.

EPFO

- Statutory body under the **Ministry of Labour & Employment**, established in **1952**.
- Administers social-security schemes for organised-sector workers.
- Implements **EPF, EPS and EDLI** schemes.
- Governed by the **Central Board of Trustees**, a tripartite body representing the **government, employers and employees**.

DIRECTORATE OF REVENUE INTELLIGENCE

Why in News?

The Directorate of Revenue Intelligence intensified its operations against **organised gold smuggling and illicit drug trafficking** across India.

About

- **DRI** is India's **apex anti-smuggling agency** under the **Central Board of Indirect Taxes and Customs (CBIC)**, Department of Revenue, Ministry of Finance.
- It was constituted in **1957** to collect, analyse and disseminate intelligence on **smuggling and customs violations**.
- **DRI is a non-statutory body** constituted by the Government; however, its officers exercise enforcement powers as **Officers of Customs** under the **Customs Act, 1962**, including **search, seizure, arrest and adjudication**.
- It undertakes **intelligence collection, investigation and prosecution** of cases involving customs and related violations.
- It enforces the **Customs Act, 1962** and allied laws such as the **NDPS Act, 1985; Wildlife Protection Act, 1972; Antiquities and Art Treasures Act, 1972; and COFEPOSA, 1974**.
- Its major areas include **gold and contraband smuggling, narcotics, wildlife products, foreign currency, commercial fraud and trade-based money laundering**.
- DRI coordinates with **Indian and foreign enforcement agencies** to combat transnational smuggling.
- It also identifies **loopholes in laws and procedures** and recommends measures to strengthen anti-smuggling enforcement.

ENVIRONMENT

TRISHULI RIVER

Why in News?

Flash floods in Nepal severely affected the **Trishuli River system** and nearby hydropower projects, including the **Upper Trishuli-3A Hydropower Project**.

About



- **The Trishuli is a transboundary, snow-fed Himalayan river** originating in the Langtang Himal region of southern Tibet, at an altitude of over 5,000 metres.
- Near the Nepal–China border at Rasuwagadhi, it is formed by the confluence of the **Kyirong Tsangpo (Kerung Khola)** and **Lhende Khola**.
- It receives water from the **Gosaikunda Lake region** through the Trisuli Khola near Dhunche.
- It flows through central Nepal and joins the **Kali Gandaki River at Devghat** to form the Narayani (Gandaki) River.
- The Narayani enters India at **Valmiki Nagar in Bihar**, where it is known as the Gandak, and eventually joins the **Ganga near Sonpur, Bihar**.
- The river basin is partly glacier-fed, with glaciers and permanent snow concentrated in the **Langtang Himal and Ganesh Himal ranges**.
- The river is **important for hydropower generation, irrigation and tourism, including rafting**.

UPSC CSE 2024 — Himalayan tributaries

With reference to the Himalayan rivers joining the Ganga downstream of Prayagraj from West to East, which sequence is correct?

- Ghaghara – Gomati – Gandak – Kosi
- Gomati – Ghaghara – Gandak – Kosi
- Ghaghara – Gomati – Kosi – Gandak
- Gomati – Ghaghara – Kosi – Gandak

Answer : (B)

WATER HYACINTH

Why in News?

Water hyacinth infestation in Vembanad Lake, Kerala, disrupted boat services and navigation, prompting a pilot project using **robotic harvesting technology** for its removal and possible conversion into useful products such as compost and handicrafts.

About



- **Water Hyacinth (*Eichhornia crassipes*)** is a **free-floating aquatic plant** native to tropical South America and now found across the world except Antarctica.
- It grows rapidly in **nutrient-rich, still or slow-moving freshwater** and can double its mass in about **5 days** under favourable conditions.
- It forms dense mats that **block waterways, reduce water quality, increase sediment,**

and crowd out native plants and animals. It reproduces through **fragmentation and thousands of seeds**.

- The plant has **lavender flowers and rounded, leathery leaves** with spongy stalks. It was introduced to **India during British colonial rule as an ornamental plant**.
- Water hyacinth can be used as a **biofertilizer** in organic farming and has aesthetic value due to its purple flowers. Its fibrous stems are used to make **bags, baskets, mats and decorative items**. It can also help in **phytoremediation by absorbing pollutants and heavy metals from water**.

5 Important Invasive Alien Species in India

1. **Lantana camara** — Lantana
2. **Parthenium hysterophorus** — Congress Grass
3. **Prosopis juliflora** — Vilayati Kikar
4. **Mikania micrantha** — Mile-a-minute Weed
5. **Chromolaena odorata** — Siam Weed

UPSC CSE Prelims 2023

The 'Invasive Species Specialist Group' (that develops the Global Invasive Species Database) belongs to which one of the following organisations?

- a) The International Union for Conservation of Nature (IUCN)
- b) The United Nations Environment Programme (UNEP)
- c) The United Nations World Commission for Environment and Development
- d) The World Wide Fund for Nature (WWF)

Answer: (A) IUCN

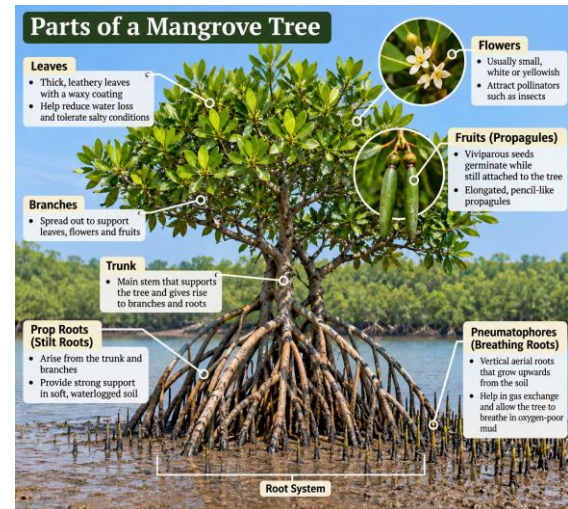
PICHAVARAM MANGROVES

Why in the News?

A recent study estimated the **Total Economic Value (TEV)** of the **Pichavaram Mangrove Ecosystem in Tamil Nadu at ₹2,485.38 crore**,

highlighting the ecological, economic and social benefits provided by the mangroves. The estimated value is about **₹1.83 crore per hectare**.

About



- **Pichavaram Mangrove Forest** is located in **Cuddalore district, Tamil Nadu**, along the Coromandel Coast.
- It lies between the **Vellar Estuary in the north and Coleroon (Kollidam) Estuary in the south**.
- The ecosystem covers about **1,478.64 hectares** and consists of mangrove forests, tidal creeks, backwaters and brackish-water channels.
- It was designated a **Ramsar Site in 2022**.
- Pichavaram is an important habitat for **fish, crustaceans and migratory birds** and supports the livelihoods of coastal communities.

Ecosystem Services

- **Coastal protection:** Mangroves act as natural barriers against **coastal erosion, storm surges and cyclones**.
- **Blue Carbon:** Mangrove vegetation and, particularly, **waterlogged sediments** store large quantities of carbon.
- **Biodiversity:** Provides habitat and breeding grounds for aquatic organisms and birds.
- **Livelihood support:** Supports **fisheries and tourism**.

- **Nutrient cycling:** Mangrove ecosystems contribute to the recycling of nutrients within coastal ecosystems.

ONE HORNED RHINO

Why in News?

The **Greater One-Horned Rhinoceros** was highlighted on **World Rhino Day**, with its global population reaching around **4,075**.

About



- The **Greater One-Horned Rhinoceros**, also called the **Indian rhinoceros**, is the largest of the three Asian rhino species.
- It mainly inhabits **swamps, grasslands, forests and riverbanks in India and Nepal**, especially in the Himalayan foothills. **Kaziranga National Park in Assam** has the largest population.
- It has a **single black horn** and thick, folded grey-brown skin that gives it an armour-like appearance.
- It is generally **solitary**, except for females with calves, and feeds on **grass, leaves, fruits, branches, aquatic plants and crops**. **Poaching and hunting** are major threats to the species. It is listed as **Vulnerable (VU)** on the **IUCN Red List**.



RHINOS

- **Horn composition:** A rhino's horn is made of keratin, the same protein found in human hair and nails.
- **Three toes:** Rhinos have three toes on each foot, leaving distinctive tracks.
- **Mud baths:** Wallows help them cool down and protect their skin from parasites.
- **Poor eyesight:** They rely heavily on their keen sense of smell and hearing.
- **Unique feature:** The greater one-horned rhinoceros has armour-like skin folds.
- **Grassland engineers:** Grazing rhinos help shape vegetation and maintain grassland habitats.

UPSC CSE Prelims 2019

Consider the following pairs:

S.NO	Wildlife	Naturally found in
1.	Blue-blooded horseshoe crabs	Coastal areas
2.	One-horned rhinoceroses	Grasslands and wetlands
3.	Dugongs	Coastal waters

Which of the pairs given above is/are correctly matched?

- 1 and 2 only
- 2 and 3 only
- 1 and 3 only
- 1, 2 and 3

Correct answer: (d) 1, 2 and 3.

ORANGUTANS

Why in News?

Five juvenile orangutans were recently found near Balasore, Odisha, outside their natural range, prompting an investigation into illegal wildlife trafficking.

About



- **Orangutans** are **Asia's only great apes** and the world's largest arboreal mammals, sharing about **96.4% of their genes with humans**.
- There are **three species**—Bornean, Sumatran and Tapanuli—and they are naturally found only in **Borneo and Sumatra**, not in India.
- They inhabit **tropical forests, peat swamps and mountainous areas** up to about **1.6 km altitude**. Orangutans have **long reddish-orange hair, very long arms, and strong hands and feet** adapted for tree life, spending over **90% of their waking time in trees**.
- They mainly eat **fruits and leaves**, along with nuts, bark and insects, and are generally **solitary**.
- Adult males can reach about **1.3 m and 130 kg** and develop prominent cheek pads. **Major threats** include habitat loss, poaching and illegal wildlife trafficking.
- **IUCN Status: Critically Endangered** for all three species.



- **Orangutan:** Means “person of the forest” in Malay and Indonesian.
- **Intelligence:** Use sticks and other tools to obtain food.
- **Parental care:** Mothers care for young for around 7–8 years.
- **Unique feature:** Mature males of some species develop cheek pads called flanges.
- **Forest guardians:** Disperse seeds and support forest regeneration.
- **Nest builders:** Often build a fresh sleeping nest in trees every night.

RED-CROWNED ROOFED TURTLE & INDIAN PEACOCK TURTLES

Why in news?

Conservation efforts have highlighted the need to strengthen the protection of freshwater turtle species in India, particularly the Red-crowned Roofed Turtle and Indian Peacock Turtles, which face threats from habitat loss, illegal collection and degradation of freshwater ecosystems.

Red-crowned Roofed Turtle



About

- The Red-crowned Roofed Turtle (*Batagur kachuga*) is a **freshwater turtle** found in the river systems of the Indian subcontinent.
- In India, it is mainly associated with the **Ganga river system**.
- It is one of the most threatened freshwater turtle species in India.

Conservation Status

- **IUCN Red List:** Critically Endangered
- **CITES:** Appendix II
- **Wildlife (Protection) Act, 1972:** Schedule I

Key Features

- It is primarily a **riverine freshwater turtle**.
- The species shows **strong sexual dimorphism**; breeding males develop striking **red and yellow coloration on the head**.
- It depends on suitable **riverine habitats and sandbanks** for breeding and nesting.

Indian Peacock Turtles



About

- Indian Peacock Turtles belong to the genus *Morenia* and are freshwater turtles found in parts of the Indian subcontinent.
- They are associated with freshwater habitats such as ponds, marshes and slow-moving water bodies.
- They are recognised by their characteristic ornamental shell patterns, which give them their common name.

Conservation Status

- IUCN Red List: Vulnerable
- CITES: Appendix I
- Wildlife (Protection) Act, 1972: Schedule I

Key features

- Indian Peacock Turtles are freshwater turtles belonging to the genus *Morenia*.
- They have a distinctive ornamental pattern on the carapace, resembling the eye-like markings of a peacock.

- They are associated with freshwater wetlands, ponds, marshes and slow-moving water bodies.
- They are mainly aquatic, but may come onto land for basking and other activities.

AGASTHYAMALAI BIOSPHERE RESERVE

Why in News?

A comprehensive study documented 3,261 flowering plant species in the Agasthyamalai Biosphere Reserve, highlighting its exceptional plant diversity and endemism in the southern Western Ghats.

About

- **Agasthyamalai Biosphere Reserve** is located in the **southern Western Ghats**, covering parts of **Kerala and Tamil Nadu**. It was established in **2001** and was included in the **UNESCO World Network of Biosphere Reserves** in 2016.
- It covers parts of **Thiruvananthapuram and Kollam in Kerala** and **Tirunelveli and Kanniyakumari in Tamil Nadu**. Important rivers such as the **Thamirabarani, Neyyar and Karamana** originate here. The region receives **heavy monsoon rainfall**, supporting dense forests and rich biodiversity.
- The reserve is a major **biodiversity hotspot** with many endemic species. It has about **2,254 plant species**, including nearly **400 endemic species**, along with **79 mammals, 337 birds, 88 reptiles and 45 amphibians**. Important animals include the **Bengal tiger, Asian elephant, Nilgiri tahr, lion-tailed macaque, Nilgiri marten and sloth bear**.
- Major vegetation types include **tropical evergreen, semi-evergreen, moist deciduous, montane rainforests and shola-grassland ecosystems**. The region is also a **genetic reservoir** of plants such as **cardamom, pepper, nutmeg and plantain**. The medicinal plant **Arogyapacha** and the **Neelakurinji**, which blooms once every **12 years**, are notable features.

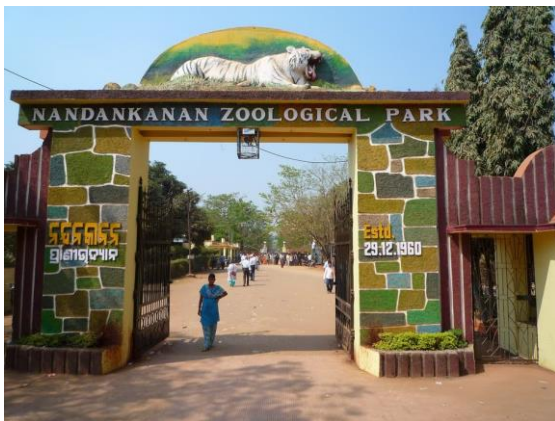
- The reserve includes **Shendurney Wildlife Sanctuary, Peppara Wildlife Sanctuary, Neyyar Wildlife Sanctuary and Kalakkad-Mundanthurai Tiger Reserve**, which together support wildlife conservation and ecological protection.

NANDANKANAN ZOOLOGICAL PARK

Why in News?

Nandankanan Zoological Park recently introduced musical therapy for the five abandoned baby orangutans to help them cope with stress.

About



- Nandankanan, meaning “**Garden of Heaven**,” is located near **Bhubaneswar**, Odisha, on the banks of **Kanjia Lake**.
- Established in 1960 and opened to the public in 1979, it is situated within the **Chandaka-Dampara forest landscape**, characterised by moist deciduous and semi-evergreen vegetation.
- It includes a zoological park, botanical garden and **Nandankanan Wildlife Sanctuary**.
- **Kanjia Lake** is a Wetland of National Importance, recognised in 2006. It supports diverse aquatic life and birds. Kiakani Lake is another waterbody associated with the wider complex.
- Nandankanan was the **first zoo in India to become a member of the World Association of Zoos and Aquariums (WAZA)**.
- It is renowned for conservation breeding, particularly of **white tigers and melanistic tigers**, and supports the conservation of

Indian pangolins, gharials, Asiatic lions, lion-tailed macaques and Nilgiri langurs.

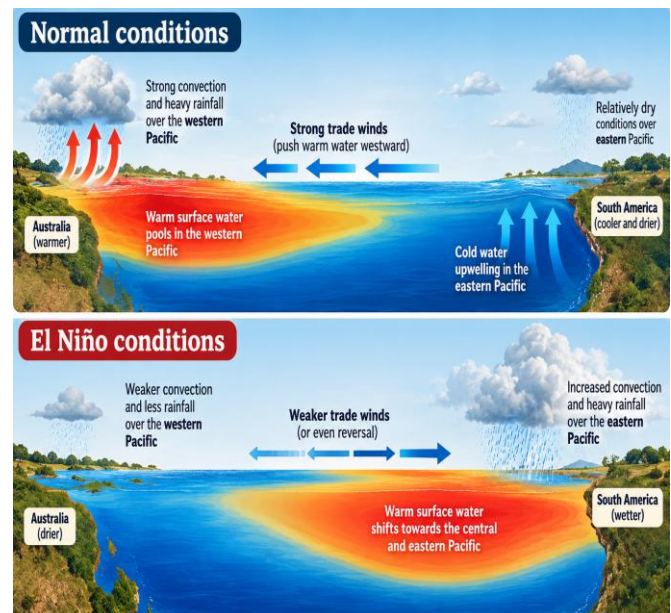
- The adjoining **Chandaka-Dampara Wildlife Sanctuary** is an important elephant habitat.

EL NINO

Why in News?

The El Niño phenomenon attracted attention as it strengthened rapidly in the Pacific Ocean, with forecasts indicating a potentially very strong event by the end of 2026, raising concerns over its impact on India’s monsoon, rainfall and agriculture.

About



- **El Niño:** A periodic climate phenomenon characterised by the **unusual warming of surface waters in the central and eastern equatorial Pacific Ocean**, particularly near Peru and Ecuador.
- **How does it occur?** Normally, trade winds blow from east to west across the tropical Pacific, pushing warm surface water towards Indonesia and Australia. **During El Niño, these winds weaken, allowing warm water to spread eastward towards South America.**
- **Southern Oscillation:** Changes in atmospheric pressure between the eastern Pacific (near Tahiti) and the western Pacific (near Darwin, Australia). These pressure

changes are closely linked to Pacific Ocean temperature changes.

- **ENSO:** The combined ocean-atmosphere phenomenon comprising El Niño (warming), La Niña (cooling) and the Southern Oscillation.
- **Frequency:** El Niño events occur irregularly, generally every 2–7 years, and often last around 9–12 months. They commonly peak during November–January.

Indian Climate & Southwest Monsoon

- **Weakens Monsoon:** Reduced convection can cause **delayed, erratic or deficient Southwest Monsoon rainfall.**
- **Drought Risk:** Linked with major drought years such as **2002, 2009, 2014 and 2015.**
- **Agriculture:** Low rainfall affects **Kharif crops**, reservoirs and rural incomes, leading to **food inflation.**
- **+IOD Effect:** A **Positive Indian Ocean Dipole** can partly offset El Niño's negative impact, as seen in **1997 and 2023.**

Global Impacts

- **South America:** Heavy rainfall, floods and landslides, especially in **Peru and Ecuador.**
- **Australia & Indonesia:** Increased **droughts and wildfires.**
- **Marine Ecosystems:** Reduced upwelling affects fisheries, while warmer seas cause **coral bleaching.**
- **Cyclones:** Generally **suppresses Atlantic hurricanes** but can increase tropical cyclone activity in parts of the **Pacific.**

UPSC CSE Prelims 2002

For short-term climate prediction, which one of the following events, detected in the last decade, is associated with occasional weak monsoon rains in the Indian subcontinent?

- La Niña
- Movement of Jet Streams
- El Niño and Southern Oscillations
- Greenhouse effect on global level

Correct answer: (c)

COMMISSION FOR AIR QUALITY MANAGEMENT

Why in News?

The Commission for Air Quality Management (CAQM) approved a revised GRAP schedule for Delhi-NCR, tightening measures related to vehicle emissions, dust control, construction activities and pollution management.



About

- The **Commission for Air Quality Management (CAQM)** is a **statutory body** established under the **CAQM in NCR and Adjoining Areas Act, 2021.**
- Its main objective is to **coordinate, monitor and control air pollution** in Delhi-NCR and adjoining areas.
- It works with **Delhi, Punjab, Haryana, Rajasthan and Uttar Pradesh** to address air-quality problems.
- The Commission has the power to **restrict activities affecting air quality, conduct research, prepare guidelines and issue binding directions** for controlling air pollution. Its orders are **binding on concerned persons and authorities**, and it is **accountable to Parliament.**
- The CAQM can **impose and collect environmental compensation** for violations of its directions under the law.
- It **oversees the implementation of the Graded Response Action Plan (GRAP)**, which prescribes anti-pollution measures based on air-quality conditions in Delhi-NCR.

Graded Response Action Plan (GRAP)

Purpose: Emergency measures to control air pollution in Delhi-NCR.

Implementing Authority: Commission for Air Quality Management (CAQM).

Stage I Poor (AQI 201–300): Dust control, mechanised road sweeping and prevention of waste burning.

Stage II Very Poor (AQI 301–400): Enhanced dust suppression, increased parking fees and improved public transport.

Stage III Severe (AQI 401–450): Restrictions on construction and demolition activities and certain polluting vehicles.

Stage IV Severe+ (AQI above 450): Stricter vehicle restrictions and suspension of specified construction activities.

BIO NIVESH PLATFORM

Why in News?

The **BIO-NIVESH platform** was launched to connect **biotechnology startups with investors**, facilitate private capital, and accelerate the **scale-up and commercialisation of biotechnology innovations**.

About

- **BIO-NIVESH** is a platform aimed at connecting **biotechnology startups with investors** and increasing **private investment** in innovations ready for scale-up and commercialisation.
- It is designed as a **recurring platform** to connect regional biotechnology ecosystems.
- It provides two-way engagement, helping startups understand investor expectations while enabling investors to assess the **scientific, regulatory, development and market potential** of innovations.
 - The first session focused on **startup-investor interactions**,
 - while the second addressed **access to capital, commercialisation, scale-up and innovation-led growth**.

- **Biotechnology Industry Research Assistance Council (BIRAC)** and its team are involved in bringing together diverse stakeholders under BIO-NIVESH.

Biotechnology Industry Research Assistance Council (BIRAC)

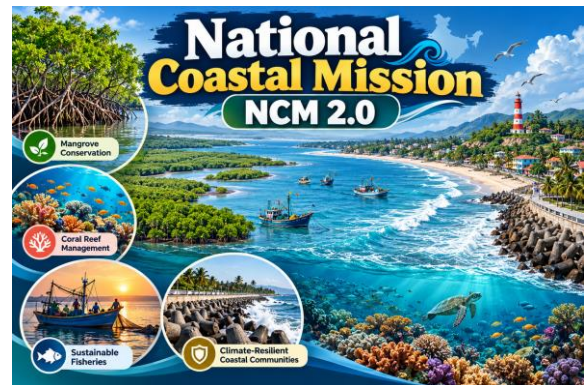
- BIRAC is a not-for-profit organisation established in 2012 under the Department of Biotechnology (DBT), Ministry of Science and Technology.
- It promotes biotechnology research, innovation and entrepreneurship by supporting startups, MSMEs and research institutions.
- It provides financial assistance, mentoring and incubation support to develop and commercialise biotechnology products.
- Major initiatives include Biotechnology Ignition Grant (BIG), BioNEST and SBIRI.
- It supports indigenous innovation in healthcare, agriculture and industrial biotechnology.

NATIONAL COASTAL MISSION 2.0

Why in News?

Recently, the Union Minister for Environment, Forest and Climate Change launched the Guidelines for implementation of National Coastal Mission (NCM 2.0).

About



- **National Coastal Mission 2.0 (NCM 2.0)** is a **Central Sector Scheme** of the **Ministry of**

Environment, Forest and Climate Change (MoEFCC).

- Its main objective is to **strengthen the resilience and sustainability of India's coastal regions and promote the Blue Economy.**
- The mission will cover **9 coastal States**—Gujarat, Maharashtra, Goa, Karnataka, Kerala, Tamil Nadu, Andhra Pradesh, Odisha and West Bengal—and **4 coastal Union Territories**—Dadra and Nagar Haveli and Daman & Diu, Andaman & Nicobar Islands, Puducherry and Lakshadweep.

Objectives of National Coastal Mission 2.0

- **Climate resilience:** Help coastal communities and ecosystems adapt to and reduce the impacts of climate change.
- **Ecosystem conservation:** Protect fragile coastal ecosystems such as **mangroves, wetlands and coral reefs.**
- **Sustainable Blue Economy:** Develop **Integrated Coastal Zone Management Plans (ICZMP)** and **Coastal Marine Spatial Plans (CMSP)** for sustainable coastal development.
- **Livelihoods:** Promote **diverse and resilient livelihood opportunities** for coastal communities.
- **Pollution control:** Prevent and reduce **pollution in coastal and marine waters.**
- **Self-reliance & global commitments:** Support **Atmanirbhar Bharat** and meet India's commitments under **international ocean and coastal environmental agreements.**

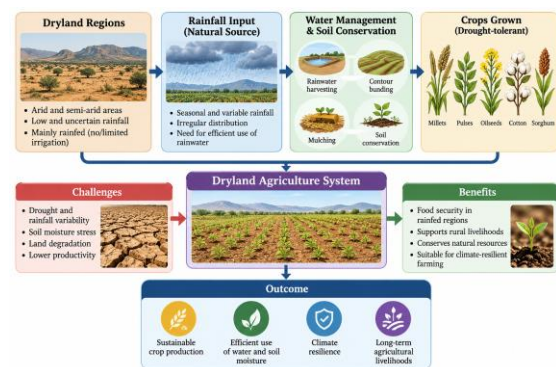


DRYLAND AGRICULTURE

Why in the News?

The Agriculture Ministry highlighted the potential of **drylands** through science, policy and market support, with emphasis on improving productivity, strengthening climate resilience and enhancing farmers' livelihoods in water-stressed regions.

About



- **Dryland agriculture** refers to crop production in areas where **rainfall is limited and/or unreliable**, with little or no assured irrigation.
- It is largely dependent on **rainfall and conservation of available soil moisture.**

- Dryland regions are generally characterised by **water scarcity, erratic rainfall, frequent droughts and high climatic variability**.
- In India, dryland agriculture is particularly important in the **semi-arid and arid regions**, including parts of the Deccan Plateau, Rajasthan, Gujarat, Maharashtra, Karnataka, Telangana, Andhra Pradesh and Madhya Pradesh.
- Important crops grown under dryland conditions include **millet, pulses, oilseeds, cotton and sorghum**, depending on local soil and climatic conditions.

Key Features

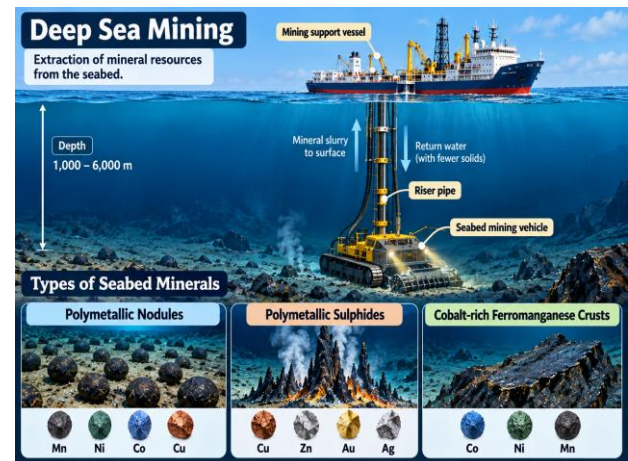
- **Moisture Conservation:** Practices such as **mulching, contour farming, bunding and rainwater harvesting** help retain soil moisture.
- **Drought-resistant Crops:** Short-duration and drought-tolerant crops are better suited to water-stressed conditions.
- **Watershed Management:** Integrated management of **soil, water and vegetation** helps reduce runoff and improve water availability.
- **Contingency Crop Planning:** Cropping patterns can be modified according to the **timing and amount of rainfall** and drought conditions.
- **Integrated Farming:** Combining crops with **livestock and agroforestry** can improve farm resilience and income.

DEEP SEA MINING

Why in the News?

The **Ministry of Earth Sciences (MoES)** and **National Institute of Ocean Technology (NIOT)** hosted an industry outreach workshop on **deep sea mining** to support India's **critical mineral security**.

About



- **Deep sea mining** refers to the extraction of mineral resources from the **seabed and ocean floor**, generally at great depths.
- It is being explored as a potential source of **critical minerals** required for clean energy technologies, electronics and advanced industries.

Major Types of Seabed Minerals

- **Polymetallic Nodules:** Potato-sized mineral deposits found on the deep ocean floor, containing **manganese, nickel, cobalt and copper**.
- **Polymetallic Sulphides:** Mineral deposits associated with **hydrothermal vents**, containing metals such as **copper, zinc, gold and silver**.
- **Cobalt-rich Ferromanganese Crusts:** Deposits formed on seamounts and oceanic ridges, rich in **cobalt, nickel, manganese and other metals**.

India and Deep Sea Mining

- India has been exploring **polymetallic nodules in the Central Indian Ocean Basin (CIOB)**.
- The **Ministry of Earth Sciences** is the nodal ministry for India's deep-ocean exploration activities.
- **NIOT** undertakes technological development related to deep-sea exploration and mining.

- India is also developing technologies under the **Deep Ocean Mission** for exploration of deep-sea resources.

Deep Ocean Mission

- Launched by the **Ministry of Earth Sciences**, the mission aims to develop technologies for the **exploration and sustainable use of deep-sea resources**.
- One of its components focuses on the development of **technologies for deep-sea mining and manned submersible operations**.

NEXT-GENERATION AQUACULTURE

Why in News?

The Government highlighted **Recirculatory Aquaculture Systems (RAS)** and **Biofloc technology** as next-generation methods for modernising India's aquaculture sector.



About

- It refers to **technology-driven and controlled aquaculture systems** that improve productivity, resource efficiency, sustainability and biosecurity.
- Major technologies include **RAS, Biofloc, cage culture, digital monitoring and automated farming systems**.
- These systems enable **intensive and year-round fish production** with better control over water quality, feeding and disease.

Recirculatory Aquaculture System (RAS):

- RAS **filters, treats and recirculates water**, allowing intensive fish farming with significantly reduced freshwater requirements.
- It can recycle **up to 90–95% of water**.
- By treating and reusing water, RAS helps address **effluent discharge**, thereby reducing impacts on **groundwater and natural aquatic ecosystems**.
- It enables fish production with **limited land and water resources**.

Biofloc Technology (BFT):

- BFT is a **little or no-water-exchange technique** that uses beneficial microorganisms, including **bacteria and algae**, to recycle nutrients and maintain water quality.
- These microorganisms convert **organic and nitrogenous waste into microbial biomass**, forming **bioflocs**.
- Bioflocs can serve as a **natural/supplementary feed source** for fish.
- BFT can reduce the **Feed Conversion Ratio (FCR)** and dependence on **external commercial feed**, thereby lowering operational costs.
- It is particularly suitable for **high-density aquaculture with limited water availability**.

Did You Know?

- India is the **world's second-largest fish producer**, contributing about **8% of global fish production**.
- India ranks **second globally in aquaculture production**.
- India is **one of the top three global exporters** of frozen shrimp.
- Frozen shrimp accounts for nearly **65–70%** of India's total seafood export earnings.

UPSC CSE PRELIMS PYQ – 2023

With reference to the role of biofilters in Recirculating Aquaculture System, consider the following statements:

1. Biofilters provide waste treatment by removing uneaten fish feed.
2. Biofilters convert ammonia present in fish waste to nitrate.
3. Biofilters increase phosphorus as a nutrient for fish in water.

How many of the statements given above are correct?

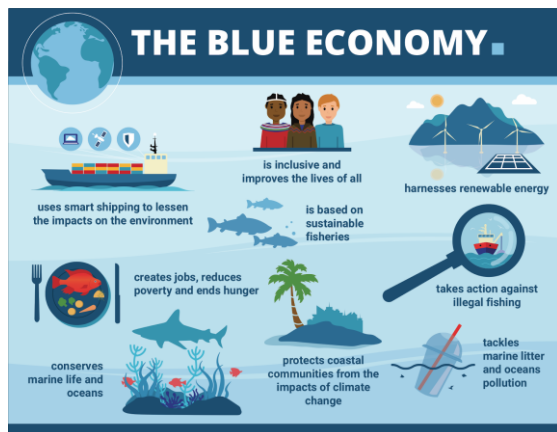
- a) Only one
- b) Only two
- c) All three
- d) None

Answer: (B) Only two

DEEP-SEA FISHING

Why in News?

The Department of Fisheries organised a **National Workshop on Promotion of Deep-Sea Fishing** in Gandhinagar to promote sustainable use of high-value marine resources.



About

- **Deep-sea fishing** refers to fishing in deeper offshore waters to harness marine resources beyond traditional nearshore fishing grounds.
- India has a coastline of about **11,099 km** and an **Exclusive Economic Zone (EEZ)** of nearly **24 lakh sq. km**.

- India's EEZ extends from **12 to 200 nautical miles** from the coast.
- Deep-sea fishing can **reduce pressure on nearshore fisheries**, diversify fisher incomes and strengthen seafood exports.

High Seas Fishing

- **EEZ fishing** occurs within India's national jurisdiction, extending up to **200 nautical miles** from the baseline.
- **High Seas** lie **beyond national jurisdiction**.
- In **July 2026**, India launched a national programme for issuing **Letters of Authorisation (LoAs)** for sustainable fishing in the High Seas.
- The LoA framework aims to enable Indian-flagged vessels to sustainably access high-value resources while ensuring **traceability, sustainability and international compliance**.
- The fee for obtaining an LoA for High Seas fishing was reduced from **₹25,000 to ₹5,000 for cooperative societies** to encourage fisher participation.

Technology and Scientific Support

- **DeepDATA**, launched by **ICAR-Central Marine Fisheries Research Institute (CMFRI)**, is a mobile application containing scientifically verified information on deep-sea fish species.
- It provides information on **taxonomy, characteristics, distribution and conservation status** and allows users to contribute field observations.
- It was developed under the **Deep Ocean Mission** with funding from the **Ministry of Earth Sciences**.
- Modern deep-sea fishing also uses **tuna longlining, GPS, echo sounders, AIS, satellite-based transponders and vessel-monitoring systems**.

SCIENCE AND TECHNOLOGY

LARGE HADRON COLLIDER (LHC)

Why in the News?

CERN Director-General Mark Thomson urged greater Indian participation in mega-science projects, including the Future Circular Collider (FCC).

About LHC

- The **Large Hadron Collider (LHC)** is the **world's largest and most powerful particle accelerator**, operated by CERN.
- It is a **27-km circular underground accelerator** that accelerates **protons or heavy ions to near the speed of light** and collides them to study fundamental particles and forces.
- The **Higgs boson** was discovered through experiments at the LHC in 2012.
- Its major experiments include **ATLAS, CMS, ALICE and LHCb**.

Applications

- **Fundamental physics:** Studies elementary particles and their interactions.
- **Higgs research:** Helps study the **Higgs boson** and mechanism of mass generation.
- **New physics:** Searches for phenomena beyond the **Standard Model**, including clues related to dark matter.
- **Technology development:** Drives advances in **superconducting magnets, detectors, computing and data processing**.

LHC and India

- India has participated in CERN programmes since the **1960s** and contributed to the **construction of the LHC**, particularly the **CMS and ALICE detectors**.
- India became a **CERN Associate Member State in 2017**.
- Indian institutions also contribute to CERN experiments and operate **Tier-2 centres of**

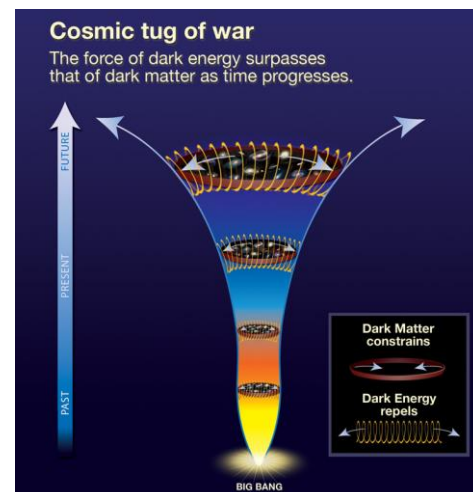
the **Worldwide LHC Computing Grid (WLCG)**.

- **Future:** CERN is exploring deeper Indian participation in projects such as the **Future Circular Collider (FCC)**. The FCC is being studied as a post-LHC collider, with a proposed **100-km underground infrastructure** and collision energies up to **100 TeV**.

DARK MATTER

Why in News?

The recent studies on **Dark Matter** highlighted its role in the **formation and evolution of galaxies**.



About

- **Dark matter** is a **hypothetical form of matter** that does not emit, absorb or reflect electromagnetic radiation, making it invisible to conventional telescopes.
- It is inferred primarily from its **gravitational effects on visible matter**, such as stars and galaxies.
- Unlike ordinary (**baryonic**) matter, dark matter does **not interact significantly with electromagnetic forces**.
- Dark matter is believed to constitute about **27% of the universe**, while ordinary matter accounts for about **5%** and dark energy for about **68%**.

Dark Matter vs Dark Energy

- **Dark Matter:** Has mass and produces **gravitational attraction**; helps explain the motion and structure of galaxies.
- **Dark Energy:** Associated with a **repulsive/accelerating effect** and is used to explain the accelerated expansion of the universe.

Why do scientists believe Dark Matter exists?

- **Galaxy rotation curves:** Stars at the outer regions of galaxies rotate faster than expected from the gravitational pull of visible matter alone, indicating the presence of additional unseen mass.
- **Gravitational lensing:** The gravity of unseen matter can bend and distort light travelling from distant objects, providing evidence for dark matter.
- **Galaxy clusters:** The observed gravitational behaviour of galaxies within clusters cannot be fully explained by visible matter alone.
- **Cosmic structure formation:** Dark matter is important for explaining how galaxies and large-scale structures formed and evolved

UPSC CSE PRELIMS PYQ - 2018

Consider the following phenomena:

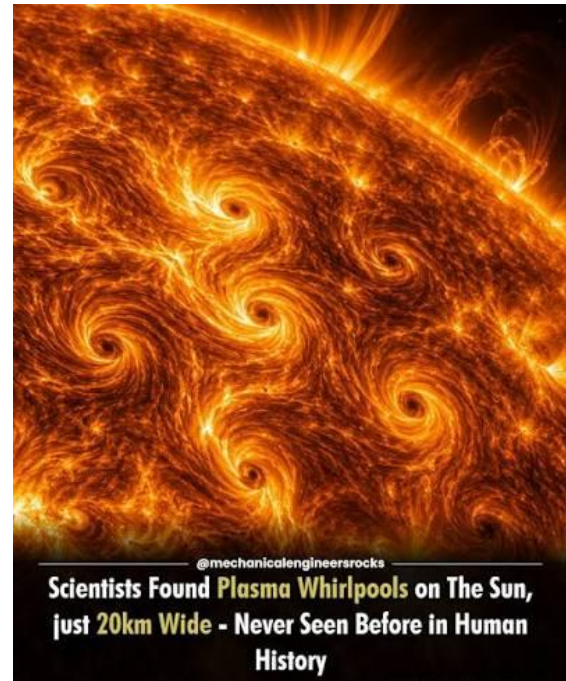
1. Size of the universe is constantly increasing.
2. Light is affected by gravity.
3. Matter warps the space around it.

Which of the above is/are prediction/predictions of Einstein's General Theory of Relativity?

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

Answer: (D) 1, 2 and 3

UNSEEN WHIRLPOOLS ON THE SUN'S SURFACE



Why in News?

Astronomers have captured the **highest-resolution images ever of the Sun's visible surface (photosphere)** using the **Daniel K. Inouye Solar Telescope (DKIST)** in Hawaii.

About Daniel K. Inouye Solar Telescope (DKIST)

- Located on **Maui, Hawaii**, and equipped with the world's largest **4-metre solar telescope mirror**.
- Provides extremely high-resolution observations of the Sun's surface and magnetic activity.

Kelvin-Helmholtz Instability (KHI)

- The observed whirlpools are produced by **Kelvin-Helmholtz Instability**, which occurs when **adjacent layers of fluid/plasma move at different velocities**, creating shear and curling vortices.
- Similar instabilities occur in **ocean waves, clouds and planetary atmospheres**.

Scientific Significance

- Provides the **first direct observational evidence of KHI in the Sun's photosphere**.
- The vortices can **twist and braid magnetic field lines**, storing magnetic energy.
- This may contribute to energetic solar phenomena such as **solar flares, CMEs and nanoflares**.

- **Solar flares:** Sudden, intense bursts of energy and radiation from the Sun's atmosphere.
- **CMEs:** Huge eruptions of magnetised plasma from the Sun's corona into space.
- **Nanoflares:** Tiny, frequent bursts of energy that may contribute to **heating the solar corona**.

- Offers a possible clue to the **coronal heating problem**, why the Sun's corona is much hotter than its visible surface.

GSLV-F17 and EOS-05



Why in News?

ISRO successfully launched **GSLV-F17 carrying EOS-05 on 4 September 2026** from Satish Dhawan Space Centre, Sriharikota.

About GSLV-F17

- **GSLV-F17** is the **19th flight of the Geosynchronous Satellite Launch Vehicle (GSLV)** family.
- It is designed to launch heavier spacecraft into **high-energy orbits**.
- In this mission, it placed EOS-05 into a **Sub-Geosynchronous Transfer Orbit (Sub-GTO)**, from where the satellite can be manoeuvred to its operational orbit.

Sub-Geosynchronous Transfer Orbit (Sub-GTO)

- **Sub-GTO** is a **transfer orbit** into which GSLV-F17 initially places EOS-05.
- It serves as an intermediate orbit from which the satellite performs **further orbital manoeuvres** to reach its operational orbit.

Recent GSLV Missions

GSLV-F16: NISAR – Joint NASA-ISRO Earth-observation mission.

GSLV-F15: NVS-02 – NavIC navigation satellite; 100th launch from Sriharikota.

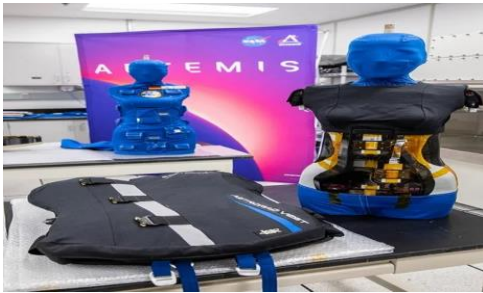
GSLV-F14: INSAT-3DS – Meteorological satellite for weather forecasting.

GSLV-F12: NVS-01 – NavIC satellite with an indigenous rubidium atomic clock.

About EOS-05

- **EOS-05** is an advanced **Earth observation satellite** developed by ISRO.
- It is India's **first imaging satellite designed to operate from a geosynchronous orbit**.
- Its Earth-observation data can support **agriculture, natural-resource monitoring, disaster management, environmental monitoring, mapping and planning**.
- Operating from a geosynchronous orbit enables **repeated observation of a particular region at regular intervals**, making it useful for frequent monitoring of large areas.

ASTRORAD VEST



Why in News?

A recent study found that the **AstroRad radiation-shielding vest** can significantly reduce astronauts' radiation exposure during intense **solar particle events**.

About AstroRad

- **AstroRad** is a wearable **radiation-shielding vest** developed by **StemRad (Israel)** with support from **Lockheed Martin** and the Israel Space Agency.
- It is designed to protect astronauts from **space radiation beyond Low Earth Orbit (LEO)**, particularly during solar particle events.
- Instead of shielding the entire body, it provides **targeted protection to radiation-sensitive organs**, reducing weight while maintaining mobility.
- The vest was tested aboard **Artemis I** using the human-body phantoms **Zohar (protected)** and **Helga (unprotected)**.

Key Features

- **Hydrogen-rich shielding:** Uses a hydrogen-rich polymer that helps reduce exposure to energetic particles while limiting secondary radiation.
- **Targeted protection:** Provides greater shielding around sensitive organs such as **bone marrow, lungs, stomach, breasts and ovaries**.
- **Lightweight & compact:** Concentrates shielding where it is most needed instead of using heavy full-body shielding.
- **Flexible design:** Shielding elements are arranged in a **scale/hexagonal structure**, allowing astronauts to move comfortably.

- **Solar-storm protection:** Can substantially reduce radiation exposure during major solar particle events; modelling of the **August 1972 solar storm** indicated nearly **60% reduction** in effective dose.
- **Future applications:** Useful for **Moon and Mars missions**, lunar habitats and other deep-space missions where radiation exposure is higher.

LUMPY SKIN DISEASE



Why in the News?

DAHD has strengthened surveillance, vaccination and disease-control measures following sporadic **LSD** cases reported in several States since **July 2026**.

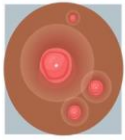
About

- **Lumpy Skin Disease (LSD)** is a **viral disease of cattle and buffaloes**, caused by the **Capripox virus**.
- It is transmitted mainly by **arthropod vectors** such as mosquitoes, biting flies and ticks.
- Characterised by **fever and skin nodules**; mortality is generally low.
- In India, it was first reported in **West Bengal and Odisha in September 2019**.

LUMPY SKIN DISEASE IN CATTLE

- Called LSD for short, it is caused by a poxvirus
- It is transmitted through the bite of an infected mosquito or tick
- It can spread through saliva & nasal secretions

LSD is not a zoonotic disease, which means it can't infect people



MAIN SYMPTOM
Skin nodules/lumps in one area or all over the body



THE EFFECT IN CATTLE

- Reduced milk production
- Reduced male fertility
- Weight loss
- Pregnancy loss

TREATMENT

- No specific remedy
- Antibiotics, anti-inflammatory drugs & vitamins are prescribed to prevent a secondary infection

An outbreak of LSD has been reported in:

- India
- Bangladesh
- Nepal
- China
- Vietnam
- Myanmar
- Thailand

In Malaysia, just 0.1% of 81,252 head of cattle tested at 9,108 farms have the disease

Control Measures

- Vaccination** of susceptible animals, especially young cattle.
- Ring vaccination** around affected areas.
- Isolation and movement control** of infected animals.
- Vector control, disinfection and quarantine** of newly introduced animals.

BIOSIMILARS

Why in News?

The **Indian Pharmacopoeia Commission (IPC)** organised a two-day national conference in **Bengaluru** on “**Quality and Safety of Biosimilars: Strengthening India’s Biopharma SHAKTI Vision.**”

About the conference

- It focused on strengthening the **quality, safety, regulatory evaluation and development of**

biosimilars through collaboration among regulators, industry, academia and research institutions.

- IPC also released an **Indian Pharmacopoeia Reference Substance (IPRS) for Enoxaparin Sodium** to enable accurate and consistent testing of biological activity.

Indian Pharmacopoeia Reference Substance (IPRS): An authenticated reference material used as a **standard for accurate and consistent testing of the quality and biological activity of medicines.**

Enoxaparin Sodium: A **low-molecular-weight heparin anticoagulant** used to prevent and treat blood clots.

About Biosimilars

- Biosimilars** are biological medicines that are **highly similar to an already approved biological medicine**, with no clinically meaningful differences in safety or effectiveness.
- They provide additional treatment options for diseases such as **cancer, arthritis, kidney diseases, psoriasis and inflammatory bowel diseases.**
- They can improve **patient access** and help reduce healthcare costs.

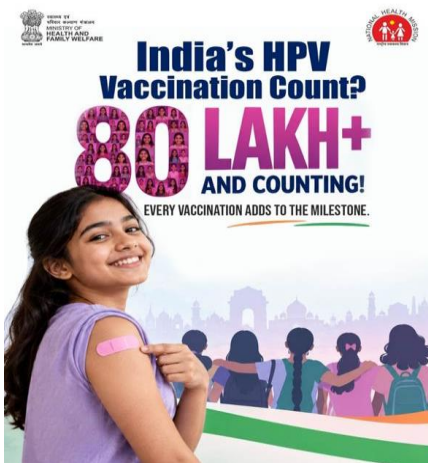
Biopharma SHAKTI mission

- Biopharma SHAKTI** = *Strategy for Healthcare Advancement through Knowledge, Technology and Innovation.*
- Introduced in **Union Budget 2026–27** with an outlay of **₹10,000 crore over five years** to strengthen domestic production of **biologics and biosimilars** and reduce import dependence.
- It includes **3 new NIPERs, upgradation of 7 existing NIPERs and 1,000+ accredited clinical trial sites** to strengthen research and clinical development.

About IPC

- **Indian Pharmacopoeia Commission (IPC)** is an **autonomous institution under the Ministry of Health and Family Welfare**.
- It develops **standards for medicines** and supports pharmaceutical quality and safety in India.

NATIONAL HPV VACCINATION CAMPAIGN



Why in News?

India has administered **over 80 lakh HPV vaccine doses** under the **National HPV Vaccination Campaign** since its launch in February 2026, marking a major milestone in cervical cancer prevention.

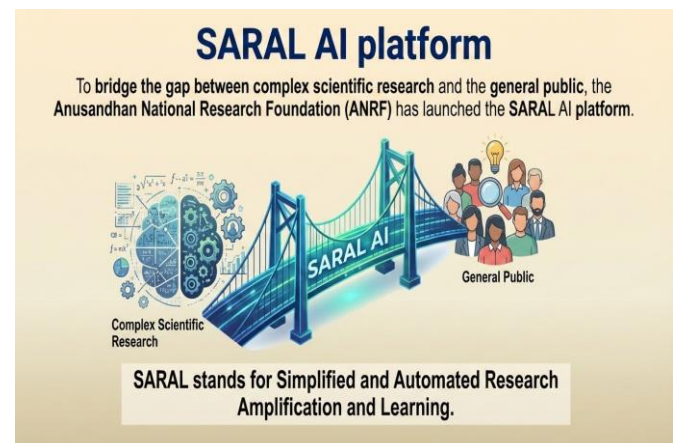
About the National HPV Vaccination Campaign

- The campaign provides **free, voluntary, single-dose HPV vaccination to 14-year-old girls** at government health facilities, with parental consent.
- Launched nationwide on **28 February 2026**, targeting around **1.2 crore 14-year-old girls** across all States/UTs.
- Uses the **single-dose Gardasil-4 vaccine**, provided free at government health facilities.
- Vaccination is **voluntary**, with **parental consent mandatory**.
- Coverage is monitored through the **U-WIN digital vaccination platform**.

HPV Infection

- **Human Papillomavirus (HPV)** is a common **sexually transmitted viral infection** affecting the skin and mucous membranes.
- Most HPV infections are **asymptomatic and clear naturally**, but persistent infection with **high-risk HPV types** can cause cervical cancer.
- HPV can also cause **genital warts** and cancers of the anus, penis, vulva, vagina and throat.
- India follows a **multi-pronged approach: HPV vaccination + screening + early diagnosis + timely treatment**.
- Screening and early diagnosis are supported through **Ayushman Arogya Mandirs**, while treatment is provided through **Day Care Cancer Centres**.

SARAL AI



Why in News?

The **Anusandhan National Research Foundation (ANRF)** has developed **SARAL AI**, an AI-based platform to make complex **scientific research publications and patents** accessible to wider audiences.

Key Features

- **Research-to-content:** Converts research papers and patents into **podcasts, short videos, posters, presentations and business briefs**.
- **Automated extraction:** Researchers can upload papers through **arXiv links or LaTeX**

files; the system extracts relevant content and figures.

- **AI script generation:** Uses AI models to generate **engaging scripts**
- **Voice synthesis:** Converts scripts into **natural-sounding audio narration** in multiple Indian languages.
- **Automated video creation:** Combines **slides, visuals and narration** to produce presentation videos.
- **Multilingual:** Enables dissemination of scientific knowledge in **18 Indian languages**, helping overcome language barriers.

META MUSE AI AGENT

Why in News?

Meta introduced its personal AI agent, Muse, marking a shift from conventional AI chatbots towards systems capable of planning and executing tasks on behalf of users.

About

- **Muse** is a **personal AI agent developed by Meta** to understand a user's goals, plan multiple steps and perform tasks across connected digital services.
- It is powered by **Muse Spark**, a **multimodal AI model** developed by **Meta Superintelligence Labs**.
- Unlike a conventional chatbot that primarily **responds to user queries**, Muse is designed to **act on behalf of the user**.
- It can assist with tasks such as – email management, travel planning, shopping, scheduling, online form filling, event planning.
- It can break a broad objective into **multiple smaller tasks**, decide the sequence of actions and use connected digital services to complete them.
- For **sensitive actions**, such as making purchases or sending communications, the system can seek **user approval**.
- Meta has developed security mechanisms such as **Muse Secure VM** and **Sentinel** to isolate the agent and monitor its activities.

AI Types

Generative AI: Creates new content. Example: ChatGPT, Google Gemini.

Agentic AI: Autonomously plans and executes tasks. Example: AI agents that research and prepare reports.

Predictive AI: Forecasts future outcomes. Example: Weather forecasting.

Conversational AI: Interacts through text or speech. Example: Customer-service chatbots.

Multimodal AI: Processes multiple data types. Example: AI analysing text, images and audio.

GALLIUM NITRIDE (GAN) TECHNOLOGY

Why in News?

Indian institutions have developed **indigenous GaN-based semiconductor technologies**, reducing dependence on foreign technology for strategic applications.

About

- **DRDO's Solid State Physics Laboratory (SSPL)** has developed GaN HEMTs and **GaN-on-SiC MMICs** for high-frequency applications up to the **X-band**, with uses in radars, electronic warfare, space and communications.
- The technology is also being advanced for **5G/6G, satellite communication, electric vehicles and renewable-energy systems**.

About GaN Technology

- **Gallium Nitride (GaN)** is a **wide-band-gap semiconductor** capable of operating at higher voltages, temperatures and frequencies than conventional silicon.
- **GaN HEMTs (High Electron Mobility Transistors)** enable high-power, high-frequency RF applications because of their high electron mobility and breakdown voltage.
- **GaN-on-SiC MMICs** integrate multiple microwave components on a single chip,

enabling **compact, lightweight and high-performance** systems.

Key Features / Applications

- **High power & frequency:** Suitable for advanced **radars, electronic warfare and satellite communication**.
- **Higher efficiency:** Reduces energy losses in power and RF systems.
- **Compact & lightweight:** Enables smaller power supplies and communication systems.
- **Strategic applications:** Defence, aerospace, space systems, 5G/6G and EVs.
- **Deep-space communication:** ISRO and SAMEER are collaborating on indigenous GaN-based high-power systems for **deep-space missions**.

RESEARCH, DEVELOPMENT AND INNOVATION (RDI) FUND

Why in News?

Dr. Jitendra Singh called for wider awareness of the **₹1 lakh crore RDI Fund** among industry, startups, researchers and other stakeholders so that the **right beneficiaries can access its support**.

Key Features of the fund

- **Corpus:** ₹1 lakh crore over 6 years.
- **Target:** **Private sector, startups and industries** working on sunrise and strategic technologies.
- **Nature of support:** **Long-term, low-cost loans and equity instruments;** support can be unsecured.
- **Technology focus:** Primarily **TRL 4 and above**, i.e. technologies closer to practical application/commercialisation.
- **Priority areas:** **AI, quantum technology, robotics, space, biotechnology, biomanufacturing, pharmaceuticals, medical devices, energy transition, climate technologies and digital economy.**
- **Strategic objective:** Promote **indigenous technology, private R&D, deep-tech innovation and Atmanirbhar Bharat**.

Governance & Funding Mechanism

- **ANRF:** Its **Governing Board**, chaired by the Prime Minister, provides strategic direction; the **Executive Council** sets guidelines, appoints fund managers and identifies priority/sunrise sectors.
- **Empowered Group of Secretaries (EGoS):** Led by the **Cabinet Secretary**, oversees approvals, sectoral priorities and performance review.
- **Nodal Department:** **Department of Science & Technology (DST)** implements the RDI framework.
- **Two-tier funding:** **Special Purpose Fund (SPF) under ANRF** acts as the fund custodian and channels resources through **Second-Level Fund Managers (SLFMs)**.
- **Nature of funding:** Primarily **long-term concessional loans at low/zero interest, with equity support for startups** and possible contributions to **Deep-Tech/other RDI-focused Funds of Funds**.

INDIA'S FIRST LNG-POWERED TRAIN



Why in News?

India's first LNG-powered train was flagged off from **Sabarmati Railway Station, Ahmedabad, Gujarat**, on **27 September 2026**.

About LNG-Powered Train

- **LNG (Liquefied Natural Gas)** is natural gas cooled to about **-162°C**, converting it into a liquid for easier storage and transport.

- The train uses a **diesel-LNG dual-fuel system**, with LNG replacing around **40% of diesel consumption**, aimed at reducing fuel use, emissions and operating costs.
- Developed by **Indian Railways/Integral Coach Factory (ICF)**, with LNG-based driving power cars.

Key Features

- **Lower emissions:** Reduces CO₂, NO_x and particulate matter compared with conventional diesel operation.
- **Fuel savings:** LNG can reduce operating costs compared with diesel.
- **Longer range:** Each LNG tank can support substantial daily operations, reducing frequent refuelling requirements.
- **Environment-friendly transition:** Provides an alternative for routes where complete railway electrification is not yet feasible.

INDIA ELECTRIC MOBILITY INDEX (IEMI)

Why in News?

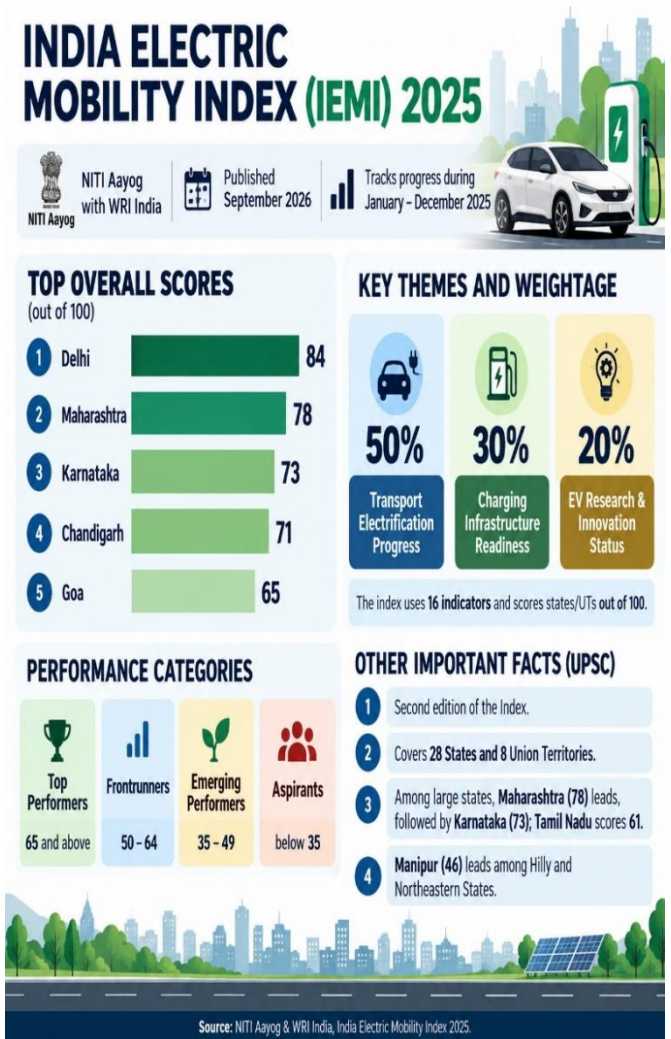
The **India Electric Mobility Index (IEMI) 2025** was released by **NITI Aayog**, benchmarking the progress of States and Union Territories (UTs) in electric mobility.

About

- The **IEMI** is a composite index that assesses the **policy framework and implementation outcomes for e-mobility** across 28 Indian States and 8 UTs.
- The IEMI 2025 is the **second edition**, following the 2024 edition.
- It was developed by **NITI Aayog** in collaboration with **World Resources Institute (WRI) India**.
- It evaluates States and UTs on a **0–100 scale** using **16 indicators** grouped under three themes:
 - **Transport Electrification Progress – 50%:** Measures EV adoption and demand-side factors, including private and commercial EV adoption.

- **Charging Infrastructure Readiness – 30%:** Covers charger-to-vehicle ratio, charging infrastructure initiatives, subsidies, building bye-laws, renewable energy capacity and power availability.

- **EV Research and Innovation Status – 20%:** Covers EV start-ups, research and development initiatives and EV-related patents.



Madhya Pradesh recorded the most notable improvement, climbing from 23rd rank in IEMI 2024 to 7th rank in IEMI 2025, a rise of 16 positions. Its score increased from 31 to 59. None of the Hilly and Northeastern States reached the **Top Performer** or **Frontrunner** category. Manipur was the **highest-scoring State in this category**.

GREEN E-METHANOL

Why in News?

India laid the foundation stone for its **first port-based e-methanol production facility at Kandla, Gujarat**, marking a major step towards green shipping and maritime decarbonisation.

About

- **Green e-Methanol** is a low-carbon synthetic fuel produced using **green hydrogen and captured carbon dioxide (CO₂)** with renewable electricity.
- **Production process:** Renewable electricity → electrolysis of water → **green hydrogen** + captured CO₂ → methanol synthesis → **e-methanol**.
- The CO₂ used for green methanol in India may be sourced from **biogenic sources, Direct Air Capture (DAC), or existing industrial sources**.

Conventional Methanol		Green E-Methanol	
 Natural gas or coal	 Raw materials	 Green hydrogen + captured CO ₂	
 Fossil fuels	 Energy source	 Renewable electricity	
 Fossil fuel-based process	 Production	 Electrolysis + CO ₂ synthesis	
 Higher lifecycle emissions	 Emissions	 Potentially lower lifecycle emissions	
 Generally cheaper	 Cost	 Generally costlier	
 Chemicals, solvents and fuels	 Uses	 Chemicals and low-carbon shipping fuel	

Harit Sagar Guidelines

- It was launched in 2023 and mandates that India's major ports reduce carbon emissions per ton of cargo (30% reduction by 2030) and transition to over 60% renewable energy usage.
- It provides for adopting the **global Green Reporting Initiative (GRI) standard** for reporting and demonstrating ports' environmental, economic and social impacts.

UPSC CSE PRELIMS PYQ – 2026:

With reference to Green Hydrogen, consider the following statements:

1. Hydrogen produced from natural gas through steam methane reforming with carbon capture and storage can be classified as Green Hydrogen.
2. Green Hydrogen can be produced through electrolysis of water using electricity generated from renewable energy sources.
3. The National Green Hydrogen Mission aims to reduce nearly 50 million metric tonnes of annual greenhouse gas emissions by 2030.

Which of the statements given above are correct?

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

Answer: (B) 2 and 3 only

INTERNATIONAL RELATIONS

26th SHANGHAI COOPERATION ORGANISATION (SCO) SUMMIT

Why in News?

The 26th Meeting of the Council of Heads of State of the Shanghai Cooperation Organisation (SCO) was held in Bishkek, Kyrgyz Republic, from 31 August to 1 September 2026, marking the 25th anniversary of the SCO.

About

- The SCO is a Eurasian political, economic and security grouping, established in 2001 in Shanghai.
- It currently has 10 members: India, China, Russia, Pakistan, Kazakhstan, Kyrgyzstan, Tajikistan, Uzbekistan, Iran and Belarus.
- India became a full member in 2017; Iran joined in 2023 and Belarus in 2024.
- The SCO traditionally focuses on combating the “three evils” — terrorism, separatism and extremism, along with cooperation in connectivity, trade, energy, technology and culture.
- The 2026 Summit was hosted by Kyrgyzstan under its 2025–26 chairmanship.

Key Highlights

- **Bishkek Declaration:** Adopted by SCO leaders, marking the organisation’s 25th anniversary.
- **India’s Priorities:** Prime Minister Narendra Modi highlighted **Security, Connectivity and Opportunity** as key pillars of India’s SCO engagement.
- **Terrorism:** India called for **zero tolerance and no double standards** in combating terrorism and dismantling terror ecosystems.
- **English as Official Language:** The SCO agreed to include **English as an official language** alongside Russian and Chinese.
- **New Security Mechanism:** Decision to establish a **Universal Centre for Countering Security Threats**.

- **Civilisational Dialogue:** India will host the first SCO Civilisation Dialogue Forum.
- **Youth Initiatives:** India supported the **Young Scientist Forum** and **Young Author’s Conclave**.
- **Other Outcomes:** The Summit adopted **four MoUs and more than 20 decisions/statements** covering climate, nuclear safety, energy conservation, drug trafficking and other areas.
- **SCO Presidency:** The chairmanship was transferred from **Kyrgyzstan to Pakistan** for 2026–27.

Shanghai Cooperation Organisation (SCO)

- **Established:** 2001, Shanghai, China.
- **Headquarters:** Beijing, China.
- **Members:** 10 countries.
- **Recent members:** Iran (2023) and Belarus (2024).
- **India:** Full member since 2017.
- **Objectives:** Regional security, counterterrorism and economic cooperation.
- **RATS headquarters:** Tashkent, Uzbekistan.
- **Official languages:** Chinese and Russian.
- **Dialogue Partner:** Laos (2026).

UPSC Prelims 2021 Question

Consider the following statements about the Shanghai Cooperation Organisation:

1. It is an intergovernmental organization to promote cooperation in trade, politics, and culture.
2. The Anti-Terrorist structure of SCO is located in Beijing.

Which of the above statement is/are correct?

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

INDIA - UZBEKISTAN CO-OPERATION

Why in News?

India and Uzbekistan elevated their bilateral ties to a **Comprehensive Strategic Partnership**, signing key agreements on critical minerals, long-term uranium supply, and UPI integration via Uzbekistan's National Interbank Processing Centre (UZQR).

About

- Uzbekistan's strategic location makes it a key partner for India in **Central Asia and Eurasia**. The upgraded **Comprehensive Strategic Partnership** focuses on **trade, critical minerals, civil nuclear cooperation, defence and digital connectivity**.

India - Uzbekistan Comprehensive Strategic Partnership Outcomes

- India - Uzbekistan bilateral relationship upgraded to a **Comprehensive Strategic Partnership**, setting a target to reach **\$5 billion** in bilateral trade by 2030.
- Critical Minerals & Uranium Deal:** They signed a Memorandum of Understanding (MoU) on **geology and critical minerals**, along with an agreement for the long-term supply of **uranium** for India's civil nuclear program.
- Fintech & Digital Public Infrastructure (DPI):** NPCI International Payments Ltd (NIPL) partnered with Uzbekistan's National Interbank Processing Centre (UZQR) to enable **UPI-based merchant payments**.
- High Civilian Honour:** The Indian Prime Minister was conferred with the **Oliy Darajali Do'stlik Order** (Order of Highest Friendship), Uzbekistan's highest honor for foreign leaders.
- Geographical Significance:** Uzbekistan is a **doubly landlocked country** in Central Asia, making it a critical anchor for India's Connect Central Asia policy via Chabahar Port and the INSTC corridor.
- Defense & Security Cooperation:** Joint military exercises (such as **Exercise Dustlik**)

and collaboration within the Joint Working Group on Counter-Terrorism to address regional security risks in Eurasia.

- Environmental & Heritage Initiatives:** India pledged a **\$1 million grant** for afforestation in the Aral Sea region and agreed to help restore ancient Buddhist heritage sites at **Fayaz Tepa** and **Kara Tepa**.

INDIA - BELGIUM DEFENCE CO-OPERATION

Why in News?

India and Belgium agreed to step up defense cooperation, shifting from a simple buyer-seller dynamic to joint technology development and co-production under India's Aatmanirbhar Bharat vision.

About

India-Belgium Relations

1. Strategic & Diplomatic Importance

- Belgium hosts the headquarters of both the **European Union (EU)** and **NATO**, making it a key strategic gateway for India's engagement in Europe.
- Belgium supports India's candidacy for a permanent seat on a reformed **UN Security Council (UNSC)**.

2. Defense & Security Co-operation

- A partnership between the **Society of Indian Defence Manufacturers (SIDM)** and the **Belgian Security and Defence Industry (BSDI)** was signed.
- Key Defence Focus Areas:** Tech-transfer and co-development of radar systems, electro-optical sensors for **Arjun tanks**, counter-drone systems, and sub-assemblies for the **Zorawar light tank**.

3. Trade & Investment

- Bilateral Trade** reached **\$13.01 billion (2025-26)**, with plans to double trade within 5 years.
- Broadening trade from traditional **diamonds (Antwerp-Surat/Mumbai)** to critical minerals, life sciences, green hydrogen, and semiconductors.

4. Science, Technology & Innovation

- **Semiconductors:** Potential cooperation in advanced materials and semiconductor research.
- **Life sciences:** Collaboration in biotechnology, pharmaceuticals and medical research.
- **Research:** Joint projects and academic exchanges between Indian and Belgian institutions.

UNITED NATIONS CONVENTION ON THE LAW OF THE SEA (UNCLOS)

Why in News?

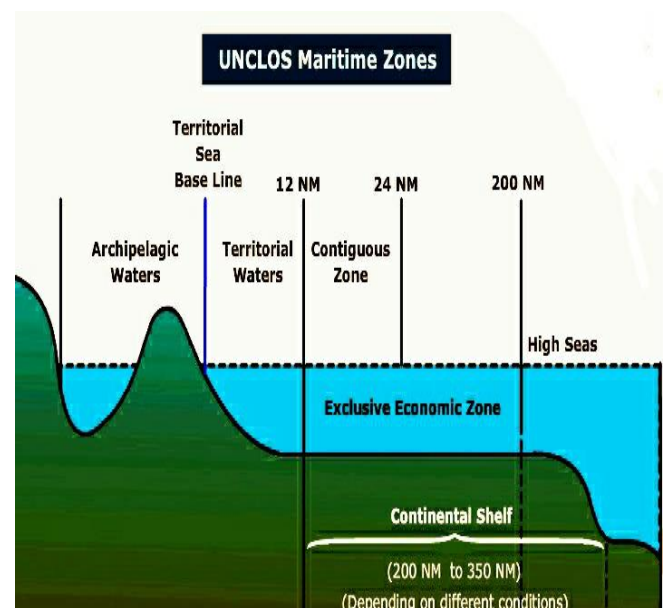
The UN General Assembly adopted its first declaration on sea-level rise, with Member States, including the US, agreeing on a common text to address its impacts.

About

- UNCLOS is a comprehensive international legal framework governing the **use of oceans and seas, maritime boundaries, navigation, marine resources and protection of the marine environment.**
- It was **adopted in 1982** and **entered into force in 1994** and is widely described as the “Constitution of the Oceans.”
- It establishes maritime zones such as the **territorial sea, contiguous zone, Exclusive Economic Zone (EEZ) and continental shelf**, along with rules for their rights and jurisdiction.
- UNCLOS provides a framework for **navigation, marine scientific research, conservation of marine resources, environmental protection and peaceful settlement of maritime disputes.**
- It established key institutions including the **International Tribunal for the Law of the Sea (ITLOS), International Seabed Authority (ISA) and Commission on the Limits of the Continental Shelf (CLCS).**

Key highlights of the UN Declaration on Sea-Level Rise

- **Statehood and sovereignty:** Sea-level rise does not automatically affect the **statehood, sovereignty, rights or UN membership** of affected States.
- **Maritime zones:** Emphasises the stability of **maritime zones established under UNCLOS** despite changes in coastlines caused by sea-level rise.
- **Climate finance:** Calls for increased **financial, technical and capacity-building support** for vulnerable developing countries, particularly **Small Island Developing States (SIDS) and Least Developed Countries (LDCs).**
- **Coastal resilience:** Promotes **nature-based solutions**, including the protection and restoration of mangroves, seagrass and other coastal ecosystems.
- **Disaster preparedness:** Stresses **early warning systems, risk assessment and anticipatory action** to address sea-level-rise-related hazards.
- **Infrastructure:** Calls for incorporating **sea-level-rise projections** into the planning and development of critical coastal infrastructure.



UPSC Prelims 2022 Question

With reference to the United Nations Convention on the Law of the Sea (UNCLOS), consider the following statements:

1. A coastal state has the right to establish the breadth of its territorial sea up to a limit not exceeding 12 nautical miles, measured from baselines determined in accordance with the Convention.
2. Ships of all states, whether coastal or land-locked, enjoy the right of innocent passage through the territorial sea.
3. The Exclusive Economic Zone (EEZ) shall not extend beyond 200 nautical miles from the baseline from which the breadth of the territorial sea is measured.

Which of the statements given above are correct?

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

G20 INNOVATION MINISTERS' MEETING

Why in News?

Union Minister of State **Jitin Prasada** led the Indian delegation at the **G20 Innovation Ministers' Meeting** held on **1–2 September 2026 in Chapel Hill, North Carolina, USA**, where G20 members adopted the **Innovation Ministerial Statement**.

About

- The **G20 Innovation Ministers' Meeting** aims to promote **innovation-driven economic growth, emerging technologies, digital transformation and international cooperation**.
- It focuses on **pro-innovation policies, skilled technical workforce development, Artificial Intelligence (AI), intellectual property, industrial innovation and investment in supply chains**.
- The meeting was hosted by the **US Department of Commerce and the White House Office of Science and Technology**

Policy (OSTP).

Key Highlights

- **Six Pillars:** Pro-innovation policy frameworks; technology for opportunity and prosperity; skilled technical workforce; IP policies for AI; AI and standards; and industrial innovation and investment in supply chains.
- **Carolina Principles for Emerging Technologies:** Focus on **foundational research, commercialisation and trusted adoption** of emerging technologies.
- **AI Prosperity Objectives & Compact:** Promote **technical workforce development and private-sector partnerships**.
- **6G:** India endorsed the **Call to Action for 6G Leadership and Security**, supporting **open, interoperable, secure and resilient** next-generation networks.
- **India-US Cooperation:** Discussions covered **semiconductors, AI and data centres**, including potential US investment in **India Semiconductor Mission (ISM) 2.0**.

UPSC Prelims Questions

1. Consider the following statements about G-20:

The G-20 group was originally established as a platform for the Finance Ministers and Central Bank Governors to discuss international economic and financial issues. Digital public infrastructure is one of India's G-20 priorities.

Which of the statements given above is/are correct?

(UPSC Prelims 2023)

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

2. With reference to the "G20 Common Framework", consider the following statements

It is an initiative endorsed by the G20 together with the Paris Club.

It is an initiative to support Low Income Countries with unsustainable debt.

Which of the statements given above is/are correct?

(UPSC Prelims 2022)

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

INDIA - MERCOSUR PTA

Why in News?

India and MERCOSUR launched negotiations for the expansion of the India-MERCOSUR Preferential Trade Agreement.

About

India-MERCOSUR PTA: Key Features

- **Signed in 2004** and operational since 2009, it provides preferential tariff concessions on selected goods.
- **Limited product coverage:** India gets concessions on about 450 tariff lines, while MERCOSUR offers concessions on about 452 lines.
- Covers products such as **pharmaceuticals, chemicals, machinery, agricultural goods** and auto components.
- It is mainly a trade-in-goods agreement; services, investment protection, government procurement and IPR are not covered.
- It includes **Rules of Origin, safeguard measures and dispute-settlement provisions** to regulate preferential trade.
- Electronic Certificates of Origin have now been recognised, enabling more paperless and faster customs procedures.
- India and MERCOSUR have started negotiations to expand the **PTA towards a broader FTA**, with the Terms of Reference defining its scope.

Significance for India

- Expands market access for Indian pharmaceuticals, engineering goods and other exports in South America.
- Diversifies export markets beyond traditional destinations such as the US, Europe and West Asia.
- Helps secure supplies of crude oil, vegetable oils, fertilisers and critical minerals such as lithium.

MERCOSUR

- **MERCOSUR** is a **South American regional economic bloc** aimed at promoting regional economic integration.
- It was established in **1991 through the Treaty of Asunción**.
- It aims to ensure the **free movement of goods, services, capital and people** among member countries.
- It became a **customs union in January 1995**.
- **Founding members:** Argentina, Brazil, Paraguay and Uruguay.
- **Bolivia** later joined as a member, while **Venezuela remains suspended** since 2016.
- **Associate members:** Chile, Colombia, Ecuador, Guyana, Peru and Suriname.
- **Headquarters:** Montevideo, Uruguay.
- **Official working languages:** Spanish and Portuguese.

LAKE ONTARIO

Why in News?

Google Maps has started displaying “Lake America” instead of “Lake Ontario” for users in the United States, following the formal change in the **U.S. Geographic Names Information System (GNIS)**. Users in Canada continue to see **Lake Ontario**, while users elsewhere see both names.

About

- **Lake Ontario** is the **smallest by surface area and the easternmost** of the five **Great Lakes of North America**, forming part of the international boundary between **Canada and the United States**.
- The name **Ontario** is derived from the Indigenous **Huron-Wendat term “Ontari’io”**, meaning “**lake of shining waters**.”
- It is a **glacial lake** covering about **19,011 sq. km**, with an average depth of around **86 m** and a maximum depth of about **244 m**.
- The lake receives its principal inflow from the **Niagara River**, which connects it with **Lake**

Erie, and drains through the **St. Lawrence River** into the **Atlantic Ocean**.

- The **Great Lakes system** holds about **20% of the world's surface freshwater** and is a major source of freshwater for the United States and Canada.
- Lake Ontario forms part of the **Great Lakes-St. Lawrence Seaway system** and is connected to Lake Erie through the **Welland Canal**, supporting navigation and commercial activities.



CEUTA MIGRANT CRISIS

Why in News?

Spain has denied reports blaming **Morocco for the mass migrant crossing into Ceuta in July 2026**, with Spanish authorities stating that there is no evidence linking the Moroccan government to the incident.

About

- **Ceuta** is a **Spanish autonomous city and enclave in North Africa**, located on the northern coast of Africa and bordering Morocco.
- It is part of **Spain and the European Union (EU)** and, along with **Melilla**, constitutes Spain's two territories on the African mainland.
- Ceuta is strategically located near the **Strait of Gibraltar** and serves as an important **EU external border and migration route**.
- **Morocco claims sovereignty over Ceuta and Melilla**, although Spain exercises administrative control over both territories.
- The July 2026 migrant crisis involved a **large-**

scale attempted crossing from Morocco into Ceuta, amid the spread of disinformation through social media.



OPERATION DEEP MANIFEST

Why in News?

The Directorate of Revenue Intelligence (DRI) seized **13 containers carrying more than 362 metric tonnes of Pakistan-origin dry dates** at the **Container Freight Station (CFS), Ambad, Nashik**, under **Operation Deep Manifest**.

About

- **Operation Deep Manifest** is a DRI enforcement operation aimed at preventing the illegal import of **Pakistan-origin goods through third countries** by concealing their actual country of origin.
- It was launched following the Government's **prohibition on the direct or indirect import or transit of goods originating in or exported from Pakistan**, effective **2 May 2025**, through **DGFT Notification No. 06/2025-26**.

Key Points

- **Agency:** Directorate of Revenue Intelligence (DRI), under the **Ministry of Finance**.
- **Route:** **Karachi Port, Pakistan → Jebel Ali Port, UAE → India**.
- **Modus operandi:** The consignments were transshipped at Jebel Ali into new containers and loaded onto another vessel, while documents declared **UAE as the country of origin**.
- **Concealment:** Preliminary investigation revealed an organised arrangement involving entities operated by **Pakistani nationals** to

conceal the actual origin of the goods.

- **Other goods intercepted:** Pakistan-origin cosmetics, rock salt and watermelon seeds, besides dry dates, have also been intercepted under the operation.

EAST ASIA SUMMIT (EAS)

Why in News?

India participated in the **14th East Asia Summit Economic Ministers' Meeting** and the **23rd ASEAN-India Economic Ministers Consultation** held in **Manila, Philippines**, with India-ASEAN bilateral trade reaching **USD 128.38 billion in 2025-26**.

About

- The **East Asia Summit (EAS)** is an **ASEAN-led, Leaders-led forum** for strategic, political, security and economic dialogue in the Indo-Pacific region.
- It was established in **2005**, with the first summit held in **Kuala Lumpur, Malaysia**. **India is a founding member**.
- The EAS comprises **19 countries** — **11 ASEAN Member States** and 8 partner countries: **Australia, China, India, Japan, New Zealand, Republic of Korea, Russia and the United States**.
- Key areas of cooperation include **maritime cooperation, connectivity, trade and investment, energy, climate and environment, health, education, finance and disaster management**.

Key Highlights

- **AITIGA Review:** India stressed the need to expedite the review of the **ASEAN-India Trade in Goods Agreement (AITIGA)** to boost trade and address trade asymmetries.
- **India-ASEAN Trade:** Bilateral trade reached **USD 128.38 billion in 2025-26**, accounting for **10.55% of India's total global trade**.
- **Economic Outlook:** Discussions covered the **regional and global economic outlook for 2027** and its impact on trade and investment.
- **Energy & Industry:** ERIA presented an

integrated approach linking **energy security, industrial clusters, digital infrastructure, trade and investment**.

- **Business Engagement:** India participated in the **ASEAN-India Business Forum 2026** to strengthen business and investment ties.

UPSC Prelims 2015 Question

India is a member of which one of the following?

1. Asia-Pacific Economic Cooperation
2. Association of South-East Asian Nations
3. East Asia Summit

Select the correct answer using the code given below:

- a) 1 and 2 only
- b) 3 only
- c) 1, 2 and 3
- d) India is a member of none of them

EXERCISE KAZIND-2026

Why in News?

The **Indian Armed Forces contingent** departed for **Kazakhstan** to participate in the **ninth edition of the India-Kazakhstan Joint Military Exercise KAZIND-2026**, scheduled from **28 September to 11 October 2026**.

About

Exercise **KAZIND** is an annual **joint military exercise between India and Kazakhstan**, conducted alternately in both countries to enhance interoperability and strengthen the capabilities of their armed forces for **joint counter-terrorism operations under a United Nations mandate**.

Key Features

- **Focus:** Counter-terrorism operations in **semi-urban and mountainous terrain**.
- **Operations:** Joint raids, cordon-and-search operations, search-and-destroy missions and **Special Heliborne Operations**.
- **Technology:** Training in **Unmanned Aerial Systems (UAS)** and **Counter-UAS** operations.
- **Command & Intelligence:** Establishment of a **Joint Command Post** and an **Intelligence and Surveillance Centre**.

- **Participation:** Personnel from the **Indian Army and Indian Air Force** and **Kazakhstan's Land Forces**.

India-Kazakhstan Defence Exercises

- **KAZIND** – Joint military exercise between India and Kazakhstan.
- **Prabal Dostyk** – Joint Special Forces exercise between India and Kazakhstan.

EXERCISE NOMADIC ELEPHANT

Why in News?

The 18th edition of **Exercise Nomadic Elephant 2026**, an annual joint military exercise between India and Mongolia, was conducted at Pithoragarh, Uttarakhand.

About

- Exercise Nomadic Elephant is an annual, platoon-level bilateral military exercise between the **Indian Army and Mongolian Armed Forces**, conducted alternately in India and Mongolia (2025 edition was held in Ulaanbaatar, Mongolia).
- It **aims** to enhance the joint operational tactics for **Counter-Insurgency/Counter-Terrorism (CI/CT) operations** in semi-urban and mountainous terrain under a **United Nations Mandate**.
- Its **18th edition** was hosted by India at **Foreign Training Node, Pithoragarh, Uttarakhand**.
- 45 personnel each from the Indian Army and Mongolian Armed Forces participated in the exercise.



Key Focus Areas

- **Tactical drills:** Cordon and search operations, room intervention drills, and special heliborne operations.
- **Modern warfare skills:** Cybersecurity, and deployment of **drones & counter-drone systems**.

SLINEX - 26

Why in News?

The 13th edition of **SLINEX-26**, the annual bilateral naval exercise between India and Sri Lanka, was conducted at Visakhapatnam, Andhra Pradesh under the Eastern Naval Command.

About

- **SLINEX** is a flagship annual **bilateral maritime exercise** between the **Indian Navy and Sri Lanka Navy**; first conceptualized in 2005.
- It aims to **enhance Maritime cooperation, operational coordination, tactical interoperability** and mutual understanding.
- Its 13th edition was conducted in **Visakhapatnam, Andhra Pradesh**, under the operational command of the Eastern Naval Command (ENC).



- The exercise has 2 phases:
 - **Harbour Phase:** Professional exchanges, operational planning, and cultural interactions.

- **Sea Phase:** Multi-dimensional tactical maneuvers, anti-submarine warfare (ASW) drills, cross-deck helicopter operations, and search-and-rescue drills.

Participating Assets

- **India:** INS Kavaratti (indigenous Anti-Submarine Warfare Corvette) and INS Jyoti (Fleet Tanker).
- **Sri Lanka:** SLNS Sindurala (Offshore Patrol Vessel).
- **Strategic Alignment:** It directly supports India's **MAHASAGAR** (Mutual and Holistic Advancement for Security and Growth Across Regions) vision and the overarching **SAGAR** (Security and Growth for All in the Region) doctrine, as well as India's **Neighbourhood First** policy.

COLOMBO SECURITY CONCLAVE

Why in News?

A three-day Table Top Exercise (TTX) under the aegis of the **Colombo Security Conclave (CSC)** was conducted at the **Eastern Naval Command (ENC) in Visakhapatnam**, strengthening regional military cooperation and joint response mechanisms against maritime security threats.

About

- Colombo Security Conclave is a regional security group formed in **2020** (evolved from a 2011 trilateral maritime security initiative between India, Maldives, and Sri Lanka).
- It is focussed on **common transnational security challenges** in the Indian Ocean Region.
- The member states are **India, Sri Lanka, Maldives, Mauritius, Bangladesh, and Seychelles**.
- CSC is led by the **National Security Advisors (NSAs)** and Deputy NSAs of the member countries.
- Its permanent **Secretariat** is located in **Colombo, Sri Lanka**.

Five Pillars of Cooperation

1. Maritime Safety and Security.
2. Countering Terrorism and Radicalisation.
3. Combating Trafficking and Transnational Organised Crime.
4. Cyber Security and Protection of Critical Infrastructure.
5. Humanitarian Assistance and Disaster Relief (HADR).

Significance: It supports India's **MAHASAGAR** vision.

CHAGOS ISLANDS

Why in News?

The UK government put its agreement to transfer sovereignty over the Chagos Islands to Mauritius on hold following security concerns and diplomatic pressure from the US. Consequently, the Maldivian President invited the British High Commissioner to discuss security and regional stability in the Indian Ocean.

About

- Chagos Archipelago is a group of island atolls in the central **Indian Ocean**, located roughly 1,000 miles (1,600 km) south of the Indian subcontinent.
- It has been administered by the UK as the **British Indian Ocean Territory (BIOT)** since 1965 after being detached from Mauritius prior to its independence.



Key Features

- **Diego Garcia:** It is the largest and southernmost atoll in the archipelago, housing a vital joint **UK-US military base**.

- **Other Atolls:** Peros Banhos, Salomon Islands, Egmont Islands, Eagle Islands, and Danger Island.

Topography & Climate: Flat, low-lying coral terrain (elevation mostly under 2 meters) with no natural lakes or rivers; experiences a tropical marine climate.

SOHAR PORT

Why in News?

Amid rising tensions near the Strait of Hormuz, Oman has invited India to invest in its Sohar Port to ensure uninterrupted and safer access to Gulf energy resources.

About

- Sohar port is a major **deep-sea port** situated in **northern Oman** along the **Gulf of Oman**, located roughly 160 km **south of the Strait of Hormuz** (midway between Muscat and Dubai).
- It is positioned **outside the vulnerable Strait of Hormuz choke point**, offering a bypass route for maritime trade and crude oil transport during regional conflicts.
- It is managed by the **Sohar Industrial Port Company (SIPC)**, a 50:50 joint venture between the Government of Oman and the Port of Rotterdam.
- It is adjoined by the **Sohar Freezone**, which serves as a major industrial complex for petrochemicals, manufacturing, metals, and logistics across the Middle East, Indian subcontinent, and East Africa.
- It **handles containerized cargo, dry bulk, liquid bulk** (petroleum/chemicals), and bulk goods.



FALKLANDS

Why in News?

The UK reaffirmed its "unshakeable" stance on keeping sovereignty over the Falkland Islands after Argentina revived its historical claim, further amplified during public celebrations where a banner declared the islands as Argentine territory.

About

- Falklands is an archipelago located in the **South Atlantic Ocean**, positioned about 480 km east of the Coast of Argentina and northeast of the Strait of Magellan.
- It is administered as an internally self-governing **British Overseas Territory**, claimed by Argentina as *Islas Malvinas*.
- **Topography & Geography:** It consists of two main islands (**East Falkland** and **West Falkland**) separated by the Falkland Sound, along with over 700 smaller islands.
- **Stanley** is the capital of the archipelago which is located on East Falkland.
- **Climate & Vegetation:** Cool temperate oceanic climate characterized by high winds, peatlands, rolling hills, and a treeless landscape.
- **Key Economic Drivers:** Commercial fishing (primarily squid), sheep farming/wool export, offshore oil exploration, and eco-tourism (notable for penguins and marine mammals).



Falkland issue

- **1982 Falklands War:** A 74-day military conflict between Argentina and the UK after Argentine forces occupied the islands; ended with a British military victory restoring UK control.
- In a 2013 political referendum, **99.8% of islanders voted to remain a British Overseas Territory**, which the UK cites under the UN principle of self-determination and Argentina remains to reject this status.

PORT OF MOKHA

Why in News?

Iran-backed Houthi rebels seized control of the strategic Yemeni port city of Mokha (Mocha) along the Red Sea, marking their largest territorial gain since the 2022 truce.

About

- The port of Mokha is a historic port city situated on the southwestern coast of **Yemen**
- along the **Red Sea**, approximately 80 km north of the strategic **Bab-el-Mandeb Strait**.
- It was a major global hub for the coffee trade from the 15th to 17th centuries, giving rise to the term "**Mocha coffee**."
- It was founded in the 14th century, it served as a key trading center where Indian merchants exchanged metal goods for Yemeni coffee and myrrh.
- The present day, modern port was established in **1955** and served as a logistics and military hub between **Aden and Hodeidah**.

SCHEMES AND INITIATIVES

PM-SETU

Why in the News?

The 5th National Steering Committee under PM-SETU approved Strategic Investment Plans (SIPs) worth ₹ 735.70 crore for ITI transformation.

About

- **PM-SETU (Pradhan Mantri Skilling and Employability Transformation through Upgraded ITIs)** is a scheme aimed at **modernising and upgrading Industrial Training Institutes (ITIs)**.
- The scheme seeks to transform ITIs into **modern, industry-aligned skill training institutions**.
- It focuses on improving **infrastructure, equipment, curriculum, trainer capacity and industry linkages** in ITIs.
- **Strategic Investment Plans (SIPs)** are prepared to identify and fund the specific transformation needs of ITIs.
- The scheme promotes **industry participation and stronger linkages between ITIs and employers** to improve the employability of trainees.
- It aims to equip youth with **future-ready skills** aligned with emerging technologies and changing industry requirements.
- PM-SETU is part of the government's broader efforts to strengthen **vocational education, skilling and employment opportunities** for India's youth.

PM VISHWAKARMA

Why in the News?

PM Vishwakarma completed three years, with 30 lakh artisans registered, highlighting government support for traditional artisans and craftspeople.

About

- The scheme covers **18 traditional trades**, including carpenters, blacksmiths, goldsmiths, potters, sculptors and cobblers.
- Beneficiaries receive **recognition through a PM Vishwakarma certificate and ID card**.
- It provides **skill training and a toolkit incentive of up to ₹15,000** to improve the quality and productivity of their work.
- Beneficiaries can access **collateral-free loans up to ₹3 lakh** in two tranches at a concessional interest rate of 5%.
- The scheme provides **digital transaction incentives** and support for **marketing and branding** to improve market access.
- It is implemented by the **Ministry of Micro, Small and Medium Enterprises (MSME)** with support from other ministries and institutions.

PRADHAN MANTRI KHANIJ KSHETRA KALYAN YOJANA (PMKKKY)

Why in the News?

PMKKKY was highlighted for promoting the **welfare and development of mining-affected areas**.

About

- **PMKKKY** was launched in **2015** to promote the welfare and sustainable development of **mining-affected areas and communities**.
- The scheme is implemented through funds collected under the **District Mineral Foundation (DMF)**.
- It gives priority to **people and areas directly affected by mining operations**.
- It focuses on sectors such as **healthcare, education, drinking water, sanitation and environmental protection**.

- It also supports **skill development, livelihoods, women and child development and income-generating activities**.
- The scheme seeks to address the **adverse impacts of mining** on local communities and improve their quality of life.
- The **District Mineral Foundation Trusts** implement projects under PMKKKY at the district level.
- **High-priority areas** such as healthcare, education, sanitation and drinking water receive greater attention under the scheme.
- PMKKKY promotes **sustainable livelihoods and inclusive development** in mineral-rich regions.
- The scheme seeks to ensure that **local communities benefit from mineral resources** and participate in the development of mining-affected areas.

The **District Mineral Foundation (DMF)** is a **non-profit body established in mining-affected districts** under the **Mines and Minerals (Development and Regulation) Act, 1957**. It is funded by contributions from **mining lease holders** and works for the **welfare and sustainable development of communities affected by mining**, including healthcare, education, drinking water and livelihoods.

UPSC Prelims 2016

What is/are the purpose/purposes of 'District Mineral Foundations' in India?

1. Promoting mineral exploration activities in mineral-rich districts
2. Protecting the interests of the persons affected by mining operations
3. Authorizing State Governments to issue licences for mineral exploration

Select the correct answer using the code given below:

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

PRADHAN MANTRI MATSYA KISAN SAMRIDHI SAH-YOJANA (PM-MKSSY)

Why in the News?

The government is promoting **aquaculture insurance under PM-MKSSY** to help fish farmers manage **production risks and crop losses** from diseases and natural calamities.

About



- PM-MKSSY is a **Central Sector Sub-scheme under the Pradhan Mantri Matsya Sampada Yojana (PMMSY)**.
- It aims to **formalise the unorganised fisheries sector** through work-based digital identities under the **National Fisheries Digital Platform (NFDP)**.
- It facilitates **institutional credit and working capital** for fishers, fish farmers and fisheries micro and small enterprises.
- It provides a **one-time incentive for purchasing aquaculture insurance** to help farmers manage production risks.
- It provides **performance-based grants** to improve fisheries value-chain efficiency and create and maintain employment.
- It promotes **food safety, quality assurance and traceability** of fish and fishery products.
- The **National Fisheries Digital Platform (NFDP)** was launched under PM-MKSSY in **September 2024** to provide digital services and facilitate access to scheme benefits.

INDIAN FISHERIES SECTOR

- India is the world's **second-largest fish producer**.
- **Fish production:** 197.75 lakh tonnes in 2024–25.
- **Inland fisheries:** Contributed around 76.7% of total fish production.
- **Seafood exports:** Valued at ₹62,408 crore in 2024–25.
- **PMMSY:** Launched in 2020 with an outlay of ₹20,050 crore to promote sustainable fisheries and aquaculture.
- **Budget 2026–27:** Fisheries allocation of ₹2,761.80 crore.
- **Livelihoods:** Supports fishers, fish farmers, coastal communities and fish-processing industries.

SENIOR CITIZENS

- **Legal definition:** A senior citizen is an Indian citizen aged 60 years or above.
- **Population:** India's elderly population is projected to reach 20.8% by 2050.
- **Key challenges:** Healthcare costs, social isolation, financial insecurity and elder abuse.
- **Constitutional provision:** Article 41 directs the State to provide public assistance in old age, within its economic capacity.
- **Government scheme:** Atal Vayo Abhyuday Yojana (AVYAY) promotes the welfare and well-being of senior citizens.

ATAL VAYO ABHYUDAY YOJANA (AVYAY)

Why in the News?

AVYAY has benefited **8.53 lakh+** senior citizens through the **Rashtriya Vayoshri Yojana**.

About

- **AVYAY** is a Central Sector Scheme aimed at improving the **quality of life and welfare of senior citizens**.
- It is implemented by the **Ministry of Social Justice and Empowerment**.
- The scheme supports **healthcare, shelter, food, financial security and social inclusion** of senior citizens.
- The **Rashtriya Vayoshri Yojana (RVY)** provides **assistive living devices** to eligible senior citizens with disabilities or age-related impairments.
- AVYAY also supports **senior citizen homes and care services** through eligible organisations.
- It promotes **active and productive ageing**, along with protection and dignity for elderly persons.
- The scheme seeks to strengthen **institutional and community-based support systems** for senior citizens.

DEEN DAYAL UPADHYAYA GRAMEEN KAUSHALYA YOJANA 2.0

Why in the News?

DDU-GKY 2.0 was highlighted for strengthening **skill training, employment and sustainable livelihoods for rural youth**.

About

- **DDU-GKY 2.0** is an upgraded version of the **Deen Dayal Upadhyaya Grameen Kaushalya Yojana**, aimed at providing **skill training and employment opportunities to rural youth**.
- It is a **placement-linked skill development programme** under the **Ministry of Rural Development**.
- The scheme focuses on **industry-relevant, demand-driven skill training** to improve the employability of rural youth.
- It gives special attention to **women, disadvantaged groups and youth from poor rural households**.
- The programme promotes **technology-enabled training, industry partnerships and stronger placement linkages**.
- It seeks to improve **sustainable employment and income opportunities** for rural youth and support rural economic development.

**DEEN DAYAL UPADHYAYA GRAMEEN KAUSHALYA
YOJANA (DDU-GKY 1.0)**

- **Launch:** 2014, under the Ministry of Rural Development.
- **Objective:** Provide placement-linked skill training to rural poor youth.
- **Target group:** Rural youth aged 15–35 years, with relaxations for certain vulnerable groups.
- **Key feature:** Focuses on training, certification and wage employment.
- **Implementation:** Through Project Implementing Agencies (PIAs) in partnership with State Rural Livelihood Missions.
- **Significance:** Enhances employability and promotes sustainable livelihoods for rural youth.

ART AND CULTURE

BAIGA TRIBE

Why in the News?

The **Baiga tribe** is in the news following reports of deaths of **Baiga children in Madhya Pradesh**, allegedly due to malnutrition, inadequate healthcare and administrative negligence.

About

- The **Baiga** are recognised as a **Particularly Vulnerable Tribal Group (PVTG)** in India.
- They are mainly found in **Madhya Pradesh and Chhattisgarh**, particularly in the **Maikal hill region**.
- Traditionally, the Baiga depend on **forest resources, hunting-gathering and shifting cultivation** for their livelihood.
- The Baiga have a close cultural and economic relationship with **forests and natural resources**.
- **Baigani** is associated with the Baiga community, while many Baigas also speak the dominant regional languages.
- Baiga communities have been granted **habitat rights under the Forest Rights Act, 2006**, to protect their traditional habitat and livelihood.



PVTGs (Particularly Vulnerable Tribal Groups) are the most marginalized and fragile sub-sections of **Scheduled Tribes** in India. They are officially identified based on criteria such as a **pre-agricultural level of technology, stagnant population growth, and extremely low literacy**. Currently, there are **75 recognized PVTGs** that receive targeted government welfare, special healthcare, and socio-economic support for their protection and survival.

(UPSC Prelims 2018)

Consider the following statements:

1. The definition of "Critical Wildlife Habitat" is incorporated in the Forest Rights Act, 2006.
2. For the first time in India, Baigas have been given Habitat Rights.
3. Union Ministry of Environment, Forest and Climate Change officially decides and declares Habitat Rights for Primitive and Vulnerable Tribal Groups in any part of India.

Which of the statements given above is/are correct?

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

Answer: (A)

LOTHAL

Why in the News?

The **National Maritime Heritage Complex at Lothal** was reviewed, bringing the **maritime history and archaeological significance of Lothal** into focus.

About

- **Lothal** was an important **Harappan civilisation site** located in present-day **Gujarat**.

- It is situated near the **Bhogava River**, a tributary of the **Sabarmati River**.
- Lothal is known for its **ancient dockyard**, indicating the maritime and trading activities of the Harappans.
- Archaeological findings include **beads, seals, pottery, jewellery and tools**, reflecting craft production and long-distance trade.
- Lothal had a **planned urban settlement** with structures related to drainage, storage and industrial activities.
- It was an important centre for **maritime trade with regions of the Persian Gulf and Mesopotamia**.
- Lothal is associated with the **Chalcolithic-Harappan cultural phase** and flourished during the mature Harappan period.
- The site provides evidence of the **Harappans' advanced knowledge of town planning, water management and maritime technology**.



(UPSC Prelims 2002)

Match List-I with List-II:

S.NO	Ancient Site	Archaeological Finding
1.	Lothal	Ploughed field
2.	Kalibangan	Dockyard
3.	Dholavira	Terracotta replica of a plough
4.	Banawali	An inscription comprising ten large-sized signs of the Harappan script

Select the correct answer using the code given below:

- a) A-1; B-2; C-3; D-4
- b) A-2; B-1; C-4; D-3
- c) A-1; B-2; C-4; D-3
- d) A-2; B-1; C-3; D-4

Answer: (B)

SWAMI VIVEKANANDA

Why in the News?

The Prime Minister recalled Swami Vivekananda's historic address in Chicago, providing relevance for Indian cultural and intellectual history.

About

- **Swami Vivekananda**, born as **Narendranath Datta in 1863**, was a prominent Indian spiritual leader and thinker.
- He was a chief disciple of **Sri Ramakrishna Paramahansa** and played an important role in spreading **Vedanta philosophy** globally.
- He delivered his historic speech at the **World's Parliament of Religions in Chicago in 1893**, representing Hinduism and highlighting religious tolerance and universal acceptance.
- He established the **Ramakrishna Mission in 1897**, which works in education, healthcare, relief and social service.
- He established the **Ramakrishna Math and Belur Math**, which became important centres of spiritual and social activities.

- His philosophy emphasised **strength, self-confidence, character-building and service to humanity**.
- He promoted the idea of **practical Vedanta**, linking spiritual principles with social service and everyday life.
- He strongly advocated **education as a means of social transformation**, particularly for the youth and disadvantaged sections.
- His major works include **Raja Yoga, Karma Yoga, Bhakti Yoga and Jnana Yoga**, which explain different approaches to spiritual development.
- His birthday, **12 January**, is celebrated as **National Youth Day** in India.



VINOBA BHAVE

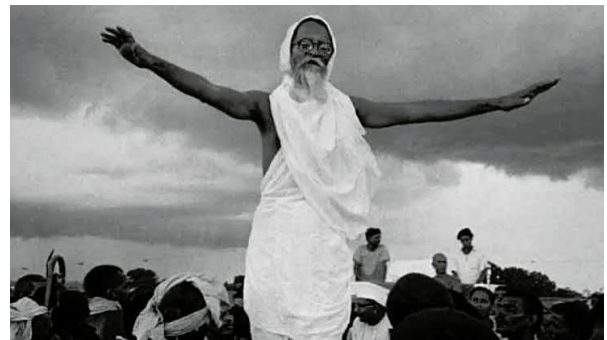
Why in the News?

The Prime Minister paid tribute to Acharya Vinoba Bhave on his Jayanti, making his contribution to the freedom movement.

About

- **Vinoba Bhave**, born as **Vinayak Narahari Bhave in 1895**, was a prominent **Gandhian thinker and social reformer**.
- He participated in the **Indian freedom movement** and was associated with **Mahatma Gandhi's constructive programmes**.
- He led the **Bhoodan Movement**, which encouraged landowners to voluntarily donate land to landless people.
- He launched the **Bhoodan Pochampally movement in 1951** in present-day Telangana.

- The Bhoodan Movement later developed into the broader **Gramdan Movement**, promoting village-level community ownership and development.
- He was the **first individual Satyagrahi** selected by Mahatma Gandhi for the **Individual Satyagraha of 1940**.
- He established **Pavanar Ashram** in Maharashtra, which became a centre for his social and spiritual activities.
- He was awarded the **Bharat Ratna posthumously in 1983** for his contributions to social reform and public life.



(UPSC Prelims 2007)

Which one of the following places was associated with Acharya Vinoba Bhave's Bhoodan Movement at the beginning of the movement?`

- Udaygiri
- Rapur
- Pochampalli
- Venkatagiri

Answer: (C)

MY BHARAT PLATFORM

Why in the News?

The **MY Bharat platform** has crossed **3 crore registered youth** since its launch in **2023**, strengthening youth participation in **volunteering and nation-building activities**.

About MY Bharat

- **MY Bharat** is a **Government of India youth platform** launched on **31 October 2023** to

provide opportunities for youth participation in nation-building.

- It functions under the **Ministry of Youth Affairs and Sports** and focuses on empowering young people through experiential learning and engagement.
- The platform provides opportunities for youth to participate in **volunteering, internships, events, experiential learning and community activities**.
- It primarily targets young people in the **15–29 years age group**, with different opportunities available according to eligibility.
- MY Bharat seeks to develop **leadership skills, civic engagement, social responsibility and practical experience** among youth.
- It provides a **digital interface connecting youth with government departments, organisations and youth-related opportunities**.
- The platform is intended to encourage **youth-led development and greater participation of young people in community and nation-building activities**.



MISCELLANEOUS

WHO RC79

Why in the News?

India highlighted the expansion of its **medical, nursing and allied healthcare workforce** at the **79th Session of the WHO Regional Committee for South-East Asia (RC79)** held in **Dili, Timor-Leste**. The meeting focused on strengthening health systems and ensuring **equitable access to specialized healthcare**.

About

- The **WHO Regional Committee for South-East Asia (SEAR)** is the governing body of WHO in the South-East Asia Region.
- It consists of representatives from **10 Member States** and meets annually to formulate regional health policies, review programmes and adopt resolutions.
- **RC79** was hosted in **Dili, Timor-Leste**.

Key Focus – Health Workforce

- India highlighted the expansion of **medical and nursing education** and the growing diversity of its healthcare workforce.
- India has expanded its **medical colleges and seats**, along with nursing institutions and training capacity.
- India has also developed a large cadre of **Community Health Officers (CHOs)** providing primary healthcare through **Ayushman Arogya Mandirs**.
- The regional discussion stressed that increasing the number of health workers alone is insufficient; **their distribution, skills and availability in underserved areas** are equally important.

Dili Declaration

- RC79 adopted the **Dili Declaration on Human Resources for Health: Equity in Specialized Care**.
- It aims to improve equitable access to **specialized healthcare**, particularly for

people living in **rural, remote and underserved areas**.

- It calls for better health workforce planning, recruitment, deployment and retention of specialist health workers.
- It also promotes **multidisciplinary teams, task-sharing, specialist outreach, telemedicine and digital health technologies**.

ASIA-PACIFIC POSTAL UNION (APPU)

Why in the News?

Dr. Vinaya Prakash Singh was re-elected as the **Secretary-General of the Asia-Pacific Postal Union (APPU)** for a **second consecutive term (2027–2030)**. His re-election highlights India's growing role in **regional and international postal cooperation**.

About

- The **Asia-Pacific Postal Union (APPU)** is a **Restricted Union** affiliated with the **Universal Postal Union (UPU)**.
- It aims to **facilitate postal exchanges and promote cooperation** among postal administrations in the Asia-Pacific region.
- It has **32 member countries**.
- The APPU Bureau is based in **Bangkok, Thailand**.
- Membership is open to countries in the **Asia-Pacific region that are members of the UPU**.

Key Functions

- Promotes **regional cooperation in postal services**.
- Facilitates **technical cooperation and capacity building** among member countries.
- Supports the **modernisation and digital transformation** of postal services.
- Encourages sharing of **best practices, technology and expertise** in the postal sector.
- Works with the UPU and other regional postal organisations on issues affecting international postal services.

India and APPU

- India is an active member of the APPU and plays a significant role in its activities.
- India participates in APPU bodies dealing with **postal supply chains and postal financial services**.
- **Dr. Vinaya Prakash Singh** was first elected Secretary-General at the **APPU Congress in Bangkok in 2022**.

APNIC 62 AND NIXI

Why in the News?

Asia Pacific Network Information Centre (APNIC) 62, hosted by National Internet Exchange of India (NIXI), brought the global Internet community together in **Mumbai**.

About APNIC

- APNIC (Asia Pacific Network Information Centre) is the **Regional Internet Registry (RIR)** for the Asia-Pacific region.
- It manages and distributes **Internet number resources**, particularly **IPv4, IPv6 addresses and Autonomous System Numbers (ASNs)**.
- It supports the development of the Internet through **technical training, policy development, capacity building and information sharing**.
- APNIC follows a **bottom-up, open and community-driven policy development process**.
- Its community includes Internet service providers, network operators, governments, researchers and other stakeholders across the Asia-Pacific region.

APNIC 62 – Key Focus Areas

- **IPv6 deployment and transition**
- **Cybersecurity and network security**
- **Internet routing and resilience**
- **Network automation and emerging technologies**
- **DNS and Internet infrastructure**
- Development of **Internet policies** through community discussions and Special Interest Groups (SIGs).

National Internet Exchange of India (NIXI)

- NIXI is a **not-for-profit organisation under the Ministry of Electronics and Information Technology (MeitY)**.
- Established in **2003**, it aims to improve India's Internet infrastructure and connectivity.
- It facilitates the **exchange of domestic Internet traffic between Internet Service Providers (ISPs) and Content Delivery Networks (CDNs)**.
- Local traffic exchange helps **reduce latency, improve network efficiency and lower dependence on international transit**.
- NIXI also manages the **.in domain registry** and supports **IPv4/IPv6 address allocation** in India.

DIGITAL INDIA BHASHINI

Why in the News?

Digital India BHASHINI conducted a workshop on **multilingual AI for inclusive digital governance**, highlighting the role of artificial intelligence in reducing language barriers and making digital public services accessible to citizens across India.

About

- BHASHINI stands for **BHASHa INterface for India**.
- It is a **Digital India initiative** aimed at overcoming language barriers through **Artificial Intelligence (AI) and Natural Language Processing (NLP)**.
- It enables citizens to access digital services and information in **Indian languages**.
- The initiative focuses on developing language technologies for **speech recognition, machine translation, text-to-speech and optical character recognition (OCR)**.
- BHASHINI works as a **language technology ecosystem**, bringing together government, industry, academia, startups and citizens.

Key Features

- **Multilingual Translation:** Facilitates translation between Indian languages and English.
- **Speech Recognition:** Converts spoken language into text.
- **Text-to-Speech:** Converts written text into spoken language.
- **OCR:** Helps convert text from images and documents into machine-readable text.
- **Conversational AI:** Supports voice-based interaction with digital platforms.
- **Open Language Resources:** Promotes the development and sharing of language datasets and AI models.

Digital India Initiative

- **Digital India** is a flagship programme of the **Government of India**, launched in **2015**.
- It aims to transform India into a **digitally empowered society and knowledge economy**.
- Its major focus areas include **digital infrastructure, digital governance and delivery of services, and digital empowerment of citizens**.
- **BHASHINI** contributes to Digital India's objective of **inclusive access to digital services**, particularly by addressing language barriers.

ICMR-NATIONAL INSTITUTE OF NUTRITION (NIN)

Why in the News?

The thresholds for determining “**high**” levels of **dietary components** are based on the **Dietary Guidelines for Indians (DGI), 2024**, issued by the **Indian Council of Medical Research (ICMR) – National Institute of Nutrition (NIN)**.

About

- **ICMR-National Institute of Nutrition (NIN)** is a premier nutrition research institute under the **Indian Council of Medical Research (ICMR)**.

- It is located in **Hyderabad, Telangana**.
- NIN conducts research on **nutrition, diet-related diseases, food composition and public health nutrition**.
- It provides scientific inputs for **nutrition policies, programmes and dietary recommendations** in India.

Institutional Framework

- **ICMR** functions under the **Department of Health Research, Ministry of Health and Family Welfare**.
- **NIN** is one of the major institutes under ICMR working in the field of **nutrition and public health**.
- The **Dietary Guidelines for Indians, 2024** were developed by ICMR-NIN with scientific inputs from experts in nutrition and related fields.

DARK PATTERNS

Why in the News?

The **Consumer Protection (E-Commerce) (Amendment) Rules, 2026** will require e-commerce platforms to disclose **importer and country-of-origin details** and strengthen **grievance redressal mechanisms**, including action against **dark patterns and bundled fees**.

About

- **Dark patterns** are deceptive or manipulative **user-interface and design practices** that influence consumers into making choices they may not otherwise make.
- They can **mislead consumers, impair informed decision-making or make it difficult to opt out** of a service or transaction.
- They are commonly encountered on **e-commerce websites, mobile applications and digital platforms**.

Common Types of Dark Patterns

- **False Urgency:** Creating a misleading impression that a product or offer is available only for a limited time.

- **Basket Sneaking:** Adding additional products or services to a consumer's shopping cart without explicit consent.
- **Confirm Shaming:** Using language that makes consumers feel guilty or embarrassed for rejecting an option.
- **Forced Action:** Requiring consumers to take an unnecessary action to access or continue using a service.
- **Subscription Trap:** Making subscription enrolment easy while making cancellation difficult.
- **Drip Pricing:** Initially displaying a lower price and revealing additional charges later in the transaction.
- **Interface Interference:** Designing the interface to manipulate users towards a particular choice.

BHARAT TAXI

Why in the News?

Bharat Taxi, India's first **cooperative-led ride-hailing platform**, was launched in **Uttar Pradesh**. The expansion reflects the Government's effort to extend the **cooperative model to the urban mobility sector**.

About

- **Bharat Taxi** is a **cooperative-based digital mobility platform** operated by **Sahakar Taxi Cooperative Limited (STCL)**.
- It is registered under the **Multi-State Cooperative Societies Act, 2002**.
- It was established on **6 June 2025** and officially launched on **5 February 2026**.
- It works on the principle of "**Driver is the Owner**", making drivers (**Sarathis**) members and owners of the cooperative.
- The initiative comes under the broader vision of "**Sahkar se Samriddhi**".

Key Features

- **Zero-Commission Model:** **Sarathis** are not charged the conventional commission on their earnings.

- **Driver Ownership:** Drivers participate as **members and owners**, rather than merely being platform partners.
- **Cooperative Governance:** Driver-members can participate in the governance of the cooperative.
- **Transparent Fares:** The cooperative determines fares based on operational costs, distance and prevailing market conditions.
- **Digital Platform:** Provides app-based booking, vehicle tracking and customer feedback.
- **Social Security:** The platform seeks to provide drivers with access to **insurance, healthcare, loans and other welfare benefits**.
- **Grievance Redressal:** Mechanisms are provided for addressing passenger and driver concerns.

RUTAG 2.0

Why in the News?

The **Principal Scientific Adviser (PSA)** chaired the annual review of **RuTAG 2.0 projects**, which focus on applying **science and technology solutions to grassroots and rural challenges**.

About

- **RuTAG** stands for **Rural Technology Action Group**.
- It is an initiative of the **Office of the Principal Scientific Adviser to the Government of India**.
- RuTAG aims to bridge the gap between **scientific institutions and rural communities** by developing practical technological solutions to local problems.
- It focuses on technologies that are **locally relevant, affordable, sustainable and easy to use**.
- RuTAG projects are implemented in collaboration with **IITs and other academic and research institutions**.

RuTAG 2.0

- **RuTAG 2.0** is an expanded phase of the RuTAG initiative.

- It focuses on developing and deploying **science and technology-based solutions** for challenges faced by rural communities.
- Projects cover areas such as **agriculture, water, energy, rural livelihoods, health and sanitation**.
- Greater emphasis is placed on **field-level validation, scalability and adoption** of technological solutions.

Key Objectives

- Address **grassroots technological challenges** through scientific innovation.
- Improve **productivity and livelihoods** in rural areas.
- Develop **low-cost and locally appropriate technologies**.
- Connect **research institutions with rural communities**.
- Promote the **transfer and adoption of technology** at the grassroots level.