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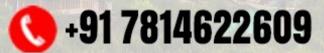
CivilsTap Himachal

Current Affairs
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By CivilsTap Himachal

For HPAS & Other Competitive Exam in Himachal Pradesh

Prelims

NEWS

1. POLITY

1.1   16TH FINANCE COMMISSION

❖ The Union Cabinet **approved the terms of reference (ToR) for the Sixteenth Finance Commission** recently. It will **recommend the formula for sharing revenues between the Centre and the States for the five-year period beginning on April 1, 2026**.
❖ The government has **set a deadline of October 31, 2025**, for the **panel to submit its recommendations.**
❖ Key recommendation- on **distribution of net proceeds of taxes between the Centre and States** and **allocation among States of the respective share of such proceeds**
❖ the **panel will also prescribe measures needed to augment the Consolidated Fund of a State** to **supplement resources of the panchayats and local bodies** on the **basis of recommendations made by the respective State Finance Commissions.**
❖ Under the **ToR**, the **panel will recommend principles that should govern the grants-in-aid of the revenues of the States out of the Consolidated Fund of India** and **the sums to be paid to the States by way of grants-in-aid of their revenues.**
❖ Also, it may **review the existing arrangements on financing Disaster Management initiatives** and **make appropriate recommendations**.

ABOUT FINANCE COMMISSION

❖ **Finance Commission are constitutional bodies set up under Article 280** of the Constitution **every five years to make recommendations on the distribution of financial resources between the Union and the states.**
❖ **Individual commissions** operate under the **terms of reference (ToR)** which **are different for every commission.**
❖ The **First Commission was established in 1951 (Chairman- KC Neogy)** under The Finance Commission (Miscellaneous Provisions) Act, 1951.
❖ As per the constitution, the Commission **consists of a chairman** and **four other members.**
❖ The **recommendations of FCs are advisory in nature** and **not binding** on the Union government.

1.2   ESSENTIAL SERVICES (MAINTENANCE) ACT (ESMA)

❖ The Odisha Government invoked the **Orissa Essential Services (Maintenance) Act (ESMA)** prohibiting **strikes by paramedical staff, including nurses, pharmacists, technicians, Class III and IV employees, to ensure that medical services are not disrupted.**
❖ As per **Section 2 (b) of the Orissa Essential Services (Maintenance) Act, 1988**, **strike** means the **cessation of work by a body of persons employed in any essential service acting in combination or a concerted refusal or refusal under a common understanding of any number of persons who are or have been so employed to continue to work or to accept employment and includes unauthorised absence from duty.**

ABOUT ESMA

❖ The Essential Services Maintenance Act is **an act of parliament 1968** under **list no. 33 in the 7th schedule under the concurrent list of the Indian constitution.**
    ✓ **Each state** has its **own unique and separate provision of the Essential services maintenance act.**
❖ It **empowers the government to define any economic activity or service as essential** whose obstruction would affect the normal life of the people.
    ✓ For e.g- **Hospital sector, services like electricity, water supply , telephone, air traffic control.**
❖ It is **a principal and typical method of states to handle strikes by its employees.**
❖ It **can be imposed for a maximum period of 6 months** and **can be extended.**

❖ The act gives the **police the right to arrest the protestors without warrant violating the act's provisions.**

ABOUT RIGHT TO STRIKE

❖ It is a **basic right of workers**, a principle **means to legitimately promote and defend their economic and social interest.**

❖ Under **article 19**, **right to protest is a fundamental right** but **not right to strike**.
  ✓ It is **a legal right with restrictions as per Industrial dispute act 1947**.

1.3	SEXUAL HARASSMENT OF WOMEN AT WORKPLACE (PREVENTION, PROHIBITION AND REDRESSAL) ACT, 2013

❖ **The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013** came into **force 10 years ago.**

EVOLUTION

❖ **Supreme Court , noting the absence of any law "enacted to provide for effective enforcement of the basic human right of gender equality" guarantee against "sexual harassment at workplaces", laid down a set of guidelines in 1997 called Vishakha Guidelines**, to fill the **statutory vacuum till a law could be enacted**.

❖ These were to be **"strictly observed in all workplaces" and were binding and enforceable in law**.
  ✓ The Court drew its strength from several provisions of the Constitution including **Article 15** (against discrimination on grounds only of religion, race, caste, sex, and place of birth) and
  ✓ **General Recommendations of the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW), which India ratified in 1993.**

❖ Protection of Women against Sexual Harassment at Workplace Bill was **introduced in 2007**.
  ✓ It was **later tabled in Parliament and went through amendments.**
  ✓ The amended Bill **came into force on December 9, 2013, as the Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) or PoSh Act.**

ABOUT POSH

❖ The PoSH Act **defines sexual harassment to include unwelcome acts such as physical contact and sexual advances, a demand or request for sexual favours, making sexually coloured remarks, showing pornography, and any other unwelcome physical, verbal, or non-verbal conduct of a sexual nature.**

❖ Under the Act, **an employee is defined not just in accordance with the company law**.
  ✓ **All women employees, whether employed regularly, temporarily, contractually, on an ad hoc or daily wage basis, as apprentices or interns or even employed without the knowledge of the principal employer**, can **seek redressal to sexual harassment in the workplace.**

❖ The law expands the definition of **'workplace'** beyond traditional offices to include **all kinds of organisations across sectors, even non-traditional workplaces** and **places visited by employees for work.**
  ✓ It **applies to all public and private sector organisations throughout India.**

❖ The law requires **any employer with more than 10 employees to form an Internal Complaints Committee (ICC)**. It has to be **headed by a woman, have at least two women employees, another employee**, and, to pre-empt any undue pressure from senior levels, to **include a third party such as an NGO worker with five years of experience, familiar with the challenges of sexual harassment**.

❖ The Act **mandates every district in the country to create a local committee (LC) to receive complaints from women working in firms with less than 10 employees** and **from the informal sector, including domestic workers, home-brd workers, voluntary government social workers and so on.**

❖ Written Complaint should be filed **within 3 months (extendable by 3 months) of sexual harassment incident.**

1.4	SC UPHOLDS ABROGATION OF ARTICLE 370

- ❖ The **Supreme Court in a 5-0 unanimous** ruling **upheld the Centre's abrogation of Article 370.**
- ❖ It upheld the **constitutional validity of the two Presidential Orders CO (The Constitution (Application To Jammu and Kashmir) Order) 272 and 273 of August 5 and 6, 2019** respectively by which the **entire Constitution of India** was made **applicable to J&K, and all provisions of Article 370 were declared inoperative.**

MAJOR HIGHLIGHTS OF JUDGMENT

- ❖ Jammu and Kashmir **surrendered completely its sovereignty after it joined the Union of India after Independence.**
- ❖ The **President of India had the power to abrogate Article 370 without a prerequisite** for a recommendation by the **Jammu and Kashmir assembly.**
- ❖ **Article 370** was **introduced to serve two purposes**.
  - ✓ First, the **transitional purpose: to provide for an interim arrangement until the Constituent Assembly of the State was formed,**
  - ✓ and **second**, a **temporary purpose: an interim arrangement in view of the special circumstances because of the war conditions in the State**
- ❖ The Supreme Court has **instructed the ECI to hold the assembly elections in Jammu and Kashmir latest by September 30, 2024**.
- ❖ SC **also urged for the earliest reinstatement of statehood in the Union Territory.**

1.5	LOK ADALATS

- ❖ A **national level Lok Adalat** was held across the country recently.
- ❖ National Level Lok Adalats are held for at **regular intervals** where **on a single day Lok Adalats are held throughout the country**, in **all the courts right from the Supreme Court till the Taluk Levels** wherein **cases are disposed off in huge numbers.**

ABOUT LOK ADALATS

- ❖ **NALSA** along with **other Legal Services Institutions conducts Lok Adalats**.
- ❖ Lok Adalat is **one of the alternative dispute redressal mechanisms**, it is a **forum where disputes/cases pending in the court of law or at pre-litigation stage are settled/ compromised amicably**.
- ❖ Levels of Lok Adalats-

National
State
High Court
District
Taluk

- ❖ Lok Adalats have **been given statutory status under the Legal Services Authorities Act, 1987**.
- ❖ Under the said Act, the **award (decision) made by the Lok Adalats is deemed to be a decree of a civil court and is final and binding on all parties** and **no appeal against such an award lies before any court of law**.
- ❖ If the **parties are not satisfied with the award of the Lok Adalat** though there is **no provision for an appeal against such an award**, but they are **free to initiate litigation by approaching the court of appropriate jurisdiction** by filing a **case by following the required procedure, in exercise of their right to litigate.**

- ❖ There is **no court fee payable when a matter is filed in a Lok Adalat**.
  - ✓ If a **matter pending in the court of law is referred to the Lok Adalat and is settled subsequently**, the **court fee originally paid** in the court on the complaints/petition **is also refunded back to the parties**.
- ❖ The **persons deciding the cases in the Lok Adalats** are called the **Members of the Lok Adalats**, they have the role of **statutory conciliators only** and **do not have any judicial role**
- ❖ The Lok Adalat **shall not decide the matter so referred at its own instance**, instead the **same would be decided on the basis of the compromise or settlement between the parties**.
- ❖ The members **shall assist the parties in an independent and impartial manner** in their attempt to reach amicable settlement of their dispute.
- ❖ Cases that can be referred to Lok Adalat
  - ✓ **Any case pending before any court.**
  - ✓ **Any dispute** which has **not been brought before any court** and is **likely to be filed before the court.**
    - ➢ Provided that **any matter relating to an offence not compoundable under the law** shall **not be settled in Lok Adalat.**

1.6	TRIBUNALS

- ❖ The Supreme Court has clarified that **tribunals functioning under the strict parameters of their governing legislations cannot direct the government to make policy.**

WHAT ARE TRIBUNALS?

- ❖ Tribunals are **judicial or quasi-judicial institutions established by law.**
- ❖ They **intend to provide a platform for faster adjudication as compared to traditional courts, as well as expertise on certain subject matters.**
- ❖ History-
  - ✓ The **Income Tax Appellate Tribunal was established in 1941** as the **first Tribunal in India.**
    - ➢ The **objective was to reduce the workload of courts**, **expedite adjudication of disputes**, and **build expertise on tax matters within the Tribunal.**
  - ✓ The **42ⁿᵈ amendment to the Constitution was passed** which empowered Parliament to constitute-
    - ➢ **Article 323-A**- **administrative tribunals** (both at central and state level) for adjudication of matters related to recruitment and conditions of service of public servants, and
    - ➢ **Article 323-B**- **other tribunals** for adjudication of certain subject matters including industrial disputes, taxation (such as levy and collection of taxes), and foreign exchange.
- ❖ **Composition**
  - ✓ The Supreme Court has noted that the **members of a tribunal may be selected from departments of the central government** as well as **from various other fields of expertise.**
  - ✓ The **presence of expert members (technical members)** along with **judicial members is a key feature of tribunals** which **distinguishes them from traditional courts.**
  - ✓ Only **persons with a judicial background** (such as Judges of the High Court and lawyers with the prescribed experience who are eligible for appointment as High Court Judges) may be **considered for appointment as Judicial Members.**

1.7	PRESIDENT GIVES ASSENT TO NEW CRIMINAL JUSTICE BILLS

- ❖ President Droupadi Murmu has **given her assent to-**
  - ✓ **Bharatiya Nyaya Sanhita, Bharatiya Nagarik Suraksha Sanhita and Bharatiya Sakshya Bill 2023.**
- ❖ These **three new criminal justice bills were passed by the Parliament** last week.

DETAILS

- ❖ The **Bharatiya Nyaya Sanhita, 2023** replaced the **Indian Penal Code (IPC), 1860**, which is the **principal law on criminal offences in the country**.
  - ✓ The new act **adds community service as a form of punishment**.
  - ✓ For the first time, **terrorism has been defined in the criminal justice system** as **act that intends to threaten unity, integrity, security or economic security of country, or strike terror in people.**
  - ✓ There is a **provision for life imprisonment and death penalty for the crime of rape of a woman under 18 years of age.**
  - ✓ Sedition is **no longer an offence**. Instead, there are provisions penalising **armed rebellion, subversive activities, separatist activities included.**
- ❖ The **Bharatiya Nagarik Suraksha (Second) Sanhita, 2023** has **replaced the Criminal Procedure Code, 1973 (CrPC)**. The CrPC provides for the procedure for arrest, prosecution, and bail.
  - ✓ **Specific time-lines** have been prescribed for time bound investigation, trial and pronouncement of judgements.
  - ✓ **Video recording of statement of sexual assault victims to be made mandatory.**
  - ✓ The **power to attach property from proceeds of crime** <u>does not</u> have **safeguards provided in the Prevention of Money Laundering Act.**
  - ✓ **All trials, inquiries,** and proceedings **may be held in electronic mode.**
- ❖ The **Bharatiya Sakshya (Second) Bill, 2023** replaced the **Indian Evidence Act, 1872**. The Act governs the **admissibility of evidence in Indian Courts**. It **applies to all civil and criminal proceedings**.
  - ✓ The **provisions have been made in these legislations to digitize the entire process** from FIR to case diary, case diary to charge sheet and charge sheet to judgment.
  - ✓ **Electronic and digital record** shall have **same legal effects as paper records.**

1.8   CENTRAL WATER COMMISSION

- ❖ **Kerala government** has **urged the Centre to speed up measures for building a new dam at Mullaperiyar in Idukki district.**
- ❖ The **request to the Centre** was forwarded at a meeting with **Central Water Commission Chairman.**

ABOUT CWC

- ❖ CWC was **earlier known as Central Waterways, Irrigation and Navigation Commission** i.e. **CWINC.**
- ❖ It was **established in 1945 on the advice of Dr. B.R. Ambedkar, Member (Labour) in Viceroy's Executive Council.**
- ❖ It is **presently functioning as an attached office** of the **Ministry of Jal Shakti, Department of Water Resources, River Development, and Ganga Rejuvenation.**
- ❖ The CWC is **headed by a Chairman**, with the **status of Ex-Officio Secretary to the Government of India.**
- ❖ The **work** of the **Commission** is divided among 3 wings namely –
  - ✓ **Designs and Research (D&R) Wing,**
  - ✓ **River Management (RM) Wing** and
  - ✓ **Water Planning and Projects (WP&P) Wing.**

2. ECONOMY

2.1   PRESS MUD

- **Pressmud**, a **residual byproduct in the sugar industry** often known as **filter cake or press cake**, has been **acknowledged as a valuable resource for green energy production**.
    - ✓ It is the **agricultural waste obtained when cane juice** is **repeatedly filtered before being sent for extraction of sugar.**
- It can **help Indian sugar mills generate extra revenue** by **utilising it as a feedstock for biogas production** through **anaerobic digestion and subsequent purification to create compressed biogas (CBG).**
- Usually, the **yield of pressmud falls within the range of 3-4 per cent weight by weight** with the **input sugarcane processed in a unit.**
- **Advantages**
    - ✓ **eliminates the complexities associated with the feedstock supply chain**
    - ✓ the **feedstock is sourced from one or two producers or sugar mills**, as opposed to agricultural residue, which involves multiple producers / farmers within a narrow window of 45 days per year.
    - ✓ pressmud's **quality is not a concern, unlike municipal solid waste**, where the **presence of inorganic material can damage anaerobic digesters, leading to lower gas output**.
    - ✓ it **eliminates pretreatment costs as it lacks the organic polymer lignin, unlike agriresidue**.
    - ✓ in terms of **conversion efficiency**, approximately **25 tonnes of pressmud are needed to produce a tonne of CBG**.
        - ➤ In comparison, cattle dung requires 50 tonnes for the same gas output.
- Challenges
    - ✓ Pressmud faces **competition for use as fertiliser and in bio-composting.**
    - ✓ The need for **CBG plants to store feedstock for the entire year**, given that sugar mills operate for a specific period.
    - ✓ **Storing pressmud proves challenging** as it **undergoes gradual decomposition, resulting in the breakdown of organic compounds.**
        - ➤ This **increases long-term storage cost and production costs.**

2.2   NATIONAL FINANCIAL REPORTING AUTHORITY (NFRA)

- The **National Company Law Appellate Tribunal (NCLAT)** has ruled in a judgment that the **National Financial Reporting Authority (NFRA)** has **superior and overriding powers over the Institute of Chartered Accountants of India (ICAI)** in matters **relating to professional misconduct of chartered accountants (CAs).**

ABOUT NATIONAL FINANCIAL REPORTING AUTHORITY (NFRA)

- The **NFRA was constituted in 2018**, by the **Government of India** under the **Companies Act, 2013.**
- It is **an independent regulator to oversee the auditing profession** and **accounting standards in India.**
- It aims to **continuously improve the quality of all corporate financial reporting in India.**
- Headquarters- **New Delhi**
- **Nodal** Ministry- **Ministry of Corporate Affairs**
- **Roles and functions**
    - ✓ For the Central Government's approval, **NFRA will recommend accounting and auditing policies and standards businesses** should embrace.
    - ✓ It will **monitor and enforce adherence to the accounting and auditing standards**.
    - ✓ It will **monitor the professions' adherence to these standards** and the **quality of their work and make recommendations for ways to raise service quality.**

- ✓ It will **carry out any additional tasks or obligations required for or related to the tasks above and obligations.**
- ❖ It consists of a **chairperson, who shall be a person of eminence and having expertise in accountancy, auditing, finance, or law** to be **appointed by the Central Government** and such other **members not exceeding fifteen consisting of part-time and full-time members.**
- ❖ NFRA have the **power to investigate, either suo moto or on a reference** made to it by the Central Government into the **matters of professional or other misconduct committed by any member or firm of chartered accountants** registered under the Chartered Accountants Act, 1949.
- ❖ It has the **same powers as are vested in a civil court** under the **Code of Civil Procedure, 1908 while trying a suit.**

2.3   NATIONAL ASSET RECONSTRUCTION COMPANY LTD (NARCL)

- ❖ **Ten public sector banks** transferred **Rs 11,617 crore worth of bad loans to the National Asset Reconstruction Company Ltd (NARCL) by November end**, the Rajya Sabha was informed recently.

ABOUT NARCL

- ❖ The National Asset Reconstruction Company Limited **(NARCL) was established in July 2021**.
- ❖ It is **an asset reconstruction company** that has been **tasked with taking over and managing the stressed assets of commercial banks**.
- ❖ NARCL is **registered with the RBI** as an **Asset Reconstruction Company under SARFAESI Act, 2002**.
- ❖ It was **established to clean up the legacy stressed assets** with **an exposure of Rs 500 crore** and above **in Indian Banking system.**
- ❖ **Public Sector Banks (PSBs)** own **51% of the NARCL**.
- ❖ **Working**
  - ✓ The **NARCL will first purchase bad loans from banks**.
  - ✓ It will pay **15% of the agreed price in cash** and the **remaining 85% will be in the form of "Security Receipts".**
  - ✓ When the **assets are sold**, with the help of IDRCL, **the commercial banks will be paid back the rest.**
  - ✓ If the **bad bank is unable to sell the bad loan**, or has to sell it at a loss, then the **government guarantee will be invoked.**
- ❖ Union government had issued a **guarantee worth Rs 30,600 crore to security receipts** issued by **NARCL**.
  - ✓ The **government guarantee** represents the **difference between the assets' face value** and the **value realized out of the sale or liquidation**.
  - ✓ The **guarantee is for five years**.

TYPES OF STRESSED ASSETS-

- ❖ **Sub-standard Assets**-If borrower fails to repay the installment, interest on principal or principal for 90 days the loan becomes NPA and it is termed as Special Mention Account (SMA).
- ❖ If it **remains SMA for a period less than or equal to 12 months** it is termed as **Substandard Assets**.
- ❖ **Doubtful Assets**-If the **Sub-standard assets remains so for 12 months or more**, then it would be termed as **Doubtful Asset**.
- ❖ **Loss Assets**-If the loan is **not repaid even after it remains substandard for more than three years** it would be called as loss Asset.
- ❖ **Written Off Assets**-Written off assets **are those on which the bank or lender doesn't count the money borrower owes to it.**

2.4   SOVEREIGN GOLD BOND (SGB) SCHEME

- ❖ The **Reserve Bank of India (RBI) announced** the **Sovereign Gold Bond (SGB) Scheme Series III** for the fiscal year **2023-2024.**

ABOUT SOVEREIGN GOLD BONDS SCHEME

- ❖ Sovereign Gold Bonds (SGBs) are **government securities denominated in grams of gold**, providing a **viable alternative to owning physical gold.**
- ❖ Investors are **required to pay the issue price in cash** and **receive a cash redemption upon maturity.**
- ❖ **Issued** by the **Reserve Bank of India on behalf of the Government of India**, these bonds **offer investor protection by ensuring they receive the prevailing market price of gold upon redemption.**
- ❖ This **guarantees the value of the initially invested quantity of gold**, making **SGBs a more favorable option compared to holding physical gold.**
- ❖ **Eligibility**
    - ✓ Individuals categorized as **residents in India** under the Foreign Exchange Management Act, 1999, such as **individuals, Hindu Undivided Families (HUFs), trusts, universities, and charitable institutions, are eligible to invest in Sovereign Gold Bonds (SGBs).**

- ❖ **Payment**
    - ✓ Sovereign Gold Bonds (SGBs) **offer a fixed interest rate of 2.50% per annum on the initial investment amount.**
    - ✓ The **interest is credited semi-annually** to the investor's bank account, and the **final interest payment is made upon maturity, along with the principal amount invested.**
- ❖ **Limits**
    - ✓ The **minimum investment in SGBs is 1 gram**, and these **bonds are issued in denominations of one gram or multiples thereof.**
    - ✓ For **individual investors** and **Hindu Undivided Family (HUF) investors, the maximum subscription limit is 4 kg per fiscal year** (April-March).
    - ✓ **Trusts and similar entities**, as notified by the government, have a **higher maximum limit of 20 kg per fiscal year.**
    - ✓ In the **case of joint investments**, the **maximum limit applies to the first applicant.**

2.5	PINK BOLLWORM

- ❖ **Cotton prices**, represented by **"Cotton candy,"** saw a **decline which is attributed to reports of pink bollworm infestation in the cotton crop, causing a reduction in yields.**
- ❖ **Central Insecticide Board and Registration Committee (CIB&RC)** — **regulatory body for processing of application** for **grant of registration of insecticides**– has **granted the registration of 50 insecticide formulations for the control of pink bollworm and bollworm complex.**
    - ✓ **CIBRC** works under the purview of **Ministry of Agriculture & Farmers' Welfare.**
- ❖ **Pink bollworm infestation** is seen in **all the cotton-growing areas of north, central and south zone across the country.**

ABOUT PINK BOLLWORM

- ❖ **Scientific name-** Pectinophora Gossypiella
- ❖ Originally **native to India**, it is **now recorded in nearly all the cotton-growing countries of the world.**
- ❖ It is **considered possibly the most destructive pest on cotton** worldwide.
- ❖ Females lay **eggs on cotton bolls**; once hatched, the **larvae eat the seeds and damage the fibers of the cotton, reducing the yield and quality.**
- ❖ In certain parts of India, the **pink bollworm is now resistant to first generation transgenic Bt cotton (Bollgard cotton) that expresses a single Bt gene (Cry1Ac).**

2.6   LATE BLIGHT DISEASE

❖ In a full-blown attack by the **late blight disease attack on potato crop**, more than **50% crop in the fields has suffered extensive damage leading to heavy losses** for the farmers in Punjab who had opted for diversification instead of growing wheat after paddy.

ABOUT LATE BLIGHT DISEASES

❖ It is a **fungal disease** caused by the **fungus Phytophthora infestans** that can damage the entire crop.
❖ Air borne **infection is caused by the sporangia.**
❖ The **primary host is potato**, but P. infestans **also can infect other solanaceous plants, including tomatoes, petunias** etc.
❖ These **infected species can act as source of inoculum to potato.**
❖ Late blight is **considered a community disease** since **sporangia from one field may spread to adjacent fields left untreated posing a threat to neighboring growers.**
❖ It **affects leaves, stems and tubers of crop.**
❖ **Symptoms**
   ✓ The first symptoms of **late blight** appear as **small, light to dark green, circular to irregular-shaped water-soaked spots**.
   ✓ During **cool, moist weather, these lesions expand rapidly** into large, dark brown or black lesions, often appearing greasy.
   ✓ A **pale green to yellow border often surrounds the lesions.**

2.7   MARINE PRODUCTS EXPORT DEVELOPMENT AUTHORITY

❖ A **hands-on training on value-added fish products** was organised by the **Marine Products Export Development Authority (MPEDA) recently.**

ABOUT MPEDA

❖ Marine Products Export Development Authority (MPEDA) is a **nodal coordinating, state-owned agency engaged** in **fishery production and allied activities.**
❖ It was **established in 1972** under the **Marine Products Export Development Authority Act (MPEDA), 1972.**
❖ It functions **under Ministry of Commerce and Industry.**
❖ **Headquarters- Kochi, Kerala.**
❖ **Its mandate is to increase exports of seafood including fisheries of all kinds, specifying standards, marketing, processing, extension and training in various aspects.**
❖ **Functions-**
   ✓ **Developing and regulating off-shore and deep-sea fishing,**
   ✓ **Registering fishing vessels,**
   ✓ **Fixing of standards and specifications for marine products, etc.**
   ✓ **Provide training in the concerned field to Fisherman, Aquaculture farmers, Fish processing workers, Stakeholders**
❖ **Rajiv Gandhi Center for Aquaculture (RGCA)** is the **R&D wing of MPEDA.**

CURRENT STATUS

❖ India exported **more than 17 lakh tonnes of marine products to 129 countries** during the last financial year, but **only 10% of this was value-added products.**

2.8   NATIONAL GEOSCIENCE DATA REPOSITORY PORTAL- NGDRP

- ❖ Ministry of Mines has launched the **National Geoscience Data Repository (NGDR) Portal** recently.
- ❖ NGDR is **a comprehensive online platform for accessing, sharing, and analyzing geospatial information across the nation**.
- ❖ The NGDR initiative is **spearheaded by the Geological Survey of India (GSI)** and **Bhaskarachaya Institute of Space Applications and Geoinformatics (BISAG-N).**
- ❖ It represents a significant leap **forward in democratizing critical geoscience data, empowering stakeholders across industries and academia with unprecedented access to invaluable resources.**

ABOUT GSI

- ❖ The Geological Survey of India (GSI) **was set up in 1851 primarily to find coal deposits for the Railways.**
- ❖ Its **main functions relate to creating and updating of national geoscientific information and mineral resource assessment**.
- ❖ These objectives are **achieved through ground surveys, air-borne and marine surveys, mineral prospecting and investigations, multi-disciplinary geoscientific, geo-technical, geo-environmental and natural hazards studies, glaciology, seismo-tectonic study and carrying out fundamental research.**
- ❖ It **functions as a 'Repository' for the purpose** and uses the latest **computer-based technologies for dissemination of geoscientific information and spatial data, through cooperation and collaboration with other stakeholders in the Geo-informatics sector.**
- ❖ **GSI, headquartered in Kolkata**, has **six regional offices** located in **Lucknow, Jaipur, Nagpur, Hyderabad, Shillong and Kolkata.**
- ❖ GSI is an **attached office** of the **Ministry of Mines.**

ABOUT BISAG-N

- ❖ **Bhaskaracharya National Institute for Space Applications and Geo-informatics [BISAG (N)]** is an **Autonomous Scientific Society registered under the Societies Registration Act, 1860** under the **MeitY.**
- ❖ Function- **to undertake technology development & management, research & development, facilitate National & International cooperation**, **capacity building and support technology transfer** & **entrepreneurship development** in area of **geo-spatial technology.**
- ❖ At present, **BISAG is a state agency of Department of Science and Technology Government of Gujarat**, located at **Gandhinagar, Gujarat.**

2.9   BHOOMI RASHI PORTAL

- ❖ **1467 projects of National Highways Authority of India** (NHAI) have been **brought under the Bhoomi Rashi Portal.**

ABOUT BHOOMI RASHI PORTAL

- ❖ The **objective of Bhoomi Rashi portal** is to **provide a single point platform for online processing of land acquisition notifications** to **accelerate highway infrastructure development projects in India and payment of compensation for land acquisition**.
- ❖ The portal has been **made mandatory for processing all the Land Acquisition (LA) proposals w.e.f. 01.04.2018.**
- ❖ All the Land Acquisition **notifications are submitted online** by the **concerned revenue official of the State Government**, duly **designated as Competent Authority for Land Acquisition (CALA).**
- ❖ Once **approved by the Ministry of Road Transport and Highways**, these **notifications are electronically transmitted to the Government of India Press via the e-Gazette.**

❖ **Compensation for land acquisition is also being paid through Bhoomi Rashi portal**.
❖ The **portal has greatly reduced the time period for publication of notifications** and **brought in efficiency as well as transparency in the whole process.**

2.10   PAAT MITRO APP

❖ To provide important information about **MSP and agronomy to jute farmers**, the **Ministry of Textiles launched "Paat-Mitro"** - a **mobile application**,
❖ It has been developed by The **Jute Corporation of India Limited (JCI).**
❖ The application is **available in 6 languages**.
❖ The application **can be freely downloaded from Google Play Store** and all the **functionalities are made available to the users free of cost**.
❖ In addition to, the latest agronomic practices and Minimum Support Prices (MSP); **Jute Gradation Parameters, Farmer-centric schemes like 'Jute-ICARE', weather forecasts, JCI's Purchase Centers' locations, Procurement Policies are also made available** in the app.
❖ Farmers will also be **able to track status of their payments for the raw jute sold to JCI under MSP Operation**.
❖ Latest technology feature like **Chatbot is included for their queries through this mobile application "Paat-Mitro".**

2.11   CABINET APPROVES DIGHA –SONEPUR BRIDGE

❖ The Cabinet Committee on Economic Affairs approved a **4.5 km-long six-lane bridge** across the **Ganga river in Bihar** that will **connect Digha in Patna with Sonepur in Saran.**
❖ The **estimated total cost** of the project **is ₹3,064 crore**, which **includes construction cost of ₹2,233 crore**. The project is **expected to be completed in 42 months, after it is awarded.**
❖ The bridge **will facilitate the movement of goods and commodities between Digha and Sonepur** as the **current rail-cum-road bridge is meant only for light vehicles.**

2.12   COPRA FARMING

❖ The **central government** has **decided to increase the minimum support price (MSP) of milling copra** by **Rs 300 per quintal** and **ball copra by Rs 250 per quintal for 2024 season.**
   ✓ **Copra refers to the dried coconut kernels from which coconut oil is expelled.**
❖ **Kerala and Tamil Nadu are major producers of milling copra.**
❖ **Karnataka** accounts for **65% of the total production of ball copra in the country.**
❖ **Milling copra or the dry part of coconut, is used to extract oil**, while **ball copra is consumed as a dry fruit and used for religious purposes.**

2.13   RBI RELEASES D-SIBS LIST

❖ **Reserve Bank of India (RBI)** issued its **list of Domestic Systemically Important Banks (D-SIBs)**.
❖ **SBI, ICICI Bank, and HDFC Bank** are **still categorized as Domestic Systemically Important Banks (D-SIBs), according to the central bank.**

DEFINITION

- ❖ D-SIBs are **systemically important** due to their **size, cross-jurisdictional activities, complexity and lack of substitute and interconnection.**
- ❖ It also means that the **bank is too big to fail.**
- ❖ If **DSBs fail**, there would be **significant disruption to the essential services to the banking system and the overall economy.**
- ❖ According to **RBI**, based on the bucket in which a **D-SIB is placed**, an **additional common equity requirement has to be applied to it**.
  - ✓ In case a **foreign bank** having a branch presence in **India is a Global Systemically Important Bank (G-SIB)**, it has to **maintain additional CET1 capital surcharge in India as applicable to it as a G-SIB.**

3. GEOGRAPHY

3.1   NAGARJUNA SAGAR DAM

- ❖ As tension **escalated between Telangana and Andhra Pradesh over the Nagarjuna Sagar reservoir water release**, the **Telangana government approached the Centre which** has urged **both states to revert to the release of Nagarjuna Sagar waters as before.**
- ❖ Earlier, nearly **700 Andhra cops stormed into the project and opened the right canal to release 500 cusecs of water per hour.**
- ❖ To avoid further conflict, **the dam will be supervised by the Central Reserve Police Force (CRPF)** which will also **oversee that both sides are getting water as per the deal.**
- ❖ As per the **Andhra Pradesh Reorganisation Act, 2014**, the **operational control of the Nagarjuna Sagar Dam is with** the **Telangana government.**

ABOUT NAGARJUNA SAGAR DAM

- ❖ It **straddles the districts of Nalgonda in Telangana** and **Palnadu in Andhra Pradesh.**
- ❖ It is located on the **river Krishna.**
- ❖ It is the **largest and highest masonry dam of the world.**
- ❖ It was **constructed between 1955 and 1967.**
- ❖ The dam has a **capacity of 11.472 billion cubic meters** and **provides water to irrigate over 1 million hectares of land in the states of Telangana and Andhra Pradesh.**
- ❖ The dam **also generates hydroelectric power, with a capacity of 816 MW.**

ABOUT KRISHNA RIVER

- ❖ The Krishna River is **one of the longest rivers in India**, flowing through the **states of Maharashtra, Karnataka, Telangana, and Andhra Pradesh**.
- ❖ It **originates in the Western Ghats near Mahabaleshwar in Maharashtra** and **flows for about 1,400 km before emptying into the Bay of Bengal.**

3.2   IBU VOLCANO

- ❖ The **Ibu volcano on Halmahera Island** in the **eastern Indonesian province of North Maluku** erupted recently, throwing **ash up to 1,200 metre above its peak.**
- ❖ Standing as high as **around 1,300 metre above sea level, Ibu volcano is classified in the second danger level**, below the **highest level of IV.**
- ❖ Located on the Pacific Ring of Fire, Indonesia is one of the countries with the most volcanoes in the world.

3.3	INDIA'S FIRST WINTER SCIENTIFIC EXPEDITION TO THE ARCTIC

- **Ministry of Earth Sciences** recently flagged off **India's first winter scientific expedition to the Arctic** from the MoES headquarters in New Delhi.
- Indian scientific expeditions to the Arctic **during the winter (November to March) will allow researchers to conduct unique scientific observations** during **polar nights**, where there is **no sunlight for nearly 24 hours and sub-zero temperatures (as low as -15 degrees Celsius)**.
- The **first batch** of the maiden Arctic winter expedition **comprises researchers from the host NCPOR, Indian Institute of Technology (IIT) Mandi; Indian Institute of Tropical Meteorology (IITM), Pune; and Raman Research Institute, Bengaluru.**
- This will **aid in expanding understanding of the Arctic**, especially **climate change, space weather, sea-ice and ocean circulation dynamics, ecosystem adaptations**, etc., which affect weather and climate in the tropics, including monsoons.
- **Priority research areas** include **atmospheric, biological, marine, and space sciences, environmental chemistry, and studies on cryosphere, terrestrial ecosystems, and astrophysics.**

FACTS

- Since **2008**, India **operates a research base in the Arctic named Himadri,** Ny-Ålesund, Svalbard in the Norwegian Arctic, which has been **mostly hosting scientists during the summer (April to October)**.
- India has **three research stations in Antarctica**, namely **Bharati (newest), Dakshin Gangotri (now a supply base)** and **Maitri**.

ABOUT PACER SCHEME

- ❖ **Indian scientific expeditions** to the **Earth's poles (the Arctic and the Antarctic) are facilitated** under the **PACER (Polar and Cryosphere) scheme of the MoES**, solely through the **aegis of the National Centre for Polar and Ocean Research (NCPOR), Goa, an autonomous institution of the MoES.**
- ❖ It has **four sub- schemes** under it, namely, **the Antarctic Program, Indian Arctic Program, Indian Southern Ocean Program and Cryosphere and Climate Program.**
- ❖ **Major objectives-**
  - ✓ To ensure the **country's strategic and scientific interests in the Polar Region and the surrounding oceans.**
  - ✓ To continue the **long-term frontline scientific programmes in Antarctica, Arctic, Himalaya and Southern Ocean**, which are pertinent to the national needs and having potential societal, strategic and global relevance.
  - ✓ **Planning, coordination and implementation** of the **annual Indian Antarctic, Arctic, Himalayan, Southern Ocean expeditions.**
  - ✓ Maintenance of **Indian Research bases at Antarctica, Arctic and Himalaya.**
  - ✓ Establishment of a **state-of-the-art polar research and logistic facilities in the country.**

3.4	POLAR STRATOSPHERIC CLOUDS

- ❖ Weather watchers have **captured images of rare iridescent clouds over Scotland, northern England and the West Midlands.**

ABOUT THE PSC

- ❖ The **Polar stratospheric clouds**, also known as **nacreous clouds**, are among the **rarest and most stunning atmospheric phenomena.**
- ❖ These **resemble mother of pearl,** and **usually develop in extremely cold air above the polar regions.**

- Nacreous clouds are **an indicator of especially cold air high in the atmosphere.**
- They are **best known for the beautiful pastel light they reflect after sunset and before sunrise.**
- These **clouds form over the polar regions** and **are made of smaller ice particles than those that form more common clouds**.
- The effect, **reminiscent of a thin layer of oil on top of water**, is produced as the **sunlight diffracts around the tiny ice crystals inside them.**
- PSCs provide a **surface for chemical reactions** where **benign forms of chlorine are converted into reactive, ozone-destroying forms**.
  - ✓ They **also remove nitrogen compounds that would otherwise moderate the destructive impact of chlorine on the ozone layer.**

3.5   CHILLA-I-KALAN

- Chilla-i-Kalan is a **Persian term that means 'major cold'** and it refers to the **40-days of harsh winter in Kashmir.**
- It starts from **December 21 and ends on January 30**.
- During the **40 day 'Chilla-i-Kalan', it is said earth goes dead, air and water are the coldest.**
- It will be followed by a **20-day-long 'Chila-i-Khurd' or small cold** (January 31 and February 19) and **10-day-long 'Chilla-i-Bacha' or baby cold** (February 20 to March 2).

3.6   ANTARCTIC CIRCUMPOLAR CURRENT

- Scientists have discovered **an ancient 20 million year old underwater mountain range** hidden within the **world's strongest ocean current, the Antarctic Circumpolar Current.**
- The range **consists of eight dormant volcanoes** reaching heights of **1,500 meters above the seafloor.**
  - ✓ They were **discovered halfway between Tasmania and Antarctica**, and **four of the volcanoes are new discoveries.**
- This revelation came to **light during a high-resolution mapping expedition** conducted by **an Australian and international research team**.

ABOUT ANTARCTIC CIRCUMPOLAR CURRENT

- The Antarctic Circumpolar Current (ACC) is the **most important current in the Southern Ocean.**
- It is the **only current that flows completely around the globe**.
- The ACC, as it encircles **the Antarctic continent**, **flows eastward** through the **southern portions of the Atlantic, Indian, and Pacific Oceans.**
- The ACC extends from the sea surface to depths of 2000-4000 m and can be as wide as 2000 km.
- The **Antarctic Circumpolar Current's eastward flow** is **driven by strong westerly winds**.
- The **average wind speed between 40°S and 60°S is 15 to 24 knots with strongest winds typically between 45°S and 55°S.**
- Historically, the ACC has been referred to as the **'West Wind Drift'**.

4. ART AND CULTURE

4.1   KALBELIA DANCE

❖ The **2023 edition of the Jodhpur Rajasthan International Folk Festival** saw **performances of Kalbelia dance**.

ABOUT KALBELIA DANCE

❖ Kalbelia is **a dance form associated with Kalbelias tribes.**
❖ **Legend of origin- Sage Kanifnath** was **offered a bowl (belia) of poison (kaal or death)** by his **spiritual mentor Gorakhnath**. When **he drank it to the last drop, Gorakhnath blessed Kanifnath with the ability to ingest poison and handle venomous creatures**.
  ✓ And so, **Kanifnath's followers from around the Thar desert in Rajasthan came to be known as Kalbeliyas**. They **venerated snakes and made a living as snake-charmers**.
  ✓ When their **traditional occupation was outlawed by the Government in 1972** (with the **enactment of the Wildlife Protection Act**), **women replaced snakes in the Kalbeliya dance**.
❖ They wear **black garments and perform snake-like movements to music** that **men play on the instruments like poong, Pakhawaj, dholak, jhanjhar, harmonium, and sarangi.**
❖ In **2010**, the **Kalbelia folk songs and dances of Rajasthan** were **declared a part of its Intangible Heritage List by the UNESCO.**

4.2   PARTHENON SCULPTURES

❖ A **diplomatic row sparked between Greece and the UK** after British Prime Minister **cancelled a meeting with his Greek counterpart** over the **status of the Parthenon Sculptures housed at the British Museum.**

ABOUT PARTHENON SCULPTURES

❖ The **Parthenon Sculptures** at the **British Museum are more than 30 ancient stone sculptures** from **Greece that are more than 2,000 years old**.
❖ Most of them **originally adorned the walls and grounds of the Parthenon temple on the rocky Acropolis hill in Athens**.
❖ Completed in **432 BC**, the **temple is dedicated to the goddess Athena and is seen as the crowning glory of Athens' Golden Age.**
❖ While **one notable sculpture, which is 75 metres long, depicts a procession for the birthday of Athena**, others show **gods, heroes or mythical creatures.**
❖ They were **removed from the Parthenon in the early 19th century** by **Thomas Bruce, the 7th Earl of Elgin and then-British ambassador to the Ottoman Empire**.
  ✓ The **marbles were taken to Britain and purchased by the British Museum in 1816.**
  ✓ While **Athens accused Lord Elgin of theft**, he **insisted he had permission to remove the marbles from the Ottoman Empire**, which **used to control Athen at the time**.
  ✓ The **original letter giving him permission, however, has been lost.**
❖ Athens has been **demanding the return of the sculptures since it became independent in the early 1830s.**

4.3   NAVY DAY CELEBRATED AT SINDHUDURG FORT

❖ PM on December 4, **Navy Day**, unveiled the **43-foot statue of Chhatrapati Shivaji Maharaj at Sindhudurg Fort in Maharashtra.**

ABOUT NAVY DAY

- Navy Day is marked to **commemorate the success of Operation Trident** which **took place during the Indo-Pakistani War of 1971**.
- **Operation Trident** was a **successful offensive operation launched by the Indian Navy** during the **Indo-Pakistan War of 1971**, between **December 4 and December 5**.
- The **Indian Navy sharply attacked the Pakistan port city of Karachi** and **caused much damage to their naval infrastructure.**
- It was the **first time that anti-ship missiles were used in combat between India and Pakistan**.
- There were **no casualties on the Indian side.**

ABOUT SINDHUDURG FORT

- The Sindhudurg Fort is **located on a small island in the Arabian Sea**, near the **shore of Malvan in the Sindhudurg district of Maharashtra.**
- It was **commissioned by Chhatrapati Shivaji I between 1664 and 1667.**
- It was **designed by the chief architect of the Maratha kingdom Hiroji Indulkar.**
- The Sindhudurg Fort is **a protected monument.**
    - The Fort **houses a handprint and a footprint of Shivaji Maharaj**.
- It is **spread over 48 acres, with 30 feet high and 12 feet thick walls** that were made to sustain high tide.
- The **fort's foundation stones were laid in molten lead.**
- Its **main entrance is concealed** in such a way that **no one can locate it from outside.**
- The fort is **closed during the rainy season because of high tide**.

4.4	THE HUMP MUSEUM

- A **museum dedicated to fallen airmen flying for the Allied forces during World War II** was inaugurated **in Arunachal Pradesh.**
- The **Hump WWII Museum at Pasighat, headquarters of the East Siang district**, has been named after a **treacherous air route between north-eastern Assam and Yunnan in China**.
- From **1942 to 1945**, military aircraft **transported nearly 6,50,000 tonnes of supplies like fuel, food, and ammunition**.
- Some **650 aircraft crashed while negotiating the terrain and extreme weather conditions.**

4.5	HORNBILL FESTIVAL

- The **first five days of the Hornbill Festival of Nagaland**, an **annual tourism event of the state government**, has **attracted more than 78,000 visitors including 1,621 foreigners**.
- The **10-day-long festival that began on December** 1 is being held at the **picturesque Naga heritage village Kisama.**
- It has been billed as the **Festival of Festivals.**
- **It was first held in 2000.**
- Festival **highlights include** the **traditional Naga Morungs exhibition and the sale of arts and crafts, food stalls, song and dance shows, indigenous games etc.**
- It is named after the **hornbill**, a **culturally significant bird embodying fidelity, beauty, and grace in Naga folklore.**
- The **Hornbill Festival symbolizes the collective celebration of identity.**

FACTS-

- ❖ **Hornbill is state bird of-**
    - ✓ **Arunachal Pradesh (Great Hornbill)**
    - ✓ **Kerala   (Great Indian Hornbill)**
    - ✓ **Chandigarh (Indian grey Hornbill)**
- ❖ **Blyth's Tragopan or Tragopan blythii** – is the **State Bird of Nagaland.**

4.6	UNESCO INTANGIBLE CULTURAL HERITAGE

- ❖ **Intergovernmental Committee for the Safeguarding of the Intangible Cultural Heritage** inscribed **'Garba of Gujarat'** on the **Representative List of the Intangible Cultural Heritage of Humanity** during its 18th session in **Kasane, Botswana.**
- ❖ The **inclusion of Garba** now makes it **India's 15th inscription on the List.**

ABOUT GARBA

- ❖ A **ritualistic** and **devotional dance performed throughout the State of Gujarat**, and across India, **Garba is celebrated for nine days during the festival of Navaratri**.
- ❖ The festival is **dedicated to the worship of the feminine energy or Shakti**.
- ❖ The **cultural, performative, and visual expressions of this feminine energy are expressed** through the Garba dance.
- ❖ The **performative and visual celebration of Garba takes place within homes and temple courtyards, public spaces in villages, urban squares, streets, and large open grounds**.
    - ✓ Garba thus **becomes an all-encompassing participatory community event**.
- ❖ In addition to being a religious ritual, Garba **fosters social equality by diluting socio-economic, gender, and rigid sect structures.** It continues to be inclusive and participative by diverse and marginalized communities, strengthening community bonds.
- ❖ The **14 other elements from India** that have been **inscripted to UNESCO's representative list of ICH are**
    - ✓ Ramlila;
    - ✓ yoga;
    - ✓ vedic chanting;
    - ✓ Kutiyattam, Sanskrit theatre of Kerala;
    - ✓ Ramman, religious festival and ritual theatre of the Garhwal Himalayas;
    - ✓ Mudiyettu, ritual theatre and dance drama of Kerala;
    - ✓ Kalbelia folk songs and dances of Rajasthan;
    - ✓ Chhau dance of eastern India;
    - ✓ Buddhist chanting of Ladakh;
    - ✓ Sankirtana, ritual singing, drumming and dancing of Manipur;
    - ✓ traditional brass and copper craft of utensil making in Punjab;
    - ✓ Nawrouz;
    - ✓ Kumbh Mela and
    - ✓ Durga Puja in Kolkata.

WHAT IS INTANGIBLE CULTURE HERITAGE?

- ❖ It is the **practices, expressions, knowledge** and **skills that communities, groups and sometimes individuals** recognise as **part of their cultural heritage.**
- ❖ The **Representative List of the Intangible Cultural Heritage of Humanity** of the **2003 UNESCO Convention for the Safeguarding of the Intangible Cultural Heritage** currently has **some 704 elements corresponding to 5 regions and 143 countries**.

4.7 PASHUPATINATH TEMPLE

❖ The **sale and consumption of meat, alcohol and other intoxicants** have been **restricted around the Pashupatinath Temple area in Kathmandu** due to the **Hindu festival Bala Chaturdashi.**
❖ During the festival, **seven types of grains mixed with fruits** are **sprinkled at the Shleshmantak Forest near the Pashupatinath Temple in memory of the deceased relatives.**

ABOUT THE TEMPLE

❖ Situated on the **banks of the holy River Bagmati** on the **eastern outskirts of Kathmandu**, Pashupatinath is **the most revered Hindu temple in Nepal**.
❖ It is **dedicated to Pashupati, a form of Shiva.**
❖ The **temple was classified as a World Heritage Site in 1979.**
❖ It **includes 518 mini-temples** and **a main pagoda house.**
❖ It attracts **hundreds and thousands of Hindu pilgrims from across the world apart from being a major tourist destination**.

4.8 CHANNAPATNA TOYS

❖ **Toys made in Channapatna near Bengaluru** have now become **part of children's academic activities in Afghanistan**.
❖ The **famed wooden toys** are **made by artisans in and around Channapatna town of Ramanagara district.**
❖ There are **over 250 cottage units and around 50 factories that make toys in Channapatna.**
❖ Channapatna is also known as **Gombegala Ooru** (toy-town).
❖ This **traditional craft of Karnataka has received the Geographical Indication (GI) tag in 2005.**
❖ Toys in Channapatna are **made from a particular type of wood** known as **"Aale mara" or ivory wood sourced from nearby forests**.
❖ These **toys are distinguished by their lacquered finish**, achieved through **natural dyes derived from vegetable extracts**.
❖ The **vibrant colors** and **glossy finish of Channapatna toys** set them apart from other wooden crafts.
❖ Channapatna toys are **ideal for children** as the **chemical dye is not used in them** and **they come without sharp edges.**

4.9 SHAR AMARTALA TORGYA FESTIVAL

❖ Arunachal Pradesh CM recently attended the **annual Shar Amartala Torgya Festival** at the **Thegtse Sangye Choi Long monastery at Balemu**, a small hamlet at the **trijunction** of **Arunachal Pradesh, Assam and Bhutan in West Kameng district.**
❖ The **religious festival** is being held **under the patronage and blessings of Padmashree His Eminence The 14th Thegtse Rinpoche.**

4.10 BODHICITTA

❖ Tibetan spiritual leader the **14th Dalai Lama** delivered his teachings to his devotees at **Siliguri's Sed-Gyued Monastery**.

- The Dalai Lama delivered his lectures on **Bodhicitta**, the **main cause of Buddha and the thoughts that help bring peace to the mind**.
- The **Tibetan spiritual leader** delivered the teaching on **Gyalsey Thokme Sangpo's 37 Practices of Bodhisattva** ('Laklen Sodunma') and the **ceremony of the generation of Bodhichitta ('Semkye').**
  - ✓ The **37 Practices of a Bodhisattva ('Laklen Sodunma')** is an **ancient text written in the 14th Century BCE by Tokme Sangpo**, a **Buddhist monk who was born in Puljung, south-west of the Sakya Monastery in Tibet**.

WHAT IS BODHICITTA?

- **Bodhicitta**, or **"awakening mind" or "thought of enlightenment,"** is the **commitment to embark on a path of awakening and be a bodhisattva**, **one dedicated to the liberation of all beings.**
- **Compassion** is the **stepping-stone into bodhicitta (awakening mind)**, the **central theme of Mahayana.**
- This form of **compassion seeks to alleviate suffering and pain** as much as possible and **takes expression in society as kindness, care, and justice.**
- Bodhicitta **permeates every aspect of Mahayana teaching and practice.**

ABOUT BODDHISATVA

- It is **derived from Sanskrit root bodhi**, meaning **"awakening" or "enlightenment"**, and sattva, meaning **"being".**
- The core meaning of the word is **"a being who is on the way to becoming enlightened".**

ABOUT SED-GUIYED MONASTERY

- It stands amidst the serene hills of **Siliguri, West Bnegal.**
- It is the **main seat of the Sed-Gyued Lineage or Whispered Lineage**, which is **a secret teaching transmitted only to the closest disciple through direct communication with their root teacher or meditational Deity**.
- It is **because of the unbroken secret teachings of Sed-Gyued Lineage and commentaries that the Tibetan Secret Mahayana Practice is intact today.**

4.11	KASHI TAMIL SAMAGAM

- Prime Minister recently inaugurated the **Kashi Tamil Sangamam at Namo Ghat, Varanasi.**
  - ✓ First held in 2022, the **Kashi Tamil Sangamam seeks to celebrate North and South India's historical and civilisational connections.**
  - ✓ It aims to further the spirit of **'Ek Bharat, Shrestha Bharat."**
- This year, around **1,400 dignitaries from Tamil Nadu and Puducherry will visit Varanasi** for the event, participating in a **number of cultural exchanges and exhibitions, showcasing art, music, handloom, handicrafts, cuisines and other distinctive products from Tamil Nadu and Varanasi.**
- Background
  - ✓ Legend has it that **King Parakrama Pandya, ruler of the region around Madurai in the 15th century**, wanted to **build a grand temple dedicated to Lord Shiva**.
  - ✓ He **travelled all the way to Kashi to bring back the lingam for his temple.**
  - ✓ While returning, he stopped to rest under a tree.
  - ✓ When he tried to continue his journey, **the cow carrying the lingam refused to budge from its spot**. Parakrama Pandya understood this to be the Lord's wish, and **installed the lingam there, a place that today is known as Sivakasi**.
  - ✓ For devotees who could not visit Kashi, the Pandyas also built the Kasi Viswanathar Temple in what is today Tenkasi in southwestern Tamil Nadu.

❖ **Nodal Ministry- Ministry of Education ;** with **participation from the other ministries such as Ministries of Railways, Textiles, Culture, Tourism etc.**

4.12	YOGMAYA TEMPLE

❖ The Yogmaya Temple in Mehrauli is a **historically important monument believed to be standing at the site of an ancient temple** that is **said to have come up during the period of the Mahabharata but of which no trace exists anymore.**
❖ Also called **Jogmaya temple.**
❖ A **noble in the court of Mughal Emperor Akbar II** by the name of **Lala Sidhu Mal built the temple between 1806 and 1837.**
❖ The **area was known as Yoginipura in ancient Jain texts** and **Prithviraj Chauhan himself was said to have patronised a Yogini temple here shortly before his city's destruction.**
❖ Lala Sidhu Mal, also known as Sed Mal, **built his temple on the site where an ancient Yogini Temple is believed to have existed.**
❖ The **Emperor ordered an offering to be given at Yogmaya temple on his son's release from British prison in Allahabad**.
   ✓ **Placing flowers at both holy sites (other being Qutubuddin Dargah)** became a **yearly tradition** known as **Phool Walon ki Sair, and it continues to this day as the capital's most prominent display of Hindu-Muslim unity.**

4.13	NATIONAL CULTURE FUND

❖ During the **last five FYs** (2018-19 to 2022-23) **NCF has received Rs.3.70 crore from Non-Government Sources.**

ABOUT NATIONAL CULTURE FUND (NCF)

❖ National Culture Fund (NCF) was **set up as a Trust in 1996** under the **Charitable Endowment Act, 1890.**
❖ It aims to **mobilize extra resources through Public-Private Partnership (PPP)** towards **promoting, protecting & preserving India's Cultural Heritage (Tangible & Intangible).**
❖ NCF is **managed by a Council and an Executive Committee.**
   ✓ The **Council is chaired by the Minister of Culture** and has **members representing the corporate and public sector, private foundations and non-profit organizations**.
   ✓ The **Executive Committee** is chaired by the **Secretary, Ministry of Culture.**
❖ Donations to the **National Culture Fund** will be **eligible for tax benefit under Income Tax Act.**

4.14	WORLD'S OLDEST FORT DISCOVERED

❖ In what is being dubbed a groundbreaking archaeological discovery, **an international team of archaeologists** has found the **world's oldest known fort which dates back to 8,000 years in a remote region of Siberia**.
❖ Archaeologists have **long associated fortresses with permanent agricultural settlements**.
   ✓ However, **this cluster of fortified structures reveals that prehistoric groups, hunter-gatherers, were constructing protective edifices much earlier than originally thought.**
❖ The **site** is **located along the Amnya River in western Siberia** and **includes around 20 scattered pit-house depressions** which were **divided into two sections – Amnya I and Amnya II.**
   ✓ **Radiocarbon dating** confirmed that the **settlement was first inhabited during the Mesolithic, or Middle Stone Age.**

| 4.15 | INTERNATIONAL GITA MAHOTSAV 2023 |

- ❖ The **International Gita Mahotsav 2023** commenced recently in **Kurukshetra**, Haryana.
- ❖ The event **commenced with the Gita Aarti** and **worship of the holy scripture at Brahma Sarovar, echoing with verses from the Bhagavad Gita.**
- ❖ The International Gita Mahotsav **promises a holistic experience with global Gita recitations** involving **18,000 students, cultural programmes organised** by the **North Region Cultural Arts Centre of Patiala and Haryana Art and Cultural Department**, an **International Gita Seminar, a saints' conference, aarti at the Brahma Sarovar, Deepotsav, and cultural programmes at 164 locations.**

| 4.16 | GUINNESS WORLD RECORD OF TABLA ENSEMBLE |

- ❖ Around 1300 people made a **Guinness World Record by playing tabla simultaneously in Gwalior, Madhya Pradesh.**
- ❖ The **'Tabla Darbar' festival program** was **organized at Karna Mahal of Gwalior Fort.**
- ❖ A **three-member team from the Guinness Book of World Records was present to monitor and record the performance.**
- ❖ This **concert was part of the 'Tansen Samaroh' music festival held annually in Gwalior.**

OTHER FACTS

- ❖ The **city of Gwalior in Madhya Pradesh was added to UNESCO's Creative Cities Network (UCCN)** on November 1, 2023 for its **"strong commitment to harnessing culture and creativity"**.
- ❖ **Kozikodhe from Kerala** (as **'City of Literature'**)was also among recent additions.
- ❖ Other Indian cities in the UCCN include
  - ✓ Jaipur: Crafts and Folk Arts (2015),
  - ✓ Varanasi: Creative City of Music (2015),
  - ✓ Chennai: Creative City of Music (2017),
  - ✓ Mumbai: Film (2019),
  - ✓ Hyderabad: Gastronomy (2019), and
  - ✓ Srinagar: Crafts and Folk Art (2021).

| 4.17 | VEER BAL DIWAS |

- ❖ The PM recently participated in the **Veer Baal Diwas function at Bharat Mandapam in New Delhi.**
- ❖ It is **commemorated on 26th December every year**.
- ❖ The **Veer Bal Diwas** marks the **martyrdom of Sri Guru Gobind Singh's sons- Sahibzada Zorawar Singh Ji and Sahibzada Fateh Singh Ji.**
- ❖ The two younger sons **were bricked alive on the orders of Aurangzeb's governor of Sirhind, Wazir Khan.**
- ❖ The two elder sons, **Sahibzada Ajit Singh and Sahibzada Jujhar Singh** both **sacrificed their lives** in the **historic battle of Chamkaur,** where a small number of Sikhs took on the huge army of the Mughals and the hill kings.

| 4.18 | SUNEHRI MASJID |

❖ **New Delhi Municipal Council (NDMC)** sought **public opinion on proposed demolition of Sunehri Masjid.**

ABOUT SUNEHRI MASJID

❖ The **historic Sunehri Masjid lies in the heart of Lutyens Delhi, near Udyog Bhavan.**
❖ It is an **18th-century mosque in Old Delhi**.
❖ It was **built by Mughal noble Roshan-ud-Daula**, during the **reign of Mughal Emperor Muhammad Shah.**
❖ Many believe that the **mosque was built 200 years ago, using lakhori bricks.**
❖ **It housed freedom fighters like Maulana Hasrat.**
❖ The Masjid is listed as a **Grade-III Heritage building as per a 2009 notification of the Delhi government.**

4.19	WARLI PAINTINGS

❖ A **Warli paintings art exhibition** was organised by Inherited Arts Forum (IAF) recently.

ABOUT WARLI PAINTINGS

❖ The **ritualistic tribal art originated** in the **Sahyadri Mountains** in **Thane district, Maharashtra.**
❖ It **can be traced back to 10th century AD** but was **first discovered and appreciated for its distinctive style only in the early 1970s.**
❖ The art was **traditionally practised by women of the Warli tribe** called **Suvasinis**, who **decorated the Lagn Chowk or the wedding square**.
❖ Layers of **cow dung slapped on the walls of village homes formed the canvas**.
❖ When the **dung dried**, they were **painted in mud brown to create a background**, and **bamboo-stick paint brushes were used to meticulously craft scenes, figures, and objects.**
❖ The **triangles, circles and lines in austere white** against a **mud brown background align to tell stories of village life** and the **customs and traditions there on walls and canvasses.**
❖ Warli represents the **daily routine of rural life**, the **relationship of the tribal people with nature, their gods, myths, traditions, customs, and festivities.**

OTHER FACTS

❖ **Jivya Soma Mashe** is known as the **father of Warli art.**
❖ He was the **first male artist to enter the female-dominated bastion of Warli art.**

5. SCIENCE AND TECHNOLOGY

5.1   GAJRAJ SURAKSHA

- ❖ In a bid to **address the rising concern of elephant deaths in train collisions**, **Indian Railways has rolled out a groundbreaking, indigenously developed new technology** called **Gajraj Suraksha**, that is **aimed at preventing such tragic incidents.**
- ❖ Gajraj Suraksha, which **is a kind of Intrusion Detection System or IDS**, is **based on an AI algorithm and claims to detect 99.5 per cent of potential collisions**, providing a **much-needed solution to this longstanding issue**.
- ❖ It **primarily relies on OFCs or Optical Fibre cables for quick transmission of signals.**
- ❖ **Working**
  - ✓ Gajraj Suraksha **senses pressure waves generated by the movement of elephants along the tracks**.
  - ✓ As elephants move, the **optical fibres detect vibrations caused by their footsteps.**
  - ✓ These **vibrations trigger signals within the optical fibre network**, enabling the **system to identify the presence of elephants up to 200 meters ahead of their arrival on the track.**
  - ✓ The OFC-based Intrusion Detection System promptly sends **alarms to station masters whenever movement is detected along the tracks.**
  - ✓ This allows them to **inform locomotive drivers in the affected areas.**
  - ✓ This quick communication **ensures that trains can be slowed down or stopped, preventing potential collisions with elephants.**
- ❖ On a **vast network spanning 700 kilometres of railway tracks, the implementation cost is estimated at Rs 181 crores, making it a viable and scalable solution for Indian Railways**.
- ❖ The **Indian Railways plans to deploy this solution across all elephant corridors in the country in the next 8 months.**
  - ✓ The Indian Railways has chosen the **Northeast Frontier Railways to pilot this programme** and **implement this new, cutting-edge technology in some of the worst affected areas.**
  - ✓ The system is **being installed over a large area and is already fully operational along a specific stretch covering approximately 70 kilometres.**

5.2   ANTHROBOTS

- ❖ Scientists have **created tiny robots**, **called anthrobots, made from human tracheal cells capable of repairing damaged neural tissue.**
  - ✓ The research builds on earlier work of the **scientists, who made the first living robots**, or **xenobots**, from **stem cells** sourced from **embryos of the African clawed frog (Xenopus laevis).**
- ❖ However, anthrobots are **self-assembling and formed from human tissue**, potentially **paving the way for personalized medicine.**
- ❖ These biobots possess the **remarkable ability to autonomously configure** into **diverse forms and sizes.**
- ❖ They can **spontaneously fuse together to form a larger structure** called a **superbot**, which **was able to encourage the growth of neurons.**
- ❖ They **hold promise for regenerative medicine**, **wound healing**, and **disease treatment.**

5.3   BRIC- BIOTECHNOLOGY RESEARCH AND INNOVATION COUNCIL

- ❖ **The inaugural meeting of the new Apex Autonomous Society** called **Biotechnology Research and Innovation Council (BRIC) Society, emphasized the need to define a "Bio-vision" for India.**
- ❖ **Department of Biotechnology (DBT), Ministry of Science and Technology is functioning as the nodal agency** for **promotion of Biotechnology** in the country.
  - ✓ It was **accorded the Cabinet approval for rationalization of its 14 Autonomous Institutions (AIs) by subsuming them** under **one Apex Autonomous Society** viz. **Biotechnology Research and Innovation Council (BRIC)**, for **centralized and unified governance to maximize impact of biotech research across the country.**
- ❖ The BRIC Society **aims to**
  - ✓ **engage in public-private research partnerships,**
  - ✓ **receive endowments from non-governmental resources, and**
  - ✓ **maintain distinct research mandates for each of the 14 subsumed institutions under a common governing body.**

5.4   WORLD'S FIRST FOURTH GENERATION NUCLEAR REACTOR

- ❖ China began **commercial operations** of the **world's first fourth generation, gas-cooled nuclear reactor power plant.**
- ❖ The **Shidao Bay plant** in **eastern Shandong province** is **powered by two high-temperature reactors cooled by gas rather than pressurised water.**
- ❖ The facility, which **began construction in 2012**, features **two 250 megawatt thermal reactors** and a **steam generator with an installed capacity of 200 megawatts.**
- ❖ **Conventional reactors** produce **electricity from nuclear energy**. However, these advanced models -- known as **small modular reactors, or SMRs -- can be used for other applications that include heating, desalination or steam for industrial needs.**
- ❖ **Instead** of using **water to cool the system**, the **high-temperature reactor will be cooled using helium gas**, offering a promising **way to develop more inland nuclear plants, as they will not need to be located next to a water source.**
- ❖ According to the **International Atomic Energy Agency**, more than **80 SMR projects are currently under development in 18 countries.**

5.5   AMRIT TECHNOLOGY

- ❖ The **Indian Institute of Technology (IIT) - Madras** has developed a **technology called 'AMRIT' (Arsenic and Metal Removal by Indian Technology)** for the **removal of Arsenic and Metal ions from water.**
- ❖ The technology **uses nano-scale iron oxy-hydroxide**, which **selectively removes arsenic when water is passed through it.**
- ❖ This water purifier has **been developed for both domestic as well as community levels.**
- ❖ The technology **aligns with the broader goals of the Jal Jeevan Mission**, which aims to provide safe and potable tap water to rural households in India.
- ❖ Also, the **technology has been recommended by the erstwhile 'Standing Committee' of the Department of Drinking Water and Sanitation for the examination of the best technologies concerning water and sanitation.**

ARSENIC POLLUTION

- Arsenic is a **natural component of the earth's crust** and is **widely distributed throughout the environment in the air, water and land**.
- It is **highly toxic in its inorganic form.**
- **Long-term exposure** to arsenic **from drinking water and food** can cause **cancer and skin lesions**.
  - ✓ Chronic poisoning **can cause Blackfoot disease (BFD), which affects the blood vessels in the lower limbs.**

5.6   VYOMMITRA

- India is set to launch **Vyommitra**, a **female robot astronaut**, into **space as part of the ambitious Gaganyaan project**.
- Ahead of the **manned mission**, a **test flight with Vyommitra is scheduled for next year**.
  - ✓ The **Gaganyaan project aims to showcase India's capability in human spaceflight.**

ABOUT VYOMMITRA

- Vyommitra is a **half-humanoid robot** introduced at the **"Human Spaceflight and Exploration — Present Challenges and Future Trends" event in January 2020**
- It represents a **fusion of Sanskrit words—Vyoma (Space) and Mitra (Friend).**
- The **Isro Inertial Systems Unit (IISU)** spearheaded the **design**, while the **Vikram Sarabhai Space Centre (VSSC) contributed to its fingers**.
- The robot's **AI-enabled features**, enable it to **speak, see, express facial emotions, and withstand the rigours of space travel.**
- Vyommitra's **role spans both unmanned and manned missions**, where she will **mimic astronaut tasks to analyze their behaviour**.
- Capable of **executing various procedures and imitating human actions in space**, Vyommitra is **poised to monitor module parameters, offer alerts, manage life**

5.7   KRUTRIM

- **Krutrim Si Designs**, the artificial intelligence (AI) venture led by Ola CEO revealed **'Krutrim,' described by the startup as 'India's own AI' model.**
- It is **India's first full-stack artificial intelligence solution**, designed to **reflect India's cultural and linguistic diversity.**
- Krutrim is a **large language model (LLM)** which will be **available in two classifications**
  - ✓ the base Krutrim model, and
  - ✓ Krutrim Pro, the more powerful one.
- With a name that **means 'artificial' in Sanskrit**, it is **a large language model (LLM)** which has been **trained on more than 2 trillion 'tokens'**;
  - ✓ These **tokens are sub-words used in conversations.**
- Features
  - ✓ The model **understands 20 Indian languages** and **can generate content in ten of these.**
  - ✓ **Hindi, Kannada, Marathi, Odiya, Telugu** are among the **languages it can generate content in.**
  - ✓ Krutrim is **larger than even GPT-4 in Indic language support.**
  - ✓ This LLM **uses a custom tokeniser to interpret the languages and scripts.**
  - ✓ Krutrim **also responds to voice inputs**, enhancing **user interaction and accessibility**.
  - ✓ The **model can seamlessly switch between written and spoken communication.**

5.8   KAKRAPAR ATOMIC POWER PROJECT

- ❖ The **fourth unit of the Kakrapar Atomic Power Project (KAPP-4)** in **Gujarat**, with **700 MWe capacity**, started **controlled fission chain reaction** and **thus became critical.**
    - ✓ Kakrapar is **situated about 80 km from Surat.**
    - ✓ The **reactor's first criticality was ascertained** after it **met all the conditions** set out by the **Atomic Energy Regulatory Board (AERB), India's nuclear safety watchdog.**
- ❖ The **700 MWe units** are the **largest indigenous nuclear power reactors** to be **built by the Nuclear Power Corporation of India Limited (NPCIL).**
- ❖ These **reactors are pressurised heavy water reactors (PHWRs)**, which **use natural uranium as fuel** and **heavy water as coolant and moderator.**

> The **Kakrapar Atomic Power Station already has two operating PHWRs with a capacity of 220 MWe each, called KAPS-1 and -2.**
>
> The **700-MWe unit-3 of KAPP started generating commercial electricity from August 30.**

ABOUT NPCIL

- ❖ It is a **public sector undertaking of the Department of Atomic Energy.**
- ❖ The **NPCIL presently operates 23 nuclear electricity reactors** with a **total capacity of 7,480 MWe.**
- ❖ It has **nine units, including KAPP-4, under construction while 10 more reactors**, with a **total capacity of 7,000 MWe, are in the pre-project phase.**

5.9	ZERO TRUST AUTHENTICATION

- ❖ Centre government has **set up secure e-mail for 10,000 users in critical ministries.**
- ❖ In the wake of cyberattacks, the **Centre has set up a secure e-mail set-up for 10,000 users in critical ministries and departments.**
- ❖ The **e-mail system that works on Zero Trust Authentication (ZTA)** has been **designed by the National Informatics Centre (NIC).**
    - ✓ **NIC works** under the purview of **Ministry of Electronics and Information Technology.**
- ❖ **The 10,000 emails span across 17 union ministries and departments.**

ABOUT ZTA

- ❖ ZTA is a **security concept and framework** that operates on the **principle of "never trust, always verify."**
- ❖ This approach to **cybersecurity is a significant shift from traditional security models** that **operated under the assumption that everything inside an organization's network should be trusted.**
- ❖ In contrast, **Zero Trust assumes that trust is never granted implicitly** but **must be continually evaluated and authenticated, regardless of the user's location or the network's perimeter.**
- ❖ Implementation of Zero Trust requires **technologies like identity and access management (IAM), data encryption, endpoint security, and network segmentation tools.**

5.10	E-SOIL

- ❖ According to the study, in hydroponic environments, eSoil is **a low-power bioelectronic growth substrate** that can **electrically stimulate the root system and growth environment of plants.**
- ❖ This novel substrate is **environmentally friendly, derived from cellulose and a conductive polymer called PEDOT**, offers a **low energy, safe alternative** to previous methods that required high voltage and non-biodegradable materials.
- ❖ eSoil **uses low energy and minimises resource consumption.**

✓ Its **active material** is an **organic mixed-ionic electronic conductor.**

ABOUT HYDROPONICS

❖ **Hydroponic cultivation** means that **plants grow without soil, needing only water, nutrients and something their roots can attach to - a substrate.**

❖ It is **a closed system that enables water recirculation** so that each seedling gets exactly the nutrients it needs.

❖ Therefore, **very little water is required and all nutrients remain in the system, which is not possible in traditional cultivation.**

❖ **Hydroponics** also **enables vertical cultivation in large towers to maximise space efficiency.**

❖ **Crops** already being cultivated in this manner **include lettuce, herbs and some vegetables.**

5.11   INDIA'S FIRST AI CITY

❖ India's largest State, Uttar Pradesh, has gone ahead with **plans to build India's first AI city in Lucknow to house and promote the AI ecosystem.**

❖ **Lucknow** houses **Centres of Excellence in areas like AI and MedTech** (with extensive AI integration).

❖ The **AI COE (centre in IIIT Lucknow) alone supports more than 15 AI/ML start-ups, nurturing a culture of creativity and entrepreneurship.**

❖ **UP Electronics Corporation Ltd.** is the **nodal agency** for the project.

❖ By integrating **cutting-edge technology, research centres, and educational institutions**, the **AI city aspires to be a hub where ideas flourish and the workforce of tomorrow is nurtured.**

5.12   CHAMELEON TROJAN

❖ Cybersecurity researchers have identified a **potent variant of the infamous 'Chameleon Trojan' malware**, posing a **substantial risk to Android device users**.

❖ This **advanced version** exhibits the **alarming ability to disable biometric authentication methods**, including **fingerprint and face unlock, to sneakily access sensitive information.**

❖ The **malware strategically attaches itself to legitimate Android applications**, such as the widely used Google Chrome, **effectively avoiding immediate detection**.

❖ Operating **discreetly** in the background, **Chameleon Trojan can disable biometric security measures, specifically targeting PINs.**

6. DEFENCE

6.1   TRITONAL

- ❖ Israel has been reportedly bombing the Gaza strip repeatedly with **Mk-84 bombs**.
- ❖ The **2,000-pound Mk-84 bombs** are **generally filled with tritonal** – a **mix of one part aluminium** and **three parts trinitrotoluene or TNT**.
- ❖ **Transport of Tritonal** by **aircraft or railways is forbidden** due to its explosive characteristics.
- ❖ When it **detonates**, the **soil, water, and air in the blast radius are all exposed to these substances**.
- ❖ The weapons have **caused a considerable amount of environmental damage, the effects of which lie beyond what the eye sees.**
- ❖ The **chemical components of these bombs are absorbed in the soil or washed into the sea**, becoming a dangerous externality.
- ❖ Even the **broken buildings – typical of all modern wars – are pollutants.**

6.2   MAHASAGAR INITIATIVE

- ❖ The **maiden edition of the high level virtual interaction MAHASAGAR** was hosted by the Indian Navy recently.
- ❖ **MAHASAGAR** also another word for vast ocean, is the **Indian Navy's outreach initiative for a high level virtual interaction** between **Maritime Heads for Active Security And Growth for All in the Region.**
- ❖ **Chief of the Naval Staff** interacted **with Heads of Navies/ Maritime Agencies and Senior Leadership** from **IOR littorals**, viz**., Bangladesh, Comoros, Kenya, Madagascar, Maldives, Mauritius, Mozambique, Seychelles, Sri Lanka and Tanzania.**
- ❖ The interaction's **theme was 'Collective Maritime Approach towards Countering Common Challenges',** which highlights the **present and necessary imperative for harmonising and collaborating capacities and capabilities** in the Indian Ocean Region (IOR), which is in consonance with the Government of India's vision of **SAGAR 'Security and Growth for All in the Region'.**

ABOUT SAGAR

- ❖ India's **SAGAR (announced in 2015), which stands for 'Security and Growth for All in the Region,'** is a **vision and policy framework** designed to **enhance maritime cooperation and security in the Indian Ocean Region (IOR).**
- ❖ The initiative emphasizes the importance of **promoting collective security** and **sustainable development for the benefit of all nations in the region.**
- ❖ For this, India would **cooperate on the exchange of information, coastal surveillance, building of infrastructure and strengthening their capabilities.**

6.3   INS SANDHAYAK

- ❖ **Garden Reach Shipbuilders and Engineers (GRSE)** delivered **INS Sandhayak**, the **largest survey vessel ever built in India** and **first in the series of four Survey Vessels (Large) or SVLs** being built by it, **to the Indian Navy on the occasion of the Navy Day.**
- ❖ The **110-metre-long warship** is the **lead vessel in a series of four SVLs** and the **reincarnation of another ship by that name**.
  - ✓ The **previous warship**, also a survey vessel, **was commissioned into the Navy in 1981 and decommissioned in 2021.**
- ❖ These warships are **capable of full-scale coastal and deep-water hydrographic survey of port** and **harbour approaches and determination of navigation channels and routes.**

- ❖ They can also **undertake surveys of maritime limits and collection of oceanographic and geographical data for defence applications** and **carry a helicopter each, participate in low-intensity combat and function as hospital ships.**
- ❖ They can **also be used for humanitarian assistance and disaster relief operations.**

6.4 NATIONAL AUTOMATED FINGERPRINT IDENTIFICATION SYSTEM (NAFIS)

- ❖ **National Automated Fingerprint Identification System (NAFIS) has been established** at **1022 locations across the country** as of November 2023.
- ❖ **VPN IDs have been created** and **shared with all States/UTs to ensure secured access to the NAFIS application.**

ABOUT NAFIS

- ❖ **Conceptualized and managed by the NCRB** at the **Central Fingerprint Bureau (CFPB) in New Delhi**, the **National Automated Fingerprints Identification System (NAFIS) project is a country-wide searchable database of crime- and criminal-related fingerprints**.

> **Madhya Pradesh** became the **first state in the country to identify a deceased person through NAFIS in 2022.**

- ❖ The **web-based application** functions as a **central information repository by consolidating fingerprint data from all states and Union Territories.**
- ❖ It **enables law enforcement agencies** to **upload, trace, and retrieve data from the database in real time on a 24×7 basis.**
- ❖ **NAFIS** assigns a unique **10-digit National Fingerprint Number (NFN) to each person arrested for a crime**.
  - ✓ This **unique ID will be used for the person's lifetime, and different crimes registered under different FIRs will be linked to the same NFN**.
- ❖ **ID's first two digits will be that of the state code in which the person arrested for a crime is registered**, followed by **a sequence number.**

6.5 INDIAN CYBER CRIME COORDINATION CENTRE (I4C)

- ❖ India's fight against cybercrime has witnessed a substantial breakthrough with the implementation of the **Citizen Financial Cyber Fraud Reporting and Management System.**
- ❖ The initiative, **established by** the **Indian Cyber Crime Coordination Centre(I4C)**, has proven **instrumental in curbing financial frauds and preventing the unlawful diversion of funds by cybercriminals.**
- ❖ The system has **recorded a staggering 12.8 lakh cybercrime complaints since its inception**.
- ❖ Remarkably, it has **successfully safeguarded over Rs 930 crore across more than 3.8 lakh complaints.**

ABOUT I4C

- ❖ **Indian Cybercrime Coordination Centre (I4C)** was **established by MHA, in New Delhi** to provide **a framework and eco-system for Law Enforcement Agencies (LEAs)** for **dealing with Cybercrime in a coordinated and comprehensive manner.**
- ❖ I4C is **envisaged to act** as the **nodal point** to **curb Cybercrime in the country.**
- ❖ The I4C **involves agencies** such as the **Central Bureau of Investigation, the National Investigation Agency, and the Indian Computer Emergency Response Team** .
- ❖ It aims to **create a system for sharing expertise and best practices related to cybercrime investigations and digital forensics**.

- ❖ It aims to **coordinate all activities related to implementation of Mutual Legal Assistance Treaties (MLAT) with other countries** related to cybercrimes in consultation with the concerned nodal authority in MHA.
- ❖ The I4C has **a dedicated website to share and access information, intelligence, and collaborate on cybercrime investigations.**

6.6	TABLE-TOP EXERCISE

- ❖ In an **effort to foster gender inclusivity and strengthen the skills of women military personnel** in **peacekeeping operations**, the **Indian Army conducted a Table-Top Exercise (TTX) at the Manekshaw Centre in New Delhi.**
- ❖ The **exercise was designed specifically** for **women officers from the Association of South-East Asian Nations (ASEAN).**
- ❖ It was **organized by the Centre for United Nations Peacekeeping (CUNPK)**, a **premier institution of the Indian Army dedicated to providing training in peacekeeping operations**
- ❖ The **TTX aligns with CUNPK's ongoing commitment to strengthening international cooperation and capacity-building in peacekeeping missions, with a special emphasis on empowering women in the field.**
- ❖ The tabletop exercise **serves as a follow-up to the joint military training between India and ASEAN member states, highlighting India's dedication to global peace, stability, and gender equality.**

6.7	AGNI 1 MISSILE

- ❖ Training launch of **'Agni-1' missile was carried out successfully from APJ Abdul Kalam Island, Odisha.**
- ❖ Agni-1 is a **proven very high precision missile system**.
- ❖ The **user training launch, carried out under the aegis of the Strategic Forces Command**, successfully validated **all operational and technical parameters.**

ABOUT AGNI 1

- ❖ **It is a short-range ballistic missile** having **range 700–900 km.**
- ❖ It is **a single-stage, solid-fuel missile.**
- ❖ It is **capable of carrying a nuclear warhead with an estimated payload of 1,000 kg.**
- ❖ It is **road-mobile**, which **gives it a high degree of mobility and makes it difficult for an enemy to target.**
- ❖ It **was first test-fired in 2002** and **first deployed in 2007 by Indian Army's Strategic Forces Command.**
- ❖ It **originated from India's 1983 Integrated Guided Missile Development Program (IGMDP).**
- ❖ **Agni-1 to 5 missiles** are **designed & developed by Defence Research & Development Organisation (DRDO).**

6.8	VINBAX 2023

- ❖ The Indian Armed Forces contingent **comprising 45 personnel reached Hanoi, Vietnam** to take part in the **fourth edition of Joint Military Exercise VINBAX-2023.**
- ❖ The **exercise will be conducted at Hanoi, Vietnam.**
- ❖ The **Indian contingent comprises 39 personnel from an Engineer Regiment of Bengal Engineer Group and six personnel of Army Medical Corps.**
- ❖ Exercise VINBAX was **instituted in 2018** and the **first edition was conducted at Jabalpur, Madhya Pradesh.**
- ❖ It is **an annual training event conducted alternatively in India and Vietnam.**
- ❖ Last edition was **conducted at Chandimandir Military Station in August 2022.**
- ❖ Aim of the exercise is to **foster collaborative partnership, promote inter- operability and share best practices** between the two sides under **Chapter VII of United Nations Charter on Peace Keeping Operations.**

6.9   PINAKA WEAPON SYSTEM

- ❖ In a major boost for the Indian Army, the **Defence Ministry has approved a Rs 2,800 crore proposal for buying around 6,400 rockets for Pinaka multi-barrel rocket launcher systems.**
- ❖ The Defence Ministry's Defence Acquisition Council's cleared the **proposal for the acquisition of two types of these rockets, known as Area Denial Munition Type 2 and Type-3.**
- ❖ The rockets **would be procured by the Indian Army from indigenous sources only.**
- ❖ **Two prominent contenders** for the rocket supply contract are **Economic Explosives Limited of Solar Industries and Munitions India Limited.**
- ❖ It is **named after the bow of Hindu god Shiva.**
- ❖ It has been **developed by the Defence Research and Development Organisation.**
- ❖ The weapon system is **one of the first few Indian military terms to have been exported to foreign countries, including Armenia.**
- ❖ As part of **larger artillery modernisation plans**, the **army has a requirement of 22 regiments of the Pinaka MBRL.**
  - ✓ **Pinaka regiments** of the **Indian Army** include **launchers with automated gun aiming and positioning systems and command posts.**

6.10   INS TARMUGLI

- ❖ **INS Tarmugli**, a **Fast Attack Craft** has been **commissioned into the Navy.**
- ❖ The vessel was **originally designed and constructed** by Kolkata-based **Garden Reach Shipbuilders & Engineers** and was **commissioned into the Indian Navy on March 17, 2001.**
- ❖ The **Trinkat Class FAC** which was **gifted to the Maldivian Naval Defence Forces (MNDF) in 2006 by India**.
- ❖ The ship was returned in May 2023 and **post extensive restoration work by the Naval Dockyard, Visakhapatnam, was reincarnated in its present avatar.**
- ❖ The warship is fitted with **advanced MTU engines, water jet propulsion, latest communication equipment, a 30 mm gun** and an **advanced Radar system**
- ❖ It will be **extensively used for coastal surveillance and protection of our ODAs in the KG Basin area** and **along the East Coast of India.**
- ❖ INS Tarmugli would operate **under the Naval Officer-in-Charge (Andhra Pradesh).**
- ❖ It is named after a **picturesque island in the Andaman group.**
- ❖ The **320-tonne INS Tarmugli,** measuring **48 meters in length**, can **achieve speeds in excess of 30 knots.**

6.11   AUTONOMOUS FLYING WING TECHNOLOGY DEMONSTRATOR

- ❖ India recently **conducted a pivotal flight trial** of its **indigenous high-speed flying wing UAV**, termed the **Autonomous Flying Wing Technology Demonstrator.**
- ❖ The **successful flight elevates the country** into an **elite league of nations that have mastered the controls for the flying wing configuration**.
- ❖ This **UAV is designed and developed by DRDO's Aeronautical Development Establishment in Bengaluru**.
- ❖ The **maiden flight of this aircraft was demonstrated in July 2022**, followed by **six flight trials in various developmental configurations using two in-house manufactured prototypes**.
- ❖ The aircraft prototype, with a complex arrowhead wing platform, is **designed and manufactured with light-weight carbon prepreg composite material developed indigenously.**

❖ The **autonomous landing** of this **high-speed UAV**, **without** the **need for ground radars/infrastructure/pilot, showcased a unique capability demonstration**, allowing **take-off and landing from any runway with surveyed coordinates**.
  ✓ This was possible using **onboard sensor data fusion with indigenous satellite-based augmentation using GPS Aided GEO Augmented Navigation (GAGAN) receivers** to improve the accuracy and integrity of GPS navigation.

6.12　AKASH MISSILE

❖ India has strongly demonstrated the **firepower of its Akash surface-to-air (SAM) weapon system**, where a **single firing unit simultaneously engaged and destroyed four unmanned targets** during the recent **Exercise Astrashakti 2023.**

❖ **India** became **first country to demonstrate the capability of engagement of 4 aerial targets simultaneously** at **25Km ranges by command guidance using single firing unit.**

❖ The Akash firing unit was **deployed with Firing Level Radar (FLR), Firing Control Centre (FCC), and two Akash Air Force Launcher (AAFL) launchers having five armed missiles.**

ABOUT AKASH

❖ AKASH is a **Short Range Surface to Air Missile System** to **protect vulnerable areas and points from air attacks**.

❖ It can **simultaneously engage Multiple Targets in Group Mode or Autonomous Mode**.

❖ It has **built-in Electronic Counter-Counter Measures (ECCM) features.**

❖ The **entire weapon system has been configured on mobile platforms.**

❖ The **Akash Weapon System** is indigenously **designed and developed by the Defence Research and Development Organisation (DRDO)** and **produced by defence public sector units along with other industries.**

❖ Akash has been **deployed by the Indian Air Force and the Indian Army for the last decade.**

❖ The Akash weapon system is also one of the indigenous defence systems that have **bagged orders from international customers.**

❖ Features-
  ✓ Range of Operation　:　**4.5 km to 25 km**
  ✓ Altitude of Operation :　**100 m up to 20 km**
  ✓ Guidance System　　　:　　**Command Guidance**
  ✓ Target types　　　　　:　　**Helicopters, Fighter aircrafts, UAVs etc.**
  ✓ Fully automatic with quick response time from target detection to kill.
  ✓ **Open system architecture ensures adaptability** to existing and futuristic Air Defence environments.
  ✓ **High immunity** against active and passive jamming.
  ✓ **Road and rail transportable** with quick mobilization and deployment capabilities.

6.13　SAMAR AIR DEFENCE SYSTEM

❖ The **Indian Air Force** successfully testfired its **SAMAR air defence missile system.**

ABOUT SAMAR DEFENCE SYSTEM

❖ SAMAR is **a short-range air-defence system jointly developed by the IAF's 7 Base Repair Depot (BRD)** and **11 BRD** in association with **Indian private-sector companies Simran Flowtech Industries and Yamazuki Denki.**

❖ The system **provides air defence against low-flying aerial targets with a maximum striking range of 12 km.**

❖ It **can engage aerial threats** with **missiles operating at a speed range of 2 to 2.5 Mach.**

- ❖ SAMAR employs the **IAF's shelf-life-expired Russian Vympel R-73E infrared-guided air-to-air missiles (AAMs).**
- ❖ The **AAMs are refurbished and upgraded to perform surface-to-air roles** and the **missiles** can be **launched in both single and salvo mode.**
- ❖ The system **comprises launch beams, a fire-control unit, an electronic control unit, and auxiliary units** including a **self-loading knuckle crane, a power supply system, and a servo mechanism feedback unit.**
- ❖ SAMAR is **intended to replace the IAF's Pechora systems**, which **have been in service since the 1970s.**

6.14   OPERATION PROSPERITY GUARDIAN

- ❖ The US has announced the creation of **an enhanced naval protection force** operating in the **southern Red Sea in an attempt to ward off mounting attacks from Yemen's rebel Houthis on merchant shipping.**
  - ✓ **Red Sea**, one of the most significant shipping routes in the world, **is seeing tensions rise as a spillover of the ongoing Israel-Hamas conflict.**
- ❖ Other participants in the effort included **Britain, Bahrain, Canada, France, Italy, the Netherlands, Norway, Seychelles and Spain.**
- ❖ The **new effort** would be **called Operation Prosperity Guardian.**

6.15   CENTRAL INDUSTRIAL SECURITY FORCE

- ❖ The Union Home Ministry has **approved the deployment of the Central Industrial Security Force (CISF)** in the **Parliament complex.**

ABOUT CISF

- ❖ CISF is **an armed force of the Union established under Central Industrial Security Force Act, 1968,** after the **recommendation of the Justice Mukherjee Commission.**
- ❖ CISF has **74 other formations including 12 reserve battalions and 08 training institutes.**
- ❖ CISF **provides security to the premises staff along with the security of property and establishments.**
- ❖ CISF is providing security to the **strategic establishment, including the Department of Space, the Department of Atomic Energy, the Airports, the Delhi Metro, the ports, the historical monuments** and the basic areas of Indian economy such as **petroleum and natural gas, electricity, coal, steel and mining.**
- ❖ Presently, CISF is **also providing security to the protected persons classified as Z Plus, Z, X, Y.**
- ❖ CISF is the **only force with a customized and dedicated fire wing.**

6.16   INS IMPHAL

- ❖ Indian Navy commissioned its **latest stealth guided missile destroyer INS Imphal in Mumbai.**
- ❖ INS Imphal has joined the **Western Naval Command.**

ABOUT INS IMPHAL

- ❖ Imphal is the **first warship to have been named after a city from the North East.**
- ❖ INS Imphal is **a potent and versatile platform** equipped with **state-of-the-art weapons and sensors,** including **surface-to-air missiles, anti-ship missiles, and torpedoes.**
- ❖ It is **constructed by Mazagon Dock Limited, Mumbai.**
- ❖ The ship is fitted with a **modern surveillance radar** which provides target data to the gunnery weapon systems of the ship.
- ❖ The INS Imphal is **equipped with BrahMos surface-to-surface missiles**, with a **displacement of 7,400 tonnes and an overall length of 164 meters.**
- ❖ INS Imphal is **powered by Combined Gas and Gas (COGAG) propulsion.**

- ❖ It is **capable** of achieving **speeds over 30 knots (56 km/hour).**
- ❖ INS Imphal boasts of a **high indigenous content of medium range surface-to-air missiles, anti-submarine indigenous rocket launchers, and 76mm super rapid gun mount.**
- ❖ The ship's **anti-submarine warfare capabilities are provided by indigenously developed rocket launchers, torpedo launchers, and anti-submarine warfare helicopters.**

6.17	INDIAN NAVY'S INFORMATION FUSION CENTRE FOR INDIAN OCEAN REGION (IFC-IOR)

- ❖ The **Indian Navy's Information Fusion Centre for Indian Ocean Region (IFC-IOR)** located in **Gurugram** played a quiet but crucial role in the backend as the hijacking incident of (Merchant Vessel) M.V. Ruen unfolded by coordinating between the Navy and with the ship owner.

ABOUT IFC-IOR

- ❖ The **IFC-IOR** was **inaugurated on December 2018.**
- ❖ The IFC-IOR is **located within the premises of the Information Management and Analysis Centre (IMAC)**, the **nodal agency for maritime data fusion set up after the 26/11 Mumbai terror attacks** which itself is set to be upgraded into the National Maritime Domain Awareness (NDMA) centre in the near future.
    - ✓ IMAC is jointly **operated by the Navy and Coast Guard.**
    - ✓ It is the **main centre** of the **National Command Control Communication and Intelligence System (NC3I).**
- ❖ The centre **aims to strengthen maritime security in the region and beyond**, by building a **common coherent maritime situational picture** and acting as a maritime security information sharing hub for the region.
- ❖ The **centre currently hosts 12 International Liaison Officers (ILOs)** from **Australia, France, Italy, Japan, Maldives, Mauritius, Myanmar, Seychelles, Singapore, Sri Lanka, U.K. and U.S.** and **actively collaborates with 43 multinational constructs and over 25 partner countries.**

6.18	1ST WOMAN CISF CHIEF

- ❖ The Centre govt. recently appointed **Nina Singh as the Director General of CISF.**
- ❖ She has become the **first woman to head this force**.
- ❖ Singh, a **1989-batch IPS officer of Rajasthan cadre**, is **currently working as Special DG, CISF.**
- ❖ She has **been appointed to the post till her superannuation on July 31, 2024.**

7. SPACE

7.1   COMET P12/ PONS-BROOK

- Astronomers at the **Indian Institute of Astrophysics (IIA)** have **used** the **Himalayan Chandra Telescope (HCT) in Hanle, Ladakh**, to **photograph the Comet P12/Pons-Brooks.**
- According to IIA, this comet has revealed **many outbursts of gas and dust** and **has been dubbed the Devil Comet or the Millennium Falcon due to its appearance.**
  - ✓ The comet **will become brighter in the coming months and may even become a naked eye comet.**

> The **Himalayan Chandra Telescope in Hanle, Ladakh**, is a **part of IIA's Indian Astronomical Observatory**, and **is operated remotely from the IIA CREST Campus in Hoskote, Karnataka.**

- Comet P12/Pons-Brooks was **discovered in 1812 and orbits the Sun with a period of 71 years**.
- During its **earlier approaches to the Sun**, astronomers had observed multiple ejections of gas and dust from its nucleus, which typically gave it an appearance of being horned.
- This **comet will pass closest to the Sun on April 21, 2024**, and **will have its closest approach to Earth on June 2, 2024 (when it will be 1.5 times the Earth-Sun distance away from us).**
  - ✓ It is **expected that this comet will be easily seen with small telescopes or binoculars, or even with the naked eye at that time.**

7.2   SUB – NEPTUNES

- Astronomers have **identified six sub-Neptune planets orbiting** in **a rare synchronised dance around a distant star.**
- The **star**, known as **HD110067**, is located **approximately 100 light-years away in the constellation Coma Berenices** and **is about 20% less massive than our Sun**.
- The **six planets were detected** by observing **minute dimming of the star's brightness as each planet transited, or passed in front of, the star from our perspective on Earth.**
- The newly discovered sub-Neptunes **range from 1.9 to 2.9 times Earth's diameter and all seem to have substantial atmospheres.**
  - ✓ **None of the six planets lie within the traditional habitable zone**—the region around a star where conditions might be right for liquid water and potentially life.
  - ✓ However they **do possess atmospheres that could modify their surface temperatures, expanding the potentially habitable zone for such planets.**
- The **orbital resonance of these planets** is intriguing, meaning **their orbits are synchronised** in such a way that **they have remained stable for about 4 billion years.**

> An **orbital resonance** occurs when **two satellites have orbital periods** that are **related by integer relationships**, allowing them to **exert a gravitational influence over each other** and **affecting the eccentricity of their orbits.**

  - ✓ This suggests that **no major disruptions, like colossal impacts, have disturbed their paths since their formation.**

ABOUT SUB-NEPTUNES

- Planets with **radii between that of Earth and Neptune** are called **'Sub-Neptunes'**.
- **Sub-Neptunes are the most commonly observed type of planet in our galaxy**, yet their fundamental nature remains a puzzle.

❖ They **could be rocky worlds with thick atmospheres of hydrogen and helium gas**, **or** perhaps **composed of rock and ice with warm, water-rich atmospheres.**

7.3	ADITYA L1

❖ The **Indian Space Research Organisation (ISRO)** reported that the **Solar Wind Ion Spectrometer (SWIS)**, the **second component of the Aditya Solar Wind Particle Experiment (ASPEX) within its inaugural solar mission, Aditya L1**, has **become operational.**

❖ As per a statement issued by ISRO, the **Aditya Solar Wind Particle Experiment (ASPEX) payload onboard India's Aditya-L1 satellite is performing normally.**

❖ **ASPEX comprises** two cutting-edge instruments - the **Solar wind Ion Spectrometer (SWIS)** and **STEPS (SupraThermal and Energetic Particle Spectrometer).**

ABOUT ADITYA L1

❖ ISRO's **Polar Satellite Launch Vehicle (PSLV-C57) on September 2 had successfully launched the Aditya-L1 spacecraft**, from the **second launch pad of Satish Dhawan Space Centre, Sriharikota.**

❖ Aditya-L1 is the **first Indian space-based observatory** to **study the Sun from a halo orbit around first Sun-earth Lagrangian point (L1)**, which is **located roughly 1.5 million km from Earth**.

❖ **Objectives**
  ✓ **Study of Solar upper atmospheric** (chromosphere and corona) dynamics.
  ✓ Study of **chromospheric and coronal heating, physics of the partially ionized plasma**, initiation of the coronal mass ejections, and flares
  ✓ Observe the **in-situ particle and plasma environment** providing data for the study of particle dynamics from the Sun.
  ✓ Physics of **solar corona and its heating mechanism**.
  ✓ Diagnostics of **the coronal and coronal loops plasma**: Temperature, velocity and density.
  ✓ **Development, dynamics and origin of CMEs etc.**

❖ **Payloads-** There are **total seven payloads on-board with four of them carrying out remote sensing** of the Sun and **three of them carrying in-situ observation.**

Type	Sl. No.	Payload	Capability
Remote Sensing Payloads	1	Visible Emission Line Coronagraph(VELC)	Corona/Imaging & Spectroscopy
	2	Solar Ultraviolet Imaging Telescope (SUIT)	Photosphere and Chromosphere Imaging- Narrow & Broadband
	3	Solar Low Energy X-ray Spectrometer (SoLEXS)	Soft X-ray spectrometer: Sun-as-a-star observation
	4	High Energy L1 Orbiting X-ray Spectrometer(HEL1OS)	Hard X-ray spectrometer: Sun-as-a-star observation
In-situ Payloads	5	Aditya Solar wind Particle Experiment(ASPEX)	Solar wind/Particle Analyzer Protons & Heavier Ions with directions
	6	Plasma Analyser Package For Aditya (PAPA)	Solar wind/Particle Analyzer Electrons & Heavier Ions with directions
	7	Advanced Tri-axial High Resolution Digital Magnetometers	In-situ magnetic field (Bx, By and Bz).

LAGRANGE POINTS

❖ They have **been named after Italian-French mathematician Joseph-Louis Lagrange.**

❖ There are **five Lagrange points, L1 to L5**, between **any two-celestial body system.**

❖ At these **positions**, the **gravitational pull of the celestial bodies equals the centripetal force**, thus the **forces acting on the third body cancel each other out.**

| 7.4 | **1RED SPRITE** |

❖ A **European Space Agency (ESA) astronaut recently** photographed an uncommon occurrence termed a **red sprite.**
❖ Scientists approximated the **dimensions of the red sprite in the astronaut's image to be around 14 by 26 kilometres (8.7 by 16.2 miles).**

ABOUT RED SPRITE

❖ A **red sprite** represents **an extraordinary meteorological phenomenon** categorized as **a Transient Luminous Event (TLE).**
❖ Occasionally dubbed red lightning, it **occurs above thunderclouds at altitudes between 40 and 80 kilometres (25 - 50 miles) above the Earth's surface**.

> **Blue jets** are **another example of a Transient Luminous Event.**

❖ **Unlike typical lightning bolts** that descend from the clouds to the ground, **a sprite behaves inversely, ascending into the atmosphere, resembling a form of reverse lightning.**

| 7.5 | **PLANKTON, AEROSOL, CLOUD, OCEAN ECOSYSTEM (PACE) MISSION** |

❖ NASA is set to launch the **Plankton, Aerosol, Cloud, Ocean Ecosystem (PACE) mission in 2024, with** the aim of **enhancing our understanding of Earth's atmosphere**.
❖ **Advanced polarimeters** will be **employed to study the interplay of light, aerosols, and clouds**, contributing to a **deeper comprehension of their impact on air quality and climate.**
❖ PACE will **orbit Earth every two days.**
❖ The **mission's data** will have **practical applications, such as improving air quality forecasts and informing policy decisions.**

PAYLOADS

❖ The **Ocean Color Instrument (OCI)**, the **primary science instrument for PACE**, is **designed to measure the ocean's color across a spectrum from ultraviolet to shortwave infrared.**
❖ In addition, PACE will feature **two polarimeters – the Spectro-polarimeter for Planetary Exploration (SPEXone)** and **the Hyper Angular Research Polarimeter (HARP2).**
   ✓ NASA explains that the **collaboration between SPEXone and HARP2** will provide **complementary spectral and angular sampling, polarimetric accuracy, and spatial coverage.**

ABOUT AEROSOLS

❖ Aerosols — tiny airborne particles such as sea salt, smoke, dust, and pollutants — play a **critical role in shaping our planet's climate**.
❖ They **scatter and absorb sunlight**, **influencing how much solar energy reaches the Earth's surface.**
❖ Moreover, these particles **are central to cloud formation, affecting weather patterns and climate dynamics.**

| 7.6 | **ENVIRONMENTAL CONTROL AND LIFE SUPPORT SYSTEM (ECLSS)** |

❖ Recently, ISRO Chairman S. Somanath stated that **ISRO will be independently developing** the **Environmental Control and Life Support System (ECLSS) for the Gaganyaan mission**.

❖ The **system is being termed pivotal by experts** for **sustaining human life beyond the Earth's confines**.

ABOUT ENVIRONMENTAL CONTROL AND LIFE SUPPORT SYSTEM (ECLSS)

❖ The **ECLSS**, a technological cornerstone, **intricately manages air quality and water supply** essential for astronaut survival in the challenging environment of space.

❖ Using mechanisms **incorporating activated charcoal beds, catalytic oxidizers, and molecular sieves**, this **system impeccably regulates cabin air quality, ensuring a breathable atmosphere for the crew**.

❖ The **Oxygen Generation System**, employing **cutting-edge electrolysis, separates water molecules into oxygen and hydrogen gas**.

   ✓ This closed-loop process ensures a constant oxygen supply for breathing while efficiently utilizing hydrogen byproducts to generate water.

❖ Additionally, the **Water Recovery System** reclaims and purifies water from diverse sources, including crew members' urine and cabin humidity.

❖ **Air Revitalization System** is dedicated to **cleaning circulating cabin air.**

ABOUT GAGANYAAN

❖ The **Gaganyaan project** envisages a **demonstration of Indian Space Research Organisation's human spaceflight capability** by launching a 3-member **crew to an orbit of 400 km** for **3 days** and **bringing them safely back to earth by landing in Indian sea waters.**

❖ Launch vehicle - **LVM3 (Geosynchronous Satellite Launch Vehicle Mk III).**

❖ It consists of **solid stage, liquid stage and cryogenic stage.**

7.7   CASSINNI MISSION

❖ **Molecules** including **methanol, ethane, and oxygen are present in gaseous plumes emitted from Saturn's moon Enceladus**, a re-analysis of data from the Cassini mission suggests.

❖ Scientists have identified presence of **hydrogen cyanide (HCN), acetylene (C2H2), propylene (C3H6), and ethane (C2H6)**, and **traces of an alcohol (methanol) and molecular oxygen.**

❖ The **Cassini spacecraft first discovered large plumes of material escaping into space** from **Enceladus's southern hemisphere in 2005**.

ABOUT CASSINI MISSION

❖ Launched in **1997.**

❖ NASA's Cassini spacecraft was the **first to orbit Saturn**, during its **13-year landmark exploration of the gaseous giant planet, its rings and its moons from 2004 to 2017.**

❖ It was **designed to explore the Saturn system, including its rings and moons, with a special focus on Titan, Saturn's largest moon.**

❖ It **carried Huygens lander**, which **landed on Titan in 2005**.

❖ It was **a joint endeavor of NASA, ESA (European Space Agency), and Italian space agency (ASI).**

7.8   TEMPO SATELLITE

❖ TEMPO is **NASA's first Earth-observation satellite in geostationary orbit** and has **developed further from previous polar-orbiting satellites provided daily observations to provide 10 to 12 daily scans.**

❖ **It stands for -Tropospheric Emissions: Monitoring of Pollution or widely known as TEMPO.**

❖ It aims to **measure atmospheric pollution from Canada's oil sands to the Yucatán Peninsula**.

❖ It also **gets data from the Atlantic Ocean to the Pacific Ocean.**

❖ The TEMPO instrument is **a UV-visible spectrometer**, and the **first ever space-based instrument to monitor air pollutants hourly across the North American continent during daytime.**

- ❖ It collects **high-resolution measurements of ozone, nitrogen dioxide and other pollutants, data which will revolutionize air quality forecasts.**
- ❖ The data **gathered by TEMPO** will be **shared with the National Oceanic and Atmospheric Administration (NOAA) and the Environmental Protection Agency (EPA) to enhance air quality forecasting.**
- ❖ NASA and Intelsat are nurturing **hopes for TEMPO's functionality extending up to 10-15 years.**

7.9   ISRO BAGS LEIF ERIKSON PRIZE

- ❖ ISRO has been awarded the **2023 Leif Erikson Lunar Prize** by the **Exploration Museum in Iceland's Husavik** for its **successful Chandrayaan-3 mission.**
- ❖ The award **celebrates the first soft-landing of a spacecraft near the lunar south pole** and **"ISRO's indomitable spirit in advancing lunar exploration and contributing to understanding celestial mysteries,".**

ABOUT LEIF ERIKSON AWARD

- ❖ The **Leif Erikson Award** is **an annual prize given by the Exploration Museum since 2015.**
- ❖ It is **named after Leif Erikson** — a **Norse explorer thought to be the first European to set foot on continental America**, almost **four centuries before the expedition of Christopher Columbus.**

ABOUT ISRO

- ❖ **ISRO**, previously the **Indian National Committee for Space Research (INCOSPAR)**, was **set up in 1962.**
- ❖ Later, on **August 15, 1969, ISRO superseded INCOSPAR** and was **subsequently brought under Dept of Space in 1972.**
- ❖ It is the **national space agency of India.**
- ❖ It operates as the **primary research and development arm of the Department of Space (DoS)**, which is **directly overseen by the Prime Minister of India** while the **Chairman of ISRO also acts as the executive of DoS.**
- ❖ **Headquarters- Bengaluru**

ABOUT CHANDRAYAAN-3

- ❖ Chandrayaan-3 was **India's third mission to the moon**, and the **second attempt to carry out a soft-landing on the lunar surface.**
- ❖ ISRO managed to place the **Vikram lander on the lunar surface** and **roll out the robotic rover, Pragyaan.**
- ❖ Both instruments **collected data and beamed it back to Earth for 15 days** — **before** being put to sleep as the **lunar night set in.**
- ❖ Additionally, the **Spectro-polarimetry of HAbitable Planet Earth (SHAPE) payload** — which is meant to observe the Earth — operated from **within the propulsion module of the spacecraft.**

7.10   ASTROSAT

- ❖ India's **first multi-wavelength space-based observatory, AstroSat**, has detected **intense sub-second X-ray bursts** emanating from **a neutron star with an ultrahigh magnetic field, known as a magnetar.**

ABOUT ASTROSAT

- ❖ **Launched in 2015,** into a **650 km orbit inclined at an angle of 6 deg to the equator** by **PSLV-C30.**
- ❖ AstroSat is the **first dedicated Indian astronomy mission** aimed at **studying celestial sources in X-ray, optical and UV spectral bands simultaneously.**
- ❖ The **payloads** cover the **energy bands of Ultraviolet (Near and Far), limited optical and X-ray regime (0.3 keV to 100keV).**
- ❖ One of the unique features of AstroSat mission is that **it enables the simultaneous multi-wavelength observations of various astronomical objects with a single satellite.**

❖ The spacecraft control centre at **Mission Operations Complex (MOX) of ISRO Telemetry, Tracking and Command Network (ISTRAC), Bengaluru manages the satellite** during its entire mission life.
❖ Payloads

ABOUT MAGNETARS

❖ **Magnetars** are **neutron stars distinguished by an ultrahigh magnetic field**, **exceeding** that **of Earth by over one quadrillion times**.
❖ The **emission of high-energy electromagnetic radiation** in these celestial objects **results from the decay of their magnetic fields**.
❖ Additionally, **magnetars exhibit notable temporal variability**, including **slow rotations, rapid spin-downs, and brief but intense bursts**, **extending to months-long outbursts**.

7.11 OSIRIS-APEX

❖ In an unprecedented extension of its celestial duties, the **spacecraft that delivered asteroid samples from Bennu, OSIRIS-REx** has embarked on a new mission, and NASA has renamed it.
❖ The mission will **now be called OSIRIS-APEX (Origins, Spectral Interpretation, Resource Identification, and Security—Apophis Explorer)** as it **heads to study the near-Earth asteroid Apophis.**

ABOUT OSIRIS-APEX

❖ **Apophis**
  ✓ Asteroid 99942 Apophis is a **near-Earth object (NEO)** estimated to **be about 1,100 feet (340 meters) across**.
  ✓ **Apophis**, a **stony "S-type" asteroid composed of silicate materials and nickel-iron, differs significantly from the carbon-rich "C-type" Bennu.**
  ✓ Discovered- **2004**
  ✓ It originated in the **main asteroid belt between Mars and Jupiter.**
❖ The **upcoming encounter with Earth on April 13, 2029, will bring Apophis within 20,000 miles (32,000 kilometers) of our planet.**
❖ It aims to **observe the physical changes induced by Earth's gravitational pull during Apophis' flyby**.
  ✓ These **changes could include** alterations in the asteroid's orbit, rotation speed, and surface features such as quakes or landslides.

ABOUT OSIRIS-REX MISSION

❖ The OSIRIS-REx mission made headlines when it **successfully returned a sample from asteroid Bennu to Earth on September 24.**
❖ After a **seven-year, 4 billion-mile odyssey, the spacecraft still had ample fuel and fully functional instruments.**

7.12 FEAST- FINITE ELEMENT ANALYSIS OF STRUCTURES SOFTWARE

❖ The **Vikram Sarabhai Space Centre (VSSC)** of the ISRO, has developed an analysis software **Finite Element Analysis of Structures Software (FEAST).**
❖ It is used to perform **Finite Element Analysis (FEA) of various types of structures** including **rockets, aircraft, satellites, buildings, etc.**
❖ Operable in **both Windows and Linux operating systems**, the software is capable of running on systems with minimal hardware configurations.
❖ FEAST is **available in three versions**, based on the **sophisticating levels and requirements of a broad category of users —**
  ✓ **academic** (for students and educational institutions),

✓ **premium** (for small and medium scale industries) and
✓ **professional** (for general large scale applications).

ABOUT FEA

❖ FEA is a **computerised method for predicting how a component or a structure reacts to real-world forces**-like various types of **structural loads, thermal conditions and other physical effects** that a structure experiences while in operation.

7.13 INTERNATIONAL SPACE STATION

❖ The **Russian and the US space agencies** have agreed to **cooperate on jointly sending crews to the International Space Station (ISS) until at least 2025.**

❖ The so-called **cross-flights** — which **involve sending one US astronaut as part of the crew of a Russian spacecraft** and **one Russian cosmonaut as part of an American crew** — were extended **"to maintain the reliability of the ISS operation,"**.

ABOUT ISS

❖ International Space Station (ISS) is a **large spacecraft around Earth** which serves as a home for **crews of astronauts and cosmonauts**.

❖ European Space Agency, United States (NASA), Japan (JAXA), Canada (CSA) and Russia (Roscosmos) are key partners for ISS.

❖ ISS was **taken into space piece-by-piece and gradually built-in orbit.**

❖ First module named **Zarya (translates to "sunrise") was launched in 1998.**

❖ The ISS was designed **to perform microgravity and space environment experiments.**

❖ It **orbits the Earth at an average altitude of 400 kilometers (250 miles)**.

❖ It needs just **some 93 minutes to circle the globe**, completing **15.5 orbits per day.**

❖ It helps in **critical research in fluids, combustion, life support systems** and **radiation environment** that **could not be done anywhere else.**

7.14 SLIM SPACECCRAFT

❖ Japan's **Smart Lander for Investigating Moon (SLIM) spacecraft entered into orbit around the moon** after a months-long journey, and ahead of its planned moon-landing attempt in January 2024.

❖ Its **apogee (farthest point) in this orbit is 4,000 km** and **perigee (closest point) is 600 km above the lunar surface.**

❖ If the **attempt succeeds, Japan will become only the fifth country to soft-land a robotic craft on the natural satellite**, months after India succeeded with its Chandrayaan 3 mission in August.

ABOUT SLIM

❖ SLIM is a **spacecraft built and launched by the Japan Aerospace Exploration Agency (JAXA)** on September 7, 2023, from the **Tanegashima spaceport.**

❖ It weighed **only 590 kg at launch.**

❖ SLIM was launched together with **XRISM**, a **next-generation X-ray space telescope**, onboard **an H-2A rocket.**
  ✓ The **X-Ray Imaging and Spectroscopy Mission (XRISM)** is a **joint mission** of the **JAXA and NASA**, with contributions from the **European Space Agency (ESA) and Canadian Space Agency** as well.
  ✓ It aims to **observe X-rays coming from deep space and to identify their wavelengths with unprecedented precision.**

7.15	KILONOVA EXPLOSION

- ❖ An international team of researchers have developed a **method to model the observable signs** of a **kilonova explosion** from the **explosive merger of two orbiting neutron stars**.
- ❖ Neutron stars are **superdense astrophysical objects** formed at the **end of a massive star's life in a supernova explosion.**
  - ✓ Sometimes, **neutron stars orbit each other in binary systems**.
  - ✓ These systems **constantly lose energy by emitting gravitational waves** until **they eventually collide and merge.**
  - ✓ Such mergers let researchers study the physical properties of the most extreme conditions in the universe.
  - ✓ For example, **the conditions of these high-energy collisions lead to the formation of heavy elements like gold.**

8. ENVIRONMENT

8.1	UNESCO REPORT WARNS OF ETHICAL RISKS OF CLIMATE ENGINEERING

- ❖ **UNESCO's World Commission on the Ethics of Scientific Knowledge and Technology (COMEST)** has published its **first ever report on the Ethics of Climate Engineering**.
- ❖ It **proposes a comprehensive global ethical perspective** on **climate engineering technologies and lists specific recommendations for their possible use.**

ABOUT CLIMATE ENGINEERING

- ❖ **Climate Engineering**, also **known as "geoengineering,"** is the **intentional large-scale intervention in the Earth's climate system to counter climate change.**
- ❖ **Climate engineering is classified into two groups of techniques-**
  - ✓ **Carbon dioxide removal (CDR)**, which removes and stores the emitted carbon dioxide from the atmosphere. CDR is **expensive**, involves **five approaches**. **These include**
    - ➢ **direct air capture**,
    - ➢ **land-use management** through afforestation / reforestation,
    - ➢ **sequestering carbon dioxide (CO_2) produced by biomass** that may also be used as an energy source,
    - ➢ **increasing the uptake of CO_2 by the ocean** and
    - ➢ **enhancing natural weathering processes that remove CO_2 from the atmosphere.**
  - ✓ **Solar radiation modification (SRM)**, which reflects sunlight back to space. This approach include.
    - ➢ **increasing the surface reflectivity of the planet by painting structures with reflective paints**,
    - ➢ **planting crops with high reflectivity, enhancing the reflectivity of marine clouds to reduce the amount of solar energy reaching the surface,**
    - ➢ **removing infrared-absorbing clouds from the atmosphere to reduce trapped heat,**
    - ➢ **Injecting aerosols into the lower stratosphere to mimic the cooling** induced by volcanic eruptions and
    - ➢ **lowering the solar radiation reaching the Earth by placing reflectors or shields** in space .

ETHICAL CONCERNS

- ❖ Climate engineering could **undermine existing climate policies** and **divert funding from vital emission reduction and adaptation efforts**.
- ❖ The **unknown and unintended consequences of these technologies** need **risks evaluation and management**.

- ❖ The **high cost of developing and deploying these tools could also exacerbating global inequalities** between countries of different economic weight, especially in terms of the distribution of risks.
- ❖ Geoengineering tools **could also have the potential for military or geo-political use.**

RECOMMENDATIONS

- ❖ UNESCO recommended its Member States to **introduce legislation that regulates climate action** while also **considering the transboundary impact of their decisions on all human beings and ecosystems.**
- ❖ The report also **urged countries belonging to a geographic area to make regional agreements to avoid risks of unequal spatial distribution of effects.**
- ❖ It called for a **ban on using climate engineering techniques as a weapon (weaponisation).**
- ❖ Also, it added that **political or economic interests should not interfere with scientific research on climate engineering.**

8.2	SHETTIHALLI WILDLIFE SANCTUARY

- ❖ The **National Green Tribunal (NGT)** has told the **state government to resolve within six months** the issues that have led to the **delay in the notification of eco-sensitive zone (ESZ) status for the Shettihalli wildlife sanctuary**.
- ❖ The **draft notification** for the **sanctuary was issued in 1974** and the **final notification came in 1977**. However, **confusion over the boundaries of the sanctuary has led to delay in the identification of the ESZ.**
  - ✓ ESZ is a **designated area around a protected area** where **certain activities are regulated to minimize human impact** and **protect the surrounding environment.**
- ❖ The delay has **led to an increase in the change of land use with the area under encroachment increasing from 616.18 hectares to 2,000 hectares.**

ABOUT SHETTIHALLI WILDLIFE SANCTUARY

- ❖ It is located in **Shivamogga, Karnataka.**
- ❖ **Area- 395 sq km**
- ❖ **Mandagadde Natural Bird Sanctuary**, is **also a part** of this Sanctuary.
- ❖ **The Tunga Anicut Dam** is situated within **the sanctuary and provides shelter for otters and water birds.**
- ❖ **Terrain- The area is plain to undulating with a few pockets consisting of very steep and undulating terrains and hillocks along with perennial nalas and a number of small streams.**
- ❖ **Vegetation** ranges from **tropical evergreen** and **semi-evergreen forests on the western side** to **eastern and central parts being mostly covered by dry and moist deciduous forests.**
  - ✓ **Tree species** including **silver oak, teak, Indian Thorny Bamboo, Sandal, Rosewood, Honne and Nandi are found.**
- ❖ **Fauna includes- Tiger, Leopard, Wild Dog, Jackal, Gaur, Elephant, Sloth Bear Sambar etc.**

8.3	BANDIPUR TIGER RESERVE

- ❖ The **tiger which had killed a woman** at **Balluruhundi close to Hediyala range of Bandipur National Park** was darted and captured recently.
- ❖ A **massive combing operation involving more than 200 forest department personnel and tribals** from the local villages, was launched soon after the woman was killed.

ABOUT BANDIPUR TIGER RESERVE

- ❖ It is **situated in two contiguous districts (Mysore and Chamarajanagar) of Karnataka** and **located at the tri-junction area of the States of Karnataka, Tamil Nadu and Kerala.**

❖ When **Project Tiger was launched in 1973**, **Bandipur was among the first nine reserves to be brought under the flagship programme** '**Project Tiger**' and it **included most areas that were already a protected area as Venugopal Wildlife Park.**

❖ It was **upgraded to a national park** and **renamed as Bandipur and the adjacent reserve forests were included under it to extend its area to 874.20 sq km**.

❖ At present, **it has an area of 912.04 sq km while the adjoining Nugu Wildlife Sanctuary too has been incorporated under Bandipur, which is recognised as among the prime tiger habitats in the world.**

❖ **Flora** comprises of **diverse vegetation of dry deciduous to tropical mixed deciduous**.
   ✓ **Species** like **rosewood, Indian kino tree, sandalwood, Indian laurel, clumping bamboo** are found here etc.

❖ The **Bandipur Tiger Reserve** is an **important component of the country's first biosphere reserve** – **Nilgiri Biosphere Reserve** and the **landscape spanning Bandipur, Nagarahole, Mudumalai, and Wayanad complex** is **home** not only **to the highest number of tigers in the country – about 724** - but is **also to the largest Asian Elephant population.**
   ✓ Fauna also includes **gaur, sloth bear, golden jackal, dhole and four-horned antelope etc**.

8.4 TROPICALISATION

❖ **Rising sea temperatures** due to **climate change** are **causing tropical marine species to move from the equator towards the poles, according to a study**.

❖ The research also shows that **temperate species are receding as it gets too warm**, they **face increased competition for habitat**, and **new predators arrive on the scene.**

❖ This **mass movement of marine life, termed tropicalisation**, is **changing the ecological landscape of oceans and leading to a cascade of consequences for ecosystems, biodiversity, and potentially the global economy.**

❖ The **warm-water boundary currents are heating faster** than the **global seawater average, facilitating the poleward movement of species**, and **reinforcing the retraction of temperate species**.

❖ The **first instance of this process was identified in the Mediterranean Sea**, now considered a **"tropicalisation hotspot"** due to **an increase in tropical species present.**

8.5 LOSS AND DAMAGE FUND

❖ On the opening day of the **COP28 summit of UN Framework Convention on Climate Change (UNFCCC) in Dubai**, a **loss and damage fund to help vulnerable countries cope with the impact of climate change has been officially launched**.

ABOUT LOSS AND DAMAGE FUND

❖ The loss and damage fund **is a global financial package** to **ensure the rescue and rehabilitation of countries facing the cascading effects of climate change**.

❖ The term **refers** to the **compensation that rich nations, whose industrial growth has resulted in global warming and driven the planet into a climate crisis**, must **pay to poor nations, whose carbon footprint is low but are facing the brunt of rising sea levels, floods, crippling droughts, and intense cyclones, among others**.
   ✓ The changing climate has **impacted lives, livelihoods, biodiversity, cultural traditions, and identities.**

❖ It **was first announced during COP27 in Sharm el-Sheikh, Egypt**, in 2022.

❖ The **World Bank** will **oversee the loss and damage fund in the beginning**, with the source of funds being rich nations, such as the US, the UK and the EU, as well as some developing countries.

❖ The **initial funding is estimated to be $475 million** — host UAE pledged $100 million, the European Union promised $275 million, $17.5 million from the US, and $10 million from Japan.

8.6   CLIMATE CLUB

❖ Climate Club was launched at the **28th Conference of Parties (COP28)** to the **United Nations Framework Convention on Climate Change.**

ABOUT CLIMATE CLUB

❖ It is an **initiative aimed at cooperation between countries** in **decarbonising the industrial sector.**
❖ It was **first proposed by Germany during a G7 summit meeting.**
❖ Led by **Germany and Chile**, the Club has **garnered support from 36 member countries including Kenya, the European Union, Switzerland and others.**
   ✓ **India** is **not** a member.
❖ The Club is **claimed to currently represent 55 per cent of the global economy.**
❖ The Climate Club **aims to make decarbonisation of industries successful** for **climate and businesses**, through **ambitious policies, alignment of methodologies** and **standards** and **improving finance and assistance for emerging and developed economies**.
❖ The Club's **core idea is based on the fact** that the **hard-to-abate sectors, including steel, cement, and chemicals, are responsible for about 70 per cent of global CO2 emissions from industry**, and **developed countries account for a significant share of these emissions.**
❖ At the launch of the Club at COP28, the **Climate Change Work Programme 2024 was put forward** which details programmatic activities of the club. The **activities are divided into three key pillars**:
   ✓ **Pillar 1**: Advancing ambitious and transparent climate change mitigation policies.
   ✓ **Pillar 2**: Transforming industries
   ✓ **Pillar 3**: Boosting international cooperation and partnership

8.7   MIYAWAKI PLANTATION

❖ In a bid **to boost forest cover in the coal belt region of Chhattisgarh**, Coal India Ltd subsidiary, **South Eastern Coalfileds Ltd (SECL) will undertake plantation using the Miyawaki method** for the **first time in its operational areas**.
❖ The plantation using the Miyawaki technique will be **carried out over a period of two years in which about 20,000 saplings will be planted**.
❖ The plantation will **include big plants such as Bargad, Peepal, Aam, Jamun etc**, **medium plants such as Karanj, Amla, Ashok etc,** and **small plants such as Kaner, Gudhal, Trikoma, Ber, Anjeer, Nimbu etc.**

ABOUT MIYAWAKI METHOD

❖ It was **named after Japanese botanist Akira Miyawaki**
❖ It involves **planting native trees, shrubs and groundcover plants within every square meter** to create a **dense canopy layer of tall trees in small land parcels.**

> It was **developed in the 1970s** to **densify green cover within a small parcel of land.**

❖ The **plants used in the Miyawaki method are mostly self-sustaining** and **don't require regular maintenance like manuring a nd watering.**
❖ In this method, the **trees become self-sustaining and they grow to their full length within three years.**
❖ Advantages- **Forests grow rapidly; Utility in urban forestry; increase carbon sequestration, reduce air and noise pollution and attract local birds and insects.**

8.8	DIEL VERTICAL MIGRATION (DVM)

- ❖ Species of the **deep ocean may seem as strange as aliens from another planet** but these **creatures are products of the same biochemistry that impels other animals**.
- ❖ Driven by the **need for food and to avoid predators, deep-sea marine animals** – especially **tiny free-floating zooplanktons – swim up to the surface at night**.
- ❖ The daily, synchronized movement of marine animals between the surface and deep layers of the open ocean **is called diel vertical migration (DVM).**
- ❖ It's **also known as diurnal vertical migration**.
- ❖ The **timing** of this migration **is tuned to the natural rhythms of sunrise and sunset.**
- ❖ This **type of migration is the largest animal migration on the planet** and **is undertaken every single day by trillions of animals in every ocean.**
- ❖ It makes **for a captivating display of nature's ingenuity**.
- ❖ It is **also a crucial player in the** <u>earth's carbon cycle</u>.
    - ✓ Animals **dwelling in the mesopelagic layer** (layer that extends from 200 to 1,000 meters below the ocean's surface) **actively remove substantial amounts of carbon from the upper ocean as they feed on surface-dwelling plankton.**
    - ✓ When these **organisms return to deeper waters**, they **carry the carbon with them.**
    - ✓ Even within the **mesopelagic layer or twilight zone**, some **migratory animals become part of the food chain, passing on the carbon they have consumed to their predators.**
    - ✓ The **carbon-rich waste produced by the predators then sinks to the ocean floor**, where it **remains trapped for millennia.**

8.9	DODO SPECIES RESURRECTION PROJECT

- ❖ An **ambitious new project** — a collaboration between **genetic engineering company Colossal Biosciences** and the **Mauritian Wildlife Foundation** — promises to **just bring the dodo back to life, and also re-introduce it in its once-native habitat in Mauritius.**

ABOUT DODO (RAPHUS CUCULLATUS)

- ❖ These were **flightless birds** that **were endemic to the island of Mauritius.**
- ❖ The last of **its species died, sometime in the final two decades of the 17th century.**
    - ✓ The **tubby flightless bird has become somewhat of an 'icon of extinction'.**
- ❖ Dodos were **remarkably well-adapted for the ecosystem they inhabited**, with **its abundant supply of food, and lack of major predators**.
- ❖ **Extinction**
    - ✓ **Their extinction** became **inevitable with arrival of humans on the scene.**
    - ✓ **Dutch colonists** first **landed in Mauritius in 1598**.
        - ➢ Dodos **disappeared around 80 years later**.
    - ✓ Not **only did the Dutch hunt the meaty bird, but the animals they brought with them — dogs, cats, rats— wreaked havoc on the defenceless dodos and their eggs.**

ABOUT THEIR REINTRODUCTION

- ❖ To **de-extinct a species**, the **first thing required is accurate and complete genetic information**.
    - ✓ This is known as a **species' genome — each genome contains all of the information needed to build that organism and allow it to grow and develop.**
- ❖ The company has **successfully sequenced the entire genome of the dodo using DNA extracted from a skull in the collection of the Natural History Museum of Denmark.**

- This is **now being compared to the genome of the Rodrigues solitaire**, the **dodo's closest (also extinct) relative to identify just what makes a dodo, a dodo.**
- It has **also sequenced the genome of the Nicobar pigeon**, the **dodo's closest extant relative, and found its primordial germ cells (PGCs)**.
  - ✓ **PGCs** are **basically embryonic precursors of a species' sperm and egg.**
- The **Nicobar pigeon's PGCs will now be edited to express the physical traits of a dodo**, with the **help of the insight gathered from the comparison of the genomes of all three birds**.
- These edited PGCs will then be inserted into the embryos of a sterile chicken and rooster, who will act as **'interspecies surrogates'.** In theory, when the chicken and rooster reproduce, they will give birth to a dodo offspring.

8.10   BANNI GRASSLANDS

- The Gujarat government said that the **central government has approved setting up a cheetah breeding and conservation centre in Banni Grassland**
- The government said a **proposal had been sent to the centre which has been accepted.**
- Banni Grassland **used to be the habitat of cheetahs, which became extinct over time**.

ABOUT BANNI GRASSLAND

- Banni Grassland, considered **one of the finest**, spans **2,618 sq km and is located along the northern border of Kutch.**
- It is **also home to 40,000 Maldharis**, a **pastoral community known for rearing high-yielding buffaloes and cows.**
- Banni **comprises grassland and wetlands** with **rich flora and fauna**.
- The **Kutch Desert Wildlife Sanctuary** which **spans over an area of 380 Sq. km** and the **recently notified 227 Sq. km Chhari Dhand Conservation Reserve** are **part of the Banni Grasslands.**
- Research estimates **indicate approximately 200 species of plants, 250 species of birds, mammals, and reptiles.**
  - ✓ **Flora - Prosopis Juliflora, Cressa critica, Cyperus spp, Sporobolus, Dichanthium, and Aristida.**
  - ✓ **Fauna- Nilgai, Chinkara, Blackbuck, Wild boar, Golden Jackal, Indian Hare, Indian Wolf, Caracal, Asiatic Wildcat and Desert Fox, Banni buffalo and the Kankrej cow etc.**
- The **grassland** is **facing encroachment due to increased agricultural activities**.

8.11   GREEN RISING INITIATIVE

- UNICEF's **Generation Unlimited**, in collaboration with India's **Ministry of Environment, Forest, and Climate Change** unveiled the **"Green Rising" initiative at COP28 in Dubai.**
- The **global "Green Rising" initiative** and the **"Green Rising India Alliance"** marks a collaborative effort involving **UNICEF, Generation Unlimited, and a diverse network of public, private, and youth partners**.
- The **main goal** is to **mobilize millions of young people worldwide, encouraging their active participation** in **green initiatives** addressing and adapting to the **severe impacts of climate change on their communities.**
- The **"Green Rising" initiative** focuses on **engaging youth for impactful environmental actions** at the **grassroots level, aligning with the global effort** to **address the severe impacts of climate change**.
- Through the **YuWaah campaign** in India, the **focus is on engaging youth to drive impactful environmental actions at the grassroots level**, inspired by the **Mission Life movement**.

ABOUT GENERATION UNLIMITED

- **Launched** in **2018.**

❖ It is **a global Public-Private-Youth Partnership** aimed at **co-creating and delivering innovative solutions on global scale**.

8.12	INDIAN BISON AND KOYA TRIBE

❖ The **indigenous Koya tribe** inhabiting the **Papikonda hill range along the rivers Godavari and Sabari in Andhra Pradesh** have **decided to do away with millennia-old traditions in an attempt to conserve the Indian Bison (Bos gaurus).**
❖ **Papikondalu hill range or the' Bison hill range,' is home to the Indian Bison**.
   ✓ In **1978**, a **portion of the hill range was declared a sanctuary**, with **Indian Bison as its megafauna species.**
   ✓ The sanctuary was **declared as a national park was made in 2008.**

ABOUT KOYA TRIBE

❖ Known as **Koya, Koitur in their dialect.**
❖ **Population is mainly found in h**illy and forested regions of **Andhra pradesh , Odisha and Chhattisgarh**.
❖ Speak the **Koya language (Koya basha), a Dravidian language related to Gondi.**
   ✓ They **also speak Odia and Telugu languages.**
❖ Traditionally they are **pastoralists** and **shifting cultivators**. Some are **artisans specializing in bamboo furniture and crafts.**
❖ Pendul is **commonly practiced form of marriage.**
❖ The Koyas **adopted Bison horns to discover their two cultural forms**:
   ✓ the **Kommu Koya dance**, during which two Bison horns are adorned on the head as part of the attire, and
   ✓ the **Permakore flute**, which is made of a single horn.
      ➢ The Koyas have moved on from **using traditional Indian Bison horns to palm leaves to craft their traditional flute, Permakore.**
      ➢ In the Koya language, **'Permam' stands for Indian Bison or Guar**, and **'Kore' stands for 'horn'**, and thus, the flute made of Bison horn is called Permakore.
      ➢ On **one corner of the horn is a bamboo pipe inserted** from where the **air is blown into the horn to produce sound.**
      ➢ The **Permakore is played at a designated time and place** to give a call to the **entire village to go hunting in the forest.**

ABOUT INDIA BISON OR GAUR (BOS GAURUS)

❖ Indian Bison is the **tallest species of wild cattle found in India and largest extant bovine.**
❖ About **13,000 to 30,000 gaurs in the world with approximately 85% of the population present in India.**
❖ They **prefer evergreen forests and moist deciduous forests but** can **survive in dry deciduous forests also.**
❖ The Indian Bison is **herbivorous by nature**, moves in **groups**, and **preys mainly on bamboo leaves.**
❖ It is also **the State Animal of Goa and Bihar.**
❖ Protection status
   ✓ **IUCN Red List- Vulnerable**
   ✓ Wild Life Protection Act, 1972- **Schedule I**

8.13	IMPATIENS KARUPPUSAMYI

❖ The researchers of **Botanical Survey of India (BSI)** have discovered a **new species of plant from Kalakad Mundanthurai Tiger Reserve, Tamil Nadu**.

- ❖ The **plant has been named 'Impatiens karuppusamyi'.**
- ❖ **Unique Characteristics**
  - ✓ **Conical spur with a horizontally straight, obtuse tip.**
  - ✓ Base of the **anterior lobe with two purplish, fleshy, and erect auriculate projections.**
  - ✓ Stout biseriate **purplish-blue hairs in front of the mouth.**
  - ✓ **Orange-pinkish pollen grains.**
- ❖ There are **more than 1000 species of Impatiens worldwide**, of which **more than 280 are found in India.**
- ❖ It is **distributed widely throughout tropical Africa, Madagascar, India, Sri Lanka and China.**

ABOUT BOTANICAL SURVEY OF INDIA

- ❖ BSI is the **apex research organization for carrying out taxonomic and floristic studies on wild plant resources of the country.**
- ❖ Established- **1890**
- ❖ Under the purview of **Ministry of Environment and Forests (MoEFCC)**
- ❖ It has **nine regional circles situated at different regions of the country.**
- ❖ Headquarters- **Kolkata, West Bengal**

ABOUT KALAKAD MUNDANTHURAI TIGER RESERVE

- ❖ Located in **Tirunelveli and Kanyakumari District of Tamil Nadu.**
- ❖ It was declared as the **"First Tiger Reserve of Tamil Nadu"** and the **17th Tiger Reserve of the country.**
- ❖ It consists of the **Kanyakumari Wildlife sanctuary in the south** and the **Nellai Wildlife Sanctuary in the North.**
- ❖ It is also **part of the Agasthyamala Biosphere Reserve.**
- ❖ It is **also known as the "River Sanctuary"** with as many as **14 rivers originating from this Tiger Reserve.**
- ❖ **Flora-** vegetation varies from **dry thorn forest to dry deciduous, moist deciduous and a patch of West coast wet evergreen forests on the higher reaches of the reserve.**
- ❖ **Fauna includes Tiger, Sambar, spotted deer, elephants, Lion Tailed Macaque, Nilgiri Tahr, leopards, wild dogs**, etc and a **large number of bird species, reptiles, etc.**

8.14	GLOBAL RIVER CITIES ALLIANCE

- ❖ A **'Global River Cities Alliance' (GRCA)** inspired by **India's River Cities Alliance** was launched at **COP28, Dubai.**
- ❖ GRCA is a **unique alliance covering 275+ global river-cities in 11 countries**, international **funding agencies** and **knowledge management partners** and is first of its kind in the world.
- ❖ The **other nations** are **Denmark, Cambodia, Japan, Bhutan, Australia, Netherlands, Egypt, and Ghana** and **river-cities of The Hague (Den Haag) from the Netherlands, Adelaide from Australia,** and **Szolnok of Hungary.**
- ❖ The **National Mission for Clean Ganga**, under the **Jal Shakti ministry** and **Housing and Urban Affairs ministry's National Institute for Urban Affairs (NIUA)**, will **take on the role of the Secretariat of the GRCA to generate the initial momentum of the alliance activities.**
- ❖ These **activities** will include **knowledge exchange, capacity development, high-level advocacy, and bi-lateral interactions among member cities.**

OTHER NEWS

- ❖ Earlier, National Mission for Clean Ganga had signed a **Memorandum of Common Purpose (MoCP) with the Mississippi River Cities and Towns Initiative (MRCTI)**, representing **124 cities/towns situated along the banks of the Mississippi River, USA** on the sidelines of COP28.

ABOUT RIVER CITIES ALLIANCE

- ❖ **It was** established **in 2021 by National Mission on Clean Ganga**(NMCG)
  - ✓ NMCG was registered **as a society in 2011 under Societies Registration Act 1860**.
  - ✓ NMCG acts as **implementation arm of National Ganga River Basin Authority (NGRBA).**
- ❖ It is a **joint initiative of MoJS & MoHUA to connect river cities** and **focus** on **sustainable river centric development.**
- ❖ The **River Cities Alliance currently has 142 river cities in India** and serves as a **dedicated platform for members to discuss aspects** related to enhancing the **state of urban rivers within their administrative boundaries.**

8.15   DEMAORCHESTIA ALANENSIS

- ❖ Researchers at Berhampur University, Odisha have discovered **a new species of marine amphipod** — a shrimp-like crustacea of genus Demaorchestia— in the **Chilika lake**.
- ❖ The new species has been **named Demaorchestia alanensis.**
- ❖ The present contribution has **added one more species to the genus Demaorchestia**, raising the global species number in the group to six.
- ❖ Characteristics
  - ✓ The new species is **white in colour** and **less than 15 millimetres in length.**
  - ✓ It has **13 pairs of legs**.
    - ➤ While **three pairs are used for swimming** in the water, **eight pairs are used for walking on land.**
    - ➤ The **other two pairs are used for capturing prey and feeding.**
  - ✓ The species can be **distinguished from the other members** of the genus by **two to three strong, hair-like structures or setae** on the **anterior margin of the propodus of the gnathopod (limb).**

ABOUT AMPHIPODS

- ❖ Amphipod are **any member of the invertebrate order Amphipoda** (class Crustacea) inhabiting **all parts of the sea, lakes, rivers, sand beaches, caves, and moist (warm) habitats** on many tropical islands.
- ❖ They can be **found in all marine habitats** (even the deepest ocean trenches, e.g., Hirondellea dubia), and have also **colonised freshwater and terrestrial habitats.**
- ❖ **Amphipods** are a **significant group in the marine ecosystem** and play **a vital role in the marine food chain**.
- ❖ They also **serve as indicators for studying the impact of climate change and health of coastal ecosystems.**

ABOUT CHILIKA LAKE

- ❖ It is **Asia's largest brackish water** and **world's second largest coastal lagoon.**
- ❖ In 1981, **Chilika Lake** was designated the **first Indian wetland of international importance under the Ramsar Convention.**
- ❖ It was **first site in Asia which was removed from Montreux Record (MR) in 2002.**
- ❖ It is the **largest wintering ground** for **migratory birds** on the **Indian sub-continent.**
- ❖ It is famous for **Nalabana Bird Sanctuary** and **Irrawaddy dolphin (IUCN-critically endangered)**.

8.16   PANGOLAKHA WILDLIFE SANCTUARY

- ❖ **Camera traps** installed at a wildlife reserve have **captured a Royal Bengal tiger (IUCN- Endangered) at an elevation of 3640 metres.**
- ❖ This is the **highest elevation in India where tigers have been spotted.**
- ❖ The photo was captured inside the **Pangolakha Wildlife Sanctuary.**

❖ According to officials, before this, the **highest altitude where tigers have been spotted in India was in Arunachal Pradesh at a height of 3,630m.**

ABOUT PANGOLAKHA WILDLIFE SANCTUARY

❖ **It is located in Sikkim's Pakyong district.**

❖ The **Pangalokha Wildlife Sanctuary** at the **tri-junction of Sikkim, Bengal, and Bhutan**, spans a **vast 128 square kilometers**.

❖ It is the **largest wildlife sanctuary in Sikkim**.

❖ The **vegetation** in the sanctuary is **typically alpine-temperate-subtropical**. Species include **rhododendrons, silver fir, juniper, and moss-covered oaks.**

❖ The Pangalokha Wildlife Sanctuary, rich in biodiversity, is home to various species, including **red pandas, snow leopards, Himalayan musk deer, Himalayan goral, and Himalayan black bears.**

8.17   UN YEAR OF CAMELIDS

❖ The **United Nations** has declared **2024 the International Year Of Camelids** to highlight the **significant importance of camelids in the lives of people across the world.**

❖ According to the **Food and Agricultural Organization(FAO)**, camelids **influence the lives of millions of households in more than 90 countries**.

❖ As a **group Camelids include alpacas, Bactrian camels, dromedaries, guanacos, llamas, vicuñas** which together help in **ensuring food security, nutrition and economic growth especially for Indigenous Peoples and local communities.**

❖ Camelids are a **source of milk and meat which helps people fight hunger**.

❖ They **also provide fibre which can be used for clothing and shelter.**

❖ Camelids are **also used by people as a means of transportation**.

❖ Camelids are **known to survive in harsh conditions.**

8.18   KUNMING-MONTREAL GLOBAL BIODIVERSITY FRAMEWORK (KMGBF)

❖ KMGBF has **completed one year since adoption.**

❖ **Kunming-Montreal Global Biodiversity Framework (KMGBF) was adopted** at the **Convention on Biological Diversity's (CBD) 15th Conference of Parties (CoP15) in Montreal.**

> **Colombia** will host the **next United Nations Biodiversity Conference**- COP 16.

❖ The Framework **furthers the overall agenda of the CBD** that strives **to ensure that biodiversity is protected, used sustainably and that the benefits accrued from its use are shared equitably** with the **communities that have protected it for centuries.**

❖ **Four overarching goals to be achieved by 2050** focus on **ecosystem and species health** including
  ✓ to **halt human-induced species extinction,**
  ✓ the **sustainable use of biodiversity,**
  ✓ **equitable sharing of benefits,** and
  ✓ on implementation and finance to include **closing the biodiversity finance gap of $700 billion per year**.

❖ Among the **twenty-three targets to be achieved by 2030** include
  ✓ **30 per cent conservation of land, sea and inland waters,**
  ✓ **30 per cent restoration of degraded ecosystems,**
  ✓ **halving the introduction of invasive species,**
  ✓ **$500 billion/year reduction in harmful subsidies,**
  ✓ **Reduce risk from pesticides** by **at least 50% by 2030,**

  - ✓ **Reduce nutrients lost to the environment by at least 50% by 2030 etc.**

ABOUT CBD

- ❖ CBD is **a legally binding treaty to conserve biodiversity** that has been **ratified by 196 nations, including India.**
- ❖ **Adopted in 1992** at **Rio Earth Summit (enforced in 1993).**
- ❖ It aims at achieving **a historic deal to halt and reverse biodiversity loss on par with the 2015 Paris Agreement on climate change.**
- ❖ **CBD Secretariat** - **Montreal, Canada.**
- ❖ The **Parties (Countries) under CBD, meet at regular intervals and these meetings are called Conference of Parties (COP).**
- ❖ **Main Protocols**
  - ✓ **Nagoya Protocol on Access to Generic Resources** and the **Fair and Equitable Sharing of Benefits Arising from their Utilization.**
  - ✓ **Cartagena Protocol on Biosafety** to the Convention on Biological Diversity.

8.19   SEA WEED

- ❖ The **Central Marine Fisheries Research Institute (CMFRI)** has commercialised the patent-protected technologies of **two seaweed-based nutraceutical products** — one to boost **anti-viral immunity** and the **other to combat high cholesterol or dyslipidemia**.
- ❖ The **nutraceuticals are a 100% natural blend of highly nutritious bioactive ingredients extracted with eco-friendly 'green' technology.**
- ❖ The nutraceutical products **contain 100% natural marine bioactive ingredients from selected seaweeds**, which are **commonly available in the Indian coastal waters**

ABOUT SEAWEEDS

- ❖ Seaweed is the **common name for countless species of marine plants and algae** that grow in the **ocean as well as in rivers, lakes, and other water bodies.**
- ❖ They are the **primitive, marine non-flowering marine algae without root, stem and leaves.**
- ❖ They **range in colours from red, green, brown and black.**
- ❖ **Size** also varies, from **microscopic to large underwater forests (called Kelp forests).**
- ❖ They contain **nutrients like iron, zinc, magnesium, riboflavin, thiamin, vitamins A, B, C & K.**
- ❖ Many seaweeds **contain anti-inflammatory and anti-microbial agents**.

ABOUT CMFRI

- ❖ The **ICAR-Central Marine Fisheries Research Institute was established** by Government of India on **February 3rd 1947** under the **Ministry of Agriculture and Farmers Welfare**.
- ❖ It later **joined the ICAR family in 1967**.
- ❖ Headquarter- **Kochi, Kerala.**

8.20   SIMLIPAL TIGER RESERVE

- ❖ There are a **total of 10 "black tigers" in India**, all exclusively found in Odisha's Similipal TR.
- ❖ These **"melanistic tigers" have been documented only in the Similipal Tiger Reserve in Odisha.**
- ❖ As per the **2022 cycle of the pan-India tiger estimation exercise, the Similipal Tiger Reserve has 16 tigers, out of which 10 exhibit melanism.**
- ❖ The **coat colouration and patterning causing the wild cats to appear dark** stem from **a single mutation in the Transmembrane Aminopeptidase Q (Taqpep) gene.**

❖ Tigers in the **Similipal Tiger Reserve form an isolated population in eastern India**, with **very limited gene flow between them and other tiger populations.**

❖ Such **isolated and inbred populations** are highly **susceptible to extinction, even over short periods.**

ABOUT SIMILIPAL TIGER RESERVE

❖ STR is located within the **Mayurbhanj District, Odisha**.

❖ It was **declared a 'Tiger Reserve' in the year 1956** and **included under the national conservation programme 'Project Tiger' in 1973.**

❖ The STR was included as a part of the **World Network of Biosphere Reserves by UNESCO in the year 2009.**

❖ **Flora**- Northern **tropical moist deciduous with some semi-evergreen patches.** About 1078 species of plants, including 94 species of orchids, are found here.

❖ Tribes- **Kolha, Santhala, Bhumija, Bhatudi, Gondas, Khadia, Mankadia and Sahara.**

❖ **Fauna**: Leopard, Gaur, Elephant, Langur, Barking and Spotted Deer, Sloth Bear Mongoose, Flying Squirrel, Porcupine, Turtle, Monitor Lizard, Python, Sambar, Pangolin etc.

❖ It is the **only landscape in the world that is home to melanistic tigers.**

❖ The Similipal Tiger Reserve has been **identified as a distinct conservation cluster due to its genetic composition a**nd provided a **financial support of ₹ 32.75 crore** for **wildlife conservation, habitat management, human resource, and infrastructure development** under the centrally sponsored scheme of **Integrated Development of Wildlife Habitats (CSS-IDWH).**

8.21	WHITE-BELLIED SEA EAGLE

❖ In an unusual sighting, the white-bellied sea eagle, an enormous raptor common to coastal habitats, was **spotted in Mukkombu, Tiruchi, Tamil nadu**.

ABOUT WHITE-BELLIED SEA EAGLE (ICTHYOPHAGA LEUCOGASTER)

❖ The **white-bellied sea eagle** is a **large diurnal bird of prey.**

❖ It has **a body length of 75-85 cm (29.5-33 in) and a wingspan of 178–218 cm (70-85.8 in).**

❖ The raptor is found in **India, Sri Lanka, Andaman Islands, southern China, the Philippines, New Guinea, Australia, and Tasmania, among other countries.**

❖ They live **primarily in terrestrial habitats near the ocean**, especially coasts, islands, and estuaries, but they also **live in forested areas with access to smaller bodies of water, such as lakes, ponds, and rivers.**

❖ As its name implies, the **bird of prey is rarely seen away from the seashore**, and as a result, has **a diet of aquatic species like fish, eels, crustaceans and sea snakes**.

❖ It is **also known to steal or pirate food from other raptors, and occasionally feed on carrions.**

❖ IUCN red list status- **'least-concern'**

8.22	NAMDAPHA FLYING SQUIRREL

❖ The **Namdapha flying squirrel** has **resurfaced in Arunachal Pradesh** after **going missing for 42 years**.

❖ It was last described in 1981 based on a **single individual found in the 1,985 sq. km. Namdapha Tiger Reserve in Arunachal Pradesh's Changlang district.**

ABOUT NAMPDAPHA FLYING SQUIRREL

❖ Scientific name- **Biswamoyopterus biswasi**

❖ It is **an arboreal, nocturnal flying squirrel endemic to Arunachal Pradesh.**

❖ It is **one of the 43 known flying squirrel species in the world.**

❖ These squirrels **glide between trees** and **cannot take flight like birds or bats.**

❖ These are **herbivores** thriving on **fruits, nuts, seeds, fungi, flowers, and tree sap.**

❖ **Protection status**

- ✓ IUCN red list- **Critically Endangered (CR)**
- ✓ Wildlife Protection Act- **Schedule II**
- ❖ It is among one of the **25 "most wanted lost" species targeted by the Global Wildlife Conservation's "Search for Lost Species" initiative.**

8.23   PONG DAM WILDLIFE SANCTUARY

- ❖ **Ministry of Environment and Forest** has issued a **draft notification declaring one-kilometre area from the boundaries of the Pong Dam Wildlife Sanctuary in Kangra district** as **an eco-sensitive zone.**

LIKELY IMPACT

- ❖ **Commercial activity** like the construction of hotels, resorts or any kind of polluting industry **will not be allowed** in the eco-sensitive zone around the Pong Dam sanctuary.
- ❖ The notification **also prohibits laying of overhead electric or communication towers** in eco sensitive zone.
- ❖ The **establishment of saw mills, brick-kilns** or commercial use of firewood **would be banned** in the area.

ABOUT PONG DAM LAKE WILDLIFE SANCTUARY

- ❖ Pong Dam Lake (also known as Maharana Pratap Sagar) is a **manmade reservoir formed due to the construction of Pong Dam on Beas River** in the wetland zone of **Shivalik hills in Kangra district of Himachal Pradesh**.
- ❖ It covers **an area of almost 307 sq km.**
- ❖ The Pong Dam is the **highest earth fill dam in India and was constructed in 1975**.
- ❖ In **1983**, the entire reservoir **was declared a Wildlife Sanctuary by the Himachal Pradesh government.**
- ❖ Pong Dam Lake was **designated a Ramsar site in 2002.**
- ❖ **Flora**- Acacia, Jamun, Shisham, Mango, Mulberry, Ficus Kachnar, Amla, and Prunus.
- ❖ **Fauna**- Sambar, Barking Deer, Wild Bear, Nilgai, Clawless Otter, and Leopards etc.
  - ✓ More than **420 bird species belonging to 56 families have been recorded in the lake.**

8.24   PANTOEA TAGOREI

- ❖ A group of **researchers from Visva-Bharati University's botany department** have discovered a **bacteria capable of boosting plant growth** and **named it 'Pantoea Tagorei' after Nobel laureate Rabindranath Tagore.**
- ❖ It was **discovered from soil samples collected in the Jharia coal mines.**
- ❖ This is a **plant growth promoting bacteria** which has **shown immense capability to boost the cultivation of paddy, pea and chilli.**
- ❖ 'Pantoea Tagorei' **efficiently extracts potassium from soil which enhances plant growth**.
- ❖ It **solubilises potassium and phosphorus and fixes nitrogen which help promote plant growth**.
- ❖ This bacteria **marks a significant stride toward fostering environmentally friendly agricultural methods.**

8.25   LANTANA CAMARA

- ❖ **Lantana (Lantana camara)**, is **one of the 10 worst invasive species in the world.**
- ❖ Lantana is **not native to India**.
  - ✓ It is a **perennial shrub native to the American tropics** and **belongs to the Verbenaceae family**.
  - ✓ It was **introduced in the country as an ornamental plant by the British in the 1800s.**

❖ The shrub **can spread on the forest ground, climb over trees a creeper and entangle with other native plants with ease.**
❖ It is **a very adaptable species**, which **can inhabit a wide variety of ecosystems**.
❖ **Nilgiri Biosphere Reserve** in **Western Ghats** is one of the **largest impacted hotspot areas due to invasion dominated by Lantana camara.**
❖ **Challenge**
  ✓ Eradicating lantana is difficult "because of its **rapid spread, intensity of infestation**, **allelopathy** [chemicals released to discourage growth of native plants], **opportunistic growth behaviour**, **reproductivity biology traits**, and **tenacious resistance to cutting and burning.**
  ✓ If the **roots are not extracted properly, the shrub can start growing again**.
  ✓ Its **seeds are also so light that they can be easily dispersed by the wind.**

8.26	**NEORA VALLEY NATIONAL PARK**

❖ **New royal Bengal tiger pictures** have been **clicked by trap cameras installed at the Neora Valley National Park.**

ABOUT NEORA VALLEY NATIONAL PARK

❖ The Neora Valley National Park (NVNP) is located in Darjeeling, West bengal, covers **a total area of 88 km².**
❖ NVNP is a **compact patch of virgin forest, rich in biodiversity located in the Eastern Himalayas**, a global **'biodiversity hotspot'.**
❖ It is **contiguous with Sikkim and Bhutan at its northern and north-eastern boundaries respectively** and **links the Pangolakha Wildlife Sanctuary in Sikkim and the Toorsa Strict Reserve of Bhutan**.
❖ It was **notified as a National Park** in **1992**.
❖ It is also **an integral part of the Kanchenjunga Landscape.**
❖ It is **unique and ecologically important** as it **includes a relatively inaccessible patch of late successional forests** and with **rich diversity and a wide range of environment gradients.**
❖ **Vegetation includes -** Subtropical Mixed Broadleaf Forest, Lower Temperate Evergreen Forest, Upper Temperate Mixed Broadleaf Forest and Rhododendron Forest.
❖ **Flora-** Rhododendrons, Oaks, Bamboo, Ferns and Medicinal plants.
❖ **Fauna-** Red Panda, Himalayan Tahr, Himalayan Black Bear, Clouded Leopard, Barking Deer, Sambar Deer etc.

9. POLICY AND PROGRAMME

9.1   PM-JANMAN

❖ The union Cabinet has approved the **Pradhan Mantri Janjati Adivasi Nyaya Maha Abhiyan (PM-JANMAN)** designed to **provide support to tribal communities with a budget of ₹24,000 crore.**

❖ Out of the ₹24,100 crore budget for the scheme, **₹15,336 crore will come from the central government** while **₹8,768 crore will come from the states.**

❖ It **aims at uplifting 75 tribal communities** identified as **Particularly Vulnerable Tribal Groups (PVTGs) across 18 states**, **1 Union Territory**, **220 districts, and 22,000 villages**.

> India's Scheduled Tribe (ST) population stands at 10.45 crore according to the 2011 census, with 75 communities in 18 states and the Union Territory of Andaman and Nicobar Islands classified as PVTGs.

   ✓ This **initiative is projected to benefit approximately 28,16,000 tribal individuals.**

❖ The **scheme** aims to **provide crucial interventions** such as **permanent housing, road connectivity, piped water supply, mobile medical units, hostel construction, 'Anganwadi' facilities, skill development centres, electricity connections, solar street lighting, Bandhan Vikas Kendra, and mobile towers**.

❖ Aligning **existing schemes like PM Awas Yojana (PMAY), Grameen Sadak Yojana (PMGSY), and the health mission aims to encompass all eligible beneficiaries.**

❖ These **interventions fall under the purview of nine key ministries** responsible for **health, livelihoods, tribal affairs, and telecom, among others.**

❖ Moreover, **ministries like Ayush and skill development and entrepreneurship** will **offer additional support.**
   ✓ The **ministry of Ayush** intends to **establish Ayush Wellness Centers and extend Ayush facilities through mobile medical units.**
   ✓ Concurrently, the **ministry of skill development and entrepreneurship plans to provide skill and vocational training** in **PVTG habitations and hostels.**

9.2   WOMEN SHG TO BE PROVIDED WITH DRONES

❖ The Union Government **will provide 15,000 progressive women self-help groups (SHG) with drones** to be **rented out to farmers for agricultural purposes**.

❖ The **drone services are envisaged to be used by the farmers for Nano fertilizer and pesticide applications.**

❖ The **scheme would have a financial outlay of ₹1,261 crore for two years beginning 2024-25.**

❖ The **self help groups would be identified from the total 89 lakh SHGs formed under the Deendayal Antyodaya Yojana.**
   ✓ **Appropriate clusters** where **usage of drones is economically feasible** will be **identified following which the SHGs will be selected for providing drones.**

❖ Around **500 drones will be provided by fertilizer companies. The rest 14,500 drones will be made available through the Central assistance in the next two years.**

❖ The **total expense of a drone and its accessories is about ₹10 lakh**. About **80% of the cost or up to ₹8 lakh, will be provided by the Centre**.

❖ The **drone pilot will get an honorarium of ₹15,000 and a co-pilot about ₹10,000.**

❖ A well **qualified member of the SHG, aged 18 and above**, will be **elected for a 15-day training, comprising five-day mandatory drone pilot training and additional 10-day training for agriculture purpose of nutrient and pesticide application**, while **another member of the group will be selected for training as technician or assistant.**

❖ The scheme will **help in infusing advance technology in agriculture for improved efficiency, enhance crop yield and reduced cost of operation for the benefit of farmers.**

❖ The approved initiatives under the scheme is **expected to provide sustainable business and livelihood support to 15,000 SHGs** and **help them earn an additional income of at least ₹1 lakh per annum.**

9.3   HYDROGEN FOR HERITAGE SCHEME

❖ India proposes to **invite expression of interest** from **global players to manufacture hydrogen-powered trains in the country** based on **technology being developed indigenously**.

❖ This is being done to implement **Hydrogen for heritage scheme**.

ABOUT THE SCHEME

❖ 'Hydrogen for Heritage' scheme, is a **plan to operate hydrogen-powered trains on select heritage** and **hilly routes that are environmentally sensitive.**

❖ It was **announced in the Union Budget 2023-24**.

❖ Indian Railways is **developing a prototype of a train that will be powered by hydrogen fuel cells**–making for a more environment-friendly locomotive than traditional diesel-powered ones.

  ✓ Currently, **only Germany commercially operates hydrogen-powered trains**, while the **US, the UK, France, and Japan are in the testing phase.**

❖ India's plan to **develop the technology involves retrofitment of hydrogen fuel cells** on **diesel electric multiple unit (DEMU) rakes**. This **prototype is expected to run on the Jind-Sonipat section in Haryana initially.**

  ✓ Hydrogen fuel cells **use the chemical energy of hydrogen to produce electricity.**

❖ Indian Railways has **proposed to run 35 hydrogen trains** at **an estimated cost of Rs80 crore per train**, with **ground infrastructure costing Rs70 crore per route.**

❖ **Thirty-five train-set rakes** (with six coaches each) have been sanctioned for the ongoing financial year **for eight sections**–Matheran Hill Railway, Darjeeling Himalayan Railway, Kalka-Shimla Railway, Kangra Valley, Bilmora Waghai, Patalpani Kalakund, Nilgiri Mountain Railways, and Marwar-Goram Ghat.

9.4   MERA GAON, MERI DHAROHAR LAUNCHED

❖ Developed in **partnership** with the **Indira Gandhi National Centre for the Arts (IGNCA) under the Ministry of Culture**, the initiative, known as **"Mera Gaon, Meri Dharohar"**, seeks to **explore the life, history, and ethos of Indian villages**.

❖ As a crucial component of the **National Mission on Cultural Mapping**, the **project reflects the government's commitment to document and map the cultural diversity inherent in villages across the country.**

❖ The **main objective** of the project is to **culturally map India's 6.5 lakh villages**, spanning **29 states and 7 union territories**, on a **comprehensive virtual platform**.

❖ Through MGMD, **people will get an opportunity to immerse themselves in the diverse and vibrant cultural heritage of India.**

❖ The **core idea** behind this project is **to encourage appreciation for India's culture and traditions, paving the way for economic growth, social harmony, and artistic development in rural communities.**

❖ The collected information is **categorized into seven broad categories**-

  ✓ **Arts and Crafts Village**
  ✓ **Ecologically Oriented Village**
  ✓ **Scholastic Village Linked with Textual and Scriptural Traditions of India**
  ✓ **Epic Village linked with Ramayana, Mahabharata, or Puranic legends and oral epics**
  ✓ **Historical Village linked with Local and National History**
  ✓ **Architectural Heritage Village**

✓ **Any other characteristic that may need highlighting such as fishing village, horticulture village, shepherding village, etc.**

ABOUT IGNCA

❖ The **Indira Gandhi National Centre for the Arts (IGNCA)** is a **leading national institution dedicated to the advancement of knowledge in the arts and culture**, as well as the study of the **connections between arts and culture and other fields of study and elements of life.**

❖ IGNCA was **established in 1987** as an **autonomous institution** under the **Ministry of Culture.**

9.5	PRADHAN MANTRI UCHCHATAR SHIKSHA ABHIYAN (PM-USHA)

❖ Union education minister recently urged Odisha CM to implement the **Pradhan Mantri Uchchatar Shiksha Abhiyan (PM-USHA).**

❖ As per **guidelines of the PM-USHA** scheme, **states/UTs are required to sign an MoU for onboarding the scheme for its implementation.**

❖ The **MoU** contains **clauses regarding proper planning, implementation and monitoring of the scheme.**

ABOUT PM-USHA

❖ **Pradhan Mantri Uchchatar Shiksha Abhiyan (PM-USHA)** a **centrally sponsored programme**, aims to **work with 300-plus state universities and its affiliated colleges.**

❖ Launched in **2013**, the **PM-USHA aims at providing strategic funding to eligible state higher educational institutions**.

❖ The **central funding** is **based on norms and is outcome dependent**.

❖ **Funds** flow from the **central ministry through the state governments/union territories before reaching the identified institutions**.

❖ **Funding to states** would be **made** on the **basis of the critical appraisal of State Higher Education Plans, which would enlist each state's strategy to address issues of equity, access and excellence in higher education.**

❖ This **scheme has been approved till March 31, 2026** with a **total outlay of Rs 12926 crore in continuation** of the scheme **of the Rashtriya Uchchatar Shiksha Abhiyan (RUSA).**

9.6	CITY OF LAKE PROJECT AND 3I MODEL

❖ Representative from the Delhi government presented the **"Kejriwal model of governance"** at the COP28 in **Dubai while** representing the **Capital at a discussion held by the C40.**

❖ Delhi's "breakthroughs" in fighting climate change were mentioned, including-
   ✓ **'City of Lakes' project**, which **aims to rejuvenate water bodies in the city**, and
   ✓ Delhi's **"3i model"** for Electric Vehicles, which focuses on **"inclusion, incentivization, and innovation"**.

ABOUT C40

❖ C40 is a **global network of nearly a hundred mayors of the world's leading cities** that are **united in action to confront the climate crisis.**

9.7	DELTA RANKINGS OF ASPIRATIONAL BLOCKS PROGRAMME

❖ **Tiriyani Block of Kumuram Bheem Asifabad district, Telangana** secured the **top position** in the **first delta rankings of Aspirational Blocks Programme (ABP) announced by NITI Aayog**.
  ✓ **Kaushambi block of Kaushambi District, Uttar Pradesh** secured second place.
❖ **Delta Ranking captures incremental change in blocks ranked based on Key Performance Indicators (KPIs)** categorized into five themes.
❖ The **blocks have also been geographically divided into six zones** and **two blocks from each zone have been given rankings**.
❖ The **winners will be felicitated with a prize amount of Rs. 1.5 crores for top rank** and **Rs. 1 crores for second rank in all zonal categories**.

ABOUT ABP

❖ The **Aspirational Blocks Programme (ABP)** was launched **on January 7, 2023**.
❖ ABP **focuses on improving governance to enhance the quality of life of citizens in the most difficult and relatively underdeveloped blocks of India**.
❖ **500 blocks from 329 districts across 27 states and 4 Union Territories of India are part of the programme.**
❖ The Programme strategy is **based on convergence of existing schemes, defining outcomes, and monitoring them on a constant basis.**
❖ About **40 key performance indicators (KPIs) were chosen** to measure **progress of the blocks** which have been grouped into **5 themes- Health and Nutrition, Education, Agriculture and Allied Services, Basic Infrastructure, Social Development.**

9.8	INDIAN FOREST & WOOD CERTIFICATION SCHEME.

❖ The **Ministry of Environment, Forests and Climate Change** has launched the **Indian Forest & Wood Certification Scheme.**
❖ It offers **voluntary third-party certification designed to promote sustainable forest management and agroforestry in the country**.
❖ The scheme **includes**
  ✓ **forest management certification**,
  ✓ **tree outside forest management certification**, and
  ✓ **chain of custody certification**.
❖ It can **provide market incentives to various entities** such as**, state forest departments, individual farmers, or Farmer Producer Organizations,** that **adhere to responsible forest management and agroforestry practices** in their operations.
❖ The Forest Management certification is **based on the Indian Forest Management Standard**, consisting of **8 criteria**, **69 indicators and 254 verifiers**, which is **an integral part of the National Working Plan Code 2023.**
❖ **A separate Trees Outside Forests Standard**, is **now introduced** as a part of the newly launched Indian Forest & Wood Certification Scheme.
❖ The **Indian Forest and Wood Certification Scheme**, will be **overseen by the Indian Forest and Wood Certification Council, which will act as a multistakeholder advisory body**.
  ✓ It **is represented by members from Indian Council of Forestry Research and Education, Forest Survey of India, Quality Council of India, Indian Institute of Forest Management including representatives from the Ministries of Agriculture and Farmers' Welfare and Ministry of Commerce and Industry, State Forest Departments, Forest Development Corporations, and representatives from wood-based industries.**
❖ **Indian Institute of Forest Management, Bhopal** will act as the **scheme operating agency** and **will be responsible for overall management of the Indian Forest and Wood Certification Scheme.**
❖ The **National Accreditation Board for Certification Bodies under the Quality Council of India** will **accredit the certification bodies.**

- ✓ These will **carry out independent audits and assess adherence of various entities on the standards prescribed** under the scheme.

9.9   PM VISHWAKARMA SCHEME

- ❖ The **PM Vishwakarma Scheme** has **received over 21 lakh applications in two and a half months** as per Ministry of Skill Development and Entrepreneurship (MSDE).
- ❖ The **highest number of applications** had come **from Karnataka followed by West Bengal, Assam, Uttar Pradesh and Andhra Pradesh**.

ABOUT PM VISHWAKARMA SCHEME

- ❖ It was **launched on September 17, 2023.**
- ❖ It is a **central sector scheme** that is **aimed at supporting and providing skill-upgradation training to artisans and craftspeople.**
- ❖ The **Vishwakarma Scheme** provides **formal training for upgradation and modernisation of traditional skills amid a changing economic landscape**.
- ❖ It **also offers financial assistance** and **creates avenues of "market linkage" for persons working in 18 trades and crafts**.
  - ✓ These include **carpenter, boat-maker, armourer, blacksmith, hammer and tool kit maker, locksmith, goldsmith, potter, sculptor, cobbler, mason, basket-maker, doll and toy-maker, barber, garland maker, washerman, tailor, and fishing net-maker.**
- ❖ The applicants are **vetted at three levels** - by **village committees, district and state levels.**
- ❖ Applicants will **attend basic training of five to seven days** and **advanced training of 15 days with a stipend of ₹500 per day that will expose them to modern tools, latest technologies, design elements, and digital and financial skills.**
- ❖ The **budget** envisaged for the scheme from **FY 2023-24 to FY 2027-28 is ₹13,000 crore.**
- ❖ Only after the **artisans and craftspeople have attended the training** will they **receive a tool kit incentive of ₹15,000, to purchase modern tools specific to their trade**.
- ❖ They will **also receive collateral-free loans at lower interest rates of nearly 8% up to ₹1 lakh and an additional ₹2 lakh for setting up their business.**

9.10   ATAL PENSION YOJANA

- ❖ The **total enrolment** under the **Atal Pension Yojana (APY) has crossed 6 crore**, with **over 79 lakh enrolments in the current Financial Year**.

ABOUT ATAL PENSION YOJANA

- ❖ **APY, launched in 2015, is** a **flagship social security scheme** of the Government of India.
- ❖ It aims to **provide old age income security to Indian citizens**, with a **particular focus on the poor, underprivileged, and workers in the unorganised sectors.**
- ❖ The **minimum age** of joining the APY **is 18 years and the maximum age is 40 years.**
- ❖ Under APY, the **subscriber is eligible to get triple benefits-**
  - ✓ Lifelong **monthly pension of Rs1000 to ₹5000** from the **age of 60 years**, depending on their contributions, which itself **would vary based on the age of joining the APY.**
    - ➢ Accordingly, the **per month subscription amount presently varies** from **Rs 42 to Rs 1,454 based on the chosen option.**

- ✓ The **same pension would be paid to the spouse of the subscriber after the demise of the subscriber.**
- ✓ On the **demise of both the subscriber and spouse**, the **pension wealth as accumulated till age 60 of the subscriber would be returned to the nominee.**

9.11 NEW SUBSCHEMES UNDER RAMP

- ❖ Union Ministry for MSME has launched **three sub-schemes under the aegis of the RAMP programme**.
- ❖ These are-
  - ✓ The first scheme - The **MSME Green Investment and Financing for Transformation Scheme (MSME GIFT Scheme)** intends to **help MSMEs adopt green technology with interest subvention and credit guarantee support.**
  - ✓ The **MSE Scheme for Promotion and Investment in Circular Economy (MSE SPICE Scheme)** is the **first ever scheme in the Government to support circular economy projects** which will be **done through credit subsidy and will lead to realising the dream of MSME sector** towards **zero emissions by 2070.**
  - ✓ The **MSE Scheme on Online Dispute Resolution for Delayed Payments** is a first of its kind **scheme to synergise legal support with modern IT tools and Artificial Intelligence** to address the **incidences of delayed payments for Micro and Small Enterprises**.
- ❖ **Implementing agencies-**
  - ✓ **SIDBI** (for MSME GIFT and MSME SPICE schemes) and
  - ✓ **National Informatics Centre Services Inc. (for NICSI)** for MSE ODR scheme.

ABOUT RAMP PROGRAMME

- ❖ **Raising & Accelerating MSME Performance (RAMP)** program is a **World Bank supported Central Sector Scheme for MSMEs.**
- ❖ It aims at
  - ✓ **improving access to market and credit**,
  - ✓ **strengthening institutions and governance at the Centre and State**,
  - ✓ improving **Centre-State linkages and partnerships**,
  - ✓ **addressing issues of delayed payments and greening of MSMEs.**

9.12 PROJECT PRAYAS

- ❖ The **International Organisation for Migration (IOM)** launched **Project PRAYAS** to **facilitate safe, orderly and regular migration for Indian workers and students.**
- ❖ The project, **PRAYAS (Promoting Regular & Assisted Migration for Youth and Skilled Professionals)**, was launched **in partnership with the Ministry of External Affairs**.
- ❖ The **objective** of the project is to **facilitate safe, orderly, and regular migration for aspiring Indian migrant workers and students** through policy recommendations in **collaboration with the Ministry of External Affairs (MEA) and state governments, thus strengthening international migration governance.**

ABOUT IOM

- ❖ IOM is a **UN agency dedicated to promoting humane and orderly migration.**
- ❖ Established- **1951**
- ❖ **Headquarters- Geneva, Switzerland**
- ❖ IOM **works in four broad areas** of migration management—**Migration and development, facilitating migration, regulating migration, and Forced migration.**
- ❖ It has **175 member** states including India.

9.13   PALNA SCHEME

- ❖ The Union Women and Child Development Ministry **aims to establish 17,000 creches in Anganwadi centres** across the country out of which 5,222 have been approved to date.
  - ✓ The Ministry also **plans to depute two additional creche workers in Anganwadis along with the existing staff.**
- ❖ **These initiatives are being taken under the 'Palna' scheme.**

ABOUT PALNA SCHEME

- ❖ The **erstwhile National Creche Scheme** has been **reorganized and renamed as Palna Scheme** under the **sub scheme 'Samarthya' of 'Mission Shakti'.**
- ❖ The **objective** of the scheme is to **address the urgent need for quality day-care facilities/creches** for the children of working women by providing **a safe and secure environment for the nutritional, health and cognitive development of the children**.
- ❖ Thus it aims at **enabling more women to take up gainful employment amongst all socio-economic groups both in the organized and unorganized sector**, irrespective of their employment status.
- ❖ **Objectives**
  - ✓ To provide day-care facilities for children (6 months to 6 years) of working mothers in the community.
  - ✓ To improve nutrition and health status of children.
  - ✓ To promote physical, cognitive, social and emotional development (Holistic Development) of children.
  - ✓ To educate and empower parents /caregivers for better childcare.
- ❖ The scheme focuses on two types of crèches
  - ✓ **Anganwadi-cum-Crèches**: These centers **combine existing Anganwadi services with dedicated crèche facilities**. This approach aims to holistically address the needs of both mothers and children in one convenient location.
  - ✓ **Stand-alone creches**: The crèches which were **running under the erstwhile National Creche Scheme** have been included as Stand Alone Creches.

9.14   PM-DEVINE

- ❖ **Ministry of Development of North Eastern Region (DoNER)** convened a meeting with the **Chief Ministers of the States in the region** for optimal implementation of **Prime Minister's Development Initiative for North East Region (PM-DevINE).**

ABOUT PM -DEVINE

- ❖ The scheme was **announced in the 2022-23 Union Budget** with **an initial allocation of ₹1,500 crore.**
- ❖ The scheme is **"aimed at rapid and holistic development"** of the **northeast region** by **"funding infrastructure and social development projects, based on felt needs of the States."**
- ❖ It will strive to fill the gaps in various sectors and **will not be a substitute for existing Central and State Schemes".**
- ❖ It is a **Central Sector scheme**, with **100% Central funding**.
- ❖ Implemented by **the Ministry of Development of North Eastern Region (MDoNER)** through **North Eastern Council or Central Ministries/agencies or State Government agencies.**
- ❖ The **time frame** defined for **PM-DevINE scheme** projects is **2023-24 for sanction and 2025-26 for completion.**

9.15	FAME- II SCHEME

❖ The **Parliamentary Standing Committee on Industry** has recommended that the **Centre should extend the deadline of the Faster Adoption & Manufacturing of Electric Vehicles (FAME) - II Scheme** by **at least three more years.**

ABOUT FAME II SCHEME

❖ The **main objective** of the scheme is to **offer upfront incentives for the purchase of electric and hybrid vehicles, and add more charging stations.**

❖ Implementing Agency- **Department of Heavy Industry, Ministry of Heavy Industry and Public Enterprises.**

❖ The **deadline** for the **ongoing FAME II scheme is March 31, 2024**, with **a budget outlay of Rs 10,000 crore**.

❖ This phase aims to generate demand by way of **supporting 7000 e-Buses, 5 lakh e-3 Wheelers, 55000 e-4 Wheeler Passenger Cars (including Strong Hybrid)** and **10 lakh e-2 Wheelers.**

❖ Scheme will be applicable **mainly to vehicles used for public transport or those registered for commercial purposes** in **e-3W, e-4W and e-bus segments.**
  ✓ However, **privately owned registered e-2Ws are also covered under the scheme as a mass segment.**

ABOUT FAME I

❖ **Phase-I** of the **FAME India Scheme was approved in March 2015**.

❖ After multiple extensions, the **deadline was extended till March 31, 2019, with an outlay of Rs 895 crore.**

❖ The scheme had **four focus areas — technology development, demand creation, pilot project,** and **charging infrastructure.**

9.16	MISSION KARMAYOGI

❖ **Ministry of Personnel, Public Grievances & Pensions** has launched the **Extended Version** of Mission Karmayogi.

ABOUT MISSION KARMAYOGI

❖ Mission Karmayogi **(National Programme for Civil Services Capacity Building)** aims at building **a future-ready civil service with right attitude**, **skills** (technology enabled) and **knowledge aligned to the vision of New India.**

❖ There will be **more focus on 'on-site learning' in complementing "off-site learning".**

❖ Six key pillars
  ✓ **Policy Framework,**
  ✓ **Institutional Framework,**
  ✓ **Competency Framework,**
  ✓ **Digital Learning Framework (iGOT-Karmayogi),**
  ✓ **the electronic Human Resource Management System (e-HRMS)** and
  ✓ **the Monitoring and Evaluation Framework.**

❖ New features launched on Mission Karmayogi platform

❖ **My iGOT** delivers **targeted training courses on home page of individual officer** that directly address the unique **capacity building needs of the officer as identified in the Capacity-Building Plan for their Ministries/Departments.**

❖ **Blended Programs** on iGOT-Karmayogi platform will **facilitate equitable access to training methodologies across all levels** to meet dynamic training needs of the officials.

❖ **Curated Programs on iGOT Karmayogi** are designed to cater to **diverse learning needs of the Ministries/Departments and Training Institutions.**

❖ **12 domain specific capacity building e-learning courses** have been developed

❖ **VIKAS (Variable & Immersive Karmayogi Advanced Support)** is a new blended learning programme meant for capacity building of Middle management civil servants in Central Secretariat.

9.17   PM-JANMAN

❖ **Ministry of Tribal Affairs** has initiated an **Information, Education, and Communication (IEC) campaign** for the **Pradhan Mantri Janjati Adivasi Nyaya Maha Abhiyan (PM-JANMAN).**
❖ The **comprehensive IEC campaign** has started **initially in 100 districts**, covering **approximately 500 blocks and 15,000 PVTG habitations across 18 states and the Union Territory of Andaman and Nicobar Islands.**
❖ During the campaign period, **Aadhar card, Community certificate and Jan Dhan accounts** will be provided as these are **basic requirements for other schemes** such as issue of Ayushman card, PM Kisan Samman Nidhi, Kisan credit card etc.

ABOUT PVTGS

❖ In 1960-61, the **Dhebar Commission** identified **disparities among Scheduled Tribes**, leading to the **creation of the "Primitive Tribal Groups" (PTG) category in 1973**.
   ✓ In **2006**, this **category was renamed Particularly Vulnerable Tribal Groups (PVTGs).**
❖ Initially identifying **52 groups**, the **category was expanded to include 75 groups in 22,544 villages across 18 states and one Union Territory of India**, totalling about **28 lakh individuals**.
❖ These groups, living **mainly in Maharashtra, Madhya Pradesh, Chhattisgarh, Jharkhand, Odisha, Andhra Pradesh, and Tamil Nadu**, are **characterised** by **pre-agricultural lifestyles, low literacy, small or stagnant populations, and subsistence economies.**
❖ PVTGs are **severely marginalised** due to their **isolation, low population, and distinct socio-economic and cultural traits.**

ABOUT PM-JANMAN

❖ PM JANMAN is **aimed at providing PVTG households and habitations with basic facilities** such as **safe housing, clean drinking water and sanitation, improved access to education, health and nutrition, road and telecom connectivity, and sustainable livelihood opportunities.**
❖ In addition, **saturation** will also be ensured for **schemes like Pradhan Mantri Jan Arogya Yojana (PMJAY), Sickle Cell Disease Elimination, TB Elimination, 100% immunisation, PM Poshan, PM Jan Dhan Yojana, etc**.
❖ This initiative is **part of the Pradhan Mantri-PVTG Development Mission announced in India's 2022-23 Union Budget, allocating Rs 15,000 crore over three years to develop them.**
❖ **The** scheme **will be** implemented by 9 ministries **with Ministry of Tribal Affairs playing the key role**.

9.18   BHARATMALA

❖ The **government** has **extended the deadline for completion of the flagship highway development project Bharatmala Phase-I** to **2027-28**, a **full six years from the original schedule.**
❖ The **move** follows an over **100% increase in the estimate cost of the mega project to nearly Rs 11 trillion**, and reflects the slowing of implementation, and financial constraints.
❖ About **26,418 km of highway stretches – 76% of the total length of 34,800 km** – have been awarded so far.
❖ Till November-end **15,045 km or 42% of the project has been completed.**

DETAILS

❖ Bharatmala Pariyojana is **an umbrella program for the highways sector envisaged by the Ministry of Road Transport and Highways.**
❖ The first-phase of Bharatmala was **announced in 2017** and **was to be completed by 2022.**
❖ In the **first phase**, the **plan is to construct 34,800 km of highways.**

COMPONENTS OF BHARATMALA PROJECT

❖ **Economic Corridor** – The central government has plans to construct 9000kms of Economic Corridors as per the guidelines of the road construction project.
❖ **Feeder Route or Inter Corridor** – A staggering 6000kms of roads fall under the Feeder Route or Inter Corridor category.
❖ **National Corridor Efficiency Improvement** – The scheme envisions the construction of 5000kms of roads under the category of National Corridor for better inter-connectivity between roads.
❖ **Border Road and International Connectivity** – The project aims to construct 2000kms of roads that fall in the Border Road or International Connectivity category to connect the cities and remote areas situated in the border regions.
❖ **Port Connectivity and Coastal Road** – The central government has mandated the construction of 2000km of roads to connect the areas along the shorelines and important ports.
❖ **Green Field Expressway** – The project lays major emphasis on the construction and development of Green Field Expressway for better management of traffic and freight.
❖ **Balance NHDP Works** – The project will see the construction and maintenance of about 10,000kms of new roads under the last segment.

9.19 6 NEW SAMARTH PROGRAMS

❖ **Karmayogi Bharat**, in association with **NITI Aayog**, has **launched 6 SAMARTH Curated Training Programs on the iGOT Karmayogi Platform for State Government officials.**
❖ The **programs are**- 1) SAMARTH Blocks, 2) SAMARTH Zila, 3) SAMARTH Rajya, 4) SAMARTH Rajya Sachiva, 5) SAMARTH Policy, and 6) SAMARTH Procurement.
❖ These programs **aim to elevate the skills and competencies of government officials**, ensuring they are **well-equipped to meet the evolving needs of governance.**

ABOUT IGOT KARMAYOGI

❖ It is **a comprehensive online learning platform** to **guide government officials in their capacity-building journey**.
❖ The portal **combines six functional hubs for online learning, competency management, career management, discussions, events, and networking**.
❖ **28 lakh+ learners** from across the government spectrum **are currently registered on the iGOT Platform having access to 840+ courses.**

10.   INDEX AND REPORTS

10.1   'A CALL FOR SAFER AND HEALTHIER WORKING ENVIRONMENTS' REPORT

❖ **'A Call for Safer and Healthier Working Environments' report** was recently **released by International Labour Organization (ILO)**.
❖ It was discussed at **23ʳᵈ World Congress on Safety and Health at Work (WCSHW)** in **Sydney, Australia.**

MAJOR FINDINGS

❖ Nearly **30 lakh workers die every year globally due to work-related accidents and diseases.**
❖ More than **63% of these deaths are reported from the Asia-Pacific region.**
❖ In **2019, work-related deaths rose to 2.93 million, a 12% increase from 2000.**
❖ Majority of **work-related deaths are caused by work-related diseases e.g., circulatory and respiratory diseases.**
❖ **Exposure to long working hours (55 hours or more per week) was the biggest "killer",** with almost 7.45 lakh people dying of it in 2016, **followed by exposure to occupational particulate matter, gases, and fumes** (4.5 lakh deaths) and **occupational injuries** (3.63 lakh deaths).

CHALLENGES INCLUDE

❖ **Changes in worker demographics**, such as **age, gender, and migration, impact occupational safety.**
❖ Workers in the **informal economy** lack **adequate legal and social protection.**
❖ The report said that **so far 79 out of the 187 member countries have ratified** the **ILO Occupational Safety and Health Convention (No. 155),** while **62 countries have ratified the Promotional Framework for Occupational Safety and Health Convention, 2006 (No. 187)**.
   a.   **India** has **not ratified both the conventions.**

RECOMMENDATIONS

❖ The report has recommended **five categories of "Fundamental Principles and Rights at Work" for ensuring safety and health at work.**
❖ These are
   ✓ **freedom of association and the effective recognition of the right to collective bargaining,**
   ✓ **elimination of all forms of forced or compulsory labour,**
   ✓ **abolition of child labour,**
   ✓ **elimination of discrimination in respect of employment and occupation, and**
   ✓ **a safe and healthy working environment.**

ABOUT ILO

❖ The International Labour Organization (ILO) is the **only tripartite U.N. agency with government, employer, and worker representatives.**
❖ It was **established in 1919** by the **Treaty of Versailles as an affiliated agency of the League of Nations.**
❖ It became the **first affiliated specialized agency of the United Nations in 1946.**
❖ It **encourages decent employment opportunities and work-related issues.**
❖ **Headquarters- Geneva, Switzerland.**
❖ It also **received the Nobel Peace Prize in 1969.**

10.2   GLOBAL DROUGHT SNAPSHOT 2023

❖ **UN Convention to Combat Desertification (UNCCD)** has released **The Global Drought Snapshot** at the beginning of the **28ᵗʰ Conference of Parties (COP28) to the UN Framework Convention on Climate Change (UNFCCC)** in **Dubai.**

- ❖ It exposes the **devastating consequences of droughts on lives, economies, and various sectors based on reporting by 101 Parties to the UNCCD.**

MAJOR FINDINGS

- ❖ It shows that **only a few hazards claim more lives, cause more economic loss, and affect more sectors** of society **than drought**.
- ❖ **1.84 billion people are drought stricken** and according to the World Bank, **85% of them live in low or middle-income countries.**
    - ✓ **4.7 percent of this population** was exposed to **severe or extreme drought.**
- ❖ As compared to men, **women and children are over 14 times more likely to be killed by climate fuelled disasters.**
- ❖ Drought's severity prompted **emergency declarations at a national or sub-national level in 23 countries (including India).**
    - ✓ **Europe** faced the **highest number of declarations**, with Spain, Italy, and the United Kingdom declaring emergencies in 2023.
- ❖ **Anthropogenic drivers are causing more frequent and extreme droughts**.
- ❖ **2023 has broken records when the world breached 2 degrees Celsius of warming on November 17, 2023.**

ABOUT UNCCD

- ❖ UNCCD is **one of three Conventions originated** at the **1992 Earth Summit in Rio de Janeiro.**
- ❖ The UNCCD **works with the other two Rio Conventions** to address the **interlinked challenges of land, climate and biodiversity. These are-**
    - ✓ **The Convention on Biological Diversity (CBD)**
    - ✓ **The United Nations Framework Convention on Climate Change (UNFCCC)**

> **2006** was declared as **"International Year of Deserts and Desertification".**

- ❖ It was **established in 1994.**
- ❖ It is the **only legally binding international agreement** linking **environment and development to sustainable land management.**
- ❖ It **obliges national governments** to take **measures to tackle the issue of desertification**.
- ❖ It **addresses specifically the arid, semi-arid and dry sub-humid areas**, known as the **drylands**, harboring some of the **most vulnerable ecosystems and population**.
- ❖ It focuses on having a **bottom-up approach to achieve its goals, by involving the local communities.**

10.3   DYNAMIC GROUND WATER RESOURCE ASSESSMENT REPORT 2023

- ❖ The Union Ministry of Jal Shakti released the **Dynamic Ground Water Resource Assessment Report** for the entire country for the year 2023.
- ❖ The **assessment was carried out jointly by Central Ground Water Board (CGWB) and States/UTs**, which can be used for taking suitable interventions by various stake-holders.
    - ✓ **Previous such assessments** were carried out in **1980, 1995, 2004, 2009, 2011, 2013, 2017, 2020, and 2022**, emphasizing the **government's commitment to regularly monitor and manage the nation's water resources.**

MAJOR FINDINGS

- ❖ As per the 2023 assessment report, the **total annual ground water recharge for the entire country is 449.08 billion cubic meters (BCM),** marking an **increase of 11.48 BCM compared to the previous year (2022).**
    - ✓ The **increase may mainly be attributed** to an **increase in recharge from canal seepage**, **return flow of irrigation water**, and **water bodies/tanks** & **water conservation structures.**
- ❖ Annual ground water extraction for the entire country is 241.34 BCM.

❖ **Stage of ground water extraction** stands at **59.23%.**
❖ **Out of total 6553 assessment units, 4793 units categorized as 'Safe'.**
❖ Further, **out of the total 6553 assessment units in the country**, **736 units have been categorized as 'Over-exploited'.**
   ✓ The report **highlights a decrease in the number of 'Over-exploited' units**, indicating positive strides in sustainable water management practices.

10.4   CRIME IN INDIA REPORT 2022

❖ The **National Crime Records Bureau (NCRB)** released its **annual report on crime in India for the year 2022.**
❖ The report is a **compilation of data on reported crime from across the country, and provides the big picture of broad trends in crime registration.**
❖ Report include **statistics on offences ranging from crimes against women to economic and financial crimes.**

MAJOR FINDINGS

❖ Total of **58,24,946 cognizable crimes** were registered showing decline of 4.5% in the registration of cases over the second pandemic year, 2021.
❖ **The crime rate, or crimes registered per lakh population**, has **declined from 445.9 in 2021 to 422.2 in 2022**.
   ✓ This is seen as a better indicator, since absolute numbers on crime increase as the population increases.
❖ 4,45,256 cases of **crime against women** were registered in 2022. This was **an increase of 4% over the 2021 numbers.**
   ✓ **Majority of cases** under **crime against women** were registered **under 'cruelty by Husband or relatives' (31.4%).**
❖ **Cases of crimes against children showed** an increase **of 8.7% compared to 2021.**
❖ **Reporting of cyber crime increased significantly by 24.4 percentage points** compared to 2021, to 65,893 cases.
❖ An **increase of 4.2% was observed in suicides reported during 2022** (1,70,924 suicides) as compared to 2021.

ABOUT NCRB

❖ Set up **in 1986** to **function as a repository of information on crime and criminals** to assist the **investigators in linking the crime to the perpetrators** based on the **recommendations of the Tandon Committee, National Police Commission (1977-1981)** and the **Ministry of Home Affairs (MHA) Taskforce (1985).**
❖ It is under the purview of **Ministry of Home Affairs** and **is headquartered in New Delhi**.
❖ It also acts as **a "national warehouse" for the fingerprint records of Indian and foreign criminals**, and **assists in locating interstate criminals through fingerprint search.**
❖ The NCRB has **four divisions**-
   ✓ **Crime and Criminal Tracking Network and Systems (CCTNS),**
   ✓ **Crime Statistics,**
   ✓ **Finger Prints,** and
   ✓ **Training.**

10.5   GLOBAL COOLING WATCH REPORT 2023

❖ **The Global Cooling Watch report**, **Keeping it Chill: How to meet cooling demands while cutting emissions** – was released by the **UN Environment Programme-led Cool Coalition.**

- ❖ The report is **released in support of the Global Cooling Pledge**, a joint initiative between the **United Arab Emirates as host of COP28 and the Cool Coalition.**
  - ✓ Over **60 countries signed up to the Pledge with commitments to reduce the climate impact of the cooling sector.**
- ❖ The cooling sector **accounts for 20 per cent of electricity use** and **is essential in combating rising temperatures, maintaining food quality and safety, as well as keeping vaccines stable and economies productive.**

MAJOR FINDINGS

- ❖ **82% of global cooling-related GHG emissions** came from **G20 countries, in 2022.**
- ❖ Under the current approach to cooling, the **installed capacity of cooling equipment globally will triple between now and 2050.**
  - ✓ The **resulting emissions could be between 4.4 billion and 6.1 billion tonnes of carbon dioxide equivalent (CO2e) in 2050**.
- ❖ Presently, **more than 40 countries**, including **India**, have **developed National Cooling Action Plans (NCAPs)**

RECOMMENDATIONS

- ❖ The **new proposed action** plans include **passive cooling** (such as cool roofs, ventilation and bringing nature back to cities), **higher energy efficiency standards**, and **a faster phasedown of climate-warming refrigerants and air conditioning.**
- ❖ Getting cooling right with these measures **would cut at least 60 per cent off predicted 2050 sectoral emissions**, provide increased access to life-saving cooling, take the pressure off energy grids, and save trillions **by 2050.**

TARGETS UNDER INDIA COOLING ACTION PLAN (ICAP)

- ❖ Launched in **2019**, ICAP aims to
  - ✓ Reduce **cooling demand across sectors by 20% to 25% by 2037-38**, and
  - ✓ Reduce **refrigerant demand by 25% to 30% by 2037-38**.
  - ✓ Reduce **cooling energy requirements by 25% to 40% by 2037-38**
  - ✓ Recognize **'cooling and related areas'** as a **thrust area of research under the national S&T Programme.**

10.6	CLIMATE CHANGE PERFORMANCE INDEX (CCPI)

- ❖ **Climate Change Performance Index (CCPI)** was recently released at **global COP-28 held in Dubai.**

MAJOR FINDINGS

- ❖ The **top three places remain empty** as **not a single assessed country has taken action** in line with the **1.5-degree limit**.
- ❖ Denmark is at the **top of the index again (4th), followed by the climbers Estonia and Philippines (5th and 6th).**
- ❖ **China**, the **largest emitter**, remains in **51st place**, while the **US has even dropped five places since last year (now 57th)**.
- ❖ The **host of COP28, the United Arab Emirates (UAE), Iran, and Saudi Arabia form the bottom trio (ranked 65th to 67th).**

INDIA SPECIFIC FINDINGS

- ❖ **India** has ascended to the **7th position in this year's Climate Change Performance Index (CCPI)**, showcasing a commendable improvement from its previous ranking.
- ❖ The **spotlight** is on **India's exceptional performance in renewable energy, outpacing fellow developing nations** and **solidifying its position in the top tier.**

- ❖ The country's **prowess in the greenhouse gas emissions category is evident**, marked by a **low level of emissions** and **minimal travel-related impact.**
- ❖ However, a **critical observation emerges regarding India's heavy reliance on fossil fuels**, prompting **speculation about its future ranking if emission rates continue to escalate.**
- ❖ India's **per capita emissions at half the global average**, while **China's figures already surpass the world average**.

ABOUT CCPI

- ❖ Published **since 2005**, the **Climate Change Performance Index (CCPI) tracks countries' efforts to combat climate change**.
- ❖ It **monitors** the **climate mitigation progress of 63 countries** and the **European Union**, together responsible for **more than 90% of global emissions.**
- ❖ **Germanwatch**, the **NewClimate Institute** and the **Climate Action Network publish the index annually.**
- ❖ As an **independent monitoring tool,** it **aims to enhance transparency in international climate politics** and **enables comparison of climate protection efforts** and **progress made by individual countries.**
- ❖ It **assesses countries performance in four categories**- GHG emissions, Renewable energy, Energy use, Climate policy.

10.7	**FAO REPORT ON FOOD SECURITY**

- ❖ **Asia and the Pacific Regional Overview of Food Security and Nutrition 2023 – Statistics and Trends** report was recently launched by **Food and Agriculture Organisation (FAO) of the United Nations.**

MAJOR FINDINGS

- ❖ **Southern Asia** had the **most people (1.4 billion)** who **could not afford the cost of a healthy diet in 2021.**
- ❖ About **half of the world's undernourished and food insecure people live in the Asia-Pacific region**, with more **food-insecure individuals in Southern Asia than any other subregion.**
- ❖ Women fared **worse in food insecurity than men across the subregions**, except for Eastern Asia.
  - ✓ Almost **one-tenth of women face severe food insecurity**, while **nearly one-fourth have moderate food insecurity.**
- ❖ The report said during the **COVID-19 pandemic** and the **"5Fs" crisis – Food, Feed, Fuel, Fertilisers, and Finance** – the **region witnessed harrowing statistics.**

INDIA SPECIFIC FINDINGS

- ❖ **74.1%** of **Indians** were **unable to afford a healthy diet in 2021** as compared **to 76.2% in 2020**.
- ❖ **16.6% of the country's population is undernourished.**
- ❖ **31.7% of children of the country under five years** of age suffered with **stunted growth**.
- ❖ For **wasting (low weight for height)**, **India** recorded the **highest rate in the region with 18.7% children suffering.**
- ❖ **2.8% of the children below five years were overweight**, another health risk.
- ❖ **53% of the country's women** aged **between 15 to 49** had **anaemia.**

10.8	**GLOBAL STATUS REPORT ON ROAD SAFETY 2023**

- ❖ **Global Status Report on Road Safety 2023** was recently **released by World Health Organization (WHO).**

MAJOR FINDINGS

- ❖ Road traffic **deaths fell by 5% to 1.19 million fatalities annually worldwide** between 2010 and 2021, with **108 UN member nations reporting a drop.**
  - ✓ **India, however, registered a 15% increase in fatalities.**

- ✓ In India, the **total number of road traffic fatalities went up from 1.34 lakh in 2010 to 1.54 lakh in 2021**.
- ❖ **Ten countries** succeeded in **reducing road traffic deaths by over 50%** — **Belarus, Brunei Darussalam, Denmark, Japan, Lithuania, Norway, Russian Federation, Trinidad and Tobago, the United Arab Emirates, and Venezuela.**
- ❖ **By region**
  - ✓ **28%** of global road traffic deaths occurred in the WHO's **South-East Asia Region**,
  - ✓ **25%** in the Western Pacific Region,
  - ✓ **19%** in the African Region,
  - ✓ **12%** in the Region of the Americas,
  - ✓ **11%** in the Eastern Mediterranean Region, and
  - ✓ **5%** in the European Region.

> **2021–2030** has been declared **UN Decade of Action for Road Safety.**

- ❖ **Road fatality rate** has declined from **18 per 1 lakh people in 2010** to **15 per 1 lakh in 2021**.
- ❖ **Annual fatality rates per 1 lakh vehicles** fell from **79 deaths to 47 deaths, which is a 41% reduction**.
- ❖ Vulnerable **road users**, including **pedestrians, cyclists, and motorcyclists**, account for **over 50% of global fatalities**, with **occupants of 4-wheel vehicles contributing to one-third.**

10.9   LEADS 2023 REPORT

- ❖ The **"Logistics Ease Across Different State (LEADS) 2023" report** was recently released by **Ministry of Commerce and Industry.**
- ❖ LEADS was **conceived** on the lines of **Logistics Performance Index of World Bank in 2018.**
- ❖ While the **LPI relies entirely on perception-based surveys**, LEADS incorporates both perception as well as **objectivity thereby enhancing the robustness and comprehensiveness of this exercise.**

ABOUT THE REPORT

- ❖ The **5th edition of the LEADS annual exercise - LEADS 2023 report**, provides **insights into improvement of logistics performance at State/UT level**.
- ❖ It **highlights an enhanced overall stakeholder perception and impact of various reforms, across States and UTs.**
- ❖ This report is **based on a pan-India primary survey covering over 7,300 responses across 36 States/UTs**. Additionally, **over 750 stakeholder consultations, facilitated by National, Regional, and State Associations, significantly contributed to this comprehensive evaluation.**
- ❖ **Major findings**
  - ✓ **23 States/UTs have also notified their State Logistics Polices** to align with the National Logistics Policy.
  - ✓ Further, **16 States/UTs have given industry status to logistics.**
  - ✓ **Length of National Highways increased by approximately 48%** on back of sustained investment push by the **government over the last decade.**
  - ✓ Digital reform such as **PM GatiShakti, Logistics Data Bank, Unified Logistics Interface Platform (ULIP), GST** are propelling India's improved ranking at global level.

PERFORMANCE HIGHLIGHTS FROM LEADS 2023-

Coastal Group	Landlocked Group	North-East Group	Union Territories

Achievers: Andhra Pradesh, Gujarat, Karnataka, Tamil Nadu	Achievers: Haryana, Punjab, Telangana, Uttar Pradesh	Achievers: Assam, Sikkim, Tripura	Achievers: Chandigarh, Delhi
Fast Movers: Kerala, Maharashtra	Fast Movers: Madhya Pradesh, Rajasthan, Uttarakhand	Fast Movers: Arunachal Pradesh, Nagaland	Fast Movers: Andaman & Nicobar, Lakshadweep, Puducherry
Aspirers: Goa, Odisha, West Bengal	Aspirers: Bihar, Chhattisgarh, Himachal Pradesh, Jharkhand North-East Group	Aspirers: Manipur, Meghalaya, Mizoram	Aspirers: Daman & Diu/ Dadra & Nagar Haveli, Jammu & Kashmir, Ladakh

10.10 MIGRATION AND DEVELOPMENT BRIEF

- ❖ The **World Bank** released its latest **Migration and Development Brief.**

MAJOR FINDINGS

- ❖ It reveals a **continuing growth in remittance flows to low- and middle-income countries (LMICs) in 2023**, albeit at a slower pace compared to previous years.
- ❖ Remittances to **LMICs grew by an estimated 3.8 per cent in 2023, reaching a total of USD669 billion.**
- ❖ Resilient **labour markets in advanced economies and Gulf Cooperation Council (GCC) countries played a pivotal role in supporting migrants' ability to send money home.**
- ❖ **India** saw the **highest amount of remittance inflows in the world in 2023 at USD 125 billion.**
  - ✓ India was **followed by Mexico, China, the Philippines, and Egypt**.
- ❖ **USA** continued to be the **largest source of remittances.**
- ❖ Economies where **remittance inflows represent substantial shares of Gross Domestic Product** (GDP) -- highlighting the **importance of remittances for funding current account and fiscal shortfalls** -- are **Tajikistan, Tonga, Samoa, Lebanon, and Nicaragua.**
- ❖ The report **suggests a potential risk of a decline in real income for migrants** in 2024 due to **global inflation and low growth prospects.**

10.11 GREEN AND SUSTAINABLE GROWTH AGENDA FOR THE GLOBAL ECONOMY' REPORT

- ❖ **NITI Aayog**, in partnership with the **International Development Research Centre (IDRC) and the Global Development Network (GDN)**, published a **report, 'A Green and Sustainable Growth Agenda for the Global Economy'**.
- ❖ It is based on the **proceedings of the G20 international conference held in New Delhi featuring 40 leading experts from 14 countries across the world.**

MAJOR POINTS

- ❖ It emphasized on **reforming the structure of the Multilateral Development Banks (MDBs) for improving capital mobilisation**, **better project implementation** and **making sustainable infrastructure an asset class.**
- ❖ There is a **global requirement of USD 3 trillion over the next decade to finance green growth** and hence there is **an urgent need to mobilise both public and private finance.**

❖ Efforts should be **directed towards ensuring macroeconomic stability and promoting inclusive growth** alongside **effective transfer, adjustment and training policies.**

10.12	QS- WORLD UNIVERSITY RANKING: SUSTAINABILITY 2024

❖ The **World University Ranking: Sustainability 2024** by **Quacquarelli Symonds (QS)** was released featuring the **world's universities that are leading the way in social and environmental sustainability.**
❖ **University of Toronto** grabbed the top spot, followed by **University of California, Berkeley** and **The University of Manchester,** grabbed the **top three spots in the QS World University Ranking: Sustainability 2024 list.**
❖ **No Indian university were featured in the Top 100 list**.
   ✓ University of **Delhi was ranked at 220**, **IIT Bombay was ranked at 303** and **IIT Madras was ranked at 344**. Overall, **56 universities from India made it to the list.**

10.13	FINANCIAL STABILITY REPORT

❖ **Reserve Bank of India** (RBI) released its **Financial Stability Report** recently.
❖ The report reflects the **collective assessment** of the **Sub-Committee of the Financial Stability and Development Council (FSDC)** on risks to financial stability and the resilience of the Indian financial system.

MAJOR HIGHLIGHTS

❖ **Capital-to-risk-weighted assets ratio (CRAR)** and the **common equity tier 1 (CET1) ratio** of scheduled commercial banks (SCBs) stood **at 16.8 per cent and 13.7 per cent respectively.**
❖ **Credit growth remains robust, and deposit growth has also gained momentum.**
❖ Macro stress tests for **credit risk** showed that **SCBs have sufficient capital buffers** and even under adverse stress scenarios their capital ratios will remain above the regulatory minimum.
❖ **Resilience** of the **non-banking financial companies (NBFCs) sector** has **improved.**

ABOUT FINANCIAL STABILITY AND DEVELOPMENT COUNCIL (FSDC)

❖ It was **set up in 2010**.
❖ Chairman- **Finance Minister**
❖ It aims to **strengthen and institutionalize the mechanism** for **maintaining financial stability, enhancing inter-regulatory coordination and promoting financial sector development.**

11. INTERNATIONAL, SUMMITS

11.1 NEPAL BECOMES FIRST SOUTH ASIAN NATION TO FORMALLY REGISTER SAME-SEX MARRIAGE

❖ **Nepal** officially **records its inaugural same-sex marriage five months after it was legalized by the Supreme Court.**
❖ This makes **Nepal, the first in South Asia to formally recognize and register a same-sex marriage following the Supreme Court's decision.**
❖ In **2007**, **Nepal's Supreme Court** had **already granted permission for same-sex marriage, a stance further reinforced by the 2015 constitution**, **explicitly prohibiting discrimination based on sexual orientation.**

11.2 LEADIT 2.0

❖ PM Modi, in collaboration with his **Swedish counterpart Ulf Kristersson**, launched the **India-Sweden Industry Transition Partnership** during the COP28 World Climate Action Summit, hosted in Dubai.
❖ The **initiative** has been **introduced under the broader framework** of the **Leadership Group for Industry Transition (LeadIT) 2.0**, and marks a **significant stride toward a sustainable and green industrial revolution.**
❖ The unveiling of LeadIT 2.0 at COP28 in Dubai has an **intensified commitment to three core areas**-
  ✓ **Inclusive and Just Industry Transition**
  ✓ **Low Carbon Technology Development and Transfer**
  ✓ **Emerging Economy Technology Transfer**

ABOUT LEADIT INITIATIVE
❖ LeadIT was **launched by India and Sweden at the UN Climate Action Summit in 2019.**
❖ LeadIT has **grown into a collaborative effort involving 18 countries and 20 industry-leading companies.**
❖ It brings **together countries, companies and industry experts to achieve net-zero emissions from heavy industries by 2050.**
❖ The LeadIT initiative, **initially centered around pivotal sectors such as iron, steel, cement, and aluminum**, focused on **industry transition and knowledge sharing**.

11.3 GLOBAL GREEN CREDIT INITIATIVE

❖ The Indian PM together with President Sheikh Mohammed bin Zayed Al Nahyan of UAE, co-hosted the High-level event on **'Green Credits Programme' at COP-28**, in Dubai.
❖ The Global Green Credit Initiative **aims** to **facilitate global collaboration, cooperation and partnership** through exchange of **knowledge, experiences and best practices in planning, implementation and monitoring** of environment positive actions through **programs/mechanisms like Green Credits**.
❖ It is also referred as **Global Platform for Nature's Ecological Transformation**.
❖ The **Green Credits initiative** envisions a **market-based approach** to **rewarding individuals, communities, and organisations for undertaking environmentally positive actions**.
  ✓ These actions could **include afforestation, water conservation, and sustainable waste management practices, among others.**
❖ Participants in the program will **earn tradeable Green Credits**, which **can be used to offset carbon emissions or sold to entities seeking to reduce their environmental footprint**.
❖ This mechanism **aims to create a financial incentive for individuals and organisations to adopt sustainable practices and contribute to environmental conservation.**
❖ The Green Credits system will be **a fully digital and tradeable instrument** for environmental sustainability.

- ✓ The **entire process**, from **registration to verification and issuance of green credits, will be done online.**
- ❖ The **Green Credits initiative** has **already been launched in India**, and the **PM has invited countries around the world to join it**.
  - ✓ It has been **notified through Green Credit Rules, 2023** by the **Ministry of Environment and Climate Change** under the **Environment Protection Act, 1986.**
- ❖ In the **first phase**, it **envisions the issuance of Green Credits for plantation on waste/degraded lands and river catchment areas, to rejuvenate and revive natural ecosystems and create voluntary carbon sinks**.
  - ✓ The **end goal** is to **contribute to a healthier planet and a more sustainable future for all.**
- ❖ **Difference between Crbon Credits and green credits**
  - ✓ **Carbon credits**, with their established international and national trading systems, focus on **reducing or offsetting carbon dioxide emissions.**
  - ✓ **Green credits**, on the other hand, have a **broader scope, encompassing a wider range of environmental actions and extending beyond direct carbon emission reduction.** They **reward** activities such as **afforestation, water conservation, waste reduction, and biodiversity conservation**.

11.4 INTERPOL

- ❖ A **high-ranking Indian delegation** to the **91st Interpol General Assembly has urged other member countries to deny safe havens to crime, criminals, and the proceeds of crime.**
- ❖ The **annual INTERPOL General Assembly had its 91st session** in **Vienna**, a **century after the organization was founded in the Austrian capital.**

ABOUT INTERPOL

- ❖ The **International Criminal Police Commission (ICPC)** was founded at a **police congress convened in 1923 by Johannes Schober, then President of the Vienna Police.**
- ❖ **Headquarters- Lyon, France**
- ❖ The **General Assembly** is **INTERPOL's supreme governing body** and **sets the organization's programme of activities and financial policy for the coming year.**
  - ✓ **It also elects the President from member countries, who holds the office for a period of 4 years.**
  - ✓ The **day-to-day activities are overseen by a full-time Secretary General** elected by the General Assembly, **who holds office for five years**.
- ❖ Its **notices are international requests** for **cooperation or alerts allowing police in member countries** to share **critical crime-related information.**

TYPES OF NOTICE

- ❖ **Red Notice**: To seek the location and arrest of persons wanted for prosecution or to serve a sentence.
- ❖ **Yellow Notice**: To help locate missing persons, often minors, or to help identify persons who are unable to identify themselves.
- ❖ **Blue Notice**: To collect additional information about a person's identity, location or activities in relation to a criminal investigation.
- ❖ **Black Notice**: To seek information on unidentified bodies.
- ❖ **Green Notice**: To provide warning about a person's criminal activities, where the person is considered to be a possible threat to public safety.
- ❖ **Orange Notice**: To warn of an event, a person, an object or a process representing a serious and imminent threat to public safety.
- ❖ **Purple Notice**: To seek or provide information on modus operandi, objects, devices and concealment methods used by criminals.
- ❖ **INTERPOL–United Nations Security Council Special Notice**: Issued for entities and individuals who are the targets of UN Security Council Sanctions Committees.

INTERPOL AND INDIA

- ❖ The **CBI** is the **National Central Bureau for Interpol in India** and **coordinates all international police cooperation requirements of Indian law enforcement agencies via Interpol channels.**
- ❖ **India**, which joined Interpol in 1949, **had hosted the 90th Interpol General Assembly in Delhi in October 2022.**
- ❖ The **CBI Academy has also joined** the **Interpol Global Academy Network to emerge as a global training hub for the Interpol.**

11.5	CAC PRAISES INDIA'S MILLET STANDARDS

- ❖ The **Codex Alimentarious Commission (CAC)** has praised **India's Standards on Millets** and accepted its **proposal for the development of global standards for millets during its 46th session held in Rome, Italy.**
- ❖ **India** has framed a **comprehensive group standard for 15 types of millets specifying 8 quality parameters**, which received resounding applause at the international meet.
  - ✓ Codex **currently has standards for Sorghum and Pearl Millet.**

ABOUT CAC

- ❖ CAC is an **international food safety and quality standard-setting body** created by **WHO and FAO in 1963.**
- ❖ **It has 188 countries and 1 organisation European Union as members**.

> 2023 is being celebrated as the International year of Millets.

- ❖ **India** has been **a member since 1964**.
- ❖ **Headq   uarters- Rome, Italy**
- ❖ Its objective is **to protect consumer's health and ensure fair practices in food trade.**
- ❖ **Codex Alimentarius**, or **"Food Code" is a collection of standards, guidelines and codes of practice adopted by the CAC.**
- ❖ Codex **standards are voluntary.**
- ❖ The **Agreement on Application of Sanitary and Phytosanitary Measures (SPS)** of the **World Trade Organization (WTO)** recognizes **Codex standards, guidelines and recommendations as reference standards** for **international trade and trade dispute settlement**.

11.6	COP28 DECLARATION ON CLIMATE AND HEALTH

- ❖ The **COP28 Presidency**, in **partnership with the World Health Organization** and **UAE Ministry of Health and Prevention**, unveiled the **'COP28 UAE Declaration on Climate and Health', in recognition of the negative impacts of climate change on health**.
- ❖ Endorsed by **123 countries**, the Declaration **marks a world first in governments acknowledging the growing health impacts of climate change on communities and countries**.
  - ✓ **India** has **not signed it**.
- ❖ The **declaration was announced at the World Climate Action Summit.**
  - ✓ Every year, **annual deaths from polluted air affect about 9 million people** and **189 million people are exposed to weather-related events each year.**
- ❖ Signatories to the Declaration **commit to pursue objectives including-**
  - ✓ **strengthening the development and implementation of policies** that maximise the health gains from **mitigation and adaptation actions and prevent worsening health impacts from climate change**;
  - ✓ **improving the ability of health systems to anticipate, and implement adaptation interventions against**,
  - ✓ **climate-sensitive disease** and **health risks**;
  - ✓ **promoting steps to curb emissions and reduce waste** in the health sector; and
  - ✓ **encouraging the scaling up of investments in climate and health** from a variety of sources.

- ❖ A set of **new finance commitments on climate and health was announced to back up these political commitments**, including a **USD 300 million commitment by the Global Fund** to prepare health systems, **USD 100 million by the Rockefeller Foundation to scale up climate and health solutions**, and an **announcement by the UK Government of up to GBP 54 million.**
- ❖ For the **first time**, **Health Ministers are attending the annual UN climate conference alongside their peers from Environment Ministries.**

11.7   INTERNATIONAL MARITIME ORGANISATION

- ❖ India was **re-elected to the International Maritime Organisation (IMO) Council** with the **highest tally**.
- ❖ **India's re-election falls under the Category of 10 states** with **"the largest interest in international seaborne trade"**, alongside Australia, Brazil, Canada, France, Germany, the Netherlands, Spain, Sweden, and the United Arab Emirates (UAE).

ABOUT INTERNATIONAL MARITIME ORGANISATION (IMO)

- ❖ It is a **specialized agency** of the **United Nations established in 1948**.
- ❖ Members- **175 members (including India) and 3 associate members.**
- ❖ **Headquarters- London**
- ❖ It **is the leading authority** that **regulates the maritime industry, which supports global trade, transportation, and all marine operations.**
- ❖ The Organization consists of **an Assembly, a Council, and five main Committees along with subcommittees.**
  - ✓ The **council is the executive organ of IMO** and **is responsible, under the assembly, for supervising the work of the organization**.
- ❖ **Between sessions** of the assembly, **the council performs the functions of the assembly, except that of making recommendations to governments on maritime safety and pollution prevention.**

11.8   INTERNATIONAL SOCIAL SECURITY ASSOCIATION

- ❖ The **Employees' State Insurance Corporation (ESIC)** bagged the **"ISSA Vision Zero 2023" Award** in the recently held **23rd World Congress on Safety and Health at Work in Sydney, Australia**.
- ❖ **"Vision Zero"** is a **transformational approach for prevention of accidents at work places integrating the three dimensions of safety, health and well-being at all levels of work.**

ABOUT INTERNATIONAL SOCIAL SECURITY ASSOCIATION

- ❖ The International Social Security Association (ISSA) is the **principal international institution bringing together social security agencies and organizations of the world.**
- ❖ The ISSA's **aim** is to **promote dynamic social security as the social dimension in a globalizing world.**
- ❖ Founded in **1927**, the **ISSA has its headquarters at the International Labour Office** in **Geneva**.
- ❖ The **ISSA provides access to information, expert advice, business standards, practical guidelines and platforms for members to build and promote dynamic social security systems worldwide**.

ABOUT ESIC

- ❖ It is a **state-run organization set up under the Employee State Insurance Act of 1948.**
- ❖ Nodal Ministry- **Ministry of Labour & Employment**
- ❖ It **provides socio-economic protection** to the **worker population and immediate dependent or family covered under the ESI scheme.**

11.9   BELT AND ROAD INITIATIVE

- ❖ **Four years after** becoming the **only G7 nation to join China's ambitious Belt and Road initiative (BRI)**, Italy **has decided to leave the project.**
- ❖ The **deal was due to automatically renew in March 2024** unless **Italy opted out by the end of 2023.**

ABOUT BRI

- ❖ The Belt and Road Initiative (BRI) is a **global infrastructure development strategy launched by China** in 2013.
- ❖ It **aims to invest in over 150 countries and international organizations**, creating **road, rail, and sea routes for trade and connectivity**.

> The G-7 includes Canada, France, Germany, Italy, Japan, the United Kingdom and the United States.

- ❖ The initiative, **often referred to as "One Belt One Road" (OBOR), is a key part of China's foreign policy.**
- ❖ The **initiative** includes **two principal components-**
  - ✓ **Silk Road Economic Belt-** This segment is **dedicated to improving connectivity, infrastructure, and trade links across Eurasia** through a **network of overland transportation routes.**
  - ✓ **Maritime Silk Road** This component **emphasizes maritime connections and cooperation** in the form of **ports, shipping routes, and maritime infrastructure projects.**
    - ➤ It begins via the **South China Sea** going towards **Indo-China, South-East Asia** and then **around the Indian Ocean thus reaching Africa and Europe.**
- ❖ **Issues**
  - ✓ **"Debt-trap diplomacy"** of **China**
  - ✓ **Geopolitical rivalries** and **disputes**
  - ✓ **Implementation problems** like **labour violations, environmental hazards, corruption scandals etc.**
- ❖ **Sierra Leone in 2018** and **Philippines in 2023** had also **announced their exit from BRI.**

11.10   COLOMBO SECURITY CONCLAVE

- ❖ The **sixth meeting** of the **Colombo Security Conclave** was held at **Mauritius recently**.
- ❖ It **agreed on a roadmap to ensure** the **security and stability of the Indian Ocean region in the face of non-traditional** and **emerging hybrid challenges.**
- ❖ **Ocean Information Services portal** was also **launched at the conclave.**

ABOUT COLOMBO SECURITY CONCLAVE

- ❖ The conclave is **a gathering of the region's leaders focused on maritime safety and security in the Indian Ocean.**
- ❖ The **Colombo Security Conclave was formed in 2011** as a **trilateral maritime security of India, Sri Lanka, and the Maldives**.
- ❖ The **roadmap of activities was later expanded, with Mauritius joining as the fourth member** and **Bangladesh and Seychelles participating as observer countries.**
- ❖ **Secretariat- Colombo, Sri Lanka**
- ❖ The **five pillars of cooperation within the CSC encompass**
  - ✓ maritime safety and security,
  - ✓ counterterrorism and counter-radicalisation initiatives,
  - ✓ the combat against trafficking and transnational organised crime,
  - ✓ cybersecurity and protection of critical infrastructure, and
  - ✓ humanitarian assistance and disaster relief.

11.11   OPERATION STORM MAKERS II

❖ The **first Interpol operation against fraud schemes** fuelled by **victims of human trafficking** has unearthed further evidence that the trend is expanding beyond the southeast Asian region.
  ✓ The **fraud schemes included fake cryptocurrency investments, fraudulent work-from-home offers, and lottery and online gambling scams.**

ABOUT THE MISSION

❖ Known as **"Operation Storm Makers II"**, the Interpol exercise **resulted in the arrest of 281 persons in different countries**, on charges such as **human trafficking, passport forgery, corruption, telecommunications fraud, and sexual exploitation.**
  ✓ **Indian enforcement agencies** also **participated in the exercise.**
  ✓ According to the Interpol, the **Telangana police registered one of the first cases in India of human trafficking** committed for the **purpose of forcing victims to commit cyber fraud.**
❖ This operation was **a special mission organized by Interpol.**
❖ It **involved law enforcement in 27 countries across Asia and other regions.**

ABOUT INTERPOL

❖ **Established in 1923**
❖ **Headquarter- Lyon, France**
❖ It **facilitates criminal investigation of police forces** across the **globe through collection and dissemination of information received** from various police forces.
❖ The **Central Bureau of Investigation (CBI)** is designated as the **National Central Bureau of India.**

11.12 UNODC RELEASES SOUTHEAST ASIA OPIUM SURVEY 2023

❖ **United Nations Office on Drugs and Crime (UNODC)** released its **Southeast Asia Opium Survey 2023**.
❖ The report states that **Myanmar is the world's biggest opium producer**.
❖ From **2022 to 2023**, Myanmar saw an **18 per cent increase to one lakh 16 thousand acres in the amount of land** used to **grow the illicit crop and a 16 per cent rise in production**.
❖ The **Southeast Asian country's opium output has topped that of Afghanistan** where **Taliban's ban has led to a 95% drop in the cultivation of opium poppies in Afghanistan.**
  ✓ **Opium**, the **base from which morphine and heroin are produced**, is **harvested from poppy flowers.**
❖ **Northeastern Myanmar** is part of the **infamous "Golden Triangle,"** where the borders of **Myanmar, Laos and Thailand meet**.
  ✓ **On the other hand Golden Crescent** comprises **illicit opium production areas in Iran, Afghanistan and Pakistan.**

ABOUT UNODC

❖ It was **established in 1997** through a **merger between the United Nations Drug Control Programme** and the **Centre for International Crime Prevention**.
  ✓ It was **renamed to its current name in 2002.**
❖ It has **20 field offices covering over 150 countries.**
❖ Headquarters- **Vienna, Austria**
❖ It is **aimed** at addressing the **issues of illicit drug trafficking, drug abuse, prevention of crime and criminal justice, political corruption and international terrorism, in a coordinated and comprehensive manner.**
❖ It is also the **chief UN body for delivering legal and technical assistance** to **prevent terrorism.**
❖ It **relies on voluntary contributions, mainly from governments**, to carry out the majority of its work.

11.13	**ENACT - ENHANCING NATURE-BASED SOLUTIONS FOR AN ACCELERATED CLIMATE TRANSFORMATION**

❖ Six new countries- **France, the United States of America, Belgium, the Netherlands, Switzerland, Pakistan** and the **UN Environment Programme, including its World Conservation Monitoring Centre** are **joining the ENACT Partnership.**

ABOUT ENACT

❖ **Germany and Egypt** along with the **International Union for Conservation of Nature launched ENACT (Enhancing Nature-based Solutions for an Accelerated Climate Transformation) at COP27** at **Sharm el-Sheikh, Egypt** in December 2022.

❖ **Canada, the European Union, Spain, Malawi, Norway, South Korea, Japan and Slovenia** were also **founding members of the partnership.**

❖ It is an **ambitious global initiative** that **seeks to coordinate global efforts to address climate change, land** and **ecosystem degradation**, and **biodiversity loss through Nature-based Solutions.**
  - ✓ **Nature-based Solutions** involve **working with and for, rather than against nature**, which is **critical to deliver the climate, biodiversity, and land restoration action** necessary to steward human well-being for all.
  - ✓ These include **wastewater management, sustainable agriculture, forestry and fishing, pollution abatement etc.**

❖ ENACT Partnership aims to
  - ✓ enhance the **protection from and resilience to climate impacts of at least 1 billion vulnerable people**,
  - ✓ **secure up to 2.4 billion hectares of healthy natural** and **sustainable ecosystems**, and
  - ✓ **significantly increase global mitigation efforts** through **protecting and restoring carbon-rich ecosystems.**

10.13	**COP28 UNFCCC CONCLUDES**

❖ The **United Nations Climate Change Conference (COP28) closed** with an **agreement that signals the "beginning of the end" of the fossil fuel era** by laying the ground for **a swift, just and equitable transition, underpinned by deep emissions cuts and scaled-up finance.**

❖ Negotiators from **nearly 200 Parties came together in Dubai** with a **decision on the world's first 'global stocktake'** to ratchet up **climate action before the end of the decade** – with the **overarching aim to keep the global temperature limit of 1.5°C within reach.**

❖ The **global stocktake** is considered the **central outcome of COP28.**

❖ Global stocktake is a **process for countries to see where they're collectively making progress towards meeting the goals of Paris Agreement.**

❖ The **stocktake recognizes** the science that **indicates global greenhouse gas emissions need to be cut 43% by 2030, compared to 2019 levels**, to **limit global warming to 1.5°C.**
  - ✓ But it **notes Parties are off track when it comes to meeting their Paris Agreement goals.**

❖ The stocktake calls on Parties to take actions towards achieving, at a global scale,
  - ✓ a **tripling of renewable energy capacity** and
  - ✓ **doubling energy efficiency improvements by 2030**.
  - ✓ The **list** also includes **accelerating efforts towards the phase-down of unabated coal power, phasing out inefficient fossil fuel subsidies, and other measures that drive the transition away from fossil fuels in energy systems, in a just, orderly and equitable manner, with developed countries continuing to take the lead.**

❖ Parties agreed on **targets** for the **Global Goal on Adaptation (GGA) and its framework**, which identify where the **world needs to get to in order to be resilient to the impacts of a changing climate and to assess countries' efforts**.
  ✓ The **GGA framework reflects a global consensus on adaptation targets and the need for finance, technology and capacity-building support to achieve them.**

11.15   1EUROPEAN FREE TRADE ASSOCIATION (EFTA) DEAL

❖ **Switzerland's Ambassador to India** has expressed **optimism that the crucial European Free Trade Association (EFTA) deal with the country would be wrapped up before the 2024 general elections.**
❖ **India and the EFTA states** are negotiating a **Trade and Economic Partnership Agreement (TEPA)** with a **view to boost economic ties between the two regions.**
❖ **Negotiations** on the agreement were **officially launched in January 2008.**
❖ The **EFTA-India merchandise trade** exceeded **USD 6.1 billion in 2022.**

ABOUT EFTA

❖ EFTA is an **intergovernmental organization established in 1960** by the **Stockholm Convention.**
❖ It comprises of **Iceland, Liechtenstein, Norway, and Switzerland**.
❖ These are **all open, competitive economies committed to the progressive liberalization of trade in the multinational arena as well as in free trade agreements.**
❖ EFTA is **not a customs union.**
  ✓ The **individual EFTA States** are **free to set their own customs tariffs and arrange other foreign trade measures vis-à-vis the non-EFTA States.**
❖ The **EFTA members are not part of the European Union (EU).**

11.16   GPAI'S NEW DELHI DECLARATION

❖ The **Global Partnership on Artificial Intelligence (GPAI) Summit** announced the **adoption of the New Delhi Declaration.**
❖ **India is hosting the summit** and will **chair the GPAI grouping in 2024.**

ABOUT THE DECLARATION

❖ The declaration affirms the **countries' commitment to "principles for responsible stewardship of trustworthy AI**, rooted in **democratic values and human rights** and promoting **trustworthy, responsible, sustainable and human-centred use of AI."**
❖ The declaration **agreed to collaboratively develop AI applications** in **healthcare and agriculture**, as well as including the **needs of the Global South in development of AI.**
❖ Participating nations agreed upon **using the GPAI platform to create a global framework on AI trust and safety**, and **make AI solutions and benefits available for all.**
❖ It **commits countries** to work on **mitigating "concerns around misinformation and disinformation, unemployment, lack of transparency and fairness, protection of intellectual property and personal data."**

ABOUT GPAI

❖ **Global Partnership on Artificial Intelligence (GPAI)** is a **multi-stakeholder initiative** which aims to **bridge the gap between theory and practice on AI by supporting cutting-edge research and applied activities on AI-related priorities.**
❖ Launched – **2020**

- ❖ It strives to **work towards "trustworthy development, deployment, and use of AI".**
- ❖ GPAI is a **grouping of countries in North and South America, Europe, and East Asia** and consists of **29 member nations including the European Union.**
  - ✓ **India is a founding member of GPAI.**
- ❖ GPAI has **a Council and a Steering Committee**, supported by a **Secretariat hosted by the OECD in Paris.**
- ❖ It has **two Centres of Expertise**-
  - ✓ **CEIMIA**, the International Centre of Expertise in Montreal for the Advancement of Artificial Intelligence **in Montreal** and
  - ✓ **INRIA**, the French National Institute for Research in Digital Science and Technology **in Paris**.
  - ✓ A **third 'expert support centre' for AI was announced** in Japan at the recent GPAI summit.

11.17 MERCER'S QUALITY OF LIVING INDEX 2023

- ❖ **Quality of Living Index 2023** was recently released by **Mercer**, a **global consultant for businesses.**
- ❖ **Vienna** (Austria), **Zurich** (Switzerland) and **Vancouver** (Canada) are the **top three cities in that order, according to the 2023 index.**
- ❖ It **evaluates** the **quality of life for employees working abroad**, especially with **families**, and **relies on data from over 500 cities all over the world**.
- ❖ The ranking is based on **factors like climate, schools and education, disease and sanitation standards, violence and crime, physical remoteness and ease of communications and socio-political environment.**
- ❖ **Hyderabad** with a **rank of 153**, **Pune at 154** and **Bengaluru in the 156th position** are the **three highest placed among Indian cities.**
  - ✓ Chennai is the **fourth Indian city in the list** at the **161 spot followed by Mumbai at 164.**

11.18 TAX INSPECTORS WITHOUT BORDERS

- ❖ **Tax Inspectors Without Borders (TIWB)** launched a programme in Saint Lucia recently.
- ❖ India has **been chosen as the Partner Administration** and **will provide Tax Experts for this programme.**
- ❖ The **focus** of the programme will be on the **effective use of automatic exchange of information under the Common Reporting Standard (CRS) framework.**
- ❖ This programme is the **seventh TIWB programme which India has supported by providing Tax Experts.**

ABOUT TIWB

- ❖ Launched in **2015**
- ❖ TIWB is a **joint initiative of the United Nations Development Programme (UNDP)** and the **Organisation for Economic Cooperation and Development (OECD).**
- ❖ Secretariat- **Paris, France**
- ❖ The **objective** of the TIWB Initiative is **to enable sharing of tax audit knowledge and skills with tax administrations in developing countries through a targeted, real time "learning by doing" approach.**
- ❖ TIWB is **focused on promoting hands-on assistance by sending Experts to build audit and audit-related skills** pertaining to **specific international tax matters** and the development of **general audit skills within developing tax administrations.**

ABOUT SAINT LUCIA

- ❖ It is **an island country of the West Indies in the eastern Caribbean**.
- ❖ It is **located north/northeast of the island of Saint Vincent, northwest of Barbados and south of Martinique.**
- ❖ It is **of volcanic origin** with highest point being **Mount Gimie**.
- ❖ Capital- **Castries**

11.19 INTERNATIONAL INSTITUTE FOR THE UNIFICATION OF PRIVATE LAW

❖ Recently, **India's Uma Sekhar** was **elected to the governing council** of the **International Institute for the Unification of Private Law (UNIDROIT)** within the **first round at the elections held in Rome.**

ABOUT INTERNATIONAL INSTITUTE FOR THE UNIFICATION OF PRIVATE LAW (UNIDROIT)

❖ UNIDROIT, the International Institute for the Unification of Private Law, functions as an **independent intergovernmental organization.**

❖ Set up in **1926 as an auxiliary organ of the League of Nations**, the Institute was, following the demise of the League, **re-established in 1940 on the basis of a multilateral agreement, the UNIDROIT Statute.**

❖ **UNIDROIT's 65 Member States** are **drawn from the five continents and represent a variety of different legal, economic and political systems as well as different cultural backgrounds.**
  ✓ **India** has been **a member of this organization since 1950.**

❖ Headquarters- **Rome, Italy**

❖ Its **core mission** involves **studying the needs and methods for modernizing, harmonizing, and coordinating private and commercial law among States and groups of States**.

❖ UNIDROIT **actively formulates uniform law instruments, principles, and rules to achieve these objectives.**

❖ UNIDROIT has an essentially **three-tiered structure**, made up of **a Secretariat, a Governing Council and a General Assembly.**

❖ The **Governing Council** consists of **25 positions which are held by distinguished legal experts.**

❖ The official languages are **English, French, German, Italian and Spanish**; its **working languages are English and French.**

❖ **Funding**
  ✓ The **Institute** is financed by **annual contributions from its Member States which are fixed by the General Assembly**.

11.20 NSCS HOLDS MEETING WITH RATS-SCO

❖ India's **National Security Council Secretariat (NSCS)** held **two joint meetings with the Regional Anti-Terrorist Structure of the Shanghai Cooperation Organization (RATS-SCO) recently**, focusing on **restricting terrorism and extremism through the use of new technologies and the internet.**

ABOUT RATS

❖ The **RATS** is **a permanent body under the SCO.**
❖ It is **headquartered in Tashkent, Uzbekistan**.
❖ It **works on promoting cooperation** of member states **against terrorism, separatism, and extremism.**

ABOUT SHANGHAI COOPERATION ORGANIZATION

❖ SCO originally known as the **Shanghai Five**, formed in **1996,** by **China, Kazakhstan, Kyrgyzstan, Russia, and Tajikistan**.
❖ SCO was officially **established in 2001** with joining of Uzbekistan as a **regional intergovernmental organization.**
❖ Member States- **China, Russia, Kazakhstan, Kyrgyzstan, Tajikistan, Uzbekistan, India, Pakistan, Iran**.
❖ The **primary objective** of the SCO is **to foster regional cooperation on diverse matters, encompassing security, economics, and cultural exchanges.**

SCO AND INDIA

❖ **India** held the **22nd summit of the SCO virtually earlier this year.**
❖ It was **New Delhi's first time chairing the forum since joining the organisation in 2005 as an observer state** and **later becoming a permanent member in 2017.**
  ✓ The **Chairmanship of SCO** is by **rotation for a year between member states**.

✓ India **handed over chairmanship to Kazakhstan in September.**

11.21 IONS-2023

❖ The **8th edition of Indian Ocean Naval Symposium (IONS) Conclave of Chiefs (CoC)** was conducted by **Royal Thai Navy at Bangkok, Thailand** recently.
❖ **Chiefs of Navies/ Senior Delegates from 27 Members/ Observer countries participated** in the event.

ABOUT IONS

❖ The **'Indian Ocean Naval Symposium' (IONS)** is a **voluntary initiative** that seeks to **increase maritime co-operation among navies of the littoral states of the Indian Ocean Region.**
❖ IONS was **conceived by the Indian Navy in 2008.**
❖ The **inaugural edition of IONS was held in Feb 2008 at New Delhi**, with **Indian Navy as the Chair for two years (2008 - 2010)**.
❖ It aims at **providing an open and inclusive platform for discussions on regionally relevant maritime issues**.
❖ Recently, Republic of **Korea Navy was welcomed by the Conclave as the latest 'Observer'**, raising the collective **strength of IONS to 34 (25 Members & 09 Observers).**
❖ India is **also scheduled to take over as the Chair of IONS (2025-27) during 9th CoC planned to be conducted in India in end 2025.**

11.22 ANGOLA EXITS OPEC

❖ In an **unexpected move**, **Angola has decided to part ways with the Organisation of Petroleum Exporting Countries (OPEC)**
❖ Angola, having **joined OPEC in 2007**, is **not a heavyweight in terms of oil production compared to some of its counterparts**, contributing approximately 1.1 million barrels per day out of the group's total of 28 million daily contribution.

ABOUT OPEC

❖ The **Organization of the Petroleum Exporting Countries (OPEC)** is a **permanent, intergovernmental organization**, created at the **Baghdad Conference in 1960, by Iran, Iraq, Kuwait, Saudi Arabia, and Venezuela.**
❖ **Other Members**- Algeria, Equatorial Guinea, Gabon, Libya, Nigeria, the Republic of the Congo, and the United Arab Emirates.
❖ It aims to **manage the supply of oil in an effort to set the price of oil in the world market**, in order to avoid **fluctuations that might affect the economies of both producing and purchasing countries.**
❖ Headquarters- **Vienna, Austria**
❖ It **possesses more than 80% of the world's total crude oil** (mixture of hydrocarbons that exists in liquid phase) reserves.
❖ OPEC **membership is open to any country that is a substantial exporter of oil and which shares the ideals of the organization.**
❖ OPEC **uses Brent Crude as a benchmark for quality.**

ABOUT OPEC+

❖ **OPEC+ countries include 13 OPEC member countries** and **Azerbaijan, Bahrain, Brunei, Kazakhstan, Malaysia, Mexico, Oman, Russia, South Sudan and Sudan.**

11.23	INDIA TO SIGN MMA WITH ITALY

- The **Union Cabinet** chaired by the Prime Minister has **given its ex-post facto approval** to the **proposal of Ministry of External Affairs to sign and ratify the Migration and Mobility Agreement** between the **Government of the Republic of India and the Government of the Italian Republic.**
- The Agreement would enhance **people-to-people contacts**, **foster mobility of students**, **skilled workers**, **business people** and **young professionals and strengthen cooperation** on issues related to irregular migration between the two sides.
- The **Agreement locks-in the current Italian visa regime** including mechanisms **for post study opportunities, internships, professional trainings assuring an advantage for India under the existing labour mobility pathways under the Flows Decree.**

12. DAYS TO REMEMBER

12.1	WORLD AIDS DAY- DECEMBER 1ST

- **December 1st** marks the World AIDS Day every year, **serving as a crucial occasion to raise awareness about HIV/ AIDS.**
- It is **observed annually since 1988.**
   - ✓ In August 1988, **James W. Bunn and Thomas Netter**, **public information officers for the AIDS Global Program of the World Health Organization**, initiated **World AIDS Day to address the devastating HIV/ AIDS pandemic.**
- The **theme** for World AIDS Day 2023 is **"Let communities lead".**
   - ✓ **It emphasizes the collective strength and influence of communities in driving initiatives related to HIV awareness, prevention and healthcare.**

12.2	INTERNATIONAL DAY FOR THE ABOLITION OF SLAVERY- DECEMBER 2ND

- The **International Day for the Abolition of Slavery** is observed annually on **December 2nd.**
- It marks the **date of the adoption, by the General Assembly, of the United Nations Convention for the Suppression of the Traffic in Persons and of the Exploitation of the Prostitution of Others in 1949.**
- The **focus** of this day is **on eradicating contemporary forms of slavery**, such as **trafficking in persons, sexual exploitation, the worst forms of child labour, forced marriage, and the forced recruitment of children for use in armed conflict.**
- The **theme** for this year's International Day for the Abolition of Slavery is - **Fighting slavery's legacy of racism through transformative education.**

12.3	NATIONAL POLLUTION CONTROL DAY

- The **National Pollution Control Day or National Pollution Prevention Day** is observed on **December 2 every year in India**.
- The **objective** of the day is **to raise awareness about the different measures to control pollution and the prevention of industrial disasters**.
- National Pollution Control Day **is especially observed in the memory of people who died in the Bhopal gas tragedy of 1984.**

- ✓ Regarded as **one of the worst industrial environmental catastrophes in the history of India**, the Bhopal Gas Tragedy took place on the **intervening night of December 2 and 3, 1984**, when a **deadly gas, methyl isocyanate**, leaked from **Union Carbide India Limited's pesticide facility in Madhya Pradesh.**
- ❖ The **theme** for National Pollution Control Day 2023 is **"Sustainable Development for a Clean and Healthy Planet".**

12.4   INTERNATIONAL DAY OF PERSONS WITH DISABILITIES- DECEMBER 3RD

- ❖ **International Day of Persons With Disabilities** is annually **observed on December 3rd.**
- ❖ In **1992**, the **annual observance of the International Day of Disabled Persons was announced** by the **United Nations General Assembly resolution 47/3**.
- ❖ The day was **celebrated with the aim of understanding disability issues and gaining support** to ensure that **their rights to well-being, dignity and equal opportunities are practiced.**
- ❖ The **theme** for International Day of Persons with Disabilities 2023 is - **United in action to rescue and achieve the SDGs for, with and by persons with disabilities.**

12.5   WORLD COMPUTER LITERACY DAY- DECEMBER 2ND

- ❖ The World Computer Literacy Day is **marked annually on December 2nd.**
- ❖ It is **observed to celebrate the advancements in computer technology and promote digital literacy, especially amongst marginalised communities.**
- ❖ World Computer Literacy Day was **first celebrated in December 2001 to promote digital learning and raise awareness about the use of computers.**
- ❖ It is **an initiative of NIIT (National Institute of Information Technology), an Indian company.**
- ❖ The day was **established on December 2, 2001, on the occasion of the 20th anniversary of the institute.**

12.6   INTERNATIONAL VOLUNTEER DAY DECEMBER 5TH

- ❖ International Volunteer Day is **observed annually on December 5th.**
- ❖ International Volunteer Day was **established by the United Nations in 1985** and **provides an opportunity to acknowledge and appreciate the efforts of millions of volunteers who dedicate their time, skills, and resources to make a positive difference.**

12.7   INTERNATIONAL CIVIL AVIATION DAY- DECEMBER 7TH

- ❖ **International Civil Aviation Day** is observed on **December 7th annually.**
- ❖ This year's celebration focuses on the **theme** of **"Advancing Innovation for Global Aviation Development."**
- ❖ It focuses on **how innovation will shape and improve civil aviation worldwide in the future**.
- ❖ International Civil Aviation Day was **proclaimed by the United Nations General Assembly on 7 December 1996.**

ABOUT ICAO

- ❖ The **International Civil Aviation Organisation (ICAO)** was established on **7 December 1944** to promote **global cooperation and uniformity in civil aviation matters.**
- ❖ **It is a specialised agency** of **United Nations.**
- ❖ Headquarters- **Montreal, Canada.**

12.8	INTERNATIONAL ANTI-CORRUPTION DAY- DECEMBER 9TH

- ❖ **International Day against Corruption or International Anti-Corruption Day (IACD)** is celebrated on **December 9th**, every year, to raise awareness among the general public on the impact of this prevailing malice.
- ❖ The **United Nations General Assembly** adopted the **United Nations Convention against corruption** on October 31, 2003.
- ❖ The **authorities also designated the date of December 9 as World Anti-Corruption Day** to raise awareness about corruption and the role of the Convention in preventing it.
- ❖ Following the same, the **observance of the day was first officially held on 9 December 2005.**
- ❖ The **theme** for this years' celebration of International Anti-Corruption Day is **'UNCAC at 20: Uniting the World Against Corruption.'**

12.9	HUMAN RIGHTS DAY- DECEMBER 10TH

- ❖ The **Human Rights Day** is **celebrated around the world** on **December 10th every year**.
- ❖ It **focuses on the fundamental rights and liberties of people** and **advocates for the rights** that **transcend nationality, gender, ethnicity, race, sexuality, religion, or any other distinctions.**
- ❖ This year marks the **75th anniversary of the Universal Declaration of Human Rights (UDHR)**.
- ❖ As per the official website of the United Nations, **the regulated theme** to celebrate Human Rights Day 2023 is **'Freedom, Equality and Justice for All.'**
- ❖ In **1950**, **Human Rights Day was formally established after the adoption of the UNGA Resolution 423.**
  - ✓ As per the resolution, **all the states and interested organisations** were invited to **celebrate the day and commemorate the proclamation of the UDHR.**

ABOUT UNIVERSAL DECLARATION OF HUMAN RIGHTS

- ❖ The **Universal Declaration of Human Rights** was **adopted** by the **United Nations General Assembly in 1948 after World War II.**
- ❖ UDHR encapsulates the **common standard** that **every country and person should strive for in terms of human rights.**
- ❖ UDHR **consists of 30 articles** that **cover a wide range of fundamental human rights and freedom to which all people from different parts of the world are entitled**.
- ❖ The UDHR **also serves as a regulatory body for all other nations** that **strive to meet basic human needs, including socio-economic and political issues.**

ABOUT HUMAN RIGHTS IN INDIA

- ❖ To preserve and protect human rights in a diverse country like India, the **National Human Rights Commission (NHRC) was established on October 12, 1993.**
- ❖ The NHRC is a **human rights institution**, which is a **recommendatory body as per the Protection of Human Rights Act passed by the Parliament.**
- ❖ The Commission **reviews and safeguards the provisions provided under the Constitution** and **makes recommendations for the effective implementation of International Conventions.**
- ❖ The Commission has **also made several interventions on key issues of human rights** which **include child labour, prison reforms, right to health, right to food, mental healthcare, rights of persons with disability, sanitation, and rights of women**.

12.10	INTERNATIONAL MOUNTAIN DAY- DECEMBER 11TH

- ❖ International Mountain Day is an **annual celebration designated by the United Nations General Assembly** on December 11th.
- ❖ It has **been observed every year since 2003 to create awareness about the importance of mountains in our lives**
- ❖ Mountains are home **to 15% of the world's population, host about half the biodiversity hotspots of the world, and provide fresh water for everyday life to half of humanity to sustain agriculture and supply clean energy and medicines.**
- ❖ The **theme** for 2023 is **Restoring Mountain Ecosystems**.
  - ✓ It **aims to increase awareness about the relevance of mountain ecosystems.**

12.11 UNIVERSAL HEALTH COVERAGE DAY- DECEMBER 12TH

- ❖ **Universal Health Coverage (UHC) Day** is observed **on December 12th every year.**
- ❖ The **theme** for **Universal Health Coverage Day 2023** is - **Health For All: Time for action.**

ABOUT UHC

- ❖ As per WHO, **Universal health coverage (UHC) means all the people** are **able to access full range of quality health services they need**, **when and where they need them**, **without financial issues**.
- ❖ It **includes all essential health services,** from **prevention, treatment, rehabilitation and palliative care.**
- ❖ In 2017, the **United Nations proclaimed 12 December as International Universal Health Coverage Day (UHC Day)** by resolution 72/138.

12.12 NATIONAL ENERGY CONSERVATION DAY 2023- DECEMBER 14TH

- ❖ **National Energy Conservation Day** is **observed in India** every **year on December 14**th, to **raise public awareness about the value of energy efficiency and conservation.**
- ❖ Every year, the **Bureau of Energy Efficiency** under the **Ministry of Power spearheads the celebrations**.
- ❖ On December 14, 1991, the **National Energy Conservation Awards were given to the winners for the first time**.
  - ✓ Since then, the **day has been marked as the National Energy Conservation Day**.

12.13 VIJAY DIWAS- DECEMBER 16TH

- ❖ Leaders across the political lines paid tributes to the soldiers who fought in the 1971 war, **on the occasion of 52nd Vijay Diwas on December 16**th.
- ❖ Vijay Diwas is **commemorated on December 16 every year** to honor the **victory of the Indian armed forces over Pakistan in the 1971 war and to pay tribute to the soldiers who sacrificed their lives for the country.**
- ❖ Following a **13-day battle**, India **secured a resounding triumph over Pakistan on December 16, 1971**, leading to the **creation of Bangladesh from the former East Pakistan.**
- ❖ On this significant day, **General Amir Abdullah Khan Niazi**, the head of Pakistan's armed forces, **along with 93,000 soldiers, surrendered before the Indian Army and the Mukti Bahini of Bangladesh**, marking the most substantial military surrender post World War II.
- ❖ **Bangladesh** celebrates **December 16 as 'Bijoy Dibos' or Victory Day.**

12.14 GOA LIBERATION DAY- DECEMBER 19TH

❖ Goa Liberation Dayis celebrated annually on **December 19th**.
❖ It **commemorates the liberation of the state from Portuguese colonial rule.**
❖ Goa Liberation Day marks the day- **19-12-1961** when the **Indian Army freed the state from 451 years of Portuguese rule.**

12.15 INTERNATIONAL MIGRANTS DAY- DECEMBER 18TH

❖ **International Migrants Day is observed on December 18th** to **recognise the contributions of migrants and highlight the challenges they face**.
❖ The **day sheds light on the socio-economic realities of migrants around the world**.
❖ **On 4 December 2000**, the **United Nations General Assembly (UNGA) proclaimed December 18 as International Migrants Day**.
   ✓ On the same day **in 1990, UNGA** had **adopted** the **International Convention on the Protection of the Rights of All Migrant Workers and Members of Their Families.**
❖ The **theme** for **International Migrants Day 2023** is **"Promoting Safe Migration."**

12.16 INTERNATIONAL HUMAN SOLIDARITY DAY- DECEMBER 20TH

❖ **International Human Solidarity Day** is a **significant observance held annually on December 20th**.
❖ The **roots of this day trace back to December 22, 2005**, when the **UN General Assembly acknowledged solidarity as a fundamental value of the twenty-first century through Resolution 60/209**.
   ✓ This **recognition led to the establishment of the World Solidarity Fund to combat poverty.**

12.17 NATIONAL MATHEMATICS DAY- DECEMBER 22ND

❖ The **National Mathematics Day (NMD) is observed on December 22 each year** to commemorate the **birth anniversary of the great Indian mathematician Srinivasa Ramanujan.**
❖ **December 22** was **designated as the National Mathematics Day** by the **government in 2012**.
❖ The **year 2012 was also termed and celebrated as the National Mathematics Year.**

ABOUT S RAMANUJAN
❖ Srinivasa Ramanujan was born on **December 22, 1887 in Erode, Tamil Nadu**.
❖ Ramanujan, one of the greatest Indian mathematicians of all time, is **known for his work in the areas of Riemann series, hypergeometric series, elliptic integrals, continued fractions, and functional equations of the zeta function.**
❖ In **1911**, he got **his first paper published in the Journal of the Indian Mathematical Society**.
❖ In **1916**, he was **awarded the B.A. degree by research at the Cambridge University.**
❖ He **died on April 26, 1920 at age of 32.**
❖ He has **left behind around 4,000 original theorems.**

12.18 KISAN DIWAS- DECEMBER 23

❖ **National Farmer's Day, or Kisan Diwas**, is observed on **December 23** in India to recognise farmers as the backbone of the country.

- ❖ The day commemorates the **birth anniversary of India's former prime minister Chaudhary Charan Singh.**
- ❖ During his short time in office (1979-80), Singh launched various welfare initiatives focused on improving the well-being and empowerment of farmers.
- ❖ Recognising his contributions, the **Government of India officially declared December 23 as National Farmer's Day in 2001, acknowledging Singh's remarkable transition from a farmer to the leader of the nation.**
- ❖ The **theme** for Farmer's Day 2023 is **'Delivering Smart Solutions for Sustainable Food Security and Resilience'.**

12.19	NATIONAL CONSUMER RIGHTS DAY- DECEMBER 24TH

- ❖ In **1986**, the **Consumer Protection Act was passed** and it **received the assent of the President on December 24**.
- ❖ Since then, **National Consumer Rights Day has been celebrated on this day to commemorate the occasion.**
- ❖ The **six fundamental rights of the Consumer Protection Act** are-
  - ✓ **Right to safety, Right to choose, Right to be informed, Right to be heard, Right to seek redressal,** and **Right to consumer education.**

> The **World Consumer Rights Day** is observed on **15th March**.

- ❖ The **Consumer Protection Act 2019 was passed to widen the scope** of the Consumer Protection Act 1986.
  - ✓ It also **includes punishment against misleading advertisements, false product descriptions, or any kind of guarantee of products and services**.
  - ✓ The **Central Consumer Protection Authority (CCPA)** is an **entity established under the amended Consumer Protection Act**.
    - ➢ It is tasked with **imposing fines and penalties on companies engaged in false and misleading advertisements**.
    - ➢ The CCPA **plays a crucial role in enhancing consumer protection and ensuring accountability in businesses.**

12.20	GOOD GOVERNANCE DAY- DECEMBER 25TH

- ❖ Good Governance Day is celebrated on **the birth anniversary of former Prime Minister Atal Bihari Vajpayee**.
- ❖ The day is **celebrated on the 25th of December every year to foster awareness** among the people of the country about **accountability in Governance and Government.**

12.21	INTERNATIONAL DAY OF EPIDEMIC PREPAREDNESS – DECEMBER 27TH

- ❖ The **International Day of Epidemic Preparedness** is observed every year on **December 27th**.
- ❖ This special day **encourages everyone, including individuals, institutions, and governments**, to participate in **educational and awareness activities** that suit their country's needs.
- ❖ It emphasizes how **crucial it is to prevent, prepare for and work together against outbreaks like diseases.**
- ❖ A **resolution passed** by the UN General Assembly on December 7, 2020, **declared December 27 to be the International Day of Epidemic Preparedness.**

13. PLACES IN NEWS

13.1   YELLOW SEA

❖ A **US F-16 jet on a training mission crashed** into waters of **Yellow Sea.**

ABOUT YELLOW SEA

❖ It is located in the **western Pacific Ocean.**
❖ It is **situated between mainland China to the west and north**, the **Korean Peninsula to the east**, and the **Shandong Peninsula and Liaodong Peninsula to the south.**
❖ **Hai River, the Yalu River, the Han River, the Taedong River, and the Yellow River** drain into the sea.
❖ Its name is **descriptive of the golden-yellow colour** of the **silt-laden water discharged from major rivers**, sourced from **yellowish sand particles originating from the Gobi Desert.**

13.2   KHAN YUNIS CITY

❖ **Israel's offensive in Gaza** has shifted to the **south**, with its **forces pushing** into **Khan Younis**, a **major southern city that had provided refuge for Palestinians displaced from the north.**
❖ **Khan Younis**, north of the **Rafah border crossing**, is the **largest city in southern Gaza**.
❖ It was **home to about 400,000 people before the war.**
❖ It **houses civilian infrastructure**, such as **Nasser Hospital,** and is also the **site of one of eight U.N. camps for Palestinian refugees who had to leave their homes in the 1948 war.**

ABOUT THE CITY

❖ The city dates to the **Mamluk empire in the 14th century**, when **Emir Yunus al-Nuruzi** constructed a **caravan serai**, or a **"khan" in Arabic**, which was a **roadside inn where travellers could rest from their day's journey**.
  ✓ Hence, the **name of the future city became known as Khan Younis.**
❖ In **1387**, **Mamuk Sultan Barqouq ordered the emir** to build a **castle in his name**.
  ✓ The castle **not only protected residents of the city** but **served as a linking point between Cairo and Damascus**, as it ensured a **space for merchants and travellers to trade**.
  ✓ **Barqouq Castle** stands today as **one of the most important historical monuments in Palestine.**

13.3   GELEPHU SMART CITY

❖ Bhutan plans to build a **massive "international city" in an area of over 1,000 sq. km. on its border with Assam**, Bhutanese King Jigme Khesar Namgyel Wangchuck announced recently.
❖ This is projected as an **"economic corridor connecting South Asia with Southeast Asia via India's northeastern States".**
❖ This is the **first official confirmation of what is known as the 'Gelephu Smartcity Project'**.
❖ It is **expected to follow environmental standards and sustainability** as a goal, and **will aim to attract "quality investment" from "specially screened" international companies.**
❖ India is building **first India-Bhutan railway line to Gelephu**, which would **also connect with roadways and border trading and crossing points into Assam and West Bengal**, and over time, **give Bhutan access to Myanmar, Thailand, Cambodia, and Singapore.**

13.4   MOUNT ULAWAN

- ❖ India recently sent **relief material worth $1 million for the people affected by a volcanic eruption in Papua New Guinea.**
- ❖ A **major volcanic eruption of Mount Ulawun in Papua New Guinea** resulted in **widespread damage and destruction in the island nation**.
- ❖ Papua New Guinea lies in the **Pacific "Ring of Fire," a horse-shoe shaped band of volcanoes and fault lines circling the edges of the Pacific Ocean.**
  - ✓ It is prone **to earthquakes and volcanic activity.**
- ❖ **Mount Ulawun** is **Papua New Guinea most-active and tallest volcano**, towering to a height of 2,334 meters (7,657 feet) above sea level.
  - ✓ Its **last major eruption was in 2019.**
  - ✓ **It is a basaltic-to-andesitic stratovolcano.**

13.5	STRAIT OF GIBRALTAR

- ❖ Iran has **threatened to close the Strait of Gibraltar and the Mediterranean Sea** unless Israel stops bombing Gaza.

ABOUT STRAIT OF GIBRALTAR

- ❖ The Strait of Gibraltar **separates Africa from Europe.**
- ❖ It is located at the **southern tip of the Iberian Peninsula**.
- ❖ It **lies between Spain in Europe and Morocco in Africa**.
- ❖ It is the **only link between the Mediterranean Sea and the Atlantic Ocean.**
- ❖ **Until** the **opening of the Suez Canal in 1869**, the **Strait of Gibraltar served as the only access point to the Mediterranean Sea.**
- ❖ It is **one of the busiest waterways in the world.**

13.6	DISPUTED PERSIAN GULF ISLANDS

- ❖ Three islands in the **strategic Strait of Hormuz,** namely the **Greater Tunb, Lesser Tunb, and Abu Musa have become a bone contention** between **Iran and UAE.**

IRAN'S STAND

- ❖ **Iran** claims that the islands have been part of Persian states since the ancient past and it took **control of the three islands after British forces withdrew in 1971.**
- ❖ It considers them an **"inseparable" part of its territory.**
- ❖ Iran asserts that it has an agreement with **Sharjah, one of the UAE's seven emirates**, which gives it the **right to administer Abu Musa and station troops there.**

UAE'S STAND

- ❖ The UAE asserts ownership of the disputed islands, with
- ❖ **Ras al-Khaimah** claiming **Greater and Lesser Tunbs**, and
- ❖ **Sharjah claiming Abu Musa**.

13.7	KURIL ISLANDS

- ❖ An earthquake of **magnitude 6.3 on the Richter scale occurred in Japan's Kuril Islands** recently.

ABOUT KURIL ISLANDS

❖ The Kuril Islands are **stretched from the Japanese island of Hokkaido** to the **southern tip of Russia's Kamchatka Peninsula** separating the **Okhotsk Sea from the North Pacific Ocean.**

❖ These are located on **Pacific Ring of Fire** and contain **at least 100 volcanoes, of which 35 are still active, and many hot springs.**

❖ **Dispute**
   ✓ The Kuril Islands dispute **between Japan and Russia** is over the **sovereignty of South Kuril Islands that comprise of Etorofu island, Kunashiri island, Shikotan island and the Habomai island.**

14. AWARDS AND HONOURS

14.1   VYAS SAMMAN

❖ Noted **Hindi writer Pushpa Bharati's 2016 memoir**, **"Yaadein, Yaadein aur Yaadein"**, has been **selected for the 33rd Vyas Samman, 2023.**

❖ The award is **bestowed by the KK Birla Foundation.**

❖ Instituted in **1991**, the **award is given to an outstanding Hindi literary work** by an **Indian citizen** published **during the last 10 years**.

❖ It **carries a cash prize of ₹4 lakh, a citation and a plaque.**

❖ Besides the Vyas Samman, the **KK Birla Foundation has also instituted Saraswati Samman and Bihari Puraskar**.
   ✓ The **Saraswati Samman**, which carries a **cash prize of ₹15 lakh**, is given to **an outstanding literary work by an Indian citizen** in any of the **languages included in Schedule VIII** to the **Constitution of India and published during a period of 10 years.**
   ✓ The **Bihari Puraskar** carries a **cash prize of ₹2.5 lakh and is meant for Hindi/Rajasthani writers of Rajasthan.**

14.2   JAVED AKHTAR HONORED WITH THE PADMAPANI LIFETIME ACHIEVEMENT AWARD

❖ Indian lyricist and poet **Javed Akhtar** is to be **honored with the Padmapani Lifetime Achievement Awards** at the **Ajanta-Ellora Film Festival**.

❖ The honour comprises **Padmapani memento**, **citation and monetary award of Rs 2 lakhs.**

❖ The award **honors his contribution to the Indian Film Industry**.

❖ Akhtar has been **a co-writer in movies like 'Zanjeer' 'Deewar' 'Don' and more**.

❖ The **Ajanta-Ellora Film Festival**, which was **earlier called Aurangabad International Film Festival (AIFF)**, is **organised annually by Nath Group, Yashwantrao Chavan Centre, Mumbai, with the support of the governments of Maharashtra and India**.

14.3   NYHOLM PRIZE

❖ **Professor Savita Ladage from Mumbai's Homi Bhabha Centre for Science Education, Tata Institute of Fundamental Research**, received the **Royal Society of Chemistry's Nyholm Prize for Education** in recognition of her contributions to chemistry education.

ABOUT THE PRIZE

❖ The **Excellence in Education Prizes, including the Nyholm Prize, celebrate individuals** working in **primary, secondary, further education, and higher education, encompassing teachers, technicians, and more.**

- ❖ The prize, **awarded annually**, aims to **commemorate the life and work of Sir Ronald Nyholm**, president of the **Royal Society of Chemistry from 1968 to 1970.**
- ❖ The **Royal Society of Chemistry's Prizes portfolio** is **one of the oldest and most prestigious in the world**, recognising achievements by **individuals, teams and organisations in advancing the chemical sciences.**
- ❖ It **recognises a major national or international research** or **innovation contribution to the field of chemical science education.**
- ❖ It is **awarded to inspirational, innovative and dedicated individuals or teams** making **a substantial and sustained impact within education.**
- ❖ The **prize alternates between being open to nominees both in the UK and Ireland** and **internationally**, and **open only to nominations from the UK and Ireland.**
  - ✓ For **2023**, the **prize is open to nominees based anywhere in the world.**
- ❖ The winner(s) **receives £5000, a medal and a certificate.**
- ❖ The winner(s) will **complete a series of lectures or workshops in the UK.**
- ❖ The winner(s) **will be chosen by the Education Prize Committee.**

14.4 SAHITYA AKADEMI AWARDS

- ❖ Sahitya Akademi has announced its **annual Sahitya Akademi Awards**.
- ❖ **9 books of poetry, 6 of novel, 5 of short stories, 3 Essays and 1 Literary Study** have won the **Sahitya Akademi Awards 2023.**

ABOUT SAHITYA AKADEMI AWARDS

- ❖ The awards are **given in 24 languages** which include-
  - ✓ **22 languages enumerated in the 8th Schedule of the Constitution and**
  - ✓ **English and Rajasthani.**
- ❖ The **Award** carries a **casket containing an engraved copper-plaque**, **a shawl** and **an amount of Rs. 1,00,000/- towards cash content** each.

ABOUT THE AKADEMI

- ❖ The Sahitya Akademi **was founded on March 12, 1954.**
- ❖ It is an **autonomous body under the Ministry** of **Culture.**
- ❖ It is **dedicated to the promotion of literature in Indian languages.**

14.5 INDIRA GANDHI PRIZE FOR PEACE 2023

- ❖ Indira Gandhi Prize for Peace, Disarmament and Development for 2023 has been **jointly awarded to Daniel Barenboim and Ali Abu Awwad** for their **efforts in bringing together the youth and peoples of Israel and the Arab World for a non-violent resolution of the Israel-Palestine conflict.**
- ❖ **Barenboim** is a **distinguished classical pianist**, and **Awwad is an eminent peace activist who has been working for a peaceful resolution of the ongoing conflict in the Middle East.**

ABOUT THE PRIZE

- ❖ It has been **conferred since 1986 by Indira Gandhi Memorial Trust.**
- ❖ The prize is **awarded annually.**
- ❖ It is **considered one of the highest honors in the field of peace and development.**
- ❖ It consists of a **monetary award of Rs. 25 lakh along with a citation.**
- ❖ The award **recognizes individuals or organizations** for their **exceptional contributions to international peace, disarmament, and development.**

14.6	PRIX VERSAILLES AWARDS

- **Bengaluru's Kempegowda International Airport** has achieved global recognition at the 2023 Prix Versailles, with **its Terminal 2 (T2) earning the prestigious "Special Prize for an Interior"** and being hailed as one of the world's most beautiful airports.
- Renowned fashion **designer Elie Saab, leading the Prix Versailles 2023 world judges panel**, announced **Bengaluru airport** as the **sole Indian recipient of this esteemed recognition, positioning it among the world's elite airports.**

ABOUT PRIX VERSAILLES AWARDS

- The **Prix Versailles awards** celebrate **outstanding achievements in architecture and design on a global scale.**
- The Prix Versailles, **established in 2015**, focuses on **"intelligent sustainability"** and looks at the **ecological, cultural and social impacts of each project** under consideration for a world title.
- At the intersection between multiple disciplines, the **members of the Prix Versailles World Jury** are tasked with awarding **twenty-four World Titles from among the ninety-six projects** named **Selected Sites** (in the categories of Airports, Campuses, Passenger Stations and Sports) or **Continental Laureates** (in the categories of Shops & Stores, Shopping Malls, Hotels and Restaurants).

14.7	RABINDRANATH TAGORE LITERARY PRIZE

- The **renowned Rabindranath Tagore Literary Prize** has named **poet-critic Sukrita Paul Kumar** as its **sixth recipient for her book, "Salt & Pepper: Selected Poems".**
- At the award ceremony, Kumar received a **cash prize of USD 5,000**, a **Tagore statue**, and a **certificate acknowledging her significant contribution to literature.**
- Also, the **Rabindranath Tagore Literary Prize** for **social achievement** was **awarded to Nobel laureate Abhijit Banerjee** for his **contributions to societal welfare.**

ABOUT THE PRIZE

- **Founded in 2018** by **US-based publisher Peter Bundalo**, the **Rabindranath Tagore Literary Prize has established itself as a valuable** platform for **world peace, literature, art, education and human rights.**
- It also **recognises works** towards **human rights and world peace with the Social Achievement Prize.**

15.　SPORTS

15.1	HARDIK SINGH NAMED THE MEN'S FIH PLAYER OF THE YEAR

- Indian hockey team **midfielder Hardik Singh was named the men's FIH Player of the Year at the FIH Hockey Star Awards 2023.**
- Hardik Singh was part of **India's Tokyo 2020 bronze medal-winning team.**
- He was **part of the gold medal-winning Indian team at the Asian Games and Asian Champions Trophy.**
- Indian women's **hockey team captain Savita Punia** won the **best goalkeeper of the year award.**
- **Dutch player Xan de Waard**, meanwhile, won the **FIH Women's Player of the Year honour.**

ABOUT FIH

- The **Fédération Internationale de Hockey**, commonly known by the **acronym FIH**, is the **international governing body of field hockey** and **indoor field hockey**.
- Its **headquarters are in Lausanne, Switzerland**.

❖ FIH is **responsible for field hockey's major international tournaments, notably the Hockey World Cup.**

15.2　SPORTS AWARDS

❖ The Sports Ministry put its stamp **on the nominations for the annual sports awards**, confirming the prestigious **Khel Ratna honour for badminton players Satwik Sairaj Rankireddy and Chirag Shetty** and the **Arjuna award for 26 sports persons**, including **pacer Mohammed Shami.**

❖ The **awards will be conferred on the athletes by President Droupadi Murmu at the Rashtrapati Bhavan on January 9.**

❖ **Chirag and Satwik are Asian Games gold medallists**, **World Championships bronze winners** and **Commonwealth Games silver medallists.**

❖ **Arjuna Award winners-**
   ✓ The athletes selected for this year's **Arjuna award include** hockey players Krishan Bahadur Pathak and Sushila Chanu, archers Ojas Pravin Deotale and Aditi Gopichand Swami, boxer Mohammad Hussamuddin, chess player R Vaishali, golfer Diksha Dagar, shooters Aishwary Pratap Singh Tomar and Esha Singh, wrestlers Antim Panghal and Sunil Kumar, paddler Ayhika Mukherjee and para archer Sheetal Devi, among others.

❖ **Dronacharya Award** (regular category) for outstanding coaches: **Lalit Kumar (wrestling), RB Ramesh (chess), Mahaveer Prasad Saini (para athletics), Shivendra Singh (hockey), Ganesh Prabhakar Devrukhkar (mallakhamb).**

❖ The **Dhyan Chand award in the life-time category** will be conferred to three persons-
   ✓ **Manjusha Kanwar (badminton), Vineet Kumar Sharma (hockey), Kavitha Selvaraj (kabaddi)**

❖ **Guru Nanak Dev University, Amritsar** is the **recipient of the Maulana Abul Kalam Azad (MAKA) Trophy 2023**, while **Lovely Professional University, Punjab** and **Kurukshetra University, Kurukshetra** are the **first and second runner-ups**.

15.3　POOJA DHANDA SUSPENDED

❖ Former **world and Asian championships medallist wrestler Pooja Dhanda** has been issued a **one-year suspension by India's National Anti-Doping Agency (NADA) for three whereabouts failures in a year.**

DETAILS

❖ An Athlete in **NADA's Registered Testing Pool** is required to **provide the whereabouts information every quarter which includes**: **Home address, email address and phone number, an address** for overnight accommodations, **Competition schedules and locations** and a **60-minute time slot for each day** where they'll be **available and accessible for testing and liable for a potential 'missed test'.**

❖ Any combination of **three Whereabouts Failures** (filing failures and/or missed tests) within a **12-month period constitutes an Anti-Doping Rule Violation** under NADA Anti Doping Rules - Article 2.4, which may **lead to the imposition of a sanction for up to 4 years.**

16.   PERSON IN NEWS

16.1   HENRY KISSINGER

- ❖ Former **United States secretary of state Henry Kissinger** passed away at the age of 100.
- ❖ Kissinger had a **significant effect on US foreign policy and external affairs** and **he served under two presidents — Richard Nixon and Gerald Ford — between 1969 and 1977.**
- ❖ Kissinger had **also won a controversial Nobel Peace Prize** for **negotiating America's exit from Vietnam war,** which led to the resignations of two Nobel committee members and inquiries into the US' secret bombing of Cambodia.
- ❖ In **1971 war for liberation of Bangladesh, Kissinger supported Pakistan against India.**
- ❖ He successfully **reestablished diplomatic relations between the United States and China.**

16.2   SHRI. RAMASAMY VENKATARAMAN

- ❖ The President of India paid **floral tributes to Shri R. Venkataraman, former President of India,** on **his birth anniversary at Rashtrapati Bhavan on December 4, 2023.**

ABOUT SHRI R VENKATARAMAN

- ❖ R Venkataraman was **born in Rajamadam village in Tanjore district, Madras Presidency.**
- ❖ He studied **law and practised in the Madras High Court and the Supreme Court of India.**
- ❖ At a young age, he was **an activist of the Indian independence movement and participated in the Quit India Movement.**
- ❖ He was **elected to independent India's Provisional Parliament in 1950** as a **member of the Indian National Congress party.**
- ❖ He **was a member of the constituent assembly that drafted India's Constitution.**
- ❖ He was **also a member of the Lok Sabha from 1952 to 1977 onwards**.
- ❖ He **eventually joined the central government and served as the Minister of Finance and Industry in 1980-82 and Minister of Defence in 1982-84.**
- ❖ **He served as** the 8th **President of India from 1987 to 1992.**

16.3   BABA RAGHAV DAS

- ❖ The birth anniversary of **Baba Raghav Das** was observed recently.

ABOUT BABA RAGHAV DAS

- ❖ **Baba Raghav Das**, popularly known as **'Gandhi of Poorvanchal'**, was born in a rich Brahman family on **12 December 1896 at Pune, Maharastra.**
- ❖ He played a great role in the **political, social, economic, and the cultural activities of the nation**.
- ❖ After his education he left Mumbai in 1913 in search of a siddh guru and reached Kashi and later Ghazipur, where he met 'Mauni baba' and learned Hindi.
  - ✓ After that, he met **'Yogiraj Anant Mahaprabhu' and accepted him as his guru**.
- ❖ In **1921, Mahatma Gandhi visited Gorakhpur** and met him.
  - ✓ Since then **he continuously worked for independence and served the oppressed people**.
- ❖ He was **imprisoned for the first time in 1921**.
- ❖ He **accompanied Gandhiji during Dandi March.**
- ❖ Post independence, he **contested in the elections and was elected MLA in 1948.**
- ❖ He also **took an active part in the 'Bhu-dan' movement** started by **Binoba Bhave**.
- ❖ The **noble saint and philosopher left for his heavenly abode on January 15, 1958**.

16.4   SAKHARAM GANESH DEUSKAR

❖ The **birth anniversary of Sakharam Ganesh Deuskar** was **observed recently on December 17th.**

ABOUT SAKHARAM GANESH DEVASKAR (1869–1912)

❖ Sakharam Ganesh Deuskar was **born on 17 December 1869 in a village near Deoghar, Jharkhand**.

❖ A **revolutionary journalist** and a **close associate of Sri Aurobindo**, he was **one of the major architects of the Indian Renaissance**.

❖ Though being of Marathi origin, he was **brought up in a Bengali set-up and acted as a bridge between Maharashtra and Bengal's renaissance**.

❖ A prolific writer, he **contributed to most of the revolutionary magazines of Bengali**.

❖ The most influential one among them was the work **'Desher Katha' which was later translated in Hindi as 'Desh Ki Baat'**.

❖ The book was **based on the exploitation of the Indian economy by colonial British rule**.

❖ It **also summarized the work of M. G. Ranade and D. Naoroji** in a popular idiom and warned in its concluding **chapter against the colonial state's "hypnotic conquest of the mind."**

❖ It **helped in mobilizing the masses for the Indian National Movement**.

❖ He considered **Bal Gangadhar Tilak as his political guru.**

❖ Deuskar **breathed his last on 23 November 1912.**

16.5   TARAK NATH DAS

❖ The **death anniversary** of revolutionary Taraknath Das was observed recently.

ABOUT TARAKNATH DAS

❖ Taraknath Das was **an Indian revolutionary with a global outlook.**

❖ He was born in **a Bengali middle-class family in Majhipara, North 24 Parganas.**

❖ At a young age, Das became a member of **Anushilan Samiti, a secret society,**

❖ On the advice of **Jatindranath Mukherjee**, Das **escaped initially to Japan and then moved to the United States of America.**

❖ He started the **publication of an anti-British newspaper, 'Free Hindusthan'** to champion the cause of immigrants.

❖ In **1913**, Das came in contact with **Har Dayal and got associated with the Ghadar Movement and its anti-colonial activities.**

❖ In **1917**, he was **implicated in the Indo-German conspiracy case for which he was imprisoned in Kansas for two years.**

16.6   ROBERT M SOLOW

❖ Robert M. Solow, who **won a Nobel in economic science in 1987, died recently.** He was 99.

❖ **He won the prize for his theory** that **advances in technology, rather than increases in capital and labor, have been the primary drivers of economic growth in the United States.**

❖ Solow taught at the **Massachusetts Institute of Technology**, where he and a fellow Nobel laureate, Paul A. Samuelson, forged the **MIT style of economic analysis**, which emerged as a leading approach in the second half of the 20th century and played an important role in economic policymaking.

❖ His work **demonstrated the power of bringing mathematics to bear on important economic debates** and simplifying the **analysis by focusing on a small number of variables at a time.**

16.7	PANDIT MADAN MOHAN MALVIYA

- ❖ PM released the **first series of 11 volumes of collected works** of **Pandit Madan Mohan Malaviya** on the occasion of his 162nd birth anniversary on December 25.
- ❖ The **bilingual (English and Hindi) work in 11 volumes, spread across about 4,000 pages, is a collection of the writings and speeches of Malaviya, collected from every part of the country.**
- ❖ Published by- **Publications Division** under the **Ministry of Information and Broadcasting.**

ABOUT PANDIT MADAN MOHAN MALAVIYA

- ❖ Madan Mohan Malaviya, known as **Pandit Madan Mohan Malaviya**, also called **Mahamana**, was **an Indian scholar, educational reformer, and leader of the Indian nationalist movement**.
- ❖ Born- **25th December 1861**, in Allahabad (now Prayagraj) in Uttar Pradesh.
- ❖ He played a **key role in the Indian independence struggle against British rule.**
- ❖ He helped establish the **Hindu Mahasabha** in **1915**.
- ❖ He **founded Banaras Hindu University in 1916.**
- ❖ He was **elected as the President of the Congress committee** (four times) in 1909, 1918, 1932 and 1933.
- ❖ Participated in **Salt Satyagraha and the Civil Disobedience Movement** and **courted arrest**.
- ❖ He was given the **title of 'Mahamana' by Mahatma Gandhi** and the second President of India, **Dr. S. Radhakrishnan gave him the status of a 'Karmayogi'.**
- ❖ **Publications**
    - ✓ Hindi weekly- **Abhyudaya** in 1907 (made a daily in 1915)
    - ✓ Hindi monthly- **Maryada** in 1910
    - ✓ English daily- **Leader** in 1909
    - ✓ He was the editor of Hindi weekly, **the Hindustan** and **Indian Union**.
- ❖ He was conferred with the **Bharat Ratna**, the **nation's highest civilian honor, posthumously in 2014.**

16.8	BINA DAS

- ❖ The **death anniversary** of **revolutionary Bina Das** was observed on **December 26th**.

ABOUT BINA DAS

- ❖ Bina Das was **an Indian revolutionary and nationalist from West Bengal**.
- ❖ She was **born on August 24, 1911 to social worker and educationist parents- Beni Madhab Das and Sarala Devi**, who were deeply involved in the **Brahmo Samaj and the freedom struggle.**
- ❖ Das was a member of **Chhatri Sangha**, a **semi-revolutionary organisation for women in Kolkata**.
- ❖ On **6 February 1932**, **she attempted to assassinate the Bengal Governor Stanley Jackson**, in the Convocation Hall of the University of Calcutta.
    - ✓ The **revolver was supplied** by another freedom fighter **Kamala Das Gupta.**
- ❖ She **fired five shots but failed** and was **sentenced to nine years of rigorous imprisonment.**
- ❖ In 1942, she **participated in the Quit India movement** and was **imprisoned again from 1942 to 1945**.
- ❖ From 1946 to 1947, she was **a member of the Bengal Provincial Legislative Assembly** and, from **1947 to 1951, of the West Bengal Legislative Assembly.**

16.9	JACQUES DELORS

- ❖ **Former European Commission** President **Jacques Delors**, who was a **key figure in the creation of the euro currency died** recently.
    - ✓ He was 98.

- ❖ From **1985 to 1995**, he served as the **head of the European Commission**, overseeing a transformative decade marked by significant strides in the bloc's integration.
- ❖ This period **witnessed milestones** such as the **establishment of the common market**, the **implementation of the Schengen accords for travel**, the **initiation of the Erasmus programme for student exchanges**, and the **introduction of the euro as the bloc's single currency.**

17.   SOCIAL ISSUES, HEALTH, EDUCATION

17.1   H1N2 SWINE FLU

- ❖ The **U.K. detected its first human case of the flu strain A(H1N2)v**, which is **similar to flu viruses circulating in pigs**, though the **case was "mild" and the patient recovered, according to an alert released by the U.K.**

ABOUT INFLUENZA VIRUS

- ❖ **Influenza A(H1) viruses** are **found in pigs in most regions of the world**, according to the World Health Organization.
- ❖ When these **viruses are found in humans**, they're **called variant influenza viruses**, and the **most common ones that infect humans are H1N1, H1N2, and H3N2.**
- ❖ These **viruses are often transmitted to people who come in contact with pigs via agricultural fairs, work, or through pigs they own**.
- ❖ People **can also become infected by touching contaminated surfaces**, then **touching their mouth or nose**. There have been **no known cases of people contracting the virus from eating properly handled pork**. Though **most cases of swine flu don't spread person-to-person, there have been documented cases of person-to-person transmission.**
- ❖ **Symptoms include - Sore throat, Muscle ache, Headache, Runny nose, Fever, Cough etc.**
- ❖ The **strain that caused the 2009 pandemic – H1N1** – now **circulates in humans seasonally** and is different from the viruses circulating in pigs today.
- ❖ There have been **50 human cases of H1N2 reported globally since 2005**.

17.2   MISSION DAKSH

- ❖ **Bihar government** launched its **ambitious scheme to minimise school dropout**.
- ❖ The scheme, called **Mission Daksh (Dynamic Approach for Knowledge and Skill)** aims at **offering special Hindi, Mathematics and English classes to weak students of classes 3-8 across the state**.
- ❖ A **teacher will teach only five students**, who **cannot read and write Hindi and English fluently and are not good at basic Mathematics.**
- ❖ Daksh classes were **run successfully between 3.30 pm and 4.15 pm in over 60,000-plus schools across the state.**

17.3   MALARIA

- ❖ **World Health Organization recently** released its **Annual Malaria Report 2023**.

MAJOR FINDINGS

- ❖ In 2022, there were an **estimated 249 million malaria cases globally.**

- ❖ **Twenty-nine countries** accounted for **95% of malaria cases globally**.
    - ✓ Four countries, **Nigeria** (27%), the **Democratic Republic of the Congo** (12%), **Uganda** (5%), and **Mozambique (4%)**, accounted for **almost half of all malaria cases globally.**
- ❖ **Africa bears** the **highest malaria burden**, accounting for **94% of cases and 95% of global malaria deaths in 2022.**
- ❖ WHO targets to **reduce malaria incidence and mortality rates by 75% in 2025 and 90% in 2030**.
    - ✓ The world is off-track, with a **55% gap for 2025 incidence reduction** and **53% for fatality rate reduction.**
- ❖ WHO-recommended malaria vaccines **RTS,S/AS01 and R21/ Matrix-M have shown promising results as per report.**
- ❖ **India specific findings**
    - ✓ India **accounted for 66% of malaria cases in the WHO SouthEast Asia Region**.
    - ✓ India saw **a 30% decline in malaria cases and 34% decline in deaths in 2022 as compared to 2021**.

ABOUT MALARIA

- ❖ Malaria is a **life-threatening mosquito borne blood disease** caused by plasmodium parasites.
- ❖ **5 Plasmodium parasite species cause malaria in humans** and **2** of these species – **P. falciparum and P. vivax – pose the greatest threat.**
- ❖ Malaria is **majorly found in the tropical and subtropical areas of Africa, South America and Asia.**
- ❖ Malaria is **spread by the bite of an infected female Anopheles mosquito.**
- ❖ The **parasites travel to the liver, mature, and then infect red blood cells.**

17.4	POMPE DISEASE

- ❖ India's **first Pompe disease patient, passed away last month** at the age of 24 years after battling the disease.
- ❖ In 2010, her father had started the **Organisation for Rare Diseases India (ORDI), the first NGO in the country for rare diseases.**

ABOUT POMPE DISEASE

- ❖ Also known as **Glycogen Storage Disease Type II,** Pompe disease **is a rare genetic disorder caused by a deficiency of the enzyme acid alpha-glucosidase (GAA).**
    - ✓ This enzyme is **crucial for breaking down glycogen into glucose within the lysosomes of cells.**
- ❖ Its **prevalence estimates range from 1 in 40,000 to 1 in 300,000 births.**
- ❖ It **occurs across diverse ethnicities and populations.**
- ❖ The **age of onset** and **severity can vary.**
- ❖ **Key symptoms**
    - ✓ **Progressive muscle weakness is a primary feature of Pompe disease**. It **affects both skeletal and smooth muscles, leading to difficulties in mobility and daily activities**.
    - ✓ **Motor skill delay** in children
    - ✓ **Degenerative impact on bones** leading to joint contractures and skeletal deformities.
    - ✓ **Respiratory complications** due to weakening of respiratory muscles, including the diaphragm.
    - ✓ **Cardiac involvement**
- ❖ **Enzyme assays are conducted to measure the activity of acid alpha-glucosidase (GAA), the deficient enzyme.**
    - ✓ **Genetic testing identifies mutations in the responsible GAA gene.**
- ❖ **There is currently no cure for Pompe disease.**
    - ✓ **However, there are treatment options available to manage symptoms and improve the patient's quality of life.**
    - ✓ **Enzyme Replacement Therapy (ERT) is a standard treatment, involving the infusion of the missing enzyme to alleviate glycogen buildup.**

17.5	AAROGYA MAITRI AID CUBE'

- ❖ The **World's first portable hospital**, **'Aarogya Maitri Aid Cube'** was unveiled recently in Gurugram.
- ❖ It is **designed indigenously under the Project 'BHISHM' (Bharat Health Initiative for Sahyog, Hita and Maitri)'.**
- ❖ It has been **jointly developed by the Ministry of Health, Ministry of Defence, and the National Security Council**.
- ❖ This cube is **tailored to treat up to 200 casualties, emphasizing rapid response and comprehensive care**.
- ❖ In the face of **mass casualty incidents (MCIs)**, where requirements range from basic aid to advanced medical and surgical care, the **Aid Cube stands out with its ability to be deployed within 12 minutes.**
- ❖ The portable hospital **includes 72 detachable mini-cubes** and these **cubes can be converted into a surgical station that has all the facilities where small operating procedures can also be performed**.
- ❖ It can **handle bullet injuries, burns, head, spinal and chest injuries, minor surgeries, fractures and major bleeding**.
- ❖ These cubes are **light and portable**, and **can be rapidly deployed anywhere, from airdrops to ground transportation**.

17.6	MEFTAL

- ❖ The **Indian Pharmacopoeia Commission** (IPC) issued **an alert regarding the common painkiller, Meftal**, and recommended **people must take the drug only after consulting a doctor as it contains mefenamic acid** which can **trigger adverse reactions like DRESS syndrome, etc**.
- ❖ Meftal is a **commonly used drug for menstrual cramps and rheumatoid arthritis.**
- ❖ The **primary constituent of Meftal** is **Mefenamic acid**, a **pain-relieving agent employed for the alleviation of muscle and joint pain** as well as **menstrual pain**.
  - ✓ Additionally, it **exhibits efficacy in mitigating sore throats, nerve pain, and muscle aches.**

ABOUT DRESS SYNDROME

- ❖ The **Drug Rash with Eosinophilia and Systemic Symptoms (DRESS) syndrome** is a **unique and severe idiosyncratic response to a medication**, marked by **a protracted onset period**.
- ❖ It was **linked to medications such as abacavir, allopurinol, and lamotrigine**.
- ❖ Subsequently, it **manifests** through a **diverse array of clinical symptoms**, typically **including fever, skin rash, lymphadenopathy, eosinophilia, and a spectrum of systemic manifestations** ranging **from mild to severe**.
- ❖ It **poses** a **considerable life-threatening risk, with an estimated mortality rate of approximately 10% across various studies.**

ABOUT INDIAN PHARMACOPOEIA COMMISSION

- ❖ IPC is **an autonomous Institution** of the **Ministry of Health and Family Welfare.**
- ❖ Its **basic function** is to **update regularly the standards of drugs commonly required for treatment of diseases prevailing in this region**.
- ❖ It **publishes official documents** for **improving Quality of Medicines by way of adding new and updating existing monographs in the form of Indian Pharmacopoeia (IP).**
- ❖ It **promotes rational use of generic medicines by publishing National Formulary of India.**
- ❖ It **prescribes standards for identity, purity and strength of drugs** essentially required from the health care perspective of human beings and animals.
- ❖ It provides **IP Reference Substances (IPRS)** which **act as a fingerprint for identification of an article under test** and **its purity as prescribed in IP.**

17.7	ANTHRAX

- The **World Health Organisation (WHO)** has reported a **significant anthrax outbreak in five countries in East and southern Africa.**
- A total of 1,166 suspected cases had been reported in **Kenya, Malawi, Uganda, Zambia and Zimbabwe.**
- The **outbreaks** in all **five countries** were **"likely being driven by multiple factors, including climatic shocks, food insecurity, low-risk perception and exposure to the disease through handling the meat of infected animals."**

ABOUT ANTHRAX

- According to **Centre for Disease Control and Prevention (CDC)**, **anthrax is a highly infectious disease** that is **caused by the gram-positive, rod-shaped bacteria** known as **Bacillus anthracis.**
- Anthrax **usually affects livestock like cattle, sheep and goats**, as well as **wild herbivores**.
- **Humans** can be **infected if they are exposed to the animals or contaminated animal products**.
- Anthrax is **not generally considered to be contagious between humans**, although there **have been rare cases of person-to-person transmission.**
- Anthrax **bacteria also occurs naturally in soil.**
- **Symptoms-** The **disease manifests in three forms depending on the route of infection**
  - ✓ **Cutaneous anthrax**, the most common form, presents with **itchy bumps that develop into black sores**, often accompanied by fever and muscle aches.
  - ✓ **Gastrointestinal anthrax** resembles **food poisoning** initially but can escalate to severe abdominal pain and bloody diarrhoea.
  - ✓ **Inhalational anthrax**, the deadliest form, starts with **cold-like symptoms** before progressing to severe respiratory distress and shock.
- **Treatment** for anthrax is **available** and **includes antibiotics** such as **ciprofloxacin, doxycycline, or levofloxacin.**
- **Vaccines are also available for both livestock and humans (**although human vaccines are typically reserved for those at high occupational risk.)

17.8   HAEMOPHILIA

- The **Haemophilia & Health Collective of North (HHCN)** in collaboration with **National Health Mission (NHM) representatives from 16 states** have proposed **guidelines for the treatment of Persons with Haemophilia (PwH) in India.**
- The guidelines will address the **"vaccum"** that existed with respect to treatment and management of this **rare disorder and consequently help both healthcare professionals and patients.**
- **HHCN** is a **registered body of India's leading healthcare professionals working in the domain of haemophilia** care for over two decades.

ABOUT HAEMOPHILIA

- Haemophilia is a **rare and usually inherited bleeding disorder** in which patients have a **fault in a gene that regulates production of proteins called clotting factors**.
- This disorder **can lead to spontaneous bleeding as well as bleeding following injuries or surgery.**
- Since the **gene is carried on the X chromosome, hemophilia is almost entirely a male disease.**
- **Types-**
  - ✓ The most common type of Haemophilia is called **Haemophilia A** where the person does not have enough clotting **factor 8**.
    - ➢ Haemophilia A, occurs **in about 1 in 5,000 births.**
  - ✓ **In Haemophilia B,** person lacks enough **factor 9**.
    - ➢ Haemophilia B is **even rarer at about 1 in about 20,000 births.**
  - ✓ **Haemophilia C**, also known as **Rosenthal syndrome** occurs due to the deficiency of **factor 11**.

17.9	NOROVIRUS

❖ The **UK** has been **witnessing a steady increase** in the **number of norovirus in recent weeks.**

ABOUT NOROVIRUS

❖ Norovirus is a **very contagious virus that causes nausea, vomiting and diarrhoea.**
❖ Norovirus **spreads easily if a person comes in contact with someone who is has already been diagnosed with the virus.**
❖ Norovirus causes **stomach or intestine inflammation**. This is **known as acute gastroenteritis**.
❖ **Symptoms usually appear 12 to 48 hours after being exposed** to the virus.
❖ While there is **no specific treatment available to cure the virus**, **generic medications for diarrhoea and vomiting can help cure the disease.**
❖ Most people **recover from norovirus illness within one to three days.**
❖ There is **no vaccine available for norovirus.**

17.10	NOMA DECLARED NTD BY WHO

❖ The **World Health Organization (WHO) recently added one of the world's most underrecognised health challenges**, **Noma**, to its **official list of neglected tropical diseases (NTD)**.

ABOUT NOMA

❖ The **name of the disease comes from the Greek word "nomē"**, meaning **"to devour",** as **noma eats away facial tissue and bones if not treated early.**
❖ Also known as **cancrum oris or gangrenous stomatitis,** it is **a severe gangrenous disease of the mouth and face.**
❖ Noma **mainly affects children aged 2-6 years old** and is **found most commonly among those living in poor communities**.
❖ It is **also associated with extreme poverty, malnutrition and poor access to sanitation and oral hygiene.**

> NTDs are a **diverse group of 20 conditions** that are **mainly prevalent in tropical areas**, where **they affect more than 1 billion people who live in impoverished communities.**

❖ The NTD is **frequently seen in developing countries, especially in sub-Saharan Africa, where it occurs almost exclusively among poor children usually aged 3-10 years.**
❖ There is **an extreme lack of awareness regarding the disease**.
   ✓ There are **no reliable numbers of cases — the WHO website lists the 'latest' estimates 140,000 cases per year and a prevalence of 770,000 cases.**
❖ Noma is **associated with** a number of risk factors, including **poor oral hygiene, malnutrition, weakened immune systems, infections, and extreme poverty.**
❖ While the **disease is not contagious**, it **prefers to attack when the body's defences are weak**.
❖ The **disease begins with gum inflammation and is thought to be caused by bacteria found in the mouth.**
❖ It has a **mortality rate of approximately 90 per cent**.

17.11	JN.1 STRAIN OF COVID-19

❖ A **new strain of Covid-19, named JN.1**, has been **detected in Karakulam, Thiruvananthapuram district of Kerala**.
❖ This variant, **is a descendant of Pirola**, which has now **already spread to 38 countries, including the US, China, and India** .

- ❖ The discovery of this novel strain has sparked **interest and raised concerns worldwide.**
- ❖ The **JN.1 variant differs from Pirola or BA. 2.86 by only a single mutation** in its spike protein.

> Variant is **a genome (genetic code) that may contain one or more mutations**.

- ❖ While it shares **similarities with previous Omicron strains in terms of high transmissibility and mild symptoms**, there are **some symptoms that individuals should be aware of**, as they may not be as mild as
- ❖ other Omicron variants.
- ❖ According to experts, initial symptoms of the JN.1 COVID variant include **fever, runny nose, sore throat, headache, and, in some cases, moderate gastrointestinal problems**.
- ❖ **Breathing difficulties** may also be experienced by certain patients.
- ❖ Prevention
   - ✓ To prevent the spread of infection, it is **essential to adhere to all necessary precautions, such as frequent handwashing, wearing masks, and maintaining social distance**.

17.12 MALARIA VACCINE

- ❖ The **World Health Organization (WHO)** has added the **R21/Matrix-M malaria vaccine** to its list of prequalified vaccines.
- ❖ It has been **developed by Oxford University** and **manufactured by Serum Institute of India**.
- ❖ The **R21 vaccine** is the **second malaria vaccine prequalified by WHO**, following the **RTS,S/AS01 vaccine which had obtained prequalification status in July 2022**.
- ❖ As per WHO, **both vaccines have been shown to be safe and effective in clinical trials, for preventing malaria in children**.

WHAT IS PREQUALIFICATION?

- ❖ The prequalification means **larger access to vaccines as a key tool to prevent malaria in children**, with it being a **prerequisite for vaccine procurement by UNICEF and funding support for deployment by Gavi**, the Vaccine Alliance.
- ❖ As part of the **prequalification process**, WHO applies **international standards to comprehensively evaluate and determine whether vaccines are safe, effective, and manufactured to international standards**.
- ❖ WHO **also ensures the continued safety and efficacy of prequalified vaccines through regular re-evaluation, site inspection, and targeted testing**.

ABOUT

- ❖ **Malaria** is a **mosquito-borne disease.**
- ❖ It is a **life-threatening** disease **caused by the Plasmodium parasite** which is **transmitted to humans through the bites of infected female Anopheles mosquitoes.**
- ❖ **Spread**- Malaria is **most common in tropical and subtropical regions of the world**, including **sub-Saharan Africa, Southeast Asia, and South America.**
- ❖ While **Plasmodium falciparum** is **responsible for more deaths**, **Plasmodium vivax** is the **most widespread of all of the malaria species.**
- ❖ **Symptoms-**
   - ✓ Fever, fatigue, chills, vomiting, and headaches
   - ✓ Diarrhoea, anaemia and muscle pain
   - ✓ Profuse sweating and convulsions
   - ✓ Bloody stools.
   - ✓ In severe cases, malaria can be devastating; it can lead to seizures, coma and eventually, death.

17.13 LEPROSY

- ❖ The **Odisha government** has declared **leprosy, a reportable disease in the state**.
- ❖ It has **asked hospitals and persons dealing with diagnosis and treatment**, **institutions imparting** medical education and providing diagnostic services to **report all cases to the respective district health authorities.**

ABOUT LEPROSY

- ❖ Leprosy is **an infectious disease** caused by a **type of bacteria, Mycobacterium leprae**.
- ❖ Also known as **Hansen's disease.**
- ❖ It is **a neglected tropical disease (NTD)** that is **still prevalent in more than 120 countries.**
- ❖ **Transmission**- Leprosy is **transmitted via droplets, from the nose and mouth**, during **close and frequent contact with untreated cases.**
- ❖ Leprosy is **known to occur at all ages ranging from early childhood to old age.**
- ❖ The disease **affects the skin, the peripheral nerves**, mucosal surfaces of the upper respiratory tract and the **eyes**.
- ❖ It **leads to physical deformity and morbidity** if the **patient is not treated early.**
- ❖ The communicable disease is **also associated with stigma and discrimination.**
- ❖ Leprosy is **a curable disease with a full course of multi-drug therapy (MDT).**
  - ✓ Also the **patient stops transmitting the disease when he/she begins treatment.**

ABOUT NATIONAL LEPROSY ERADICATION PROGRAMME (NLEP)

- ❖ It is a **Centrally Sponsored Scheme** under the **umbrella of National Health Mission (NHM).**
- ❖ Even as **India has eliminated leprosy as public health problem, according to the WHO criterion** (less than one case per 10,000 population at the national level), **it remains endemic in some states including Odisha**, where **prevalence is greater than one**.
- ❖ The NLEP **aims at eliminating leprosy in each of the districts by 2030.**
- ❖ The NLEP **strategies and plans are formulated centrally**, and the **programme is implemented by the States/UTs.**

17.14   MEDTECH MITRA

- ❖ **Ministry of Health and Family Welfare** recently launched **MedTech Mitra**, an **online portal that aims to assist medtech innovators in clinical evaluation, regulatory facilitation, and uptake of new products.**
- ❖ The portal will be **coordinated collaboratively** by the **Indian Council of Medical Research (ICMR)** and the **Central Drugs Standard Control Organisation (CDSCO)**, under the **guidance of NITI Aayog's Atal Innovation Mission.**
- ❖ It will **facilitate indigenous development of affordable**, **quality MedTech devices** and **diagnostics** leading to **reduction in import dependence (presently around 80%) in MedTech.**

17.15   CHRONIC WASTING DISEASE

- ❖ In a concerning development, scientists are sounding the alarm about the potential spread of a condition known as **chronic wasting disease (CWD), often referred to as "zombie deer disease," from animals to humans.**
- ❖ The **CWD** has been **labelled by the experts** as a **"slow-moving disaster"** and the **governments are being strongly advised to prepare for the chances of its transmission to humans.**

ABOUT CHRONIC WASTING DISEASE

- ❖ Chronic wasting disease (CWD) is a **prion disease** that **affects deer, elk, reindeer, sika deer and moose.**
  - ✓ **Prion diseases** occur when **normal prion protein**, found on the **surface of many cells**, **becomes abnormal and clump in the brain, causing brain damage.**

- ❖ It has **been found in some areas of North America, including Canada and the United States, Norway and South Korea.**
- ❖ It **may take over a year before an infected animal develops symptoms**, which can **include drastic weight loss (wasting), stumbling, listlessness and other neurologic symptoms.**
- ❖ The illness, which is also known as **'Zombie Deer Disease'**, leaves **animals drooling and confused.**
- ❖ CWD can **affect animals of all ages** and **some infected animals may die without ever developing the disease.**
- ❖ CWD is **fatal to animals** and **there are no treatments or vaccines.**

17.16   HUNTINGTON DISEASE

- ❖ Scientists are researching about how **Huntington's disease progresses at the molecular level.**

ABOUT HUNTINGTON'S DISEASE

- ❖ Huntington Disease (HD) is a **progressive genetic disorder which affects the brain.**
- ❖ The patient's carry **a mutated version of a gene called HTT**.
- ❖ The **HTT gene codes for a protein called huntingtin, or Htt.**
- ❖ **Nerve cells** in the human body **require the Htt protein for their normal functioning and survival**.
  - ✓ The **mutated gene**, however, encodes an **abnormal Htt protein that instead destroys the neurons that regulate movement, thinking, and memory.**
- ❖ At first, Huntington's disease patients have mild symptoms: **forgetfulness, loss of balance, and clumsiness in performing simple tasks**.
- ❖ The symptoms **begin in the ages 30-50**, by when the patient might also have had children.
- ❖ The **condition progressively worsens**.
- ❖ The **patient suffers mood swings, has difficulty in reasoning, shows abnormal and uncontrollable jerky movements, and experiences difficulty in speaking, swallowing, and walking.** The **patient eventually dies.**
- ❖ There is **no cure for the disease.**

18.   MISCELLANEOUS

18.1   NATIONAL ARCHIVES OF INDIA

- ❖ A **Book Fair and an exclusive Exhibition-cum-Sale of National Archives of India(NAI's) Publications** was recently held in New Delhi.

ABOUT NATIONAL ARCHIVES OF INDIA

- ❖ The **National Archives of India** is the **custodian of the records of enduring value of the Government of India.**
- ❖ Established on **11 March, 1891 at Calcutta (Kolkata) as the Imperial Record Department**, it is the **biggest archival repository in South Asia**.
- ❖ It has a **vast corpus of records** viz., **public records, private papers, oriental records, cartographic records and microfilms**, which constitute an invaluable source of information for scholars-administrators and users of archives.
- ❖ The **Director General of Archives** has been **given the mandate for the implementation of the Public Records Act, 1993** and the **rules made there under, the Public Records Rules, 1997** for the **management, administration and preservation of public records** in the **Ministries, Departments, Public Sector undertakings** etc. of the Central Government.
- ❖ It functions as **an Attached Office of the Ministry of Culture.**

It has **one Regional Office at Bhopal** and **three Records Centres at Bhubaneswar, Jaipur and Puducherry**

18.2   INDIA'S FASTEST SOLAR-ELECTRIC BOAT -BARRACUDA

❖ India's **fastest solar-electric boat**, Barracuda was launched at the **yard of Navalt Solar and Electric Boats, located off Aroor in Alappuzha, Kerala.**
❖ Named after the **swift, long fish**, **Barracuda was designed by Navalt** and **can be deployed even in the rough seas as a workboat to ferry up to 12 passengers and cargo.**
❖ The **14-metre-long, 4.4-metre-wide vessel can attain a top speed of 12.5 knots (23 kmph)** and has a **range of seven hours on a single charge**.
❖ It has **twin 50 kW electric motors, a marine-grade LFP battery, and 6 kW solar power**, epitomising **efficient and clean energy usage.**
❖ The vessel was built for **Mazagon Dock Limited** which will **introduce the eco-friendly vessel at its Mumbai dock.**
❖ It is **engineered to navigate through waves as tall as four metres** and **operates without noise, vibration and air pollution.**

18.3   FIRST INDIAN AIRLINE TO CARRY 100 MILLION PASSENGERS

❖ India's **largest airline IndiGo** made history by **"becoming the first Indian airline to carry 100 million passengers in a single calendar year."**
❖ This remarkable **milestone solidifies IndiGo's position in the aviation industry and underscores its significant contribution to air travel in the country**.
❖ With this development **IndiGo has joined a select group of carriers globally.**

19.   HIMACHAL NEWS

19.1   IIT MANDI BAGS AWARD AT COP28

❖ The **Indian Institute of Technology, Mandi**, has been **honoured with the prestigious 'Green University' award at COP 28** held in UAE.
❖ The recognition was given to the institute **in acknowledgment of its comprehensive commitment to sustainable practices and its holistic approach towards environmental initiatives.**
❖ This **award was conferred by Green Mentors**, a **non-governmental organisation holding special consultative status with the United Nations Economic and Social Council (ECOSOC) in the United States**.

19.2   CHANDRA RIVER

❖ **Himachal Pradesh Police** recently cracked down on an SUV owner for allegedly driving his vehicle across the **Chandra River in Lahaul and Spiti district**.

ABOUT CHANDRA RIVER

❖ The **River Chandra** is **one of the two rivers** which **merge to form the Chenab in the Lahaul region of Himachal Pradesh**
   ✓ **Other is Bhaga river** which **originates from Suryataal lake**.

- ❖ It **rises in the snows lying at the base of the main Himalayan range in the Lahaul and Spiti district**.
- ❖ The beautiful **Chandra Tal lake has formed at its source**.
- ❖ It goes on to **merge with the Bhaga River downstream of Keylong and form Chenab river.**
- ❖ The **entire area is a vast cold desert** that **receives little or no rain as it lies in the rain shadow of the Pir Panjal range lying towards South.**
- ❖ The **important human settlement** along the river is **Koksar**.

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