Current Affairs

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For HPAS & Other Competitive Exam in Himachal Pradesh

Prelims

1. POLITY

1.1. ANTI- DEFECTION LAW

SC has observed that for application of anti-defection law, it does not matter whether rival group is the minority or majority within the political party if their acts amount to defection.

About Anti-Defection law:

❖ It was added by the 52nd Amendment in 1985 that also inserted Tenth Schedule to the Constitution (grounds of defection).
❖ **A member of a House becomes disqualified if:**
    1. He voluntarily gives up his membership of such political party; or
    2. He votes/abstains from voting contrary to any direction issued by his political party and such act has not been condoned by the bnparty within 15 days.
    3. An independent member becomes disqualified he joins any political party after such election.
    4. A nominated member becomes disqualified if he joins any political party after expiry of six months from date on which he takes seat.
❖ **Exceptions in anti-defection law:**
    1. Allows a party to merge with or into another party provided at least two-thirds of its legislators are in favour.
    2. If a person is elected as speaker of Lok Sabha or Chairman of Rajya Sabha then he could resign from his party, and rejoin the party once he demits that post.

1.2. NATIONAL YOUTH PARLIAMENT FESTIVAL (NYPF) 2023

❖ The 4th edition of National Youth Parliament Festival (NYPF) commenced in the Central Hall of Parliament recently.
❖ It is based on the **theme**: "Ideas for a Better tomorrow: India for the World".
❖ More than 2.01 Lakh youth from 748 Districts of all States and UTs participated at 150 venues across the country.
❖ **Objective:**
    ✓ To hear the voice of youth in this age bracket of 18-25 who are allowed to vote but cannot contest in elections.
    ✓ To encourage the youth to engage with public issues, understand the common man's point of view, form their opinion and express these in an articulate manner.

ABOUT NATIONAL YOUTH PARLIAMENT FESTIVAL (NYPF)

❖ NYPF is based on the idea given by the Prime Minister in his Mann Ki Baat address.
❖ Under this District Youth Parliaments are also conducted.
❖ These are conducted at three levels:
    i. **District Youth Parliament (DYP):** Preliminary rounds of screening are conducted to select youth for participation in the DYP by a Jury.
    ii. **State Youth Parliament (SYP):** The youth selected by a Jury from the District Youth Parliament participate at the State level in SYP.
    iii. **National Youth Parliament (NYP):** The youth selected by a Jury from the State Youth Parliament participate at the National level in NYP in New Delhi.
❖ 1st edition of NYPF 2019 was organised with the theme "Be the Voice of New India and Find solutions and Contribute to Policy" with the participation of 88,000 youth in physical mode.
❖ **Organized by:** Ministry of Youth Affairs and Sports.

1.3. SC'S JUDGMENT ON THE APPOINTMENT OF ELECTION COMMISSIONERS

❖ A Constitution Bench of the Supreme Court directed in a landmark judgment that Chief Election Commissioner (CEC) and Election Commissioners (ECs) will be appointed by the President on the advice tendered by a committee of the Prime Minister, Leader of Opposition (LoP) in the Lok Sabha and the Chief Justice of India (CJI).
    ✓ The judgment has now brought the appointment process of Chief Election Commissioners and Election Commissioners on par with that of the CBI Director.

- ✓ The move is aimed at insulating the appointment of the Chief Election Commissioner (CEC) and election commissioners from the Executive's interference.
- ❖ Chief Election Commissioners and Election Commissioners have so far been appointed by the President on the advice of the Prime Minister.
- ❖ The high-powered committee would continue to advise the President on the appointment until the Parliament enacts a law on the appointment process of Election Commissioners.
- ❖ Other highlights of SC verdict
    - ✓ Appointment of an EC for a tenure less than six years is in "clear breach" of law. Section 4(1) of Election Commission (Conditions of Service of ECs and Transaction of Business) Act, 1991 requires that CECs and ECs should separately have a period of six years in office.
    - ✓ SC ruled that process of removal of CEC and other ECs cannot be the same.
    - ✓ On issue of funding EC, Court held that there is a need to provide for a permanent Secretariat and expenditure be charged on Consolidated Fund of India.

The Election Commission of India
- ❖ It is an autonomous constitutional body under Article 324.
- ❖ It administers elections to the Lok Sabha, Rajya Sabha, and State Legislative Assemblies in India, and the offices of the President and Vice President in the country.
- ❖ **Composition**
    - ✓ Originally the commission had only a Chief Election Commissioner.
    - ✓ It currently consists of Chief Election Commissioner and two Election Commissioners.
- ❖ **Appointment & Tenure of Commissioners**
    - ✓ The President appoints Chief Election Commissioner and Election Commissioners under article 324(2).
    - ✓ They have a tenure of six years, or up to the age of 65 years, whichever is earlier.
    - ✓ They enjoy the same status and receive salary and perks as available to Judges of the Supreme Court of India.
    - ✓ The Chief Election Commissioner can be removed from office only through impeachment by Parliament.
    - ✓ **Service condition-** same as judges of Supreme Court. EC can't be removed from office except on recommendation of CEC.

1.4. SUPREME COURT EASES NORM FOR SELECTION OF CONSUMER COURT PRESIDENTS, MEMBERS

- ❖ The Supreme Court recently used its extraordinary powers under Article 142 to attract younger talent to preside over consumer courts by-
- ❖ Reducing the mandatory professional experience to 10 years(from presently 20 years for President and 15 years for member)
- ❖ Introducing written exams and viva voce to check candidates' performance.

About the Act
- ❖ Consumer Protection Act (CPA), 2019 was enacted with an objective to provide better protection of the interests of the Consumers, especially in the digital era.
- ❖ It replaced Consumer Protection Act, 1986.

KEY FEATURE OF CPA, 2019
- ❖ Promulgates a **three-tier quasi-judicial mechanism** for redressal of consumer disputes.
    1. **District Commissions** – composed of a President, who is or has been or is qualified to be a District Judge and not less than two members. Pecuniary jurisdiction upto Rs 50 lakh.
    2. **State commissions** - composed of a President, who is or has been a Judge of a High Court and at least four other members. Pecuniary jurisdiction from Rs 50 lakh- Rs 2 crore.
    3. **National Commission** - composed of a President who is or has been a Judge of SC and not less than four other members. Pecuniary jurisdiction of above Rs 2 crore.
- ❖ Central Consumer Protection Authority to protect rights of consumers.
- ❖ Penalties for misleading advertisement.

1.5. ELECTORAL BOND SCHEME COMPLETES 5 YEARS

- ❖ EBs were introduced in Union Budget 2017-18.
- ❖ Electoral Bond is a bearer instrument in the nature of a Promissory Note and an interest free banking instrument.
- ❖ **Details**
  - ✓ Citizen of India or a body incorporated in India is eligible to purchase bond.
  - ✓ EBs are issued/purchased for any value, in multiples of Rupee 1,000, 10,000, 1,00,000, 10,00,000 and 1,00,00,000 from specified branches of State Bank of India.
  - ✓ Political parties receiving donations through EBs have to redeem them **within 15 days** otherwise EBs shall be deposited by authorised bank with Prime Minister's National Relief Fund (PMNRF).
- ❖ **Eligibility of political parties**: Registered under section 29A of Representation of People Act, 1951 and which secured not less than one percent of the votes polled in last general election to House of People or a Legislative Assembly.

1.6. BCI ALLOWS FOREIGN FIRMS IN INDIA

- ❖ Recently, the Bar Council of India permitted foreign lawyers and law firms to practice in India.
- ❖ BCI notified Rules for Registration and Regulation of Foreign Lawyers and Foreign Law Firms in India, 2022.
- ❖ About rules
  - ✓ Allows foreign lawyers and law firms to register with BCI to practise in India.
  - ✓ A foreign lawyer registered under rules shall be entitled to practice law in India in **non-litigious matters only**, which would be laid down by BCI in consultation with Ministry of Law.
  - ✓ They are **allowed to practice transactional work /corporate work** such as joint ventures, mergers and acquisitions, intellectual property matters, drafting of contracts and other related matters on a reciprocal basis.
  - ✓ However, they will **not be allowed to appear before any courts**, tribunals or any other regulatory authorities.
- ❖ **Significance of the move**
  - ✓ Law firm will benefit from exposure to global best practices.
  - ✓ It will provide foreign firms and investors with some judicial comfort.

ABOUT BCI
- ❖ It was **established by Parliament** under section 4 of **Advocates Act, 1961** to regulate and represent Indian bar.
- ❖ Statutory **functions of BCI** include:
  - ✓ prescribes standards of professional conduct.
  - ✓ Safeguard the rights, privileges and interests of advocates
  - ✓ Promote and support law reform
  - ✓ Deal with and dispose of any matter which may be referred by a State Bar Council
  - ✓ It also sets standards for legal education
  - ✓ grants recognition to universities for degree in law
  - ✓ Recognise foreign qualifications in law obtained outside India for admission as an advocate.
- ❖ **Structure:**
  - ✓ It consists of **members elected from each state bar council**, and the **Attorney General of India and the Solicitor General of India who are ex officio members**.
  - ✓ The council elects its own chairman and vice-chairman for a **period of two years** from among its members.

1.7. RAJASTHAN GETS NEW DISTRICTS

- ❖ Recently Chief Minister Ashok Gehlot announced the creation of 19 new districts and 3 new divisions in the state during his course of the discussion on the Finance and Appropriation Bill in the Legislative Assembly.
- ❖ Rajasthan will now have 19 new districts and 3 new divisions, taking the number of districts to 50 and divisions to 10.
- ❖ The **new districts** are- Anupgarh, Balotra, Beawar, Deeg, Didwana-Kuchaman, Dudu, Gangapur City, Jaipur North, Jaipur South, Jodhpur East, Jodhpur West, Kekri, Kotputli-Behror, Khairthal, Neem Ka Thana, Phalodi, Salumbar, Sanchor and Shahpura districts.
- ❖ The CM also declared adding **three new administrative** divisions: Sikar, Banswara and Pali.
- ❖ For the new districts and divisions, CM proposed a budget of Rs 2,000 crore for the first phase of implementation of infrastructure and human resource development.

1.8. PAROLE AND FURLOUGH

- ❖ Recently, Supreme Court of India ruled that the period of parole granted to convicts during the Covid-19 pandemic to prevent overcrowding in prisons and avoid the risk of spread of infection, **cannot be counted** as part of their actual sentence period.
- ❖ Parole and furlough are considered as reformative processes. Both are covered under the Prisons Act of 1894.

About Parole

- ❖ It is a system of releasing a prisoner with suspension of the sentence.
- ❖ The release is **conditional**, usually **subject to behavior**, and requires periodic reporting to the authorities for a set period of time.
- ❖ Parole is **not a right**, and is **given to a prisoner for a specific reason**, such as a death in the family or a wedding of a blood relative.
- ❖ It may be denied to a prisoner even when he makes out a sufficient case, if the competent authority is satisfied that releasing the convict would not be in the interest of society.

About Furlough

- ❖ It is given in cases of long-term imprisonment.
- ❖ The period of furlough granted to a prisoner is treated as remission of his sentence.
- ❖ Unlike parole, furlough is seen **as a matter of right for a prisoner**, to be **granted periodically irrespective of any reason**, and merely to enable the prisoner to retain family and social ties, and to counter the ill-effects of prolonged time spent in prison.

2. ECONOMY

2.1. 3 NATIONAL FLAGSHIP PROGRAMMES FOR FISHERIES LAUNCHED.

❖ The fisheries sector is a direct source of livelihood for more than 20 million fishers and fish farmers; contributes INR 1.75 trillion annually to the gross value added to India's economy.
❖ India is the third largest fish-producing country.
❖ Fisheries are the country's single-largest agriculture export.
❖ Recently, the Union Minister of Fisheries launched three national flagship programmes for the development of the fisheries sector. These include-

National Surveillance Programme for Aquatic Animal Diseases (NSPAAD) Phase-II
❖ Phase-II is sanctioned under the Pradhan Mantri Matsya Sampada Yojana programme (PMMSY).
  ✓ Phase 1 has been implemented since 2013.
❖ The phase-II will be implemented at the pan-India level and state fisheries departments to be an integral part.
❖ It envisages development of the National Information System on Aquatic Diseases.

Genetic improvement program of Penaeus indicus (Indian white shrimp)-Phase-I
❖ Shrimp farming sector mostly depends on one exotic Specific Pathogen Free stock of Pacific white shrimp (Penaeus vannamei) species.
❖ Program will help to break single species dependence and promote indigenous species vis-à-vis exotic shrimp species.
❖ Program sanctioned with an outlay of Rs.25 crores under PMMSY to establish a National Genetic Improvement Facility for shrimp breeding.

Shrimp Crop Insurance product
❖ Developed by ICAR-CIBA
❖ It charges a differential premium based on location and requirements of the individual farmer from 3.7 to 7.7 % of input costs.
❖ Farmers will be compensated to the tune of 80 % loss of input cost in the event of total crop loss. i.e., more than 70% crop loss.

2.2. HINDUSTAN 228 AIRCRAFT.

❖ Recently, the Directorate General of Civil Aviation (DGCA) approved a new variant of the Hindustan 228-201 LW Aircraft.
❖ Features: This variant of the Hindustan 228-201 LW aircraft has a maximum take-off weight of 5,695 kg with 19 passengers.
❖ Developed by: Hindustan Aeronautics Limited (HAL).
❖ HAL is building civil aircrafts to promote the UDAN (Ude Desh Ka Aam Nagrik) Scheme.
  1. HAL is a public-sector aircraft manufacturing company. It has also made the Light Combat Aircraft (LCA) for the Indian Air Force (IAF).
❖ This variant provides several operational benefits for operators, such as reduced pilot qualification requirements enabling pilots with Commercial Pilot Licence to fly the aircraft, enhanced availability of pilot pool for the aircraft, reduced operational cost, reduced training requirements for flying and ground crew, including aircraft maintenance engineers.
❖ It will promote the UDAN (Ude Desh Ka Aam Nagrik) Scheme.
  1. Ude Desh ka Aam Nagrik (UDAN) was launched as a regional connectivity scheme under the Ministry of Civil Aviation in 2016.
  2. It is an innovative scheme to develop the regional Aviation market.
  3. The central government aims to set up 1,000 new air routes and establish 100 new airports, under the UDAN scheme.

2.3. NORTH EAST'S 1ST COMPRESSED BIOGAS PLANT UNVEILED IN ASSAM.

- ❖ The foundation stone laying ceremony of northeast India's first-ever compressed biogas plant project at Domora Pathar in Sonapur under Kamrup (Metropolitan) district was held recently.
- ❖ Being set up by Redlemon Technologies, it is expected to functional by November 2023.
- ❖ It will have a 5 tonne-per-day production capacity for compressed biogas from raw materials like municipal solid wastes and cattle manure.

2.4. FRONT RUNNING

- ❖ SEBI recently barred 21 entities in the Axis mutual fund front-running case.
- ❖ It identified Rs 30.5 crore as wrongful gains accrued due to the alleged front-running activities and directed that this amount be impounded from the entities.
- ❖ **Front running**, also known as tailgating, is the prohibited practice of entering into an equity trade, option, futures contract, derivative, or security-based swap to capitalize on advance, nonpublic knowledge of a large pending transaction that will influence the price of the underlying security.
- ❖ **Insider trading** is when a company insider, an official, employee or a senior executive, takes advantage of unpublished price-sensitive information (UPSI) to trade in the company's stock and make profits from such transactions.

About Securities and Exchange Board of India (SEBI)

- ❖ SEBI is a statutory body established in accordance with the provisions of the Securities and Exchange Board of India Act, 1992.
- ❖ The basic functions of the Securities and Exchange Board of India is to protect the interests of investors in securities and to promote and regulate the securities market.
- ❖ SEBI Board consists of a Chairman , full time and part time members.
- ❖ SEBI is a quasi-legislative and quasi-judicial body which can draft regulations, conduct inquiries, pass rulings and impose penalties.

2.5. SPICE BOARD OF INDIA

- ❖ Recently, Spice Board India celebrated its 36th anniversary.
- ❖ It is headquartered in Kochi, Kerala.
- ❖ It is a statutory body constituted under Spice Board Act 1986 after merging erstwhile Cardamom Board and the Spices Export Promotion Council.
- ❖ The board is responsible for development of the cardamom industry and promotion export of 52 scheduled spices listed under the act.
- ❖ The board is headed by a senior secretary level officer. Also, two Members of Parliament are also elected to serve on the board.
- ❖ The board functions under administrative control of the Ministry of Commerce and Industries.

2.6. SOCIAL STOCK EXCHANGE.

- ❖ Recently, the National Stock Exchange of India received final approval from the markets regulator Securities and Exchange Board of India (SEBI) to set up a Social Stock Exchange (SSE).
- ❖ Finance Minister had proposed to initiate steps for creating a stock exchange under the market regulator's ambit in the Union Budget of 2019.
  - ✓ The proposal was cleared in September 2021.

Social Stock Exchange

- ❖ The SSE would function as a separate segment within the existing stock exchange and help social enterprises raise funds from the public through its mechanism.
- ❖ It would serve as a medium for enterprises to seek finance for their social initiatives, acquire visibility and provide increased transparency about fund mobilisation and utilisation.
- ❖ Retail investors can only invest in securities offered by for-profit social enterprises (SEs) under the Main Board.
  - ✓ In all other cases, only institutional investors and non-institutional investors can invest in securities issued by SEs.
- ❖ Eligibility: Any non-profit organisation (NPO) or for-profit social enterprise (FPSEs) that establishes the primacy of social intent would be recognised as a social enterprise (SE), which will make it eligible to be registered or listed on the SSE.

❖ NPOs can raise money either through the issuance of Zero Coupon Zero Principal (ZCZP) Instruments from private placement or public issue, or donations from mutual funds.

2.7. TEA INDUSTRY IN INDIA

❖ India has taken several steps to boost tea output, create a niche brand for the Indian tea and ensure the welfare of families associated with this industry, the commerce ministry said recently.
❖ Facing various geo-political, geo-economic and logistical challenges, Indian tea exports are expected to achieve more than 95% of set targets of $883 million.

Tea Industry- details

❖ India is 2nd largest tea producer after China and 4th largest exporter of tea in world.
❖ Also, India is largest black tea producer and consumer.
❖ Tea Cultivation and Exports are regulated by **Tea Board of India**.
❖ It employs 1.16 million workers directly with 52% of total produce from small tea growers.
❖ Major Tea Varieties grown in India: Darjeeling Tea, Assam Tea, Nilgiri tea, Kangra tea etc.
❖ Darjeeling tea was 1st Indian product to get Geographical Indication (GI) tag.
❖ Ideal Conditions for Tea plantation
    ✓ Temperature: Vary from 16 to 32 degree C.
    ✓ Annual rainfall: 125 to 150 cm, which is well distributed over 8-9 months in year.
    ✓ Atmospheric humidity: 80%.
    ✓ Locations: North Eastern States, hill ranges from 600 to 2200 m above mean ssea level.

About Tea Board of India

❖ Constituted under Tea Act 1953 under **Ministry of Commerce**.
❖ Aim- To make India, the leading producer and supplier of quality tea in the global market.
❖ **Members**- 31 members (including Chairman) drawn from Members of Parliament, tea producers, tea traders, tea brokers, consumers, and representatives of Governments from the principal tea producing states, and trade unions.
❖ Headquarters- Kolkata
❖ Board is reconstituted every three years.

2.8. SC PANEL ON ADANI ISSUE

❖ The Supreme Court recently formed a five-member expert committee to investigate the possibility of regulatory failure in the Hindenburg Adani saga.
❖ The Supreme-Court formed a committee headed by former apex court judge, **Justice Abhay Manohar Sapre** to assess the regulatory framework.
❖ The scope of the committee is to
    ✓ Provide an overall assessment of the situation, including the relevant factors which led to the volatility in the securities market.
    ✓ Suggest measures to strengthen Indian investor awareness.
    ✓ Investigate any regulatory failure in dealing with the alleged breaking of rules by the adani group of companies.
    ✓ Suggest measures to strengthen the statutory and regulatory framework and secure compliance with the existing framework for the protection of investors.

2.9. PREVENTION OF MONEY LAUNDERING ACT

❖ Delhi High Court has asked central government to appoint chairperson and other members of the appellate authority provided under PMLA within eight weeks.
❖ Act was enacted in 2002 in response to India's global commitment (including Vienna Convention) to combat money laundering.
❖ Enforcement Directorate enforces the PMLA.

2.10. GOVT TO DEVELOP 23 RIVER SYSTEMS TO UTILISE INLAND WATERWAYS FOR CARGO, PASSENGER VESSEL MOVEMENT

- ❖ Out of 111 national waterways 23 river systems have been identified as feasible for navigation.
- ❖ The aim is to utilise inland waterways to improve cargo and passenger vessels movement at cheap transportation cost.

About National Waterways

- ❖ National Waterways (NWs) are declared under National Waterways Act, 2016 to promote Inland Water Transport (IWT) in India.
- ❖ Ganga-Bhagirathi-Hooghly River System (Allahabad to Haldia) was first NW declared in 1986.
- ❖ Recently, NW-68 between Panjim to Vasco on Mandovi River in Goa was completed.
- ❖ India has an extensive network of inland waterways in the form of rivers, canals, backwaters and creeks.
- ❖ Inland waterways contribute only around 2% in India's internal freight movement.
- ❖ Benefits- Eco-friendly and cheaper (less fuel consumption per tonne-km), better connectivity to hinterland, require relatively less maintenance, reduced pollution of air, water, noise etc.
- ❖ **Challenges**: Absence of storage facilities, limited number of vessels, inadequate inland ports and logistics system, low technology adaptation etc.
- ❖ Initiatives for Inland Waterways Development
  - ✓ Establishment of Inland Waterways Authority of India (IWAI) in 1986.
  - ✓ Inland Vessels Act, 2021 replaces Inland Vessels Act, 1917.
  - ✓ River Cruise Tourism on NWs.
  - ✓ PANI (Portal for Asset & Navigation Information) platform for river navigation and infrastructure information.

2.11. BIS MAKES HUID MANDATORY

- ❖ Bureau of India Standards (BIS) has prohibited the sale of hallmarked gold jewelry or gold artefacts without 6-digit alphanumeric Hallmark Unique Identification Number (HUID) after 31st March 2023.
- ❖ However, Hallmarked jewellery lying with consumers as per old schemes shall remain valid.
- ❖ Earlier, the old hallmarked jewelry with 4 marks without HUID was also permitted to be sold by the jewelers along with the 6-digit HUID mark.

Hallmarking

- ❖ Hallmarking is the accurate determination and official recording of the proportionate content of precious metal in precious metal articles.
- ❖ Hallmarking scheme for Jewellery was started by BIS in the year 2000.
- ❖ In India, at present two precious metals namely gold and silver have been brought under the purview of Hallmarking.
- ❖ However, Mandatory Hallmarking has been successfully implemented in 288 districts of the country with effect from 23 June 2021 by Hallmarking of Gold Jewellery and Gold Artefacts Order, 2022.

About HUID

- ❖ HUID stands for Hallmark Unique Identification.
- ❖ It is a 6-digit alphanumeric code consisting of alphabets and numbers.
- ❖ HUID is stamped at the BIS-certified Assaying and Hallmarking Centre.
- ❖ For every piece of gold jewellery which is hallmarked by the Bureau of Indian Standards (BIS), a unique HUID code is given to it.
- ❖ After introduction of 6-digit HUID in 2021, hallmark consisted of 3 marks viz, BIS logo, purity of the article and six-digit alphanumeric HUID. Each hallmarked article has unique HUID number which is traceable.

2.12. HINDU RATE OF GROWTH

- ❖ An Indian Economist Raj Krishna coined the term "Hindu Rate of Growth" in 1982.
- ❖ It was then used to refer to the growth rate of period, which was stagnant at 3.5-4% for a long period.
- ❖ This rate of growth remained steady through changes in governments, wars, famines, and other crises.

2.13. HAR PAYMENT DIGITAL MISSION

- ❖ It was launched by Reserve Bank of India (RBI) during Digital Payments Awareness Week (6th to 12th of March) 2023 to encourage digital payments adoption.
- ❖ RBI appealed to all stakeholders - banks, payment system operators (PSOs), digital payment users, etc. - to adopt digital payments and teach others about merits of using digital payments.

- ❖ RBI also launched '75 digital villages programme' to adopt 75 villages and convert them into digital payment enabled villages.
- ❖ PSOs will adopt these villages and conduct awareness camps and onboard merchants for digital payments.

2.14. SWAMIH INVESTMENT FUND

- ❖ Special Window for Affordable and Mid-Income Housing (SWAMIH) Fund has so far provided final approval to about 130 projects with sanctions worth over Rs 12,000 crore.
- ❖ In three years since its inception in 2019, the Fund has already completed 20,557 homes and aims to complete over 81,000 homes in the next three years across 30 tier 1 and 2 cities.

About SWAMIH Fund
- ❖ The Special Window for Affordable and Mid-Income Housing (SWAMIH) Investment Fund I is a social impact fund specifically formed for completing stressed and stalled residential projects.
- ❖ The Fund is sponsored by the Ministry of Finance, Government of India, and is managed by SBICAP Ventures Ltd., a State Bank Group company.
- ❖ The fund considers first-time developers, established developers with troubled projects, developers with a poor track record of stalled projects, customer complaints and NPA accounts, and even projects where there are litigation issues
- ❖ It is considered the lender of last resort for distressed projects.
- ❖ It is India's largest social impact fund specifically formed for completing stressed and stalled residential projects.
- ❖ **Eligibility Criteria**:
  - ✓ The real estate projects must be Real Estate (Regulation and Development) Act (RERA)-registered which have been stalled due to a lack of adequate funds.
  - ✓ Each of these projects must be very close to completion.
  - ✓ They must also fall under the 'Affordable and Middle-Income Project' category (any housing projects wherein housing units do not exceed 200 sq.m.).
  - ✓ Net-worth positive projects are also eligible for SWAMIH funding.
    - ➢ Net-worth positive projects are those projects for which the value of their receivables (debts owed to them by buyers), plus the value of their unsold inventories is greater than their completion costs and outstanding liabilities.
- ❖ **Objective:**
  - ✓ It aims to provide financing to enable completion of stalled housing projects and ensure delivery of apartments to homebuyers.
  - ✓ To unlock liquidity in the real estate sector and provide a boost to core industries such as cement and steel.

2.15. MSME COMPETITIVE (LEAN) SCHEME

- ❖ **Minister for MSME** launched the Scheme to enhance Domestic and Global Competitiveness of MSMEs through the application of various Lean Techniques.
- ❖ Scheme is to create awareness about LEAN Manufacturing practices and incentivize MSME to attain LEAN levels. The Scheme is a business initiative to reduce "waste" in manufacturing.
- ❖ It provides for building awareness of lean manufacturing practices in MSME clusters as well as cost sharing of consultant's fees with MSME units who opt for such interventions.
- ❖ Under the scheme, the Centre's contribution will be 90 per cent of the implementation cost for handholding and consultancy fees as against 80 per cent previously.
- ❖ Lean Manufacturing Techniques are adopted with the objective of
  - ✓ reducing waste,
  - ✓ increasing productivity,
  - ✓ introducing innovative practices for improving overall competitiveness,
  - ✓ inculcating good management systems and imbibing a culture of continuous improvement.
- ❖ Under the scheme, MSMEs will implement **LEAN manufacturing tools** like **5S, Kaizen, KANBAN, Poka Yoka** etc.
- ❖ **Nodal Agency: National Productivity Council** (NPC)
  - ✓ National Productivity Council of India, established in the year 1958, is an autonomous organization **under Department for Promotion of Industry & Internal Trade, Ministry of Commerce and Industry**.
- ❖ **Eligibility:** The Scheme is open to Micro, Small or Medium as per the definition of the MSME Act. (The Micro, Small and Medium Enterprises Development Act, 2006.)

- ✓ The **units are required to form a Mini Cluster of 10** or so units.
- ✓ All MSMEs registered with the **UDYAM registration portal** will be eligible to participate.
- ✓ Also open to **SFURTI** and **Cluster Development Program Schemes**.

2.16. NEW CENTERS OF EXCELLENCE UNDER MIDH

- ❖ Under Mission for Integrated Development of Horticulture (MIDH), Centers of Excellence (CoEs) are being established in various States through Bilateral Cooperation or Research Institutes.
- ❖ These CoEs serve as demonstration and training centres for the latest technologies in the field of horticulture.
- ❖ 3 CoEs that have been approved include:
    - ✓ CoE for Kamlam (Dragon Fruit) at Bengaluru, Karnataka
    - ✓ CoE for Mango and Vegetables at Jajpur, Odisha
    - ✓ CoE for Vegetables and Flowers at Ponda, Goa
- ❖ **MIDH** is a **Centrally Sponsored Scheme** for the holistic growth of the horticulture sector covering fruits, vegetables and other areas.
- ❖ Under MIDH, the Government contributes 60% of the total outlay for developmental programmes in all the states (except Northeastern and Himalayan states where GOI contributes 90%) & 40% is contributed by State governments.
- ❖ **Implementing agency** -National Horticulture Board, Ministry of Agriculture and Farmer's Welfare

2.17. LDC STATUS

- ❖ Bhutan will become seventh nation to graduate from United Nations' list of Least Developed Country (LDC) status by 2023 end.
- ❖ Bhutan was included in the first group of 'Least Developed Countries' in 1971.
    - ✓ However, over the last few decades, it has made remarkable progress on a variety of socio-economic metrics.
- ❖ LDCs are developing countries listed by UN that exhibit lowest indicators of socioeconomic development.
- ❖ Currently, UN lists 46 countries that qualify as LDCs.
- ❖ List of LDCs is reviewed every three years by Committee for Development Policy (CDP).
- ❖ UN identifies three criteria for a country to be classified as an LDC
    - ✓ Gross national income (GNI) per capita below threshold of USD 1,230 over a three-year average.
    - ✓ Perform poorly on a composite human assets index based on indicators including nutrition, health and education.
    - ✓ Country must demonstrate economic vulnerability such as being prone to natural disasters and possessing structural economic constraints.

2.18. INFRASTRUCTURE FINANCE COMPANY

- ❖ RBI has granted IFC status to Indian Renewable Energy Development Agency (IREDA).

About IFC
- ❖ IFC is a non-deposit accepting loan company which complies with the following :
    - ✓ A minimum of **75 per cent of the total assets** of an IFC-NBFC should be deployed in **infrastructure loans**;
    - ✓ The company should have **minimum net-worth of Rs 300 crore**,
    - ✓ The **CRAR** of of the company should **be at 15% with Tier I capital** at 10% and
    - ✓ The **minimum credit rating** of the company should be at **'A' or equivalent of CRISIL, FITCH, CARE, ICRA, BRICKWORK or equivalent rating** by any other accrediting rating agencies.

2.19. UTTARAKHAND- FIRST STATE TO START INSURANCE SERI CULTURISTS

- ❖ Uttarakhand launched the country's first "Resham Keet Bima" programme to safeguard its sericulturists. 200 sericulturists from five blocks in four districts—**Dehradun, Haridwar, Udham Singh Nagar, and Nainital**.
- ❖ The programme has been launched as a pilot project spanning five development blocks of four districts of the state in order to safeguard farmers from loss.
- ❖ The initiative is managed by **Saral Krishi Beema**.

2.20. MILLETS AND FOOD SECURITY

- ❖ Inaugurating Global Millets (Shree Anna) Conference at Pusa, New Delhi, PM also launched a compendium of Indian Millet (Shri Anna) Start-ups and Book of millet (Shri Anna) standards.
- ❖ Also, **Indian Institute of Millets Research of ICAR** (Indian Council of Agricultural Research) is declared as a **Global Centre of Excellence**.

About Millets

- ❖ Millets, also known as **nutri-cereals**, are a collective group of small, round seeded (coarse grains) annual grasses that are grown as cereal crops/grains for human food and as fodder.
- ❖ They **are called superfoods** for having nutrients like protein, Vitamin-A, Iron and Iodine, antioxidants, etc.
- ❖ Globally millets are **grown in more than 100 countries** and are **traditional food** for more than **500 million people**.
- ❖ Millets are mainly grown on marginal land in dry areas of temperate, sub-tropical and tropical regions.
- ❖ **India** accounts for **80% of Asia's production** and **20% of global production**.
- ❖ They require much less water than rice and wheat, and are mainly grown in rainfed areas.
- ❖ Initiatives to promote Millets
  - ✓ **National Year of Millets** celebrated in **2018**.
  - ✓ Millets notified as nutri-cereals and included **under POSHAN Mission Abhiyan**.
  - ✓ United Nations General Assembly declared the year **2023** as **International Year of Millets**.

2.21. L20 Meeting in Amritsar

- ❖ The Labour20 (L20) Inception Meet under G20 recently was held in **Amritsar**.
- ❖ L20 adopts two joint statements on **Universalisation of Social Security** and **Woman and Future of Work**.
- ❖ Joint statement advocated for resolving issues of social security portability among G20 nations as a first step towards universalisation of social security and plugging the gender gap in global workforce.
- ❖ India's initiatives for social security of workers
  - ✓ eShram Portal for the registration of Unorganized Workers.
  - ✓ Pradhan Mantri Shram Yogi Maandhan Yojana.

2.22. Gamma Ray Irradiation for Onions

- ❖ The Centre is planning to irradiate onions with Gamma rays before sending them into cold storage on a pilot basis.
  - ✓ Perishable nature of onions, combined with lower processing penetration and sub-optimal storage infrastructure causes **post-harvest losses (almost 25%).**
- ❖ Kharif and late kharif onion or red onion is highly perishable and cannot be stored for over a month.
  - ✓ Therefore, the **rabi variety**, which accounts for 65% of the onion harvest and has a longer shelf life of about 5-7 months, would be considered for irradiation.
- ❖ **Maharashtra** is the leading onion producing state, followed by Madhya Pradesh, Karnataka and Gujarat. These states account for about 80% of India's total production.

About Irradiation

- ❖ Irradiation prevents sprouting and thus helps in bringing down post-harvest losses.
- ❖ Food irradiation involves **controlled application of energy from ionizing radiations** such as gamma rays, electrons and X-rays for **food preservation**.
- ❖ Irradiation works by **disrupting the biological processes that lead to decay**.
- ❖ **Gamma ray, X-ray** or electrons **do not induce any radioactivity in food**.
- ❖ Radiation sources approved for use on foods
  - ✓ Gamma rays emitted from radioactive forms of **cobalt (Cobalt 60)** or **Caesium (Caesium 137)** used routinely to sterilize medical, dental products.
- ❖ X-rays produced by reflecting a high-energy stream of electrons off a target substance into food.
  - ✓ Electron beam (or e-beam) is like X-rays and is a stream of high-energy electrons propelled from an electron accelerator into food.

Benefits

- ❖ Can be used to sterilize foods, which can then be stored for years without refrigeration.
- ❖ Delay of sprouting and ripening to increase longevity.
- ❖ Destroy or inactivate organisms that cause spoilage and decomposition.
- ❖ Eliminate organisms that cause foodborne illness, such as E. coli.

2.23. IMF Bailout For Sri Lanka

- International Monetary Fund (IMF) has cleared a $3 Billion bailout for Sri Lanka.
- An IMF bailout usually comprises **a financing package**, **a structural reforms package** (to be implemented by borrowing country) and **specific debt conditions**.
- **India**, **Japan** (as a member of the **Paris Club**) and **China** — Sri Lanka's top three bilateral creditors — played a crucial role in unlocking IMF assistance by providing financing assurances.
- **Bailout** is provided under IMF's **Extended Fund Facility** (EFF), extended when a country faces serious medium-term balance of payments (BoP) problems because of structural weaknesses that require time.

Lending instruments of IMF

- **Stand-By Arrangements (SBAs)-** Address short-term or potential BoP problems for the emerging and advanced market economies in crises.
- **Standby Credit Facility (SCF)-** Similar to SBAs. Address the BoP problems for low-income countries
- **Extended Fund Facility (EFF)-**Medium-term support to countries facing protracted BOP problems
- **Extended Credit Facility (ECF)-** Similar to EFF. Medium-term support to low-income countries facing protracted BOP problems.
- **Flexible Credit Line (FCL)**: for crisis prevention and crisis-mitigation lending for countries with very strong policy frameworks.
- **Precautionary and Liquidity Line**: for countries with sound economic fundamentals but with some remaining vulnerabilities that preclude them from using FCL.

About IMF

- **Specialised UN Agency** conceived in **1944** at United Nations Bretton Woods Conference.
- It monitors economic and financial policies of its member countries, provides policy advice to nations for promotion of international financial stability and monetary cooperation.
- Unlike development banks, **IMF does not lend for specific projects**. It also provides precautionary financing to help prevent crises.
- Members – 190 countries; India is a founding member.

2.24. Nano-Fertilizers Adoption

- The **Standing Committee on Chemical & Fertilizers** in its report on Nano Fertilizers listed the benefits of Nano urea and wants the govt's fertilizer PSUs to adopt the nanotechnology-based plants for its multiple benefits to the farmers.
- Earlier, **IFFCO** developed Nano urea and Nano DAP, nanotechnology-based fertilisers.
- IFFCO has also developed nano fertilizer macronutrient grades - Nano Nitrogen and secondary /micronutrient grades - Nano Zinc, Nano Copper, Nano Boron, Nano Sulphur, etc.
- **Advantages of Nano fertilisers**
  - ✓ **Lower input cost** for the farmers.
  - ✓ Nano Urea has **85-90% efficiency** compared to about **25% of conventional urea**.
  - ✓ An average of 8 % higher crop yield was achieved in trials.
  - ✓ Improved agriculture sustainability through higher nutrient uptake, lower water consumption and reduction in environmental losses.
- **Recommendations**
  - ✓ Nano-fertilisers should be **manufactured by both public and private sector companies**.
  - ✓ Bring production of nano-fertilisers under **production linked incentive (PLI) scheme**.
  - ✓ Establish long term agreements and set-up joint venture plants in countries rich in fertilizers' raw materials.

2.25. Sticky inflation

- Sticky inflation is an undesirable economic situation where there is a combination of stubbornly high inflation and often stagnant growth.
- Sticky inflation is often associated with **cost-push factors**, i.e. factors which cause a rise in the inflation rate but also lead to lower spending and economic growth.
- Inflation takes longer than expected to fall essentially because **higher food** and **fuel prices** get seeped into broader economy and made other things costlier.

2.26. RBI's Data Centre And Training Institute At Bhubaneswar

- ❖ The Governor of the Reserve Bank of India (RBI), Shaktikanta Das, initiated the establishment of a **"Greenfield Data Centre"** and an **"Enterprise Computing & Cybersecurity Training Institute"** in **Bhubaneswar, Odisha**, during a foundation stone laying ceremony.
- ❖ The new Data Centre and Training Institute, which will cover an area of 18.55 acres, will be able to address the emerging needs of the RBI and the financial sector, according to a statement by the central bank.

2.27. Green Ship Building

- ❖ India is aiming to become a leader in the global shipbuilding industry by launching the Green Tug Transition Programme (GTTP) and setting a goal of becoming a 'Global Hub for Green Ship' building by 2030.

About Green Tug Transition Programme (GTTP)

- ❖ Programme will start with 'Green Hybrid Tugs', which will be powered by Green Hybrid Propulsion systems, and subsequently adopting non-fossil fuel solutions like (Methanol, Ammonia, Hydrogen).
- ❖ Target has been set for initial Green Tugs to start working in all major ports by 2025.
- ❖ At least, 50% of all Tugs are likely to be converted into Green Tugs by 2030.
    - ✓ **Tug Boats** or Tugs are small but powerful ships which are used to pull or push other large ships for maneuvering or salvage purposes.
- ❖ Benefits
    - ✓ Reduce emission as country moves towards achieving sustainable development.
    - ✓ In line with **India's Mission LiFE** movement and to become **carbon neutral by 2070.**

- ❖ Ministry of Ports, Shipping and Waterways also inaugurated **India's first Centre of Excellence in Green Port & Shipping** (NCoEGPS).

National Centre of Excellence for Green Port & Shipping (NCoEGPS)

- ❖ Located in **Gurugram**, it is a major initiative by the Ministry of Ports, Shipping and Waterways (MOPSW) towards providing greener solutions.
- ❖ The NCoEGPS will be working under the framework of the **Sagarmala programme** of the MoPSW.
- ❖ The Energy and Resources Institute (**TERI**) is the **knowledge and implementation partner** for this project.
- ❖ It aims at empowering 'Make in India' in Port, Coastal and Inland water transport.

2.28. Serious Fraud Investigation Office

- ❖ A Parliamentary panel asked the Ministry of Corporate Affairs to fill all vacancies in Serious Fraud Investigation Office (SFIO).

About SFIO

- ❖ A multi-disciplinary organization, established through **Government of India Notification (2015)** as per **Companies Act, 2013,** to investigate corporate frauds.
- ❖ Aim- Take up for investigation cases characterized by
    - ✓ Complexity and having inter-departmental and multi- disciplinary ramifications.
    - ✓ Substantial involvement of public interest.
- ❖ **Ministry: Ministry of Corporate Affairs.**
- ❖ **HQ- New Delhi and five Regional Offices:** Mumbai, New Delhi, Chennai, Hyderabad & Kolkata.

2.29. Canalization

- ❖ Centre has extended tenure of **Indian Potash Limited** (IPL) as a canalising agency for import of urea till March 2024.
- ❖ Government fertilizer companies **Rashtriya Chemicals Fertilizers** (RCF) and **National Fertilizers Limited** (NFL) are two other canalising agencies that import urea on government account.
- ❖ **Canalisation** of import and export refers to importing and exporting of commodities through specified government agencies.
- ❖ **Purpose**: Price stabilization, ensure availability of supplies for domestic consumers, Improve bargaining power, Boost exports, Eliminate under invoicing etc.

❖ **Major Canalised Commodities**: Precious Metals, Arms/Ammunitions, agricultural products like onion etc

2.30. DIGICLAIM

❖ It is National Crop Insurance Portal's digitized claim settlement module, under **Pradhan Mantri Fasal Bima Yojana** (PMFBY).
❖ The technology has been enabled through the integration of **National Crop Insurance Portal** (NCIP) and **Public Finance Management System** (PFMS).
❖ DigiClaim would prevent delay in claim settlement as claims will be processed directly to bank accounts of farmers. Also, it will facilitate real-time tracking of claim.
❖ PMFBY provides comprehensive crop insurance against non- preventable natural risks at premium rate of **2% for kharif crops**, **1.5% for rabi crops** and **5% for Horticulture and commercial crop**.
❖ Till date, Rs 1.32 lakh crore claim has been disbursed to the insured farmers under the Pradhan Mantri Fasal Bima Yojana (PMFBY).

2.31. GSTAT

❖ Lok Sabha has cleared changes in Finance Bill 2023 to pave the way for setting up of an appellate tribunal for resolution of disputes under GST (Goods and Services Tax).
❖ On hold since GST launch in 2017, GSTAT will hear appeals against orders passed by Appellate Authority or Revisional Authority.
❖ GSTAT benches would be set up **in every state with two judicial members** and **two technical members** representing centre and state.
❖ GSTAT principal bench will be in **Delhi** with President, a judicial member and two technical members representing centre and state.
❖ **Significance of GSTAT:**
  ✓ Lessen burden on higher judiciary and make GST regime more efficient.
  ✓ Currently, high courts hear disputes in absence of GSTAT, making it expensive and time consuming.

Other key amendments in Finance Bill 2023
❖ Investments in mutual fund where not more than 35% is invested in equity shares of Indian company, i.e. **debt funds, will now be deemed to be short-term capital gains**.
❖ Set up a **committee under Finance Secretary on pension system** to address employees' needs and maintain fiscal prudence.
❖ RBI is being requested to bring credit card payments for foreign tours within ambit of **Liberalised Remittance Scheme** (LRS) and tax collection at source theron.
❖ Enhanced tax benefits to offshore banking units operating in GIFT city, offshore banking units to get a 100% deduction on income for 10 years.
❖ Tax on royalty or technical fees earned by foreign (non-resident) companies hiked from 10% to 20%.

Economic terms
❖ **Capital Gains Tax** is the tax paid on any profit or gain that arises from the sale of a 'capital asset
  ✓ Short-Term Capital Gains Tax (STCG) These are the profits that individuals earn when they sell off their capital assets before one year of holding those.
  ✓ Long-Term Capital Gains Tax (LTCG) These are the profits that individuals earn when they sell off their capital assets post one year.

2.32. CRISP

❖ Rubber Board has launched a mobile app–CRISP (Comprehensive Rubber Information System Platform)–to inform growers about rubber cultivation and provides solutions online.
❖ CRISP has been developed by **Rubber Research Institute of India** (RRII) in collaboration with Digital University of Kerala.
❖ With the help of CRISP, farmers will now be able to **receive recommendations of RRII on production and productivity enhancement,** reduction of cultivation cost, maintenance of soil fertility, disease control measures, etc.
❖ Rubber Board is a **statutory body** constituted **under Rubber Act 1947**, for overall development of rubber industry.
❖ It functions under administrative control of Ministry of **Commerce and Industry**.
❖ Headquarters- **Kottayam, Kerala**

2.33. INDIA'S 1ST CABLE-STAYED RAIL BRIDGE

❖ **Anji Khad bridge** in Jammu's Reasi district is a major step in the Indian Railways' ambitious plan to seamlessly connect Kashmir to Jammu, and the rest of India.
❖ Anji Bridge, the **first cable-stayed railway bridge in the country** and **is part of the Udhampur-Srinagar-Baramulla Rail Link (USBRL) project**.
   ✓ Anji River is a **tributary of Chenab River** between Katra and Reasi district of Jammu.
❖ The Anji bridge forms an important link in Indian Railways' aim to connect J&K to the rest of India with all-weather rail connectivity.
❖ A **large number of sensors** have been placed on the Anji bridge so that the structural health can be monitored regularly.
❖ It has been designed to handle heavy storms and **wind speed of up to 213 kilometres per hour**.

2.34. MAHOBA DESAWARI BETEL LEAF

❖ Ongoing Climatic variations and rising input costs, has made cultivation of MDBL unviable in Mahoba district of U.P.
❖ **MDBL** is one of the **few betel leaf varieties** in the country that has received **Geographical Indication (GI) tag**.
❖ The variety, however, is **highly susceptible to climatic fluctuations** and **needs a controlled environment**.
❖ Their **size is larger** than other betel varieties and they have a unique aroma, **lesser fibre** with a **mild bitterness and sweet taste**.
❖ The betel claims an **ancient lineage from the time of the Chandela** rulers and is **said to have been mentioned in the Ain-i-Akbari** as a major crop in Mahoba that provided handsome revenue to the Mughal kingdom.

3. GEOGRAPHY

3.1. MACQUARIE ISLAND

- ❖ Tasmania (Australia) has planned to give greater protection to Macquarie Island (also declared a World Heritage Area).
- ❖ Macquarie Island is an oceanic island in the Southern Ocean, lying south-east of Tasmania.
- ❖ Several seabird species, including penguins and albatross, have been recorded on Macquarie Island.
- ❖ It is the only place on earth where rocks from earth's mantle are being actively exposed above sea-level.
  - ✓ These unique exposures include excellent examples of pillow basalts and other extrusive rocks.
- ❖ Island is exposed crest of undersea **Macquarie Ridge**, raised to its present position where Indo-Australian tectonic plate meets Pacific plate.
  - ✓ Macquarie Ridge impedes the eastward flow of a current called Antarctic Circumpolar Circulation

3.2. GLACIAL RETREAT

- ❖ Recent studies on Himalayan glaciers show that the variability in retreat rate and mass balance in different sectors of the mountain range is primarily linked to topography and climate.
- ❖ However, variable retreat rates of glaciers and inadequate supporting field data make it challenging to develop a coherent picture of climate change impact.

FACTORS INFLUENCING GLACIAL DYNAMICS
- ❖ A research team studied two glaciers with different characteristics, the Pensilungpa Glacier (Ladakh) and the Durung-Drung Glacier, (Ladakh) for a comparative study of glacier fluctuations between 1971 and 2019.
- ❖ They quantitatively evaluated the influence of the debris cover on the loss of ice mass in summer and on the terminal recession of glaciers.
- ❖ Its study confirms that the glacier retreat rate is controlled by climate change and the topographic setting and morphology of the glacier.
- ❖ They also found that the thickness of the debris cover significantly alters the glacier response to climate forcing.
- ❖ Other factors such as snout geometry, glacier size, elevation range, slope, aspect, debris cover, as well as the presence of supra and proglacial lakes also influence the heterogeneous glacial dynamics.

ABOUT GLACIAL RETREAT
- ❖ Glacial retreat refers to the process of a glacier shrinking or receding in size over time due to a decrease in ice accumulation or an increase in ice melt.
- ❖ Causes: This can be caused by a number of factors, including rising global temperatures, changes in precipitation patterns, or changes in the geography of the surrounding landscape.
- ❖ Impacts: As a glacier retreats, it can lead to a number of significant environmental impacts, including changes in water availability, alterations to local ecosystems, and increased risk of natural disasters such as floods and landslides.
- ❖ In addition, the loss of glacial ice can contribute to rising sea levels, which can have significant impacts on coastal communities and ecosystems around the world.

3.3. SIMILAR RIDGES ON SALT FLATS WORLDWIDE

- ❖ In salt flats across the globe, the salt on the surface forms pentagons and hexagons arranged in a patchwork pattern.
- ❖ These mesmerizing patterns have been captured in Bolivia, Chile, China, India (in the Rann of Kutch), Iran, Tunisia and even United States.
- ❖ Researchers are puzzled by these patterns of salt flats.
- ❖ Now a study conducted by researchers from Austria, Germany and the United Kingdom may have found an explanation for these patterns of salt flats.
  - ✓ The study began with the hypothesis that the salt on the surface is influenced by the salt flowing through the soil below.
  - ✓ Based on this, they found that the salt penetrated deeper into the soil exactly below the ridges and remained shallow under the flat areas. Due to this, salt on the surface forms pentagons and hexagons.

ABOUT SALT FLATS

- ❖ A salt flat is a natural landscape in which a large area of flat land is covered by salt.
- ❖ World's most well-known salt flat is the Salar de Uyuni in Bolivia contains more than half of the planet's lithium reserves.
- ❖ A salt flat forms from a natural water body whose recharge rate is lower than the evaporation rate.
- ❖ The underlying soil is highly saline: even if the water table is shallow, the groundwater is too salty for humans to drink.
- ❖ To mitigate the deleterious effects of salt flats, experts have recommended covering salt flats in a shallow layer of water, so that the salt is deposited on the surface more uniformly and less salt is carried away by winds.

3.4. CYCLONE FREDDY

- ❖ Freddy (active for 33 days now) is on track to become the longest-lasting tropical cyclone.
    - ✓ Current record is held by **Hurricane/Typhoon John** (1994) which lasted for **31 days**.
- ❖ The storm **first developed off the North Australian coast** in early February and then tracked across the entire Indian Ocean before striking the east coast of Madagascar on February 21, 2023.
- ❖ It then crossed the Mozambique Channel and made landfall in Mozambique's Inhambane province near Vilankulo, where it stalled and dropped a huge amount of rain before doubling back and nearly hit the west coast of Madagascar again.
- ❖ Long life of Freddy is fuelled by energy provided from warm ocean surface.
- ❖ Also, there has been not much land interaction.
- ❖ **Conditions favourable for Tropical cyclone**
    - ✓ Large sea surface with temperature higher than 27° C.
    - ✓ Presence of Coriolis force.
    - ✓ A pre-existing weak low-pressure area or low-level-cyclonic circulation.
    - ✓ Upper divergence above sea level system.

3.5. ZOJI LA

- ❖ Border Roads Organisation (BRO) reopened Zoji La on Srinagar-Kargil-Leh highway in record 68 days.
- ❖ Zoji La Pass is a high mountain pass at an elevation of 11,578 ft above sea level, located in Kargil district of Ladakh.
- ❖ It is the strategic link connecting Ladakh to Srinagar and the rest of India.
- ❖ Zojila Tunnel is being constructed to provide all-weather connectivity to Ladakh.
    - ✓ Once completed, at 14.15 km, it will be India's longest road tunnel, and Asia's longest bidirectional tunnel.

3.6. GANDAK RIVER

- ❖ Recently, under **Namami Gange Program**, the development of river front on Gandak River in the district of Gopalganj, Bihar has been undertaken and two Ghats have been constructed.
- ❖ River Gandak was declared as **National Waterway (NW)-37** from Bhaisalotan Barrage to Gandak and Ganga River confluence at Hajipur, Bihar along with 111 NWs in the country vide National Waterways Act, 2016.

About Gandak

- ❖ The river Gandak, is also known as the Gandaki and Narayani River in Nepal.
- ❖ **Valmiki National Park** and Tiger Reserve in Bihar is located on the banks of Gandak.
- ❖ The river Gandak **originates** at an altitude of 7620 m above main sea level in the **north of Dhaulagisi in Tibet near** Nepal border.
- ❖ The river stretches over a length of **630 kilometers**, with 445 kilometers running through India and 185 kilometers in Nepal.
- ❖ The Gandak River has a total drainage basin area of 29,705 square kilometers.
- ❖ The river **flows through the Indian states of Bihar and Uttar Pradesh**, and joins the Ganges near Patna just downstream of Hajipur.
- ❖ The major **tributaries** of the Gandak River include the **Mayangadi**, **Bari**, **Trisuli**, **Panchand**, **Sarhad**, **Budhi Gandak**.

3.7. VERNAL EQUINOX

- ❖ The vernal equinox is observed on March 21st 2023.
- ❖ Equinox happens twice a year when the sun is directly above the equator, and it occurs on approximately 21st March and 23rd September.
- ❖ During an equinox, **both the Northern and Southern Hemispheres have equal day and night time**.
- ❖ The vernal equinox (spring equinox) takes place in the Northern Hemisphere around 20th or 21st March, while in the Southern Hemisphere, it happens on 22nd or 23rd September.
- ❖ Conversely, during the autumn season in the Northern Hemisphere on 23rd September (autumn equinox), it is springtime in the Southern Hemisphere, and on 21st March, it is the opposite.
- ❖ After the spring equinox, the northern hemisphere tilts closer to the sun in March, resulting in more hours of daylight, with earlier sunrises and later sunsets.
- ❖ According to Hindu astrology, Vernal Equinox is known as **Vasant Vishuva** or **Vasant Sampat**.
- ❖ The **Spring equinox** brings earlier sunrises, later sunsets, and sprouting plants in the **northern hemisphere**.
- ❖ Later sunrises, earlier sunsets, chillier winds, and dry and falling leaves are observed in the south of the equator (southern hemisphere).

3.8. LAKE NATRON

- ❖ Lake Natron is an **alkaline lake** located in the north Ngorongoro District of the Arusha Region in **Tanzania**.
- ❖ Over a period of time, this lake has become a centre of attraction for experts and analysts.
- ❖ Lake Natron has a myth that the lake turns animals that touch it into "stone."
  - ✓ However, there is no scientific proof to support this claim.
- ❖ In fact, the same water supports a thriving ecosystem of salt marshes, freshwater wetlands, and flamingos.
- ❖ The **lake contains salt, soda, and magnesite deposits**, which contribute to its alkaline nature.
- ❖ The deposits of sodium carbonate found in the surrounding hills make the **water extremely caustic**, with a **pH of over 10.5**.
- ❖ This hostile environment is due to **the active volcano, Ol Doinyo Lengai,** which emits rare **natrocarbonatites** – a carbonatite lava found only in this volcano.

3.9. UAE'S SINIYAH ISLAND

- ❖ Archaeologists said on Monday they have found the oldest pearling town in the Gulf on **Siniyah island**, off one of the northern emirates of the **United Arab Emirates**.
- ❖ Artifacts found in this town **on Siniyah Island in Umm al-Quwain**, likely once home to thousands of people and hundreds of homes, date as far back as the region's pre-Islamic history in the late 6th century.
- ❖ While older pearling towns have been mentioned in historical texts, this represents the **first time archaeologists say they have physically found one from this ancient era across** the nations of the Gulf.

3.10. CHENAB RAILWAY BRIDGE

- ❖ Chenab Railway Bridge, being claimed as **world's highest railway bridge** by India, is expected to become **operational by 2024.**
- ❖ Bridge will allow **trains to run along Udhampur-Srinagar-Baramulla Rail Link (USBRL) project**, and will **connect Jammu & Kashmir with the rest of India.**
  - ✓ It'll be 35 meters higher than Eiffel Tower in Paris.
- ❖ The **1.3 km long bridge** has a design speed of **100 kmph** for trains and **a lifespan of 120 years**.
- ❖ The bridge is designed to withstand high wind speed up to 266 Km/Hour, bear earthquake forces of highest intensity zone-V in India.

3.11. ATMOSPHERIC RIVERS

- ❖ California has experienced an exceptionally wet winter with 11 atmospheric rivers battering the state since late December 2022.

About Atmospheric Rivers

❖ Atmospheric rivers are **relatively long, narrow regions in the atmosphere** – like rivers in the sky – that **transport most of the water vapor outside of the tropics**.
  ✓ One well-known atmospheric river called the "Pineapple Express" picks up warm, moist air near Hawaii.
  ✓ When the Pineapple Express hits land in the Western United States and Canada, it can cause heavy rain and snow. In California, it can cause up to 5 inches of rain in a day.
❖ Atmospheric rivers **typically occur in the extratropical North Pacific/Atlantic, southeastern Pacific, and South Atlantic oceans** often making landfall on the west coasts of North and South America. Other regions that experience atmospheric river landfalls include Greenland, Antarctica, and the south-central United States.
❖ Formation
  ✓ Atmospheric rivers usually **begin over tropical regions**.
  ✓ Warm temperatures cause **ocean water to evaporate** and rise into the atmosphere.
  ✓ **Strong winds** help to **carry the water vapor through the atmosphere**.
  ✓ As atmospheric **rivers move over land, the water vapor rises up farther into the atmosphere**.
  ✓ It **then cools into water droplets**, which fall as precipitation.
❖ Most **Atmospheric Rivers are weak systems** that often provide beneficial rain or snow that is crucial to the water supply.
❖ However, heavy rainfall associated with ARs can cause flooding, landslides, and mudslides.
❖ Climate change is expected to **increase the frequency and intensity of ARs in some regions** of the world, particularly in the mid-latitudes which could have significant implications for water resources management, flood control, and other areas of public policy.

3.12. DAYLIGHT SAVINGS TIME

❖ Recently **Lebanon** saw mass Confusion after its government decided to delay DST by a month.
❖ Daylight Saving Time (DST) is the practice of **turning the clock ahead as warmer weather approaches** and **back as it becomes colder again**.
❖ The daylight saving time is **followed in over 70 countries** on various dates.
❖ **India does not follow daylight saving time** as countries near the Equator do not experience high variations in daytime hours between seasons.
  ✓ However, people of the North east have demanded a separate time zone to make up for the loss of daylight hours due to the longitudinal breadth of India.

3.13. ZAPORIZHZHIA NUCLEAR POWER PLANT

❖ Recently, the International Atomic Energy Agency's Director has visited the **Zaporizhzhia Nuclear Power Plant** .
❖ **Zaporizhzhia** is an important town in the **Ukraine's southeast** that houses **the largest nuclear power plant in Europe**.
  ✓ It is about 40 km up the **Dnieper River** from the nuclear plant.
❖ The Nuclear power plant at Zaporizhzhia has six reactors, which together produce about 5,700 MW of electricity.
❖ Ukraine is a signatory to the **Nuclear Non-Proliferation Treaty** as a non-nuclear weapons state.

International Atomic Energy Agency

❖ The IAEA is the international centre for cooperation in the nuclear/atomic field. It is a UN agency.
❖ It works with its member countries and many partners to promote peaceful uses of nuclear technologies.
❖ It originated as the world's "Atoms for Peace" organisation in 1957 within the United Nations family
❖ HQ-**Vienna**
❖ It reports to both the **United Nations General Assembly** and **Security Council**.
❖ In 2005, it was awarded the Nobel Peace Prize for their work for a safe and peaceful world.

4. ART AND CULTURE

4.1. ASI discovers 1,300-yr-old Buddhist Stupa in Odisha.

❖ The Archaeological Survey of India (ASI) discovered a 1,300-year-old stupa right in the middle of a mining site in Odisha's Jajpur district at Khondalite stone mining site.
  ✓ The sones were being supplied for the beautification project around the 12 th Century Shree Jagannath Temple in Puri.
❖ The stupa could be 4.5-metre tall and initial assessment showed it may belong to the 7th or 8ᵗʰ century.
❖ It was found at Parabhadi which is situated near Lalitagiri, a major Buddhist complex, having a large number of stupas and monasteries.
  ✓ **Lalitgiri Buddhist site** is believed to be the most sacred among the three sites (Lalitagiri, Ratnagiri and Udayagiri) as it unearthed a massive stupa where a relic of Buddha was discovered inside a stone casket.

About Stupa

❖ Stupas were burial mounds prevalent in India from the vedic period.
❖ Stupa, Sanskrit for heap, is a mound-like (hemispherical) burial structure containing relics of Buddhist monks. E.g., Sanchi Stupa built over Buddha's relics.
❖ Stupas consist of a cylindrical drum with a circular anda and a harmika and a chhatra on the top.
  ✓ **Anda**: Hemispherical mound symbolic of the mound of dirt used to cover Buddha's remains (in many stupas actual relics were used).
  ✓ **Harmika**: Square railing on top of the mound.
  ✓ **Chhatra**: Central pillar supporting a triple umbrella form.
❖ The core of the stupa was made of unburnt brick while the outer surface was made by using burnt bricks, which were then covered with a thick layer of plaster and medhi (circular terrace) and the toran(gateway) were decorated with wooden sculptures.

4.2. Govt to commemorate Banjara community leader Santh Seva Lal.

❖ For the first time ever, Ministry of Culture has announced a year-long commemoration of birth anniversary of Banjara Dharmaguru Santh Sevalal Maharaj.
❖ He was born in 1739 in Shivamogga district of Karnataka.
❖ He was a social reformer and spiritual teacher of Banjara Community.
❖ Having sound knowledge in Ayurveda and Naturopathy, he eradicated myths and superstitions prevalent among forest dwellers and nomadic tribe.
❖ In states like Karnataka, Tamil Nadu, Andhra Pradesh, Telangana, Maharashtra and Madhya Pradesh, Sevalal Maharaj is a revered figure, and his birth anniversary is celebrated every year throughout the month.
❖ His final resting place or Samadhi is situated at Pohradevi in Maharashtra's Washim district, also known as Banjara Kashi.

About Banjara Community

❖ Spread across India, Banjara Community is a nomadic community with nearly 10-12 crore population.
❖ They are classified as SC, ST and OBC in different states.
❖ They converse in Gor Boli, also known as Lambadi, a language of the Indo-Aryan Group. No script exists for Lambadi.

4.3. Attukal Pongala.

❖ The Attukal Pongala held in Attukal Temple, Thiruvananthapuram is the largest congregation of women for a festival in the world.
❖ Pongala, which means 'to boil over', is the ritual in which women prepare sweet payasam (a pudding made from rice, jaggery, coconut and plantains cooked together) and offer it to the Goddess or 'Bhagavathy'.
❖ 'The ten-day-long celebration commences in the Malayalam month of Makaram-Kumbham (Feb - March)on the Karthika star.

4.4. Sisupalgarh Archaelogical Site

- ❖ Archaeological Survey of India (ASI) has sought Odisha government intervention to protect Sisupalgarh from land mafia.
- ❖ Sisupalgarh is an ancient fortified city which flourished between 300 B.C. and 4th century A.D, on outskirts of Bhubaneswar.
- ❖ Sisupalgarh, believed to have been built around the 7th to 6th century BCE, served as the capital of the Kalinga kingdom.
- ❖ It was an important centre of trade and commerce during ancient times.
- ❖ First excavated in 1948, it was declared a Centrally Protected Monument under provisions of Ancient Monuments Preservation Act, 1904.
- ❖ **Other features of city:**
  - ✓ JalaDurga (Water Fort) with planned drainage system,
  - ✓ presence of stone pillars,
  - ✓ only fortified site in India having eight gateways.

4.5. GREAT PYRAMID OF GIZA

- ❖ A hidden corridor, 9 m long and roughly 2 m wide, has been unearthed by scientists close to the main entrance of the 4,500-year-old Great Pyramid of Giza.
- ❖ The discovery was originally made by the ScanPyramids project in 2016 using a non-invasive technique called cosmic-ray muon radiography.

The greatest pyramid
- ❖ The Great Pyramid of Giza is the largest of the three pyramids in Giza, originally standing roughly 147 m above the Giza plateau.
  - ✓ Giza Pyramids are the only surviving structure of the seven wonders of ancient world.
- ❖ Construction was started in circa 2550 BC, during the reign of Khufu, often considered the greatest pharaoh of Egypt's old kingdom.
- ❖ It is estimated that the pyramid was built using 2.5 million stone blocks, each weighing between 2.5 and 15 tonnes.
- ❖ Tomb art includes depictions of ancient farmers working, fishing and fowling, carpentry, costumes, religious rituals and burial practices.

4.6. MOIDAMS IN ASSAM

- ❖ As per recent news, Moidams in Charaideo in Assam meet UNESCO technical requirements for World Heritage Site status.
  - ✓ The 'Moidams' were first included in the tentative list of Unesco World Heritage Sites in April 2014.
- ❖ Charaideo has more than 90 moidams.
- ❖ Moidams (or Maidams) represent late medieval (13th-19th century CE) mound-burial tradition of Tai Ahoms in Assam, which lasted almost 600 years (1228–1826).
- ❖ Spread over an acre under the Patkai hills, the burial grounds house 42 tombs of kings and queens.
- ❖ Ahom kings used to be buried along with their treasures and articles of their day-to-day use.
- ❖ Maidam consists of three major features: A vault or chamber, hemispherical earthen mound, an octagonal boundary wall.

4.7. ATTUKAL PONGALA

- ❖ Considered one of the largest women's gatherings in the world, around 15 lakh women participated in the annual Attukal Pongala festival of Thiruvananthapuram, Kerala.
- ❖ The festival includes offering Pongala, a sweet delicacy made of rice to the deity of Attukal Bhagavathy Temple in Kerala's Thiruvananthapuram.
- ❖ The highlight of the ten-day festival is the mass offering that takes place on the ninth day. Women from across the state make it to the capital in huge numbers.
- ❖ In 2009, the ritual had made it to the Guinness Book of World Records for being the largest religious gathering of women on a single day when over 2.5 million people took part in it.
- ❖ Attukal Temple is called the "Women's Sabarimala" as only women perform rituals, while it is predominantly men who undertake the pilgrimage to the hill shrine of Lord Ayyappa at Sabarimala.

4.8. MANIPUR'S YAOSHANG FESTIVAL BEGINS

❖ Yaoshang, Manipur's version of Holi, which lasts for five days, has begun. On the full moon of Lamta (February–March) in the Meitei lunar calendar, the event is observed annually.
❖ Manipur celebrates Yaoshang differently than Holi, with a traditional touch.
   ✓ Manipur comes to life throughout the course of these five days with traditional "thabal chongba" dance in the evening and sporting events during the day.
   ✓ A typical Meitei dance called the thabal chongba involves boys and girls dancing in a circle on an open field.
      ➢ The Thabal Chongba is now performed all during the Lamta month, though.
❖ In a practice known as "nakatheng," kids solicit their neighbours for financial gifts.

4.9. BHUNGA HOUSES OF KUTCH

❖ he Prime Minister whilw inaugurating the 3rd Session of the National Platform for Disaster Risk Reduction (NPDRR) gave an example of Bhunga houses of Kutch which survived the earthquake to a large extent.

ABOUT BHUNGA HOUSES OF KUTCH
❖ They are traditional houses, a unique type of round **mud hut walled with thatched roof**.
❖ After the devastating earthquake of 1819, the people of Kutch came up with an innovative circular design of bhungas to minimize the damage to their lives as well as properties.
❖ The reworked design of bhungas that is about 200 years old stood very firm during the earthquake of 2001 when it was very close to the epicenter.
❖ These houses are commonly called **'Architecture without Architect'** because of the superior architectural knowledge gained by the locals through the years.
❖ The design of the house is such that it keeps the interior cool in summers and warm in winters and they are tremendously strong and can withstand natural calamities like desert storms and earthquakes.

4.10. OVER 480 ASI ANTIQUITIES MISSING

❖ Since Independence, only **486 antiquities** have been reported as missing from the 3,696 monuments protected and maintained by the Archaeological Survey of India (ASI), including 139 from Madhya Pradesh, 95 from Rajasthan and 86 from Uttar Pradesh.
   ✓ However, estimates of missing pieces range from less than 500 to as high as 50,000.
❖ Antiquities are defined under **Antiquities and Art Treasures Act**, 1972 (AATA) and include items such as any **coin, sculpture, painting, epigraph or other work of art or craftsmanship**, article, object or thing detached from a building or cave.
❖ **National Mission on Monuments and Antiquities** (NMMA), launched in 2007, has the mandate of preparing a database of antiquities as defined in AATA.
   ✓ NMMA has so far registered **3.52 lakh antiquities**.
❖ **UNESCO 1970 Convention** (ratified by India) on **Means of Prohibiting and Preventing Illicit Import, Export and Transfer of Ownership of Cultural Property** calls for measures to prohibit illicit trafficking of cultural property.
❖ In India, AATA makes export of such items without a license (from ASI) a criminal offence.
❖ **Categories** of missing antiquities include:
   ✓ Those taken out of India pre-independence;
   ✓ Those which were taken out since independence and before implementation of AATA (March 1976);
   ✓ Those taken out since April 1976.
❖ Antiquities can be retrieved by raising requests bilaterally or on international fora with proof of ownership and with the help of UNESCO convention.

4.11. BUMCHU FESTIVAL

❖ Recently, Bumchu Festival was celebrated in Tashiding Monastery, located in Sikkim.
❖ Bumchu festival commemorates a supernatural occurrence that took place in 18th century under Chogyal Chakdor Namgyal. Bumchu means "pot of sacred water" in Tibetan.
❖ The vase is opened during the event, and water inside is thought to have healing qualities shared among the worshippers.

❖ Celebration takes place on 14th and 15th of first lunar month, which often falls in February or March.
❖ Tashiding Monastery is one of the most sacred Buddhist pilgrimage sites.
❖ It is believed that during his journey to Sikkim in the eighth century, Guru Padmasambhava, better known as Guru Rinpoche, the great Buddhist guru who brought Buddhism to Tibet, blessed the location of the monastery.
❖ A Nyingma teacher named Ngadak Sempa Chempo Phunshok Rigzing later founded the monastery in the 17th century on top of a hill between two rivers, Rangit and Rathong.

4.12. NANAKSHAHI SAMMAT 555

❖ Recently, the Prime Minister greeted the Sikh community on the commencement of Nanakshahi Sammat 555.
❖ Nanakshahi Sammat is a calendar system that was introduced by the Shiromani Gurdwara Parbandhak Committee (SGPC) in 2003.
❖ It is named after the founder of the Sikh religion, Guru Nanak Dev Ji to mark his 500th birth anniversary.
❖ It is a **tropical solar calendar** used in Sikhism.
❖ The Nanakshahi calendar is used by Sikhs around the world to mark important dates and festivals in the Sikh calendar, including the birth anniversaries of the ten Sikh Gurus, the martyrdom of Guru Arjan Dev, and the anniversary of the founding of the Khalsa Panth.
❖ It is based on the "**Barah Maha**" (Twelve Months), a composition composed by the Sikh gurus reflecting the changes in nature conveyed in the twelve-month cycle of the year.
❖ The year begins with **the month of Chet**, with 1 Chet corresponding to 14 March.
❖ The reference epoch of the Nanakshahi calendar is the birth of Guru Nanak Dev, corresponding to year 1469 CE.

4.13. MATUA COMMUNITY

❖ PM has urged people to visit **Matua Maha Mela in West Bengal**.
❖ Mela is organised on birth anniversary of **Shri Harichand Thakur** (1812-1878), who was the founder of the sect of **Vaishnavite Hinduism** called **Matua**.
❖ He wrote couplets in Bengali and stressed on education and strong organisation as the primary modes of community empowerment.
❖ He wanted to establish a classless, casteless society.

About Matua community

❖ Matuas are **Namasudras**, a **Scheduled Caste group** considered untouchable during 19th C.E.
❖ Matuas **migrated to India** during Partition and after the creation of Bangladesh.

4.14. KHANDAGIRI AND UDAYGIRI CAVES

❖ Archaeological Survey of India (ASI) has recently warned about these caves eroding rapidly.

About the caves

❖ Situated in **Odisha**, these are one of the earliest groups of Jain rock-cut architecture in Eastern India.
❖ Built around 1st and 2nd century BC by **King Kharavela** of **Meghavahana dynasty**.
❖ The **cave complex has both man-made and natural caves** possibly carved out for residence of Jain monks.
❖ There are **18 caves in Udayagiri** and **15 in Khandagiri**.
❖ Each of these caves has various inscriptions either in **Brahmi script** or **Devanagari script**.
❖ **Hathigumpha Inscription** is a seventeen-line inscription in Prakrit language incised in Brahmi script in a cavern called Hathigumpha in Udayagiri hills, inscribed by Jain king Kharavela.

4.15. SHARDA PEETH

❖ Recently, Home Minister e-inaugurated **Mata Sharda Devi Temple** dedicated to Goddess Sharda Devi and announced that the government of India will attempt to **build a Kartrapur-style corridor to Sharda Peeth** as an important step in the direction of discovery of Sharda-civilization and promotion of Sharda-script.
❖ **Sharda peeth** is an **abandoned Hindu temple and ancient center of learning**.
❖ It is located at **Neelum Valley in Pakistan-occupied Kashmir** across Teetwal village in Jammu and Kashmir's Kupwara district along the Line of Control.
❖ It is **one of the 18 Maha Shakti Peethas** and is considered to be the abode of the Hindu Goddess Saraswati.
❖ Sharda peeth is the **most revered religious place for Kashmiri Pandits**.

4.16. VEDIC PORTAL

❖ Home Minister recently inaugurated the **Vedic Portal** and inaugurated a virtual museum — **'Kala Vaibhav'** — built by the Indira Gandhi National Centre for the Arts (IGNCA).
❖ Portal aims to **communicate message enshrined in the Vedas**. It will help common people to have a general understanding about the Vedas.
❖ Portal will be a one-stop solution for the user, who would like to search any information regarding the Vedic heritage.
❖ Audio visual recording of **four vedas -Rigveda, Yajurveda, Samaveda and Atharvaveda** have been uploaded on the portal.
❖ The portal has over **18 thousand mantras** of the four vedas with a **duration of over 550 hours**.

About Indira Gandhi National Centre for the Arts (IGNCA)

❖ Indira Gandhi National Centre for the Arts(IGNCA) was established in 1987 as an **autonomous institution** under the **Ministry of Culture**, as a centre for research, academic pursuit, and dissemination in the field of the arts.
❖ IGNCA has a trust (i.e. Board of Trustees), which meets regularly to give general direction about the Centre's work.
❖ The Executive Committee, drawn from among the Trustees, **functions under a Chairman**.
❖ IGNCA is the **nodal coordinating agency** with support of Archeological Survey of India and National Museum as associate bodies for **Project Mausam (Ministry of Culture).**

4.17. LORD BASAVESHWARA

❖ Home Minister recently unveiled a statue of **Lord Basaveshwara** in Bengaluru.
❖ **Lord Basaveshwara or Basavanna** was a 12th century poet and born in Karnataka.
❖ He lived during the reign of the Kalyani Chalukya/Kalachuri dynasty.
❖ He was a **philosopher** and **social reformer**.
❖ He rejected gender and caste discrimination, superstitions and rituals.
❖ Basavanna spread social awareness through his poetry, popularly known as **Vachanaas.**
❖ He is considered the **founder** of the **Lingayat religion**, which is a **major religious group** in Karnataka.
❖ A strong promoter of **ahimsa** (non-violence), he condemned human and animal sacrifices.
❖ His philosophy was based on principles of **Arivu** (true knowledge), **ethos** (right conduct), and **Anubhava** (divine experience).
❖ **Basava Purana**, written by **Palkuriki Somanatha** in 13th-century, holds full account of Basavanna's life and ideas.
❖ He developed and inspired a new devotional movement named **Virashaivas**, or ardent, heroic worshippers of Shiva.

4.18. NADDAPRABHU HIRIYA KEMPEGOWDA AKA KEMPEGOWDA (1510-1569)

❖ A statue of Nadaprabhu Kempegowda was unveiled at the State Assembly premises in Bengaluru.
❖ Hailing from dominant agricultural Vokkaliga community in Karnataka, Kempegowda was a **chieftain under Vijayanagara Empire**.
❖ He is known as **founder of Bengaluru in 16th century** and had developed around 1,000 lakes in city to cater to drinking and agricultural needs.
❖ He prohibited the custom of amputating last two fingers of left hand of unmarried women during "**Bandi Devaru**".
❖ He was multilingual and had authored **'Gangagaurivilasa'**, a yakshagana play in Telugu.

5. SCIENCE AND TECHNOLOGY

5.1. INDIA'S FIRST PROSPECTIVE DNA VACCINE AGAINST DENGUE

- ❖ In a significant development in DNA vaccination research, India's first and only DNA vaccine candidate for dengue has shown promising results.
- ❖ It has been in development since 2019 in National Centre for Biological Sciences (NCBS), Bengaluru.
    - ✓ **Earlier, world's first DNA vaccine**—ZyCoV-D was approved in 2021 for emergency use against COVID-19.
    - ✓ **Globally,** DNA vaccines are being developed for diseases like tuberculosis and chikungunya.

About the DNA vaccine

- ❖ DNA vaccine uses a copy of a genetic sequence from a part (i.e., outer or spike-protein) of a pathogen (virus or bacteria) to stimulate body's immune system. More specifically, it known as "plasmid DNA vaccine".
- ❖ On the other hand, RNA vaccine uses a copy of a natural chemical called messenger RNA (mRNA) to produce an immune response in humans. Delivery of mRNA is achieved by lipid nanoparticles.
- ❖ DNA vaccine is more stable than RNA vaccine.
- ❖ Unlike RNA vaccine, DNA vaccines have potential to integrate into host cell genome.
- ❖ **Benefits of DNA vaccine**
    - ✓ Stability and safety: Vaccines are non-infectious; carries no potential toxicity from viral vectors.
    - ✓ Efficacy and boosting: Stimulate both humoral and cellular arms of adaptive immune system; pose minimal risk of anti-vector immunity.
    - ✓ Rapid and Scalable manufacturing: Lower cold chain requirements.
- ❖ **Issues:** Relatively limited data on safety and efficacy in humans; risk of development of anti-nuclear antibodies; induction of antibiotic resistance.

5.2. LEWIS SUPERACIDS

- ❖ Scientists at Paderborn University, Germany have been able to make a unique class of catalysts called Lewis super-acids.
- ❖ Named after chemist, G N Lewis, Lewis super-acids derive from Lewis acids.
- ❖ A **Lewis acid** is any substance, such as a Hydrogen ion (H+) that can accept a pair of nonbonding electrons. In other words, it is an electron-pair acceptor.
- ❖ They are often used to speed up chemical reactions.
- ❖ Lewis superacids are stronger than antimony pentafluoride-- strongest Lewis acid -- and can break even toughest bonds.
- ❖ A Lewis base is any substance, such as OH- ion, that can donate a pair of nonbonding electrons. Therefore, it is an electron-pair donor.

5.3. BIOCOMPUTERS

- ❖ Scientists at John Hopkins University have planned research on "organoid intelligence (OI)" to create biocomputers where 3D brain cultures grown in the lab are coupled to real-world sensors and input/output devices.
- ❖ The planned research will use brain organoids, i.e., cultures of brain cells, as biological hardware.
    - ✓ Organoids are tiny, self-organized three-dimensional cells or tissues derived from stem cells.
- ❖ Biocomputers are defined as computers that use components of biological origin (such as molecules of DNA) instead of electrical components.
- ❖ Potential Benefits:
    - ✓ Greater Energy and Data efficiency; Multitasking via parallel computation; improved AI capabilities; ability to self-organize and self-repair, decode pathology of drug development for neuro-developmental and degenerative diseases etc.

5.4. H3N2 OUTBREAK

- ❖ Across India, an outbreak of a respiratory illness with symptoms of cold, sore throat and fever accompanied by fatigue has been observed since December 2022 and January 2023.
- ❖ The Indian Council of Medical Research (ICMR) confirmed that Influenza Sub-type H3N2 has been causing this illness. It further warned that the virus appeared to lead to more hospitalisations than other Influenza subtypes.

- ❖ H3N2 virus is a type of influenza virus called the influenza A virus. It is a respiratory viral infection that causes illnesses every year. This subtype of influenza A virus was discovered in 1968 in humans.
- ❖ The virus derives from types of protein strains of the influenza A virus - hemagglutinin (HA) and neuraminidase (NA). HA has over 18 different subtypes, each numbered H1 to H18 while NA has 11 different subtypes, each numbered N1 to N11.
- ❖ The H3N2 is a combination of the two protein strains of the influenza A virus.
- ❖ Symptoms-cough, runny nose or congested nose, sore throat, headaches, body aches, fever, chills, fatigue, diarrhoea, vomiting and breathlessness.
- ❖ Precautions- getting vaccinated, sanitise surroundings by washing your hands regularly with soap, avoiding contact with people who are ill, wearing a mask.
- ❖ **Treatment-**
    - ✓ take more fluids and keep hydrated.
    - ✓ Regular over-the-counter medications for fever, cough or headaches can be consumed to relieve the symptoms.
    - ✓ Annual flu shots for the influenza virus.
- ❖ There are four types of seasonal influenza viruses, types A, B, C and D.
    - ✓ Influenza A and B viruses circulate and cause seasonal epidemics of disease.
    - ✓ Influenza A viruses are the only influenza viruses known to cause flu pandemics (i.e., global epidemics of flu disease).

5.5. ISRO CARRIES OUT RE-ENTRY OF MEGHA-TROPIQUES 1 SATELLITE

- ❖ Recently, the Indian Space Research Organisation (ISRO) has successfully carried out the controlled Re-Entry experiment for the decommissioned Megha-Tropiques-1 (MT-1) Satellite.
- ❖ An uninhabited area in the Pacific Ocean between 5°S to 14°S latitude and 119°W to 100°W longitude was identified as the targeted re-entry zone for MT1.

Controlled Re-entry
- ❖ Controlled re-entries involve de-orbiting to very low altitudes to ensure the impact occurs within a targeted safe zone.
- ❖ Usually, large satellites or rocket bodies, which are likely to survive aero-thermal fragmentation upon re-entry, are made to undergo controlled re-entry to limit ground casualty risk.
    - ✓ Aero-Thermal Fragmentation is a process in which an object traveling through the Earth's atmosphere at high-speed experiences extreme heat and pressure, causing it to break apart or fragment.

About MT-1 Satellite
- ✓ It is an Indo-French Earth Observation Satellite, which was launched in October 2011 for carrying out tropical weather and climate studies
- ✓ The main objective of this mission is to understand the life cycle of convective systems that influence the tropical weather and climate and their role in the associated energy and moisture budget of the atmosphere in tropical regions.
- ✓ With its circular orbit inclined 20° to the equator, it is a unique satellite for climate research that aided scientists seeking to refine prediction models.
- ✓ Payloads: Microwave Analysis and Detection of Rain and Atmospheric Structures (MADRAS), an Imaging Radiometer developed jointly by CNES (Centre National d'études Spatiales), France and ISRO; Sounder for Probing Vertical Profiles of Humidity (SAPHIR), from CNES; Scanner for Radiation Budget (ScaRaB), from CNES; Radio Occultation Sensor for Vertical Profiling of Temperature and Humidity (ROSA), procured from Italy.

5.6. WHISKEY FUNGUS

- ❖ A local court in North Carolina stopped the construction of a new barrel warehouse for Jack Daniel's – the biggest-selling brand of American whiskey in the world. This order came after a resident sued the company due to the uncontrollable spread of the whiskey fungus.

About Whiskey Fungus
- ❖ Whiskey fungus, also known as Baudoinia compniacensis, is a black, sooty fungus that grows in the vicinity of bakeries and distilleries around the globe.
- ❖ The fungus is a sac fungus. The sac is the reproductive feature of the fungus.
- ❖ This fungus thrives on the alcoholic vapours that evaporate from whiskey casks during maturation.

❖ Usually, a small portion (up to 2%/ year) of the spirit evaporates into the atmosphere and this is called the 'angel's share'.
  ✓ It is on this angel's share that these fungi thrive.
❖ It tends to cover outdoor surfaces, including cars, homes, and trees, which can adversely affect the value of properties.
❖ Although research has not shown any health risks from exposure to the fungus, it can damage trees and properties.
❖ Cleaning the fungus from affected surfaces can be a difficult and costly task as they form thick coatings.

5.7. NEW SUPERCONDUCTOR OFFERS LOSSLESS ENERGY POSSIBILITY

❖ Researchers from US have claimed that they have created a new superconductor that can operate at room temperature and a much lower pressure than previously discovered superconducting materials.
❖ Named Red Matter, it was formed by combining lutetium (a rare earth metal) with hydrogen and nitrogen.
❖ It can conduct electricity without resistance at 21 degrees Celsius and around just 10,000 atmospheres of pressure.
❖ Superconductors are materials that can conduct electric currents without any loss when they are cooled below a critical temperature.
❖ These materials also expel magnetic fields as they transition to the superconducting state (Meissner effect).
❖ However, it is considered extremely impractical because they typically need to be extremely cooled, to around minus 195 degrees Celsius, and subjected to extreme pressure to work.
❖ Applications of superconductors:
  ✓ In Nuclear magnetic resonance and magnetic resonance imaging (MRI).
  ✓ In high-energy physics accelerators and in thermonuclear fusion reactors.
  ✓ Frictionless, levitating high-speed trains.
  ✓ Power grids that transmit electricity without the loss of energy.

5.8. FLUOROSCENT MICROSCOPY

❖ **USA scientists** have devised '**Glowscope' microscope**, to make fluorescent microscopy affordable for schools.
❖ Fluorescence microscope studies an object **by analysing how it re-emits light that it has absorbed**.
❖ Object is illuminated with light of a specific wavelength. Particles in object absorb this light and reemit it at a higher wavelength (i.e., different colour).
  ✓ These particles are called **fluorophores**.
  ✓ Different fluorophores are used to identify and study different microscopic entities.

Applications

❖ A fluorescent microscope can track fluorophores as they move inside the object, revealing the object's internal shape and other characteristics.
❖ Through this, scientists have developed **different fluorophores to identify and study different entities**, from specific parts of DNA to protein complexes.
❖ With this setup, the researchers were able to **image the creatures' brain, spinal cord, heart, and head and jaw bones**.
❖ They were able to zoom in and out using the smartphone camera and the clip-on lens.

5.9. WORLD'S FASTEST SINGLE-SHOT LASER CAMERA

❖ **Scientists from Germany and the US** have built the world's fastest single-shot laser camera – 1,000x faster than its predecessors at capturing extremely short-lived events.
❖ They used the camera to provide the most precise view yet of how a hydrocarbon flame produces soot.
❖ The device's technique is called **laser-sheet compressed ultrafast photography (LS-CUP)** combining laser sheet imaging with compressed sensing on a standard streak camera system.
❖ It "can resolve a plane of a three-dimensional object like a flame or spray or any turbid media and can "resolve physical or chemical processes" in space and time.
❖ It can capture images at **12.5 billion frames per second** (fps).
❖ The device can also be used to photograph shockwaves in nuclear reactors, combustion of fine sprays, and an enigmatic process called sonoluminescence (sometimes, when excited by sound, bubbles in a liquid implode and release light at a temperature of ~10,000 K), all of which involve processes that happen in a few nanoseconds.
  ✓ However, the technology can be **cost intensive**.

5.10. LEARNING SCIENCE VIA STANDARDS INITIATIVE

- ❖ It was launched by Bureau of Indian Standards (BIS) for students for learning science via standards.
- ❖ This initiative is in continuity with an earlier BIS initiative under which 'Standards Clubs' are being established in educational institutions across India.
    - ✓ Over the years, more than 4200 such Clubs have been formed with over one lakh student members.
- ❖ The initiative will help students understand their practical applications in manufacturing, functioning and testing of quality characteristics of different products as stated in the relevant Indian Standards.
- ❖ The subjects for the lesson plans are largely related to products used in day-to-day life and have been chosen based on their relevance to education as part of the course curriculum as well as to industrial applications.
- ❖ BIS officials and resource personnel will be responsible for delivering lesson plans to students for an interactive learning experience.

About Bureau of Indian Standards

- ❖ It is the national standards body of India established as Indian Standards Institution in 1947 under the Indian Standards Institution (ISI) Act, 1946.
- ❖ It is responsible for the development of standards, product certification, and testing and quality control in India.
- ❖ It operates through its headquarters in New Delhi and five regional offices located in Kolkata, Mumbai, Chennai, Chandigarh, and Delhi.
- ❖ BIS is also a member of the International Organization for Standardization (ISO), International Electrotechnical Commission (IEC), and the Pacific Area Standards Congress (PASC).

5.11. OPENAI RELEASES NEW MODEL GPT-4

- ❖ It is the latest version of ChatGPT (Generative Pre-Trained Transformer), an artificial intelligence (AI)-powered chatbot, which can comprehend and generate natural language or human text.

About ChatGPT

- ❖ ChatGPT is an artificial-intelligence chatbot developed by San Francisco-based AI research company OpenAI in 2022.
- ❖ The dialogue format makes it possible to answer followup questions, admit its mistakes, challenge incorrect premises, and reject inappropriate requests. It can have conversations on topics from history to philosophy, generate lyrics and suggest edits to computer programming code.
- ❖ GPT is a kind of computer language model that relies on deep learning techniques to produce human-like text based on inputs.
    - ✓ **Deep learning** is a subset of machine learning, which is essentially a neural network with three or more layers.
    - ✓ These neural n etworks attempt to simulate behavior of human brain allowing it to learn from large amounts of data.
- ❖ GPT-4 is a large multimodal model (accepting image and text inputs, emitting text outputs) that is supposedly **bigger, faster, and more accurate** than earlier versions.
    - ✓ It can process a lot more information at a time and is also **more multilingual**.
- ❖ **Issues**: Not fully reliable, makes reasoning errors, can have various biases in its output and does not learn from its experience.

5.12. DESALINATION PLANT IN LAKSHADWEEP

- ❖ **National Institute of Ocean Technology** aims to set up green self-powered desalination plant in Lakshadweep.
    - ✓ Current desalination plants are powered by diesel generator sets - leading to air pollution and increase in operational cost due to diesel transportation to island.
- ❖ NIOT has established **Low Temperature Thermal Desalination** (LTTD) plants on six Lakshadweep islands and one at Northern Chennai.

Technology used

- ❖ Desalination is the process of obtaining freshwater from either seawater or brackish water from estuaries.
- ❖ LTTD is a process under which **warm surface seawater is flash evaporated** at low pressure and vapour is condensed with cold deep seawater.
- ❖ **Cold water condenses the warmer water** (at the surface level) whose pressure has been lowered using vacuum pumps.
- ❖ Condensed water is free of salts and contaminants and fit to consume.

❖ Now, instead of diesel, Ocean Thermal Energy Conversion (OTEC) technology will be used to generate energy to depressurize warmer water (previously, done through diesel powered vacuum pumps).

Benefits of LTTD

❖ Not require any chemical pre and post-treatment of seawater and thus pollution problems are minimal.
❖ Completely indigenous, robust and environment friendly.

About National Institute of Ocean Technology (NIOT)

❖ The National Institute of Ocean Technology(NIOT) was established in **1993** as an autonomous society under the **Ministry of Earth Sciences in India**.
❖ NIOT aims to develop reliable indigenous technologies to solve various engineering problems associated with the harvesting of non-living and living resources in **India's exclusive economic zone**, which is about two-thirds of the land area of India.
❖ NIOT is the nodal institution for the **Deep Ocean Mission**.

5.13. QUANTUM COMPUTING

❖ Google claims to have made a breakthrough in an important subfield called **quantum error correction** which would go on to make quantum computing more accurate.
❖ Rather than storing information using bits represented by 0's or 1's as conventional computers do, **quantum computers use qubits**, to **encode information as 0's, 1's, or both** at the same time.
    ✓ However **qubits are so sensitive** that even **stray light can cause calculation errors** and the problem worsens as quantum computer grows.
❖ To bridge this calculation error gap, Google claimed to have made a breakthrough in quantum error correction.
❖ **Quantum error correction** protects information by **encoding it across multiple physical qubits (**instead of relying on individual physical qubits) to form a **"logical qubit"**.
❖ Quantum computing is focused on developing computer technology based on quantum theory principles, which explains nature and behaviour of energy and matter on the quantum (atomic and subatomic) level.
❖ It uses two key principles of quantum physics-
    ✓ **Superposition** means that each qubit can represent both 1 and 0 at the same time.
    ✓ **Entanglement** means that qubits in a superposition can be correlated with each other; i.e., state of one (whether it is a 1 or a 0) can depend on state of another.

5.14. INDIA'S FIRST INDIGENOUS QUADRUPED ROBOT

❖ **Svaya Robotics**, a Hyderabad-based company, has partnered with two DRDO labs, the **Research and Development Establishment** in Pune (R&DE) and **Defence Bio-engineering & Electro Medical Laboratory** in Bengaluru (DEBEL), to create India's first quadruped robot and wearable exo-skeleton.
❖ **Quadruped robots**
    ✓ They are four-legged robots that can walk or run on uneven and rough terrains.
    ✓ The robots can carry 25 kg in payload and walk along with the soldier.
    ✓ It is made for navigating in unstructured terrains to provide remote reconnaissance and inspection, which otherwise are not safe for humans to operate in.
❖ **Exoskeleton**
    ✓ It is developed to suit Indian soldiers' anthropometry and augment soldier strength for walking long distances.
    ✓ These active exoskeletons, when worn by soldiers, can carry heavy loads without expending much effort.

5.15. SAND BATTERY

❖ Recently, **Finland** has **installed world's first sand battery** that can store heat from renewable energy sources for months.
❖ Sand Battery is a **high temperature thermal energy storage** that uses sand or sand-like materials as its storage medium.
❖ It stores **energy in sand as heat**. Its main **purpose is to work as a high-power and high-capacity reservoir for excess wind and solar energy**.

❖ Energy is stored as heat, which can be used to heat homes, or to provide hot steam and high temperature process heat to industries that are often fossil-fuel dependent.

Working

1. Electricity is generated by wind turbines or solar panels.
2. **Almost 30% power** is **used to power local infrastructure**.
3. The **remaining 70% is stored in sand battery** heating the sand upto 1000 ℃ .
4. Stored energy can be used during lean (winter) season.

5.16. LACCASE ENZYME

❖ An enzyme called laccase generated by a group of fungi has been found capable of degrading a variety of hazardous organic dye molecules that are regularly drained into water bodies after dying clothes in the textile industry.
❖ This observed characteristic which the scientists termed **substrate promiscuity** can have deep implication in designing enzyme-coated cassettes for treating heavily dye-polluted water through a natural solution to make the environment greener.
❖ It belongs enzyme **family of multicopper oxidases** (MCOs).
   ✓ They are classified as benzenediol oxygen reductases and are also known as urushiol oxidases and p-diphenol oxidases.
❖ **Laccase** was known for its capacity to degrade various organic molecules.
❖ They are capable of oxidizing a large number of phenolic and non-phenolic molecules due to their low substrate specificity, using oxygen as electron acceptor and generating water as a by-product.
❖ Hence the scientists saw a scope in using it to develop a technology to treat/degrade the dye effluents emanated from textile industries.

5.17. INTERNATIONAL LIQUID MIRROR TELESCOPE

❖ Asia's largest ILMT was recently inaugurated at **Devasthal in Uttarakhand**.
❖ Other telescope facility at Devasthal
   ✓ **Devasthal Optical Telescope** and **Devasthal Fast Optical Telescope**.
❖ It is owned by **Aryabhatta Research Institute of Observational Sciences** (ARIES).
❖ ILMT is the **first liquid mirror telescope designed** exclusively for **astronomical observations** and is the **first optical survey telescope in India**.
❖ The Devasthal observatory is equipped with the largest aperture telescope available in India that will use Big Data and Artificial Intelligence/Machine Learning (AI/ML) algorithms to classify objects in the sky.
❖ LMTs are devices that consist a mirror-made with a reflective liquid, essentially mercury.
   ✓ However, other liquids like, low-melting alloys of gallium, are also used.
❖ LMTs are **stationary telescopes** that **image a strip of sky** which is at the zenith.
❖ It can capture all possible celestial objects — from **stars, galaxies, supernovae explosions, asteroids to space debris**.

5.18. XBB.1.16

❖ Recently, XBB.1.16 was found to be the variant behind India's new COVID spike.
❖ Two recombinant lineages of SARS-CoV-2 are currently designated as 'Variants Under Monitoring' by the World Health Organization:
   1. XBB, a recombinant of Omicron sublineages BA.2.10.1 and BA.2.75, and
   2. XBF, a recombinant of BA.5.2.3 and BA.2.75.3 Omicron sublineages.
❖ The lineage **XBB.1.5**, a sublineage of the XBB has functional advantages over currently circulating variants such as **increased transmissibility in populations** with prior immunity to the virus.
❖ Based on preliminary data, there is no evidence to suggest that infections with the XBB.1.16 lineage differ in clinical severity from those caused by other Omicron lineages.
❖ It however has a higher risk of reinfection compared to other circulating Omicron lineages.

5.19. GISAID (GLOBAL INITIATIVE ON SHARING ALL INFLUENZA DATA)

❖ Scientists were banned by GISAID from using the database that contained the genomic information they used for their study on COVID-19 virus origins.

❖ Many scientists have expressed surprise about the ban which appears to have further vitiated public conversations as well as intensified the spotlight on China's recalcitrance against international investigations on the virus's origins.

About GISAID

❖ Global Initiative on Sharing All Influenza Data **(GISAID**) is an **open-access database that was launched in 2008 by WHO.**

❖ In 2010, **Germany** became the official host of the GISAID platform.

❖ Its initiative promotes the rapid sharing of data from all influenza viruses and the coronavirus causing COVID-19.

❖ The Initiative ensures that open access to data in GISAID is provided free-of-charge to all individuals that agreed to identify themselves and agreed to uphold the GISAID sharing mechanism governed through its Database Access Agreement.

5.20. 6G

Recently, the Prime Minister launched the Bharat 6G vision document and the 6G Testbed as part of its 6G mission.

About 6G

❖ The 6G (sixth-generation wireless) has been conceived as a far superior technology promising internet speeds up to 100 times faster than 5G.

❖ As opposed to 5G, which at its peak can offer internet speeds up to 10 gigabits per second, 6G promises to offer **ultra-low latency** with **speeds up to 1 terabits per second**.

❖ Use cases of 6G include remote-controlled factories, constantly communicating self-driven cars and smart wearables taking inputs directly from human senses.

Bharat 6G Vision document

❖ It is prepared by the **Technology Innovation Group on 6G (TIG-6G)** to develop a roadmap and action plans for 6G in India.

❖ The government plans to implement the 6G project in two phases.
   ✓ **Phase 1** (2023-2025): Support to explorative ideas, risky pathways, and proof-of-concept tests.
   ✓ **Phase 2** (2025-2030): Conceptualizing and delivering potential technology solutions.

❖ **An apex council** is to be constituted to lay down phase wise objectives, select research and innovation pathways, and approve financial support for them. Key focus of council will be on new technologies such as Terahertz communication, radio interfaces, tactile internet, etc.

❖ To fund research and innovation on 6G, the **government plans creation of a corpus of Rs 10,000 crore** to facilitate various funding instruments such as grants, loans, VC fund, fund of funds, etc. for the next 10 years.

Test bed

❖ PM also launched **6G research and development test-bed** (Co-developed by a consortium of Indian Institutes of Technology (IITs), including Guwahati and Madras).

❖ It'll provide academic institutions, industries, start-ups, MSMEs etc. a platform to test and validate evolving ICT technologies.

5.21. TERRAN 1 ROCKET

❖ Terran 1, world's first **3D-printed rocket**, failed to reach orbit.
   ✓ 3D printing or additive manufacturing uses computer-aided designing to make prototypes or working models of objects.

❖ Terran 1 is designed by the firm **Relativity Space**, to haul lightweight satellites into orbital space.

❖ **World's first 3D printed rocket engine** is **Agnilet engine** produced by Indian spacetech startup **AgniKul Cosmos**.

❖ It is fully designed and manufactured in India. It was successfully tested in November 2022.

5.22. PELLET BEAN PROPULSION

❖ A newly proposed **'pellet-beam' propulsion system** could theoretically beam a heavy spacecraft to outside the confines of our Solar System in less than 5 years.

- ❖ The pellet-beam concept was partly inspired by the **Breakthrough Starshot initiative**, which is working on a 'light-sail' propulsion system.
- ❖ This **system requires two spacecraft** – one that sets off for interstellar space, and one that goes into orbit around Earth.
- ❖ The spacecraft orbiting Earth would shoot a beam of tiny microscopic particles at interstellar spacecraft.
- ❖ Those particles would be heated up by lasers, causing part of them to melt into plasma that accelerates the pellets further, a process known as **laser ablation**.
- ❖ Those **pellets could reach 120 km/second(75 miles/second)** and either hit the sail of the interstellar spacecraft or repel a magnet within it, helping to propel the spacecraft to huge speeds that would let it whizz out of our heliosphere – the bubble of the solar wind around our Solar System.
- ❖ This is new propulsion architecture for **fast transit of heavy (1 ton and more) payloads** across the Solar System and to the interstellar medium.

5.23. MOORE'S LAW

- ❖ In 1965, **Gordon Moore** postulated that roughly **every two years, the number of transistors on microchips will double**.
- ❖ Commonly referred to as Moore's Law, this phenomenon suggests that **computational progress will become significantly faster, smaller, and more efficient over time**.

5.24. INDIA'S FIRST QUANTUM COMMUNICATION LINE MADE OPERATIONAL

- ❖ A highly secured link, developed by Centre for Development of Telematics (C-DOT), under Department of Telecommunications, was established for the first time in India.
  - ✓ The communication is link between Sanchar Bhawan and National Informatics Centre.
- ❖ A ₹10 lakh prize money for ethical hackers who can break the encryption of the system was also announced.

About Quantum Computing
- ❖ Quantum Communication refers to communication channels that **leverage laws of quantum physics** to protect data and make it more secure than traditional transmission.
- ❖ In **traditional key-based cryptography**, data and keys are sent as **classical bits (representing 1 and 0)** as a stream of electrical or optical pulses.
- ❖ However, in a quantum communication network, data is transmitted via **qubits**.
- ❖ **Qubits are particles** – usually photons of light – in a **superposition state**, meaning they can be **in multiple states and represent numerous combinations of 0 and 1.**
- ❖ If a hacker tries to read them in transit, super-fragile quantum state **"collapses" to either 1 or 0 and attempt to hack will also be recorded eventually**.
- ❖ This property has helped to create networks for transmitting highly sensitive data based on a process called **quantum key distribution, or QKD.**
- ❖ QKD involves transmission of encrypted data as classical bits while decryption key is encoded and transmitted in a quantum state using qubits.

5.25. BIOTRANSFORMATION TECHNOLOGY

- ❖ A **UK-based startup** claims to have developed a Biotransformation Technology that could alter the state of plastics and make them biodegradable **without leaving behind any microplastics**.
- ❖ It is a novel approach to ensure plastics that escape refuse streams are processed efficiently and broken down.
- ❖ It was **co-developed by the Imperial College in London, UK**, and a **Britain-based startup, Polymateria**.
- ❖ The technology would digest the plastics packaging waste naturally with the help of microbes and biodegrade the waste without leaving behind any microplastics.
- ❖ This biotransformation technology is the **world's first that ensures polyolefins fully biodegrade** in an open environment **causing no microplastics**.

Working
- ❖ **Plastics** made using this technology are given **a pre-programmed time** during which the manufactured material looks and feels like conventional plastics without compromising on quality.

❖ **Once the product expires** and is exposed to the external environment, **it self-destructs and biotransforms into bioavailable wax**.
❖ This wax is then consumed by microorganisms, converting waste into water, CO2, and biomass.

Applications

❖ **Food packaging** and **healthcare industries** are the major two sectors that could use this technology to reduce waste.

5.26. PIEZOELECTRIC EFFECT

❖ For the first time, scientists have reported evidence of **piezoelectric effect in liquids**.
❖ Piezoelectric effect is the ability of certain materials to generate **an electric charge in response to applied mechanical stress**.
❖ In the piezoelectric effect, a body develops an electric current when it is squeezed. The piezoelectric effect was discovered in 1880, in quartz.
   ✓ **Quartz** is the most famous piezoelectric crystal.
   ✓ Quartz is silicon dioxide (SiO_2). The quartz crystal consists of silicon and oxygen atoms at the four vertices of a three-sided pyramid; each oxygen atom is shared by two pyramids.
❖ It is used in this capacity in analog wristwatches and clocks. Such crystals are also used in cigarette lighters, electric guitars, TV remote controls, audio transducers etc.
❖ The Piezoelectric effect has only been expected in solids thus far because the body being squeezed needs to have an organised structure, like pyramids of quartz.
   ✓ Liquids don't have such structure. Instead, they take shape of their container.

5.27. GIR COW

❖ SCIENTISTS at National Dairy Research Institute, Karnal have successfully cloned a Gir cow **"Ganga".**
❖ Gir cow belongs to **Zebu (Bos indicus) family**.
❖ It is popular because of its docile nature and goodness of milk.
❖ Main native tract of Gir cattle is **Saurashtra region** (Gujarat) especially area around Gir forest of Kathiawar including Junagad, Bhavnagar, Rajkot etc.
   ✓ The breed is also in high demand in Brazil, the USA, Mexico and Venezuela.
❖ Gir cattle are very hardy and well-known for their **tolerance to conditions of stress** and **resistance to various tropical diseases**.
❖ Communities rearing Gir Cattle: **Rabari tribe**, **Aher** and **Mer community** etc.

6. DEFENCE

6.1. PALM 400

- ❖ Indian Army is going to conduct PALM 400 drone tests in Pokhran.
- ❖ PALM 400 is an armed remotely piloted vehicle (RPV) built by AVision Systems.
- ❖ It is a joint venture between Israeli firm UVision Air Ltd and Hyderabad-based Aditya Precitech Private Ltd.
- ❖ It is a high precision loitering system launched from a canister which can loiter for up to 120 minutes.
- ❖ **Speed:** 50-140 knots (90-260 km per hour), Height: 3,000-4,000 feet above ground.
- ❖ It picks out its target and fires an armor-penetrating projectile from top - where its armor protection is the least.

6.2. SHINYUU MAITRI

- ❖ It is the exercise conducted between the Indian Air Force (IAF) Japan Air Self Defence Force (JASDF).

6.3. BRAHMOS MISSILE

- ❖ Indian Navy successfully test-fired ship-launched version of BrahMos missile with an indigenous seeker and booster in Arabian Sea.
- ❖ Earlier, Indian Air Force had also successfully tested BrahMos missile from Sukhoi Su-30 MKI aircraft.

About Brahmos missile

- ❖ BrahMos is a medium-range ramjet supersonic cruise missile that can be launched from submarine, ships, aircraft, or land having range of 450 km.
- ❖ It is a joint venture of India and Russia and it's named after rivers Brahmaputra and Moskva.
- ❖ It is a two-stage missile with solid propellant booster engine as its first stage and a liquid ramjet as second stage.
- ❖ Operates on Fire and Forget principle.
- ❖ It flies at a speed of 2.8 Mach or almost three times speed of sound.

6.4. FRINJEX

- ❖ It is the maiden Joint Military Exercise between Indian Army and French Army to be conducted in Thiruvananthapuram, Kerala.
- ❖ It is for the first time that the armies of both nations are engaging in this format with each contingent comprising of a Company Group each from the Thiruvananthapuram-based Indian Army troops and French 6th Light Armoured Brigade.
- ❖ **Objective-** enhancing inter-operability, coordination and cooperation between both forces.
- ❖ Other military dialogues and regularly held joint exercises include
    - ✓ Varuna (navy),
    - ✓ Garuda (air force), and
    - ✓ Shakti (army).

6.5. GROUP CAPTAIN SHALIZA DHAMI 1ST WOMAN TO COMMAND FRONTLINE IAF COMBAT UNIT

- ❖ In the first command appointment for a woman officer in the Indian Air Force (IAF), Group Captain Shaliza Dhami has been selected to take over the command of a frontline combat unit in the Western sector.
- ❖ For the first time ever in the IAF's history, a woman officer has been given command of a frontline combat unit – in this case, a missile squadron in the Western sector.
- ❖ The IAF's move comes just two months after Captain Shiva Chauhan of the Indian Army's Fire and Fury Corps became the first woman officer to be operationally deployed at the world's highest battlefield in Siachen.

6.6. OPERATION TRISHUL

- ❖ **Central Bureau of Investigation** (CBI) has extradited 33 fugitives involved in various criminal activities under its 'Operation Trishul' since 2022.

- Under 'Trishul', **CBI geolocates criminals with help of Interpol channels** and seeks their deportation or extradition through formal route.
- It utilises **Interpol's Star Global Focal Point Network**, analysis of financial crime files and using Interpol's channels to identify dispersal of proceeds of crime.
- Operation Trishul also aims at dismantling support networks and generate criminal intelligence on shell companies, fraudulent transactions, money mules and co-accused located globally.
- The CBI also works in close coordination with the police of other countries to undertake this operation.
- It includes **tracing suspects**, along with **proceeds of financial crimes**.

6.7. VAYULINK

- Indian Air Force has implemented "Vayulink" along northern and eastern boundaries.
- It is an in-house system to identify friendly forces during combat.
- Vayulink is effectively a data link system which connects all entities, combat and non-combat, through a single link.
- It uses the indigenous Indian Regional Navigation Satellite System (IRNSS), also called NAVIC.
- It'll enhance battlefield transparency through identification of friendly forces in a combat situation whether airborne or on ground through secure, jammer-proof communication.
- It'll arm pilots with accurate weather data before they fly.
- System integrates inputs available from multiple sources in a joint battlefield and provides near real-time data to operators.
- It helps in improving situational awareness and consequently aiding in effective decision making.

6.8. MARITIME PARTNERSHIP EXERCISE WITH FRENCH NAVY

- Indian Navy's indigenously built guided missile frigate, INS Sahyadri participated in a Maritime Partnership Exercise (MPX) with **French Navy ships** in the Arabian Sea in March 2023.
  - ✓ **INS Sahyadri** is fitted with state-of-the-art weapons and sensors, which makes it capable of detecting and neutralising air, surface and sub-surface threats. The ship is a **part of Indian Navy's Eastern Fleet based at Visakhapatnam.**
- The exercise witnessed a wide spectrum of evolutions at sea which included cross deck landings, boarding exercises and seamanship evolutions.
- The seamless conduct of the exercise reaffirmed the interoperability and high level of cooperation between the two navies.

6.9. GLOBAL ARMS TRANSFER BY SIPRI

- New findings on Global Arms Transfers were published by Stockholm International Peace Research Institute (SIPRI) recently.
  - ✓ SIPRI is a **Sweden-based independent international institute** dedicated to research into conflict, armaments, arms control and disarmament.
- **USA** was world's **topmost military exporter** in past five years, followed by Russia and France.
- According to the findings, **India** still holds its position as the **world's biggest importer** of major arms since 1993.
  - ✓ It is followed by Saudi Arabia, Qatar and Australia.
- **Russia was the largest supplier of arms to India**, but its share of total Indian arms imports fell from 64% to 45% while France emerged as the second largest supplier between 2018-22.
  - ✓ India's arms imports fell 11% between 2013-17 and 2018-22 because of reasons like a complex procurement process, efforts to diversify arms suppliers and attempts to replace imports with local design.

Initiatives taken for Defence Indigenisation

- Priority to procurement from domestic sources under Defence Acquisition Procedure (DAP)-2020.
- Notification of **Positive Indigenisation Lists** for which there would be an embargo on import beyond indicated timelines.
- Allowing **74% FDI** under **automatic route**.
- **SRIJAN portal** to facilitate indigenisation by Indian Industry.
- Establishment of **two Defence Industrial Corridors** (one each in Uttar Pradesh and Tamil Nadu).
- Launch of Mission DefSpace; Innovations for Defence Excellence (iDEX) scheme etc.

6.10. MULTILATERAL EXERCISE LA PEROUSE

- ❖ The third edition of the multilateral exercise La Perouse was conducted in the Indian Ocean Region from 13 to 14 March 2023.
- ❖ This edition will witness participation of personnel, ships and integral helicopters of Royal Australian Navy, French Navy, Indian Navy, Japanese Maritime Self Defence Force, Royal Navy and the United States Navy.
- ❖ The **biennial** exercise La Perouse is conducted by the **French Navy**.
- ❖ It is aimed at enhancing maritime domain awareness and optimising maritime coordination amongst the participating navies in the **Indo-Pacific Region**.

6.11. VSHORADS MISSILE

- ❖ DRDO conducted two consecutive successful flight tests of Very Short-Range Air Defence System (VSHORADS) missile at Integrated Test Range, Chandipur off the coast of Odisha.
- ❖ VSHORADS is a **Man Portable Air Defence System (MANPADS)** designed and developed indigenously by DRDO's **Research Centre Imarat** (RCI), Hyderabad in collaboration with other DRDO facilities and various Indian industry partners.
- ❖ It is meant to target **low altitude aerial threats** at **short** ranges.
- ❖ These are lightweight and portable **surface-to-air missiles**.
- ❖ These **can be fired by individuals** or **small groups** to destroy aircraft or helicopters.
- ❖ Propelled by a dual thrust solid motor, it incorporates many novel technologies including miniaturised **Reaction Control System (RCS)** and integrated avionics.

6.12. LIGHT COMBAT AIRCRAFT- TEJAS

- ❖ Successful flight-test of Power Take Off (PTO) shaft was conducted on LCA Tejas.
  - ✓ PTO shaft, critical component in aircraft, will support the requirements of future fighter aircraft & their variants and offers competitive cost & reduced time of availability.

About LCA Tejas

- ❖ LCA Tejas is all weather, single engine, lightweight, highly agile, 4.5 generation, multi-role supersonic fighter aircraft.
- ❖ It was designed by Aeronautical Development Agency (ADA) under the Department of Defence Research and Development and produced by Hindustan Aeronautics Limited (HAL).
- ❖ Tejas has many advanced features like Beyond Visual Range Missile capabilities, Air-to-Air Refuelling and Air-to-Ground weapons.
- ❖ It is equipped with a state-of-the-art satellite-aided inertial navigation system.
- ❖ The Light Combat Aircraft (LCA) programme was started by the Government of India in 1984 when they established the Aeronautical Development Agency (ADA) to manage the LCA programme.
  - ✓ It aimed at replacing the ageing Mig 21 fighter planes.

6.13. EXERCISE BOLD KURUKSHETRA

- ❖ The Singapore Army and Indian Army participated in the 13th edition of Exercise **Bold Kurukshetra**, a bilateral armour exercise at Jodhpur Military Station, India.
- ❖ First conducted in 2005, this exercise underscores the strong and long-standing bilateral defence relationship between both countries and enhances cooperation between the two armies.
- ❖ Other exercise between India and Singapore includes **Joint Military Training** (Air Force), Trilateral **Maritime Exercise SIMTEX (**with Thailand) and **Exercise Agni Warrior** (Army).

6.14. COLOMBO SECURITY CONCLAVE

- ❖ Indian Coast Guard Region (North East) is conducting fourth edition of Table top exercise (simulated emergency) under CSC.
- ❖ CSC was formed in 2011 as a trilateral maritime security grouping of **India, Sri Lanka and Maldives**.
- ❖ Later **Mauritius** joined as fourth member and **Bangladesh & Seychelles** participate as **observer countries**.

❖ Conclave underlines regional cooperation and shared security objectives concerning all littoral nations in the Indian Ocean Region (IOR).

❖ It aims to make maritime security, marine pollution response and maritime search & rescue priorities for the region.

6.15. DEFENCE ACQUISITION COUNCIL

❖ The Defence Acquisition Council (DAC) accorded **Acceptance of Necessity** (AoN) for capital acquisition proposals worth Rs 70,500 crore for the Armed Forces & Indian Coast Guard under **'Buy Indian-IDDM' (Indigenously Designed, Developed and Manufactured) category** of Defence Acquisition Policy (DAP), 2020.
  ✓ AoN is the first step in long defence acquisition process, and may or may not necessarily culminate into a final order.

❖ Approval was granted for-
  ✓ **Indian Navy**- BrahMos missiles, Shakti Electronic Warfare systems & Utility Helicopters-Maritime;
  ✓ **Indian Airforce** - Long Range Stand-Off Weapon to be integrated on SU-30 MKI aircraft ;
  ✓ **Indian Army**- High Mobility & Gun Towing Vehicles etc.;
  ✓ **Indian Coast Guard** -Advanced Light Helicopters MK-III from HAL .

❖ DAP, 2020 was issued to streamline procurement process and provide a boost to indigenous arms manufacturing.

❖ DAP 2020 superseded Defence Procurement Procedure (DPP) of 2016.

❖ It includes following procurement categories:
  ✓ Buy (Indian – Indigenously Designed Developed and Manufactured),
  ✓ Buy (Indian),
  ✓ Buy and Make (Indian),
  ✓ Buy (Global - Manufacture in India) and
  ✓ Buy (Global).

❖ Highest priority is accorded to procurement under **Buy (Indian-IDDM) category**.

❖ Buy Indian-IDDM refers to acquisition of products from an Indian vendor that have a minimum of 50% Indigenous Content on cost basis of total contract price i.e.total contract price less taxes and duties.

About Defence Acquisition Council

❖ The DAC is the highest decision-making body in the Defence Ministry for deciding on new policies and capital acquisitions for the three services (Army, Navy and Air Force) and the Indian Coast Guard.

❖ The **Minister of Defence** is the **Chairman** of the Council.

❖ It was formed, after the Group of Ministers recommendations on 'Reforming the National Security System', in 2001, post Kargil War (1999).

6.16. EXERCISE SEA DRAGON

❖ Indian Navy is participating in SEA DRAGON 23 exercise in waters off Guam, USA which has been scheduled from 15-30 March 23.

❖ It is a **biennial** coordinated multilateral anti-submarine warfare (ASW) exercise for long-range maritime reconnaissance aircraft.

❖ The exercise is **hosted by the United States Navy**, and it involves the participation of other friendly navies from Japan, Canada, South Korea, and India.

❖ It aims to achieve high levels of synergy and coordination between the participating countries based on their shared values and commitment to an open, inclusive Indo-Pacific.

Other Exercises between India and USA

❖ **Malabar Exercise**: Malabar series of exercises began in 1992. Members- India, US , Australia and Japan.

❖ **VAJRA PRAHAR**: Special Forces

❖ **Yudh Abhyas**: Military Training

6.17. INS ANDROTH

❖ Recently, **Anti-submarine ship INS Androth** launched in Kolkata.

❖ It is **second in a series of eight** Anti-Submarine Warfare Shallow Water Craft.
  ✓ First ship of the series was **INS Arnala**.

- ❖ INS Androth draws its name from the **largest and longest island Androth Island**, in the **Lakshadweep archipelago**.
- ❖ Androth's primary role is to conduct anti-submarine operations in coastal waters, it is also capable of full-scale subsurface surveillance of coastal waters and various surface platforms and coordinated Anti-Submarine Warfare (ASW) operations with aircraft.
- ❖ The ship also carries lightweight torpedoes, ASW rockets and mines, a close-in weapon system (with a 30 mm gun) and 16.7 mm stabilised remote-controlled guns.
- ❖ The Androth and its fellow craft will be fitted with hull mounted sonar and a low frequency variable depth sonar.

6.18. EXERCISE COBRA WARRIOR

- ❖ It is Multilateral Air exercise **held twice a year** in **United Kingdom**
- ❖ This time Air Forces from India, Finland, Sweden, South Africa, USA, UK and Singapore participated.
- ❖ It aims to train both pilots and other air specialists in planning and executing complex airborne missions.

6.19. EXERCISE KONKAN

- ❖ It is an annual bilateral maritime exercise **between Indian Navy and Royal Navy (UK)**.
- ❖ Other military exercises of India and the UK include - **Konkan Shakti 2021** (first-ever tri-services joint exercise), **Exercise Indradhanush** (joint air force exercise), **Exercise Ajeya Warrior** (joint military exercise between India's & UK's soldiers)

6.20. AFSPA

- ❖ Ministry of Home Affairs has decided to further decrease the jurisdiction of "disturbed areas" under Armed Forces (Special Powers) Act (AFSPA), 1958 in Nagaland, Assam and Manipur.
- ❖ Earlier, AFSPA was completely withdrawn from **Meghalaya in 2018**, **Tripura in 2015** and **Mizoram in 1980s**.
- ❖ Currently, AFSPA is in effect in Nagaland, Assam, Manipur and parts of Arunachal Pradesh.
- ❖ **AFSPA** grants special powers to armed forces to maintain public order in "disturbed areas".
- ❖ **Disturbed areas** are declared under Section 3 of AFSPA Act, 1958 when a part or whole state/UT is in such a condition that the use of armed forces in aid of civil power is necessary.
- ❖ Disturbed areas are **declared by Governor of state or administrator of Union Territory** or by Central government.
- ❖ **Under section 4 of Act**, Armed forces can **fire upon or arrest anyone who is acting against law & order** in disturbed area after giving warning.
- ❖ **Section 6 of the Act** gives **legal immunity** to persons acting under Act.

6.21. HAELI DRONE

- ❖ **North Korea** has recently unveiled its new nuclear underwater drone, which has caused concerns in the international community.
- ❖ The drone, dubbed "Haeil" or Tsunami, is designed to create massive radioactive waves through submarine explosions.
- ❖ The drone can be deployed at any coast and port or towed by a surface ship for operation.

7. SPACE

7.1. LIONEL MESSI WINS 'BEST FIFA PLAYER OF 2022'.

- ❖ Argentina's Lionel Messi has bagged the Best FIFA men's player prize for 2022.
- ❖ Messi outclassed his Paris Saint Germain (PSG) teammate Kylian Mbappe and Real Madrid captain Karim Benzema to lift the famous trophy at Salle Pleyel in Paris.
- ❖ Messi became the first player, male or female, to win seven FIFA best player awards.

7.2. NSIL TARGETS 10 SSLV LAUNCHES BY 2026

- ❖ New Space India Limited (NSIL), under Department of Space and commercial arm of Indian Space Research Organisation (ISRO), is targeting 10 SSLC launches by 2026.
- ❖ NSIL is the sole nodal agency responsible for providing end-to-end Small Satellite Launch Vehicle (SSLV) Launch services for customer satellites.

About Small Satellite Launch Vehicle
- ❖ SSLV is a 3 stage Launch Vehicle configured with three Solid Propulsion Stages and liquid propulsion-based Velocity Trimming Module (VTM) as a terminal stage.
- ❖ It is 2m in diameter and 34m in length with a lift-off weight of around 120 tonnes.
- ❖ It is capable of launching Mini, Micro, or Nanosatellites (10 to 500 kg mass) to a 500 km Low Earth Orbit.
- ❖ It aims to cater to emerging market for launch of small satellites into LEOs.
- ❖ India's share in global space economy of $360 billion can be increased to over 10% with SSLV (currently around 2%).
- ❖ Advantages of SSLV
    - ✓ Reduced turnaround time, cost-effective, and launch on demand.
    - ✓ Requires lesser infrastructure and manpower.
    - ✓ Unlike PSLV and GSLV, SSLV can be assembled both vertically and horizontally.

7.3. WORM MOON

- ❖ The final full moon of the winter season, called the Worm Moon, was visible on March 6 and 7.
- ❖ Each year, the timing varies between late February to late March.
- ❖ The name of this full moon is derived from the time it appears in the year when winter subsides in the Northern hemisphere, leading to the earthworms emerging from the ground as the soil softens.
- ❖ Various tribes have named each full moon after the weather events occurring during that time. March's full moon is also referred to as the Sap Moon since it is when the sap of sugar maples starts flowing, and as the crow, crust, and sugar moon.
- ❖ Festivals associated with worm moon
    - ✓ In India, Holi is celebrated during the worm moon (Falgun Purnima).
    - ✓ Jews celebrate the Purim festival during the worm moon period. The festival is celebrated to mark the salvation of the Jews who escaped the plot of killing in Persia.
    - ✓ In Europe, the fasting period before easter begins on worm moon and they call it the LENTEN MOON.
    - ✓ Buddhists in Laos, Thailand, Cambodia, and Thailand celebrate Magha Puja on worm moons. It is celebrated to mark a gathering of Lord Buddha and his disciples.

7.4. MAIA MISSION

- ❖ Multi-Angle Imager for Aerosols (MAIA) is a state-of-the-art satellite instrument producing data that will be used in health studies to examine the health effects of various types of air pollution.
- ❖ It is a joint effort between **NASA** and **Italian space agency**.
- ❖ Its measurements of sunlight reflecting off airborne particles will help determine abundance, size and optical properties of certain pollutants in the atmosphere.
- ❖ Three-year mission will focus on **several primary target areas** including **Los Angeles, Atlanta, Boston, Spain, Beijing and New Delhi**.

7.5. ACTIVE VOLCANOES ON VENUS

- ❖ Recently, a study of **NASA Magellan spacecraft's** captured images of Venus' surface from different orbits gave new evidence of Venus having active volcanoes.
- ❖ A 2.2 square kilometre volcanic vent showed signs of drained lava, the radar images indicated that the same vent had doubled in size and the lava lake seemed to have reached the rim. The vent is associated with **Maat Mons**.
  - ✓ A **volcanic vent** is a spot through which molten rock erupts.
  - ✓ **Maat Mons** is the planet's second-highest volcano. It sits in the Atla Regio, a vast highland region near Venus' equator.

Magellan Mission

- ❖ NASA's Magellan mission to Venus was one of the most successful deep space missions.
- ❖ It was the first spacecraft to image the entire surface of Venus and made several discoveries about the planet it was **launched on May 4, 1989**.

Other upcoming Expeditions to Venus

- ❖ Indian Space Research Organisation's **Shukrayaan-1** to study Venus geological and volcanic activity.
- ❖ Europe's **Envision** (scheduled in 2032).
- ❖ NASA's **VERITAS** and **DAVINCI** (in the 2030s).

About Venus:

- ❖ It is the **second closest** planet to the sun and the **sixth-largest planet** in the solar system.
- ❖ Known as **earth's twin**.
- ❖ **Hottest planet** in the solar system and its extreme temperatures (450^0 C) and acidic clouds make it an unlikely place for life.
- ❖ Along with Uranus it **spins backwards** with respect to other planets i.e. Its sun rises in the west and sets in the east.
- ❖ Along with Mercury it **has no moons** and **no rings**.

7.6. TERMINATOR ZONES

- ❖ In a recent study, researchers explained the possibility of extra-terrestrial life on far-off exoplanets within a special region known as "terminator zone".
- ❖ Terminator zone **is a ring on planets that have one side that is always facing its star and one side that is always dark.**
- ❖ **Terminator** is the **dividing line between day and night sides** of planet.
- ❖ It could exist in **"just right" temperature zone** between too hot and too cold.
- ❖ Terminator zone planet can retain liquid water.
- ❖ If the planet is mostly covered in water, then water facing the star would likely evaporate and cover entire planet in thick layer of vapour.
  - ✓ But if there's land, this effect should not occur.

7.7. ISRO LVM3

- ❖ Launch Vehicle Mark 3 (LVM3) in its sixth consecutive successful flight placed **36 satellites of OneWeb** into Low Earth Orbit (LEO).
- ❖ With this, **NewSpace India Limited (NSIL)** has successfully executed its contract to launch 72 satellites of OneWeb to LEO, 36 of which were placed in October, 2022.
  - ✓ **NSIL** is under **Department of Space** and **commercial arm of** Indian Space Research Organisation (**ISRO**).

About LVM3 (earlier called Geosynchronous Launch Vehicle Mark III or GSLV-MK3)

- ❖ LVM3 is a **three-stage rocket** with the **first stage** fired with **liquid fuel**, the **two strap-on motors powered by solid fuel**, the **second by liquid fuel** and the **third is the cryogenic engine**.
- ❖ It has a **carrying capacity of 8 tonnes to LEO** and **4 tonnes to Geo Transfer Orbit** (GTO).
- ❖ It is **ISRO's second rocket** for global commercial market, after its Polar Satellite Launch vehicle (PSLV).
- ❖ Its key missions include- **Chandrayaan-2**, **Gaganyaan** (Human Space Flight), **Chandrayaan-3** and **Aditya L1** (mission to study sun).

About One Web

- ❖ One Web is a **joint venture** between India's Bharti Enterprises and U.K. government to deliver high-speed, low-latency connectivity worldwide.
- ❖ OneWeb satellites operate in LEO at an altitude of **1,200 kilometers**.

8. ENVIRONMENT

8.1. Scientists unsure as Olive Ridley 'Arribada' starts a month early.

❖ Officials and scientists are unsure as to what could have caused the start of the mass nesting or 'Arribada' of Olive Ridley turtles at the Rushikulya rookery in Odisha's district.
❖ Rushikulya beach is considered the second biggest rookery for sea turtles in India after Gahirmatha Marine Sanctuary, Odisha.
❖ Suitable climatic and beach conditions were some of the reasons for the early mass nesting of Olive Ridley turtles.

About Olive Ridley turtles

❖ These are the smallest and most abundant of all sea turtles found in the world.
❖ These turtles are carnivores and get their name from their olive-coloured carapace.
❖ They are best known for their unique mass nesting called Arribada, where thousands of females come together on the same beach to lay eggs.
❖ Olive Ridley Turtes are found in warm waters of the Pacific, Atlantic and Indian oceans.
❖ **Protection Status-**
  ✓ included in Schedule 1 of the Wildlife Protection Act, 1972,
  ✓ listed as vulnerable in the IUCN Red List
  ✓ mentioned in appendix I of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).

8.2. Malabar tree toad.

❖ Malabar Tree toad found in Mollem National Park.
  ✓ Mollem National Park is located in Sanguem taluk in Goa close to the border with Karnataka.
  ✓ This park also has several temples dating back to the Kadamba Dynasty.

About Malabar tree toad

❖ It is a small species found in a forest along the Western Ghats in wet hollows.
❖ It is believed to be the only toad to dwell on high canopies.
❖ Conservation IUCN status: Endangered.
❖ It finds mention in the updated checklist on Indian Amphibians released by the Zoological Survey of India (ZSI).

8.3. Other Effective Area-Based Conservation Measures (OECM).

❖ In recently concluded fifth International Marine Protected Areas Congress, the need to focus more on OECM was discussed.
❖ OECMs refers to a geographic site, which is not within any protected area, that delivers long-term biodiversity conservation under equitable governance and management.
❖ OECMs may occur in public, individual private lands, community lands, and Indigenous territories.
❖ It recognizes that conservation outcomes are possible outside protected areas, and people involved in governance of those natural resources should be valued, respected, and supported.
❖ Aravalli Biodiversity Park was the first Other Effective Area – based Conservation Measures site, OECM site in India.
❖ The OECM tag is provided by the International Union for Conservation of Nature, IUCN.

8.4. Changthang Wildlife Sanctuary.

❖ Standing committee of National Board for Wildlife (NBWL) has cleared the setting up of a new Indian Air Force mountain radar in Changthang Wildlife Sanctuary (CWS) in Eastern Ladakh.
❖ The NBWL, chaired by Union Environment minister, cleared the way for the transfer of 31.6 hectares of land from the Changthang wildlife sanctuary in Ladakh.
❖ Changthang Wildlife Sanctuary (CWS) is located in Ladakhi Changthang plateau in Leh district of Ladakh UT.
❖ It covers lakes like Pangong Tso, Tso Moriri and Tso Kar.
❖ Fauna: Snow Leopard, Tibetan Antelope, Tibetan wolf, wild yak, bharal etc.
❖ Flora: although devoid of trees, rare and endangered plants can be found throughout the region.

8.5. GREATER PANNA LANDSCAPE COUNCIL.

- ❖ As part of the Ken-Betwa Link Project (KBLP), GPLC has been constituted to ensure systematic and time bound implementation of the Greater Panna Landscape Management plan.
- ❖ KBLP is an interlinking of rivers project (through the Panna Tiger Reserve), envisages transferring water from the Ken River to the Betwa river.
- ❖ The broad objectives of the GPLC are-
    - ✓ Enable betterment of habitat, and management for flagship species viz. tiger, vulture, and gharial in the landscape;
    - ✓ Consolidate the landscape for biodiversity conservation through spatial prioritization;
    - ✓ Provide species-specific and site-specific monitoring strategies.
- ❖ **Integrated Landscape Management** refers to long term collaboration to achieve the objectives required from the landscape, such as agricultural production, the delivery of ecosystem services, cultural heritage and values, and rural livelihoods.

About Panna Tiger Reserve
- ❖ It is situated in the Vindhyan Hills nearer to the confluence of the Deccan Peninsula, Upper Gangetic Plain, and Semi-Arid Gujarat Rajputana reflecting the influence of three bio-geographic regions. Ken river passes through it.
- ❖ It was formed in 1981 and in 2011 it was designated a biosphere reserve by the government.
    - ✓ It is the third biosphere reserve included in the World Network of Biosphere reserves (WNBR) from Madhya Pradesh after Pachmarhi and Amarkantak.

8.6. CERTIFICATION OF FORESTS

- ❖ Forest Certification offers a multi-layer audit system that seeks to authenticate the origin, legality, and sustainability of forest-based products such as timber, furniture, handicraft, paper and pulp, rubber, and many more.
- ❖ The certification is done to avoid consumption of any product that might be the result of deforestation or illegal logging.
- ❖ There are two major international standards:
    - ✓ One developed by Forest Stewardship Council (FSC) ;
    - ✓ Other by Programme for Endorsement of Forest Certifications (PEFC).
    - ✓ Both operate in India, but the Government is also working on its own national standards.
    - ✓ They are not involved in the evaluation and auditing of the processes; it is done by certification bodies authorised by FSC or PEFC.
- ❖ Two main types of certification:
    - ✓ Forest management and
    - ✓ Chain of Custody- CoC certification is meant to guarantee the traceability of a forest product like timber throughout the supply chain from origin to market.
- ❖ Currently, forests in only one state in India i.e. Uttar Pradesh are certified.

8.7. PHYTOPLANKTON BLOOMS

- ❖ Huge blooms of phytoplankton — microscopic algae floating on the ocean's surface — have become **larger** and more **frequent** along the world's coastlines.
- ❖ Marine animals such as fish and whales eat phytoplankton.
- ❖ It can also prove toxic in large amounts, starving the ocean of oxygen and leading to "dead zones" that wreak chaos on the food chain and fisheries.
- ❖ **Reasons behind the boom**
    - ✓ Warmer sea surface temperatures.
    - ✓ Changes in climate can also mess with ocean circulation, affecting mixing between ocean layers and how nutrients move around the ocean.
    - ✓ Human development also plays a role. Fertilizer runoff from agriculture can spike nutrient loads in the ocean, leading to blooms.

8.8. NATIONAL REMOTE SENSING CENTRE (NRSC), HYDERABAD RELEASES 'LANDSLIDE ATLAS OF INDIA

- ❖ For the first time, NRSC scientist did risk assessment on landslides recorded between 1988 and 2022 in 147 districts in 17 states and two union territories to build a Landslide Atlas of India.
- ❖ Atlas, prepared under Disaster Management Support Programme of ISRO, provides state-wise geospatial distribution of landslides using space data and geospatial models.
- ❖ NRSC is responsible for managing data from aerial and satellite sources.
- ❖ **Important points-**
  - ✓ India is third most landslide prone country in world.
  - ✓ Area- 12.6% of India's land area, excluding snow covered area, is prone to landslide.
  - ✓ Northwest Himalayas contribute 66.5% of landslides in India, followed by Northeast Himalayas (18.8%) and Western Ghats (14.7%).
  - ✓ Top 5 districts based on their exposure to landslide: Rudraprayag and Tehri Garhwal (Uttarakhand), Thrissur (Kerala), Rajouri (J&K) and Palakkad (Kerala).
- ❖ Landslide is defined as the movement of mass of rock, earth or debris down a slope.
  - ✓ **Causes:** deforestation, heavy rainfall, earthquake etc.
  - ✓ **Impact:** Loss of lives and infrastructure, risk of floods, creates financial burden for rebuilding infrastructure

8.9. JERDON'S NARROW-MOUTHED FROG

- ❖ In a report published recently, in 2022, a group of zoologists photographed 40 tadpoles of Jerdon's narrow-mouthed frog (Uperodon montanus) species in the biodiverse Western Ghats.
- ❖ It was a common sight earlier but since it was last studied in 1934, the species faded away permanently.
  - ✓ Thus the frog species has been rediscovered after 89 years.
- ❖ Features- longish snout and shiny brown skin with darker brown, red and golden spots on the back and head.
- ❖ Habitat-found in rock pools or tree holes filled with rainwater.
- ❖ Its tadpoles are free-swimming and exotrophic (they feed on other species).
- ❖ Change in the tadpole body colouration was observed during the day (comparatively darker) and night (slightly transparent).
- ❖ This frog is considered a montane species and is restricted to higher altitude ranges.
- ❖ They are distributed from near Wayanad south across the Palghat and the Shencottah gaps to the Agasthyamalai hills.
- ❖ Classified as 'Near Threatened' in the International Union for Conservation (IUCN) of Nature Red List of Threatened Species.

8.10. GREAT SEAHORSES

- ❖ As per a new study, extensive fishing off the Coromandel coast could be forcing great seahorse (Hippocampus kelloggi) to migrate toward Odisha.
- ❖ Seahorses are a type of fish with horse-like heads.
- ❖ They are poor swimmers but migrate by rafting (clinging to floating substrata).
- ❖ There are 46 species of seahorses reported worldwide.
- ❖ Coastal ecosystems of India house 9 out of 12 species found in Indo-Pacific.
  - ✓ They are found in shallow coastal waters in latitudes from about 52° N to 45°S.
- ❖ Habitat: Seagrass, mangroves, macroalgal beds, and coral reefs.
- ❖ Unique Reproductive Habits-The male gives birth to child as the female uses an ovipositor (egg duct) to place her eggs into a brood pouch located at the base of the male's tail where the eggs are later fertilized.
- ❖ Protection Status-
  - ✓ IUCN status- Vulnerable,
  - ✓ CITES- Appendix II

8.11. SWACHH SUJAL SHAKTI SAMMAN 2023

Recently, the Ministry of Jal Shakti has organized the "Swachh Sujal Shakti Samman 2023", to honor the women champions of the rural water and sanitation sector. The event also saw the launch of Jal Shakti Abhiyan – Catch the Rain 2023.

- ❖ This event was organized in the run up to the International Women's Day on 8th March and to highlight and acknowledge the leadership and contribution of women at the grass-root level in the journey towards making a 'Swachh Sujal Bharat'.

❖ 36 women WASH(water, sanitation and hygiene) Champions were conferred with the 'Swachh Sujal Shakti Samman 2023' for their exceptional and exemplary work at the grassroots level in the implementation of Swachh Bharat Mission – Gramin (SBM-G), Jal Jeevan Mission (JJM), Jal Shakti Abhiyan: Catch the Rain (JSA-CTR).

Catch the Rain 2023

❖ The President of India launched 'Catch the Rain-2023' as part of efforts to turn conservation of water into a mass campaign in the run-up to the monsoon season.

❖ **Theme 2023:** Source Sustainability for Drinking Water.

❖ **Tag line:** Catch the rain, where it falls, when it falls.

❖ Catch the Rain is a Jan Andolan campaign to encourage all stakeholders to create rainwater harvesting structures.

❖ The campaign is implemented by the National Water Mission (NWM), Ministry of Jal Shakti.

❖ The campaign takes place across the country, in both rural and urban areas.

8.12. INTERNATIONAL BIG CAT ALLIANCE (IBCA)

❖ India has proposed to launch a mega global alliance under its leadership to protect big cats and assured support over five years with guaranteed funding of USD 100 million (over Rs 800 crore).

❖ IBCA aims to protect and conserve the seven major big cats — tiger, lion, leopard, snow leopard, puma, jaguar and cheetah.

❖ India is the only country in world to have 5 big cats in wild (except pumas and jaguar).

❖ **IUCN Status:**
  ✓ Endangered- Royal Bengal Tiger, Asiatic Lions;
  ✓ Vulnerable- Snow Leopards, African Cheetahs;
  ✓ Least Concerned- Common Leopard.

❖ IBCA Membership: Open to 97 "range" countries, which contain natural habitat of these big cats, as well as other interested nations, international organisations, etc.

❖ IBCA's governance structure
  ✓ General Assembly consisting of all member countries.
  ✓ Council of at least seven but not more than 15 member countries elected by General Assembly for 5 years term.
  ✓ Secretariat. Upon recommendation of Council, General Assembly will appoint IBCA Secretary General for a specific term.

❖ **Importance**
  ✓ Big cats are apex predators whose loss can set off "trophic cascade," wherein prey populations may explode, resulting in overgrazing and degrading health of landscape.
  ✓ Supports economies through ecotourism.

8.13. UN HIGH SEAS TREATY

❖ Recently, for the first time, United Nations members have agreed on a unified treaty to protect biodiversity in the high seas.

❖ The treaty is negotiated under the United Nations Convention on Laws of the Sea (UNCLOS) of 1982 which governs the rights of countries regarding marine resources.
  ✓ High seas begin at border of countries' EEZ, which extend up to 370km from coastlines.
  ✓ They comprise more than 60% of world's oceans and nearly half planet's surface.
  ✓ But until now only about 1% of these waters have been protected.

❖ Treaty of High Seas, also known as **Biodiversity Beyond National Jurisdiction (BBNJ) Treaty**, will create a new body to manage conservation of ocean life and establish Marine Protected Areas (MPAs) in high seas.

❖ The treaty also establishes ground rules for conducting environmental impact assessments for commercial activities in the oceans.

Importance of High Seas:

❖ Ninety per cent of global warming occurs in the ocean, deeply affecting Marine life.

❖ Comprehensive protection of endangered species and habitats is not possible without High Seas.

❖ Several marine species — including dolphins, whales etc make long annual migrations, crossing national borders and the high seas.

❖ High seas are the crucial component in global efforts to bring 30% of the world's land and sea under protection by the end of the decade, a target known as "30 by 30".

8.14. GLOBAL GREENHOUSE GAS MONITORING INFRASTRUCTURE (GGGMI)

- United Nations' World Meteorological Organisation has come up with a new GGGMI to provide better ways of measuring planet-warming pollution and help inform policy choices.
- GGGMI will integrate space-based and surface-based observing systems, and seek to clarify uncertainties about where greenhouse gas emissions end up.
- GGGMI will build on and expand WMO's long-standing activities in GHG monitoring, implemented as part of Global Atmosphere Watch, and via its Integrated Global Greenhouse Gas Information System.
- The data provided by this platform will be faster and sharper.
- Three major GHGs are carbon dioxide, methane and nitrous oxide and account for 66% of global warming.
- Focus of Global Greenhouse Gas Monitoring Infrastructure is to bring back the long-standing auspices of the Integrated Greenhouse Gas Information System, also called IG3IS launched by Global Atmosphere Watch.
- The IG3IS was launched to provide information about the distribution of greenhouse gases in the atmosphere.
    - ✓ It was launched by the Global Atmosphere Watch Programme.

8.15. CEA DRAFT REGULATIONS FOR GREAT INDIAN BUSTARD AREAS

- The Central Electricity Authority (CEA) has issued Draft Central Electricity Authority (Construction of Electric Lines in Great Indian Bustard Area) Regulations, 2023, making mandatory for electric lines to be underground or overhead through the 'Great Indian Bustard (GIB) Area'.
- The regulations came in light of a case in the Supreme Court (SC) on the issue of threat to the endangered Great Indian Bustards.
- As per the regulations, all electric lines of 33 kV and below passing through the 'Great Indian Bustard Area' will be underground, while those above 33KV will be overhead lines installed with bird flight diverters.
- These diverters are aimed at improving power line visibility for birds and reducing the risk of collision.

About Great Indian Bustard

- The Great Indian Bustard (Ardeotis nigriceps), the State bird of Rajasthan, is considered India's most critically endangered bird.
- It is considered the flagship grassland species, representing the health of the grassland ecology.
- Its population is confined mostly to Rajasthan and Gujarat.
    - ✓ Small populations occur in Maharashtra, Karnataka and Andhra Pradesh.
- **Vulnerability:** The bird is under constant threats due to collision/electrocution with power transmission lines, hunting (still prevalent in Pakistan), habitat loss and alteration as a result of widespread agricultural expansion, etc.
- **Protection Status:**
    - ✓ IUCN red List- Critically Endangered
    - ✓ CITES- Appendix1
    - ✓ Convention on Migratory Species (CMS): Appendix I
    - ✓ Wildlife (Protection) Act, 1972: Schedule I

8.16. RARE MOTH SPECIES SPOTTED IN KMTR

- Researchers have spotted a rare moth species (Mimeusemia ceylonica) for the first time in India in Kalakkad–Mundanthurai Tiger Reserve (KMTR).
- It is a moth species belonging to the subfamily Agaristinae and family Noctuidae.
- It was first illustrated and described by English entomologist George Hampson in 1893.
- The spotting of the Moth species in the district has added to the testimony of the rich biodiversity of the region.

ABOUT KALAKKAD–MUNDANTHURAI TIGER RESERVE (KMTR)

- Located in Tirunelveli and Kanyakumari District of Tamil Nadu, it forms part of the interstate Agasthyamalai Biosphere Reserve.
- It includes three sanctuaries, viz. Kalakad, Mundanthurai and part of Kanyakumari Sanctuary.
- **Flora:** Varies from thorny shrub jungle to lush evergreen forests.
- **Fauna:** Tiger, Leopard, Sambar, Indian Pangolin, Sloth, Mouse Deer, Monitor Lizard, Great Indian Hornbill etc.

8.17. INDIAN WOLF

- In a first, **Gujarat** set to shift 10 Indian grey wolves (Canis lupus pallipes) from a conservation breeding centre to forested areas in an attempt to check population of wild herbivores.
- Indian wolf is a subspecies of grey wolf inhabiting semi-arid and arid areas extending from Indian subcontinent to Israel.
- Threats to the spcies include habitat loss, fragmentation and degradation, retaliatory killing coupled with disease threats.
- **IUCN status**: Least Concern

8.18. MOUNT MERAPI VOLCANO ERUPTS

- Mount Merapi, one of the world's most active volcanoes, erupted, spewing out smoke and ash that covered villages near the crater. There were no immediate reports of casualties, the the National Disaster Mitigation Agency said.
- The Mount Merapi is the Fire Mountain in Indonesia and Java.
- It is an active stratovolcano that is located on the border between the Central Java and Yogyakarta provinces, Indonesia.
- It is considered as the most active volcano in Indonesia and is erupted regularly since 1548.

8.19. GREEN CLIMATE FUND

- The 35th meeting of Board of GCF will be held in **Kigali, capital of Rawanda**.
    - ✓ Board of GCF generally holds three meetings per year.
- Board is independent and guided by Conference of Parties (COP) to Convention.
- Meetings are attended by more than 300 participants, including National Designated Authorities (NDAs), and Accredited Entities and other partners who assist in delivering climate finance to developing countries.
- From India-
    - ✓ NDA: **Ministry of Environment Forest And Climate Change.**
    - ✓ Direct access accredited entities: IDFC Bank, Yes Bank, NABARD, SIDBI, IESIL (IL&FS Environmental Infrastructure and Services Limited).

About GCF

- GCF was **established in 2010** under UN Framework Convention on Climate Change (UNFCCC) to help developing countries reduce their GHG emissions and adapt to impact of climate change.
- It is governed by a **24 Board member Board**.
- Secretariat is located in **Songdo, Incheon- South Korea**.
- Key features of GCF
    - ✓ Country-driven approach i.e., developing countries lead GCF programming and implementation.
    - ✓ Balanced allocation i.e., GCF is mandated to invest 50% of its resources to mitigation and 50% to adaptation in grant equivalent.
    - ✓ Provide financial support through flexible combination of grant, concessional debt, guarantees or equity instrument.

8.20. JALYUKT SHIVAR PROJECT

- Government of **Maharashtra** has decided to launch the second phase of Jalyukt Shivar project.

About the scheme

- It is a scheme that **targets drought-prone areas** by undertaking water conservation measures.
- The scheme attempts to **arrest maximum run-off water during the monsoon months**, in village areas known to receive less rainfall.
- Under the scheme, **decentralised water bodies are installed** at various locations within villages to enhance the groundwater recharge.
- In the first phase, planned during 2015 – 2019, Jalyukta Shivar envisaged making 5,000 villages drought-free, every year.

Other GoI initiatives :

- **Jal Jeevan Mission**: The mission was announced by the Prime Minister to provide potable tap water to every rural household in the country by 2024.

- ❖ **Pradhan Mantri Krishi Sinchayee Yojana**: This scheme was launched with an aim to enhance water-use efficiency by better on-farm management practices.
- ❖ **Jal Shakti Abhiyan**: The scheme is aimed at water conservation in 256 water-stressed districts across the territory of India, in a time-bound manner.

8.21. THE ELEPHANT WHISPERER

- ❖ Directed by Kartiki Gonsalves and produced by Guneet Monga, Indian documentary The Elephant Whisperers emerged as the winner in the Best Documentary Short category.
  - ✓ It became the first Indian production that has won an Academy Award for the Documentary Short category.
- ❖ The film also highlights the stunning beauty of **Tamil Nadu's Mudumalai National Park** and gives a peek into the lives of the **Kattunayakan**, an indigenous community that inhabits parts of South India.
- ❖ The film is based on the life and work of Bomman and his wife Bellie who foster orphaned elephant calves. Bomman and Bellie are both from the Kattunayakan tribe.
  - ✓ Kattunayakans, **one of the 75 "Particularly Vulnerable Tribal Groups" (PVTGs) in India**, are settled in parts of Tamil Nadu and Kerala.

About Mudumalai Tiger Reserve

- ❖ It is located in the Nilgiris District of **Tamil Nadu** state, at the tri-junction of three states, viz, Karnataka, Kerala and Tamil Nadu.
- ❖ It has a common boundary with **Wayanad Wildlife Sanctuary (Kerala)** on the West, **Bandipur Tiger Reserve (Karnataka)** on the North, and the **Nilgiris** North Division on the South and East and Gudalur Forest Division on the South West, together forming a large conservation landscape for flagship species such as Tiger and Asian Elephant.
- ❖ The Reserve has tall grasses, commonly referred to as **'Elephant Grass'.**
- ❖ Red tide has recently occurred on the coast of Florida. It has been occurring since the 1800s in the Gulf of Mexico.
- ❖ Red tide is caused by a toxic algae species known as **Karenia brevis**. It occurs when the algae multiply in large numbers and form blooms, resulting in the water turning reddish-brown.
- ❖ The algae produce **brevetoxins**, which are fatal for aquatic life and capable of making humans sick.
- ❖ It could also block out the sunlight and deplete the water's oxygen levels. It was responsible for the deaths of over 2,000 tonnes of marine life between 2017 and 2018.

Timing of Red tide

- ❖ It occurs **during summer and spring** when the sunshine is apt.
- ❖ During this time, the **water is warm and slow-moving**.
- ❖ Also, the water is rich in nutrients as the rivers are free from ice and are adding more nutrients to the sea. The algal bloom is always more in the areas where there is a mixture of brackish and marine water.

In India

- ❖ The west coast of India is more prone to algal bloom.
  - ✓ Algae like diatoms, cyanobacteria, haptophytes, and raphiphytes cause an algal bloom in India.
- ❖ Most of the algal blooms occur during the retreat of southwest monsoon and also during the pre-monsoon period.
- ❖ Although east coast has more nutrients than the west coast as it has more number of rivers draining.
- ❖ But the temperature and water current are more suitable on the west coast. So more algal blooms occur on the west coast of India.

8.22. SANJAY DUBRI TIGER RESERVE

- ❖ A tigress recently died of electrocution in a buffer zone of Sanjay Dubri Tiger Reserve in Madhya Pradesh.
- ❖ It is situated in the northeastern part of the state of MP and is bordered by the Guru Ghasidas National Park on the south.
- ❖ It is located in Sidhi district of Madhya Pradesh; it comprises Sanjay National Park and Dubri Wildlife Sanctuary.
- ❖ It forms a wildlife corridor connecting Bandhavgarh and Palamau Tiger Reserve.
- ❖ Topography:
  - ✓ Undulating topography, some small hills interspersed with plain area.
  - ✓ Rivers like Banas, Gopad, Mawai, Mahan flow through.
- ❖ Flora: It comprises of North Indian moist deciduous peninsular sal and North Indian dry deciduous peninsular sal. The forests in the Dubri sanctuary range from dense to open sal forests with remains of degraded bamboo stumps.

❖ Fauna: Tiger, Sloth bear, Chital, Nilgai, Chinkara, leopard, Dhole (wild dog) Hyena, Porcupine, Jackal, Fox, Indian Wolf, Indian Python Four-horned Antelope, and Barking deer etc.

8.23. DENMARK IMPORTS CO_2, BURIES IN NORTH SEA

❖ Denmark inaugurated a project to store carbon dioxide 1,800 metres beneath the North Sea, the **first country** in the world to **bury CO_2 imported from abroad**.
❖ The CO_2 graveyard, where the carbon is injected to prevent further warming of the atmosphere, is on the site of an old oil field.
❖ Led by British chemical giant Ineos and German oil company Wintershall Dea, the "Greensand" project is expected to store up to eight million tonnes of CO2 per year by 2030.

8.24. EURASIAN OTTER

❖ Recently, scientists from Jammu obtained a photographic record of the semi-aquatic carnivorous mammal in **Neeru stream**, a **tributary of the Chenab** River.
   ✓ Neeru is a 30-km perennial stream that originates in the Kailash Lake at 3,900 metres above mean sea level and drains into the Chenab at Pul-Doda.
❖ Otters are mammals of the family Mustelidae consisting of 13 species.
   ✓ They are **found in every continent except Australia and Antarctica**.
❖ The Eurasian otter covers the **largest range of any Palearctic mammal**.
❖ The species is persecuted as a **pest** in countries such as **India, China and Nepal**, and its populations have declined due to hunting for food and pelt, habitat loss, pollution and climate change.
❖ **IUCN Red List** classification- **'Near Threatened'**.
❖ It is regarded as a **flagship species and indicator** of high-quality aquatic habitats.

8.25. PLASTIC ROCKS

❖ Researchers have found plastic rocks on Trindade island in the state of Espirito Santo, Brazil.
❖ Trindade island is an important conservation spot for one of the largest sea turtles - **Green Turtles** (Chelonia Mydas), classified as **'Endangered'** on IUCN red list.
❖ Plastic was found in the rocks called **plastiglomerates** - a mixture of sedimentary granules and other debris held together by plastic.
❖ This intertwining of plastic with rocks is evidence of humans' pollution reaching earth's geological cycles.

8.26. PROJECT LION

❖ Gujarat government has proposed a second home for Asiatic lions in Gujarat at **Barda Wildlife Sanctuary** (BWS).
❖ It is about 100 km away from their present home at Gir National Park (GNP) which is overflowing with big cats.
   ✓ Central government has given in-principle approval to the project.
❖ A report on **"Lion@2047: A vision for Amrutkal"**, prepared by the **Wildlife Institute of India** for Gujarat government, has identified Barda as a potential site where a population of 40 adult and sub-adult lions can be accommodated in the larger landscape of Barda-Alech hills and coastal forests.
   ✓ Barda is home to Maldhari community.
❖ BWS would protect lion population from extinction in case of diseases like Canine Distemper Virus; unexpected decline in prey; natural calamities or retaliatory killings.
❖ **Project Lion** envisages landscape ecology-based conservation of Asiatic Lion in Gujarat by integrating conservation and eco-development.
   ✓ It was launched by PM in 2020 on lines of Project Tiger and Project Elephant.
Asiatic Lion (Panthera leo persica)
❖ Asiatic Lions are found only in India, in five protected areas in Gujarat – GNP, Gir Sanctuary, Pania Sanctuary, Mitiyala Sanctuary, and Girnar Sanctuary.
❖ Conservation status:
   ✓ **Schedule I and IV** of Wildlife Protect Act, 1972;
   ✓ **Appendix I** of CITES; and
   ✓ **Endangered** on IUCN Red List.

❖ Asiatic lions are slightly smaller than African lions (Vulnerable on IUCN Red list).

8.27. MISSION SAHBHAGITA

❖ It was launched in 2022 by **Ministry of Environment, Forest and Climate Change** (MoEFCC) with a mission of healthy and effectively managed network of **75 wetlands of national and international significance**.
   ✓ India has the largest network of Ramsar Sites in Asia
❖ It strives to enable a **society ownership approach** with communities leading at the forefront.

8.28. HORSESHOE CRABS

❖ Horseshoe crabs, medicinally priceless and one of oldest living creatures on the earth, appear to be disappearing from their familiar spawning grounds due to destructive fishing practices along Chandipur and Balaramgadi coast in Odisha's Balasore district.
❖ Horseshoe crabs are **considered living fossils** meaning they have existed nearly **unchanged for at least 445 million years**, well before even dinosaurs existed.
❖ There are **four species of horseshoe crabs**-
   ✓ **Limulus polyphemus**, the Atlantic or American horseshoe crab, found along the Atlantic coast of the United States and the Southeast Gulf of Mexico.
   ✓ The tri-spine horseshoe crab (**Tachypleus tridentatus**), the coastal horseshoe crab (**Tachypleus gigas**) and the mangrove horseshoe crab (**Carcinoscorpius rotundicauda**) in coastal waters of India, southeast Asia, China and Japan
❖ Female horseshoe crabs are about one-third larger than the males.

Conservation Status:
❖ The **American horseshoe** crab is listed as **Vulnerable** to extinction and the **tri-spine horseshoe** crab is classified as **Endangered** on the IUCN Red List of Threatened Species.
❖ Coastal horseshoe crab (Tachypleus gigas) and the mangrove horseshoe crab (Carcinoscorpius rotundicauda) are not listed on IUCN red list yet but are part of Schedule 4 of Wildlife Protection Act, 1972.

Uses
❖ A horseshoe crab's blood contains a special clotting agent **limulus amebocyte lysate** (LAL) which detects a contaminant called **endotoxin**.
❖ It is used to test vaccines, drugs and medical devices to ensure that they aren't contaminated with dangerous bacterial toxins.

8.29. NAMPDAPHA NATIONAL PARK

❖ A tiger was recently spotted in the Namdapha national park, after a gap of eight years.
❖ Namdapha, a National Park and Tiger Reserve, lies on the border between India and Myanmar within Changlang District of Arunachal Pradesh.
❖ It comprises the catchment area of **Noa-Dihing River**, which is a tributary of the Brahmaputra.
   ✓ Namdapha is name of a river which originates from Daphabum (Dapha is name of hill, Bum means peak of hill) and meets Noa-Dihing river.
❖ **Flora:** Sumatran pine, Spruce, Orchid Bamboo etc.
❖ **Fauna:** Barking deer, Elephants, Asiatic golden cat, clouded leopard, snow leopard etc.

8.30. RACCOON DOGS

❖ A new analysis of genetic data collected from **the Huanan Seafood Market in Wuhan, China**, has linked coronavirus to raccoon dogs.
❖ Laboratory experiments have shown that **raccoon dogs are susceptible to and capable of transmitting the novel coronavirus**.
   ✓ But that does not mean that they are the natural reservoir for the virus.
About Raccoon Dogs

- ❖ They belong to the **canid family** and are closely related to foxes.
  - ✓ Ironically they are neither dogs nor raccoons.
- ❖ They are the **only canids that hibernate during the winter**.
- ❖ They are **omnivores** and eat rodents and berries and are monogamous, often living in pairs.
- ❖ Raccoon dogs are originally from East Asia and are commonly found in parts of China, Korea, and Japan, where they are known as **tanuki**.
  - ✓ They are also found in Europe, where they were first brought in by fur traders in the 1920s.
- ❖ Today, raccoon dogs are considered to be a threat to the local ecosystem in Europe and an EU report declared them "one of the **most successful alien carnivores in Europe**."
  - ✓ However, in Japan, tanuki is revered.
- ❖ They are sold for meat and fur.
- ❖ Protection Status: **Least Concern** in the IUCN Red List of Threatened Species.

8.31. KAPPAPHYCUS ALVAREZII

- ❖ Recently, the dead coral reefs were observed near Kurusadai (Tamil Nadu), one of the 21 uninhabited islands forming the **Gulf of Mannar Marine National Park**.
- ❖ The primary reason behind this loss is **Kappaphycus alvarezii**, a **seaweed species** deliberately introduced for commercial cultivation some two decades ago.

About Seaweeds:
- ❖ Seaweeds are group of many species of marine algae and plants that grow in water bodies such as rivers, seas and oceans.
- ❖ They vary in size, from microscopic to large underwater forests.
- ❖ Seaweed is found on the **shores across the world**, but is more **commonly a staple in Asian countries**.
- ❖ Seaweed has numerous benefits, including being **a source of nutrition**, **containing anti-inflammatory** and **anti-microbial agents** for medicinal purposes
- ❖ Contributing to economic growth through its use in manufacturing, acting as a **bio indicator** by absorbing excess nutrients and balancing out ecosystems.
- ❖ They **trap excess iron and heavy metals** and supplying oxygen and nutrients to other marine life forms.

Impact of Kappaphycus alvarezii Seaweed:
- ❖ The Kappaphycus alvarezii seaweed species has invaded six of the 21 islands of the Gulf of Mannar Marine National Park in Tamil Nadu and has killed the corals near Kurusadai.
- ❖ Globally it has also caused considerable damage to Coconut Island in Hawaii, Cubagua Island in Venezuela, Zanzibar in Tanzania, and Almirante and Cristobal in Panama and Costa Rica.
- ❖ IUCN lists Kappaphycus alvarezii as **one of the world's 100 most invasive species**.

8.32. PROSOPIS JULIFLORA

- ❖ In a pilot project, work to remove **Vilayati Kikar** (Prosopis juliflora) will start at Central Ridge in Delhi in order to restore its natural biodiversity.
- ❖ Vilayati Kikar is an **invasive species** first imported into India by British as an exotic and decorative species.
- ❖ Prosopis Juliflora is a shrub or small tree in the family **Fabaceae**.
- ❖ Also known as Vilayati Babool, it is **native to Mexico, South America and the Caribbean.**
- ❖ An important fuelwood in dry regions, it can survive hostile drought-like conditions.

Negative impact
- ❖ It causes **stomach poisoning in livestock** by inducing a permanent impairment of its ability to digest cellulose.
- ❖ It causes drying up of water bodies and ground water as it **absorbs more than 4 litres of water to obtain one kg of biomass**.
- ❖ It cannot even shelter birds as it **produces less oxygen** and **more carbon dioxide.**
- ❖ It causes land erosion due to the loss of the grasslands that are habitats for native plants and animals.

8.33. IPCC AR6 SYNTHESIS REPORT

❖ The Synthesis Report is the culmination of a cycle of reports of the **IPCC's 6th Assessment Cycle** that have been published over the past five years.
❖ Its aim is to provide policymakers up-to-date understanding of climate change, its impacts and future risks, and highlight solutions to address it.

Findings

❖ Excess emissions from human activities have **raised global temperature by 1.1°C** above 1850-1900.
❖ **Nationally Determined Contributions** (NDC) announced by countries make it likely that warming will **exceed 1.5°C during the 21st century**.
❖ For **every 1000 Gt CO_2 emitted** by human activity, **global surface temperature rises by 0.45°C** (best estimate, with a likely range from 0.27 to 0.63°C).
❖ Losses and damages will disproportionately affect the poorest and most vulnerable populations, particularly those in Africa and least-developed countries, creating more poverty.

Recommendations

❖ The world must rapidly **shift away from burning fossil fuels**.
❖ A mix of strategies can help avoid locking in the carbon emissions, including retiring existing fossil fuel infrastructure, canceling new projects, retrofitting fossil-fueled power plants with carbon capture and storage (CCS) technologies and scaling up renewable energy sources like solar and wind.
❖ There is a need for urgent, system wide transformations to secure a net-zero, climate-resilient future.
❖ **Deep emission cuts** are necessary across all of society to combat the climate crisis.

About Intergovernmental Panel on Climate Change

❖ An intergovernmental organization created in 1988 by the **World Meteorological Organization** (WMO) and the **United Nations Environment Programme** (UNEP).
❖ Headquarters- **Geneva**, Switzerland
❖ Aim-To provide governments at all levels with scientific information that they can use to develop climate policies.
❖ IPCC is the UN body for assessing the science related to climate change.
❖ Membership: **195 members including India**.
❖ Other Key information:
  ✓ Prepares **Assessment Reports**, **special reports**, and methodology reports assessing the state of knowledge of climate change.
  ✓ However, it **does not itself engage in scientific research**.
  ✓ In **2007**, the IPCC was awarded the **Nobel Peace Prize**.

8.34. KEIBUL LAMJAO NATIONAL PARK

❖ The Centre has advised the Manipur state government to take steps for the protection of Keibul Lamjao Park and Loktak Lake.
❖ **Keibul Lamjao Park** is considered as the **only floating national park** in the world.
❖ The National Park is situated in the south western part of the **Loktak lake**.
  ✓ It has a unique ecosystem called **'Phumdi'**.
  ✓ Loktak Lake is the **largest natural freshwater lake** in the **north-eastern India**.
❖ It is the last natural habitat of the **brow-antlered deer** (**Sangai**) the dancing deer of Manipur.
  ✓ In the 1950s, it was believed that the brow-antlered deer (Rucervus eldii eldii) had become extinct in the country. However, it was subsequently re-discovered in Manipur.
❖ Hog Deer, Otter, a host of water fowls and migratory birds are found here.
  ✓ The Code on Social Security, 2020.

8.35. BIOFUELS

❖ Directorate General Of Foreign Trade (DGFT) has modified the 2018 notification, allowing export of biofuel from Special Economic Zones (SEZs) and Export-Oriented Units (EOUs) for both fuel and non-fuel purposes without any restrictions if biofuel is produced using imported feed stock.
  ✓ Biofuel imports and exports both require a license.
About Biofuels

- ❖ Biofuel, **renewable form** of energy, is any hydrocarbon fuel that is **produced from organic matter** in a short period of time.
- ❖ Examples include Bio ethanol, Biodiesel, Compressed Biogas etc.
- ❖ Different generations of Biofuels
    - ✓ **First Generation**- Edible biomass – Sugar beet , Sugar cane, Wheat, Corn, Oil crops
    - ✓ **Second Generation**- Non-Edible biomass- Wood, Grass, Straw, Waste
    - ✓ **Third Generation**- Algal biomass- Macroalgae, Microalgae
    - ✓ **Fourth Generation**- Breakthrough- Pyrolysis, Solar to fuel, Genetically Modified Orgaisms
- ❖ **Significance of Biofuels**
    - ✓ Reduce greenhouse gas emissions and are a renewable source of energy.
    - ✓ Benefit Farmers with additional income.
    - ✓ Opportunities for new businesses in processing of biomass, storage solutions and enable employment generation.

Government policies to promote Biofuels

- ❖ National Policy on Biofuels, 2018 for reaching **20% ethanol-blending by 2025-2026**.
- ❖ Pradhan Mantri JI-VAN (**Jaiv Indhan- Vatavaran Anukool fasal awashesh Nivaran)** Yojana, 2019.
- ❖ **GOBAR** (Galvanizing Organic Bio-Agro Resources) DHAN scheme, 2018.
- ❖ Sustainable Alternative Towards Affordable Transportation (**SATAT**) to establish an ecosystem for Compressed Biogas (CBG) production.

8.36. SARUS CRANE

- ❖ Uttar Pradesh (U.P.) Forest Department has relocated a sarus crane, U.P.'s State bird, from Mandka village in Amethi to Raebareli's Samaspur Bird Sanctuary.

About Sarus Crane (Grus Antigone)

- ❖ It **world's tallest flying bird**.
- ❖ The birds are predominantly gray, with long, pale red legs. Their naked head is red, as is their neck.
- ❖ The Sarus crane is known for its ability to live in association with humans, inhabiting open, cultivated, well watered plains, marshlands and jheels. These areas suit them well for foraging, roosting and nesting.
- ❖ These birds **nest on the ground.**
- ❖ They are found in open wetlands in South Asia, seasonally flooded Dipterocarpus forests in Southeast Asia, and Eucalyptus -dominated woodlands and grasslands in Australia.
- ❖ **Global Distribution**
    - ✓ Australia, Cambodia, China, India, Laos, Myanmar, Nepal, Pakistan, Viet Nam, Bangladesh.
- ❖ In the Indian subcontinent, it is found in **northern and central India, Terai Nepal and Pakistan**.
- ❖ It was once a common site in the paddy fields of Uttar Pradesh, Bihar, Rajasthan, West Bengal, Gujarat, Madhya Pradesh and Assam.
- ❖ Their population is now on the decline in India, a majority of which are in Uttar Pradesh.
- ❖ Threats-
    - ✓ Loss of habitat, due to drainage of wetlands, agricultural expansion and human development.
    - ✓ The use of pesticides, as well as collisions with wires
    - ✓ Also commonly targeted by humans hunting and egg collecting.
- ❖ **Conservation Status**
    - ✓ They are classified as **vulnerable** (VU) on the **IUCN Red list** of threatened species.
    - ✓ Listed in **Schedule IV** of the **Wildlife (Protection) Act 1972**.

Samaspur Bird Sanctuary

- ❖ It is situated in the RohaniyaDevelopment block of the Rae Bareli district.
- ❖ It was created in 1987 with the aim of protection and conservation of the wetland with special emphasis to the local and migratory birds, conservation of their natural habitat including aquatic plants and animals.
- ❖ More than 250 varieties of birds can be seen here.

8.37. LIQUID 3

- ❖ Scientists in **Belgrade (Serbia)** have introduced liquid tree.

❖ Also dubbed LIQUID 3, the novel creation is Serbia's first urban photo-bioreactor, a solution in the fight for clean air.
❖ It contains **six hundred litres of water** and works by using microalgae to bind carbon dioxide and produce pure oxygen through photosynthesis.
❖ LIQUID 3 is more efficient than trees, replacing **two 10-year-old trees** or **200 square meters of lawn**.
❖ The advantage of **microalgae** is that it is **10 to 50 times more efficient than trees**.

8.38. GANDHAMARDAN HILL

❖ Odisha government has declared the Gandhamardan Hill Range in Bargarh and Balangir district as a Biodiversity Heritage Site (BHS).

About Gandhamardan Hill (Gandhamardan Reserve Forest)

❖ It is considered as the treasure trove of medicinal plants and an Ayurvedic paradise of Odisha.
❖ Gandhamardan is home to 1,200 species of plants and 500 species of animals with hundreds of types of trees, shrubs, herbs, and species of medicinal plants.
❖ Hosts two historical monuments: Nrusinghanath Temple located on northern slope and Harishankar Temple situated on southern slope.
❖ In In his chronicles, Hiuen Tsang had described the hill shrine as a Buddhist heritage site named Parimalagiri

8.39. MoEFCC LAUNCHES ARAVALLI GREEN WALL PROJECT

❖ Aravalli Green Wall Project is inspired by Africa's Great Green Wall (GGW) programme, an initiative launched in 2007 in Sahel region bordering Africa's Sahara Desert, to combat desertification and land degradation. GGW project aims to restore 100 million hectares of degraded land by 2030.
❖ Green Wall Project is a major initiative to create green corridors in **5 km buffer area** around **Aravalli Hill Range in four states** - **Haryana, Rajasthan, Gujarat and Delhi**.
❖ It'll involve **planting native species of trees** and shrubs on scrubland, wasteland and degraded forest land, along with **rejuvenating and restoring surface water- bodies** such as ponds, lakes and streams.
❖ The project will also focus on agroforestry and pasture development to enhance the livelihoods of local communities.
❖ **Objectives**
   ✓ Improving ecological health of Aravalli range.
   ✓ Prevent eastward expansion of Thar Desert and reduce land degradation.
   ✓ Increase carbon sequestration and mitigating climate change.
   ✓ Promote sustainable development and livelihood opportunities by involving local communities.
   ✓ Contribute to India's commitments under various international conventions such as United Nations Convention to Combat Desertification.
   ✓ Enhancing India's image as a global leader in environmental protection and green development.

About Aravalli range

❖ **Aravalli range** extends from Gujarat to Delhi passing through Rajasthan and Haryana in a southwest-northeast direction.
❖ Highest peak - **Guru Shikhar** on Mount Abu.
❖ It is considered the **oldest range of fold-mountains** in India.
❖ It gives rise to several rivers, including the **Banas**, **Luni** and **Sabarmati**.

8.40. EARTH HOUR

❖ Earth Hour was observed on March 25 this year.
❖ Earth Hour is an annual event that takes place on the **last Saturday of March**.
❖ Earth Hour, **organized by World Wildlife Fund** (WWF), is a global grassroots movement uniting people to take action on environmental issues and protect the planet.
   ✓ The event was first introduced in Sydney, Australia, in 2007 by WWF and its partners as a symbolic lights-out event to raise awareness about climate change.
❖ It is held worldwide to encourage individuals, households, communities and businesses to turn off their non-essential lights for one hour as a symbol for their commitment to the planet.

8.41. PLASTIGOMARATE

- ❖ **Marine biologists** during routine monitoring of marine litter stumbled upon **plastiglomerate** (plastic rock) from a beach on Aves Island of Andaman and Nicobar Islands.
- ❖ **Plastiglomerate** is a rock composed of sand, rock fragments, shells and other materials held together by plastic.
  - ✓ It is a **new form of plastic pollution**, which scientists described **in 2014**.
- ❖ This is the first such find from India.

8.42. ASIATIC LIONS AND CHEETAHS

- ❖ The **National Tiger Conservation Authority** (NTCA) recently stated that it would be detrimental to the survival of both species, lions and cheetahs, to introduce lions in the same area as cheetahs due to **interspecies competition**.
- ❖ Supreme Court had in 2013 ordered to translocate Asiatic lions from Gujarat to **Kuno National Park (KNP) in Madhya Pradesh**.
- ❖ **Reason for relocation of lions**- This was recommended because **Gir (Gujarat) was becoming crowded**, and there was a risk of **a disease decimating the entire population**.
- ❖ Recently, Cheetahs from **Namibia and South Africa** were introduced in KNP.
- ❖ Earlier, **Project Lion**, prepared by Wildlife Institute of India for Gujarat government, envisaged landscape ecology based conservation in Gujarat by integrating conservation and eco-development. It also identified **Barda (Gujarat)** as a **potential site** where Asiatic lions can be introduced and populated.

About Asiatic Lion
- ❖ Only found in India
- ❖ Population limited to following protected areas in Gujarat – Gir National Park, Gir Sanctuary, Pania Sanctuary, Mitiyala Sanctuary, and Girnar Sanctuary.
- ❖ IUCN status: Endangered.
- ❖ Threat: Vulnerable to disease, genetic inbreeding, potential poaching, accidental deaths due to human causes etc.

About National Tiger Conservation Authority
- ❖ Headquartered at- New Delhi
- ❖ It is statutory body constituted under 'The Wild Life (Protection) Act, 1972' under Ministry of Environment, Forests and Climate Change.
- ❖ **Chairperson:** Minister for Environment, Forest & Climate Change.

8.43. KAZIRANGA NATIONAL PARK

- ❖ After zero cases of rhinoceros poaching recorded in Assam in 2022, first such case was reported recently in KNP.

About Kaziranga National Park
- ❖ It is located on the edge of Eastern Himalayan biodiversity hotspots- **Golaghat and Nagaon** district of Assam and covers 42,996 Hectare (ha).
  - ✓ **Brahmaputra** lies on North and Karbi Anglong hills on South of Kaziranga.
- ❖ It is the **single largest undisturbed and representative area in the Brahmaputra Valley floodplain**.
- ❖ It was declared as a **National Park in 1974** and a **tiger reserve since 2007**.
- ❖ It was declared a **UNESCO World Heritage Site in 1985** and is also recognized as an Important Bird Area by BirdLife International.
- ❖ It has the world's **largest-population of one-horned rhinoceros**.
- ❖ Conservation efforts in Kaziranga are focused on the **'big four' species**— Rhino, Elephant, Royal Bengal tiger and Asiatic water buffalo.

8.44. MORAY EEL

- ❖ Researchers have discovered a **new species of Moray Eel** off the **Cuddalore coast in Tamil Nadu**.
- ❖ Moray eels, or **Muraenidae** are a family of eels found globally.
- ❖ They have **small Eyes** and they **rely mostly on their highly developed sense of smell**, lying in wait to ambush prey. Their body is generally patterned.
- ❖ Moray Eels occur in all tropical and subtropical seas, they live in shallow water among reefs and rocks.
- ❖ Moray eels can be found in both freshwater habitats and saltwater habitats.

❖ They are known for **two types of jaws**: one is regular **(oral) jaws** with big teeth and the second jaw is called the **pharyngeal jaw** (which drags prey inside the eels stomach).

8.45. UBUNTU

❖ African philosophy 'Ubuntu' can help us fight climate crisis.

About Ubuntu

❖ African word **Ubuntu** means **'humanity to others'**.
❖ This indigenous philosophy (focusing on altruism) **provides an alternative way of thinking to rampant individualism**.
❖ It will help us focus on and rebuild our relationship with the natural world and prioritise interconnectedness.
❖ It invokes a spirit of collective, global and regional inter-governmental action, as well as communal and individual efforts to resolve complex climate crisis.

8.46. TIGRESS IN RAJASTHAN RESERVES

❖ Recently a decision was taken to release one tigress each to Kota's Mukundra Hills Tiger Reserve and Bundi's Ramgarh Vishdhari Tiger Reserve in the state of Rajasthan to increase the tiger population in the region and to improve the ecological balance of the area.
❖ Along with the tigresses, some other wild animals like Gaurs and wild dogs will also be released into the reserve area.

About Mukundra Hills Tiger Reserve

❖ The Mukundra Hills Tiger Reserve is located in Rajasthan's Kota district and has an area of 759.99 km2.
❖ It was established in 2004 and comprises three wildlife sanctuaries: Darrah Wildlife Sanctuary, National Chambal Sanctuary, and Jawahar Sagar Wildlife Sanctuary.
❖ The reserve is located in the Khathiar-Gir dry deciduous forests and has a rugged and hilly terrain dominated by Dhok (Anogeissus pendula) trees.
❖ It is an important ecological zone for wildlife, including tigers, leopards, chinkaras, and crocodiles.

About Ramgarh Vishdhari Tiger Reserve

❖ The Ramgarh Vishdhari Tiger Reserve is situated in the southeastern part of the state in Bundi district.
❖ It represents both Vindhyan and Aaravalli elements and is in continuation with the buffer area of Ranthambore tiger reserve in the northeastern side and Mukundara Hills tiger reserve in the southern side.
❖ The Mez, a tributary of the Chambal river, passes through the tiger reserve.
❖ The terrain is mostly rugged and hilly, and it is part of the 'Semi-arid' Zone of India.
❖ The habitat is dominated by Dhok (Anogeissus pendula) trees.

8.47. EXOSTOMA DHRITIAE

❖ A team from the Zoological Survey of India (ZSI) recently discovered a new catfish species in Arunachal Pradesh.
❖ The new species was found in **Siking stream**, a tributary of **Siang river** in Upper Siang district of Arunachal Pradesh.
❖ The new catfish species has been christened **'Exostoma Dhritiae'** after Dhriti Banerjee, the first woman director of the ZSI, as a mark of honour for her contributions to research on the fauna of the country.
❖ The new species is a small fish found in streams in these hills and is called 'Ngorang' by local tribals.

8.48. AMCHANG WILDLIFE SANCTUARY

❖ Assam High Court has sought a report on demarcation of borders of **Amchang Wildlife Sanctuary** (AMS).
❖ AMS is a small but naturally rich habitat on **eastern fringe of Guwahati city**.
❖ It falls under East-Kamrup division with Brahmaputra River to its North.
❖ It was declared as a **wildlife sanctuary in 2004** by Government of Assam.
❖ It is flanked by the three Reserve forests-**Khanapara**, **Amchang**, and the **South Amchang**.
❖ Species found
   ✓ **Forest Types**: Khasi Hill Sal Forests, East Himalayan Mixed Deciduous Forest, Eastern Alluvial Secondary Semi-evergreen Forests and East Himalayan Sal Forests.
   ✓ **Mammals** – Chinese pangolin, Flying fox, Slow loris, Assamese macaque, Rhesus macaque, Hoolock gibbon, Porcupine.

- ✓ **Birds**- Lesser Adjutant, Greater Adjutant, White-backed Vulture, Slender-billed Vulture, Khaleej Pheasant Green Imperial Pigeon, Lesser Pied Hornbill etc.
- ✓ **Reptiles**- Python, Monitor Lizard, Indian Cobra etc.

8.49. MISSION ARKOMPAN

- ❖ The forest department has initiated **'Mission Arikomban'**, an operation to capture the rogue tusker.
- ❖ A wild elephant by the name of Arikomban has been causing chaos in the higher ranges of Idukki district in Kerala.
- ❖ Over the past few years, **Arikomban** has trampled at least 10 people to death and destroyed around 60 houses and shops.
- ❖ The forest department has come up with a plan to capture Arikomban and train it to be a **'kumki'**, a captive elephant used for operations against rogue elephants.
- ❖ The plan is to capture it with tranquilizer shots and later shift it to an elephant training center.

8.50. NGT IMPOSES PENALTY ON KERALA GOVT. FOR FAILING TO PROTECT RAMSAR SITES

- ❖ The National Green Tribunal (NGT) has imposed a penalty of Rs 10 crore on the Kerala government for failing to protect two wetlands, **Vembanad** and **Ashtamudi lakes**, which are included in the Ramsar list of wetlands.
- ❖ The wetlands have become polluted due to the dumping of pharmaceutical waste, plastic waste, household waste, and slaughterhouse waste.

About Vembanad
- ❖ Vembanad was designated as a **Ramsar site** back in **2002**.
- ❖ It is the **longest lake in India** and the largest lake in the state of Kerala.
- ❖ The **lake is situated at sea level** and is separated from the **Laccadive Sea by a narrow barrier island**.
- ❖ The lake is also known as **Punnamada Lake** (in Kuttanad) and **Kochi Lake** (in Kochi).
- ❖ The **Kumarakom Bird Sanctuary** is located on the east coast of the lake.
- ❖ According to a recent study by the Kerala University of Fisheries and Ocean Studies, Vembanad lake's water retention capacity has decreased by 85% in the last 120 years due to encroachment and devastation of its ecology.

About Ashtamudi lake
- ❖ Ashtamudi lake, home to several plant and bird species, was included in the **Ramsar list in August 2002**.
- ❖ It covers an area of 61 sq kms and is named "Ashtamudi" because it has **eight branches or channels, which flow out from the lake**.
- ❖ It has a unique wetland ecosystem and is known as **Gateway to Kerala Backwaters.**

8.51. HEAT INDEX

- ❖ The India Meteorological Department (IMD) is planning to introduce a **'heat index' warning system** in Delhi and other parts of the country.

Need
- ❖ According to **"Hot Weather Analysis over India,"** IMD revealed that the mechanism by which heat impacts humans is complex; it is a result of the interactions between temperature, radiation, wind, and humidity.
- ❖ There is strong experimental evidence that physiologic stress from high temperatures is greater if humidity is higher.

About the Proposed Heat Index
- ❖ Heat Index will calculate the **temperature** along with the **humidity levels** to provide a more accurate measure of **what the temperature actually feels like**.
- ❖ In the US, the heat index is color-coded to provide warnings based on the impact of the heat index.
    - ✓ The IMD is planning to introduce a similar color-coded warning system in India.
- ❖ It will factor a day's- **Relative humidity**, **Wind speed**, **Maximum temperature**, **Cloud cover**.
- ❖ There is direct relationship between the air temperature and relative humidity and the heat index, meaning as the air temperature and relative humidity increase (or decrease), the heat index increases (or decreases).
- ❖ **Usage of HI**
    - ✓ It will not **only warn against Heat waves hazard** but also list precautions people can take.

✓ Calculation of HI will help states in formulating **better Heat Action Plans (HAPs) for heatwave assessment**, forecast, preparedness and mitigation.

9. POLICY AND PROGRAMME

9.1. VAIBHAV FELLOWSHIPS.

❖ Ministry of Science and technology launches 'VAIBHAV Fellowship' for NRI researchers.
❖ Vaibhav Fellowship aims at improving the research ecosystem of India's Higher Educational Institutions.
❖ It facilitates academic and research collaborations between Indian institutions and best institutions in world through mobility of faculty/researcher from overseas institutions to India.

Criteria

❖ Applicant should be Non-Resident Indian (NRI), Persons of Indian Origin (PIO) or Overseas Citizen of India (OCI).
❖ Must have obtained a Ph.D/M.D/M.S degree from a recognized University.
❖ Plan to work for a minimum of 1 month to maximum of 2 months a year in a research institution / academic institution in India.
❖ The duration of the fellowship is three years with the government offering the researchers an amount of up to Rs 37 lakh for the entire period.

9.2. SWAYATT INITIATIVE.

❖ Recently, a function was held to commemorate the success of "SWAYATT", an initiative to promote 'Start-ups, Women and Youth Advantage Through e-Transactions'(SWAYATT) on Government E-Marketplace (GeM) in New Delhi.

About SWAYATT Initiative

❖ The initiative was launched in February 2019 under Ministry of Commerce and Industry.
❖ It brings together the key stakeholders within the Indian entrepreneurial ecosystem to Government e-Marketplace the national procurement portal.

Outcomes of the initiative:

• More than 8.5 lakh Micro and Small Enterprises (MSEs) have been registered on GeM portal who have been able to get business of over Rs. 1.87 lakh crore spread across 68 lakh+ orders.
• More than 1.45 lakh **women** MSEs have fulfilled 7.32 lakh orders worth 15,922 Crore.
• Approximately 43000 SC/ ST MSEs have delivered 1.35 lakh+ orders worth 2,592 Crore on the GeM portal so far.
• 105 **Farmer Producer Organisations** (FPOs) can now sell more than 200 Agri products directly to the Government through GeM.

About GeM-Government e-Marketplace

❖ GeM is an Online Market platform was setup in 2016 to facilitate procurement of goods and services by the government ministries, departments, public sector undertakings (PSU) etc.
❖ It has been envisaged as National Procurement Portal of India.
❖ It has been developed by Directorate General of Supplies and Disposals (Ministry of Commerce and Industry) with technical support of National e-governance Division (Ministry of Electronic and Information Technology).
❖ It functions under Directorate General of Supplies and Disposals (DGS&D), Ministry of Commerce and Industry.

9.3. SAMARTH (SCHEME FOR CAPACITY BUILDING IN TEXTILES SECTOR)

❖ The Ministry of Textiles has invited proposals for empanelment from the textile industry and industry associations to broad base the panel of implementing partners for Samarth.

About SAMARTH

❖ Samarth is a demand driven and placement-oriented umbrella skilling programme of the Ministry of Textiles.
❖ It aims to incentivize and supplement the efforts of the industry in creating jobs in the organized textile and related sectors, covering the entire value chain of textiles, excluding Spinning and Weaving.
❖ The scheme has been penetrated across 28 States and 6 Union territories of the country and caters to all sections of the society including SC, ST and other marginalized categories.
❖ Ministry of Textiles has partnered with 116 Textile Industries / Industry Associations, 12 Central / State Government Agencies and 3 Sectoral Organizations of the Ministry for undertaking training programmes under Samarth.
❖ The implementation period of the scheme is up to March 2024. Employment linkage is mandated in the courses under organized textile sector with mandatory placement 70% in entry level & 90% for Upskilling programmes.

❖ **Achievements so far:**
  ✓ Out of the skilling target of 3.47 lakh beneficiaries allocated so far, 1.5 lakh beneficiaries have been provided training.
  ✓ More than 85% of the beneficiaries trained so far under the scheme are women.
  ✓ More than 70% of the beneficiaries trained in organized sector courses have been provided placement.

9.4. DHARA INITIATIVE

❖ The unique and flagship initiative "Dhara: Ode to Indian Knowledge Systems", taken up under the aegis of Azadi Ka Amrit Mahotsav by the Ministry of Culture has completed one year in February 2023.
❖ The Indian Knowledge Systems (IKS) Division of the Ministry of Education located at AICTE, New Delhi is the key execution partner for Dhara events.
❖ During its yearlong activities, it has been successful in creating public awareness and stakeholder participation and helped to devise a framework for the promotion and revival of multiple domains of IKS.
❖ The programme was conceptualized as a series of lectures and discussions dedicated to specific areas of inquiry highlighting India's civilizational achievements.

9.5. UNIQUE LAND PARCEL IDENTIFICATION NUMBER (ULPIN)

❖ Department of Land Resources is organizing a National Conference on implementation of ULPIN.
❖ Bhu-Aadhaar or ULPIN is a **14-digit alpha-numeric number** generated based on latitude and longitude coordinates of each land parcel.
❖ It is part of Digital India Land Records Modernization Programme.
❖ ULPIN is an authoritative source of information on any parcel of land or property to provide Integrated Land Services to the citizens.

9.6. GRAMIN KRISHI MAUSAM SEWA PROJECT (GKMS)

❖ **India Meteorological Department**, Ministry of Earth Sciences in collaboration with **Indian Council of Agriculture Research** (ICAR) and other institutions is rendering District/Block level **Agrometeorological Advisory Services** (AAS) for the benefits of farmers in the country under the scheme "Gramin Krishi Mausam Sewa (GKMS)".
❖ The main emphasis of the existing AAS system is to **collect and organize climate/weather, soil and crop information**, and to amalgamate them with weather forecast to assist farmers to take decisions on **day-to-day farm operations**, which can further optimize the application of input resources at farm level during deficient rainfall situation and extreme weather events to reduce monetary loss and to maximize crop yield.

9.7. REACHOUT SCHEME

❖ REACHOUT scheme is implemented by Ministry of Earth Sciences for capacity building.
❖ REACHOUT is an umbrella scheme of the following six sub-schemes-
  ✓ Research and Development in Earth System Science (RDESS).
  ✓ Outreach and awareness.
  ✓ Knowledge Resources Center Network (KRCNet).
  ✓ BIMSTEC Centre for Weather and Climate (BCWC).
  ✓ International Training Centre for Operational Oceanography (ITCOocean).
  ✓ Program for development of skilled workforce in Earth system sciences (DESK).
❖ Main objective is to
  ✓ support various R&D activities,
  ✓ develop useful collaborations with international organizations,
  ✓ create awareness amongst the public, students, academicians and user communities
  ✓ develop skilled and trained manpower in Earth Sciences etc.

9.8. O-SMART SCHEME

❖ Government allocated an amount of Rs. 2177 crore for implementation of 'Ocean Services, Modelling, Application, Resources and Technology (O-SMART)' Scheme during a period of 5 years i.e 2021-22 to 2025-26.
❖ It is a **central sector scheme** being undertaken by **Ministry of Earth Sciences**.
❖ Further, to achieve the objectives of the scheme, following steps are being taken by the Ministry of Earth Sciences:

- ✓ Various **ocean observational platforms** including Argo floats, XBT/XCTDs, Wave Rider Buoys, Automatic Weather Stations, Drifters, Moored Buoys, Tide Gauges, Acoustic Doppler Current Profilers, were deployed.
- ✓ **Operational services** on Tsunami Early Warnings, Storm Surges, Potential Fishing Zones, Ocean State Forecast, Harmful Algal Blooms, Coral Reefs, Multi Hazard Vulnerability, Coastal Vulnerability Indices, High Wave Alerts, Oil Spill, Search and Rescue operations etc were generated using the data and models operational in house and was provided on day-to-day basis to various stake holders and end users.
- ✓ **Coastal surveys and deep-sea cruises** and
- ✓ **Public awareness** campaign and related activities.

9.9. PM MITRA SCHEME

- ❖ The **Ministry of Textiles** will shortly name the States identified for implementation of Prime Minister MITRA (Mega Integrated Textile Region and Apparel) scheme.
- ❖ States are identified through the **challenge route** and the PM MITRA parks will provide the best ecosystem for the textile industry to be collectively present in one location, with plug-and-play infrastructure, and improve the competitiveness of the textile value chain.
- ❖ The vision for 2030 is **to achieve an economic value of $250 billion in production** and **$100 billion in export of textiles, apparel, and related products** and this is achievable even though the industry faced a small setback in the current year.

About PM MITRA

- ❖ The PM MITRA scheme is inspired by the **5F vision** - Farm to Fibre to Factory to Fashion to Foreign.
- ❖ It aspires to fulfil the vision of building an Aatmanirbhar Bharat and to position India strongly on the Global textiles map.

PM MITRA Parks

- ❖ PM MITRA Parks offer an opportunity to create an **integrated textiles value chain** right from spinning, weaving, processing/dyeing and printing to garment manufacturing at one location.
- ❖ These parks are envisaged to be located at sites which have inherent strengths for the textile industry to flourish and have the necessary linkages to succeed.
- ❖ The scheme envisages to leverage the Public Private Partnership model for fast-paced implementation in a time-bound manner.
- ❖ It will **reduce logistics cost** of industry.
- ❖ Intended to generate ~**1 lakh direct and 2 lakh indirect employment** per park.

9.10. UIDAI ROLLS OUT NEW SECURITY MECHANISM FOR AADHAR

- ❖ To deal with faster detection of spoofing attempts, Unique Identification Authority of India (UIDAI) has implemented **a two-layer authentication system** to ensure that originality of fingerprints is captured in a more fool-proof manner.
    - ✓ The Artificial intelligence -based mechanism captures both the fingerprint image and finger minutia (major features of a fingerprint image).
- ❖ Development comes amid concerns raised against possible misuse of Aadhar because of **issues** like:
    - ✓ Aadhaar system **treats all 10 fingerprints as one entity**, hence by varying a set of fingers a new ID can be created.
    - ✓ System is **unable to differentiate between a real fingerprint and a silicon imprint**.
    - ✓ It does not conduct facial biometrics match while creating ID's, thus allowing a same person to obtain different Aadhaar using mixed fingerprints.
- ❖ Aadhaar is a **12-digit unique identity number** that can be obtained by residents of India, based on their biometric and demographic data.
- ❖ It is issued by UIDAI, a statutory authority **under Ministry of Electronics & Information Technology**, on behalf of Government of India.
- ❖ In 2018, Supreme Court (SC) while upholding the Aadhar scheme as constitutionally valid provided certain riders regarding its use for various services.
    - ✓ Aadhaar cannot be made mandatory: for openings of a bank account and for getting mobile connections, for school admission.
    - ✓ Private companies cannot ask for Aadhaar.

9.11. PMMSY TO BE REVISED

- ❖ While addressing Sagar Parikrama programme, Ministry stated that necessary changes to **Pradhan Mantri Matsya Sampada Yojana** (PMMSY) will be made to enable traditional fishermen to buy trawlers or other boats for deep-sea fishing.
- ❖ This is due to difficulties they faced in purchase of deep-sea fishing vessels as per technical specification prescribed in PMMSY scheme.

About PMMSY

- ❖ PMMSY, launched in 2020 by **Ministry of Fisheries, Animal Husbandry & Dairying**, aims to bring about **Blue Revolution** through sustainable and responsible development of fisheries sector in India.
- ❖ PMMSY is being implemented **in all States and Union Territories** for a period of 5 years from FY 2020-21 to FY 2024-25.
- ❖ PMMSY is implemented as **an umbrella scheme** with **two separate components** namely **Central Sector Scheme** (100% central funding) and **Centrally Sponsored Scheme** (CSS).
- ❖ PMMSY **targets** to **increase fish production to 22 million metric tons by 2024-25**, reduce post-harvest losses from 20-25% to about 10% etc.
- ❖ **Other initiatives to promote fisheries sector:**
  - ✓ Fisheries & Aquaculture Infrastructure Development Fund (**FIDF**), 2015;
  - ✓ **Kisan Credit Cards** for Fishermen (2018-19) etc.
  - ✓ **Sagar Parikrama Program**, launched under Department of Fisheries, Ministry of Fisheries, Animal Husbandry and Dairying, aims to promote responsible fisheries and protect marine ecosystem.

9.12. PRADHAN MANTRI UJJWALA YOJANA

- ❖ Cabinet has extended the Rs 200 subsidy on an LPG cylinder (up to **12 refills per year**) under the PMUY by one year.
- ❖ The subsidy is credited directly to the bank accounts of eligible beneficiaries.
- ❖ PMUY was introduced by **Ministry of Petroleum and Natural Gas** (MOPNG) in 2016.
- ❖ It aims to provide deposit free Liquified Petroleum Gas (LPG) connections to adult women of poor households.
- ❖ The scheme aims to safeguard the health of women and children by providing them with clean cooking fuel.
- ❖ Initial target was to release 8 Crore LPG Connections, which was achieved in September 2019.
  - ✓ As on 1st March 2023, there are 9.59 crore beneficiaries.

9.13. SAGAR MANTHAN DASHBOARD

- ❖ Recently, the **Ministry of Ports, Shipping and Waterways** (MoPSW) launched Sagar Manthan dashboard.
- ❖ It is the Real-time Performance Monitoring Dashboard of MoPSW that will monitor and track the progress of their projects.
- ❖ This new digital platform has integrated all the data related to the Ministry and other subsidiaries.
- ❖ Features: Data visualization,Real-time monitoring, Improved communication, Data-driven decision making,Increased accountability
- ❖ Significance:
  - ✓ The dashboard is a positive development towards Digital India vision.
  - ✓ It will ensure the timely completion of projects, informed decision-making, increased efficiency & effectiveness of projects
  - ✓ It will also promote risk management, resource allocation, and progress reporting.

9.14. SMILE AND SHRESHTA SCHEME

- ❖ The **Ministry of Social Justice & Empowerment** in India is implementing two schemes: **The Scheme for Residential Education for Students in High Schools in Targeted Areas** (SHRESHTA) and the **Support for Marginalized Individuals for Livelihood and Enterprise** (SMILE).

About SHRESHTA

- ❖ SHRESHTA provides **financial assistance to NGOs for education projects** related to students belonging to Scheduled Castes, with three types of projects covered. They are **Residential Schools**, **Non-Residential Schools**, and **Hostels**, both for Primary and Secondary Students.

❖ The **scheme has been revised** and a **new component, Mode-I**, has been added for quality residential education **for meritorious SC students in top-class residential High Schools** through a nationwide entrance test conducted by National Testing Agency (NTA).

About SMILE

❖ SMILE, on the other hand, **supports marginalized individuals for livelihood and enterprise**, but does not specifically cover persons belonging to Scheduled Castes.

❖ The focus of the scheme is extensively on rehabilitation, provision of medical facilities, counselling, basic documentation, education, skill development, economic linkages and so on.

❖ It includes a subscheme - **'Central Sector Scheme for Comprehensive Rehabilitation of persons engaged in Begging'**.

10. INDEX AND REPORTS

10.1. INDIAN STATES' ELECTRICITY TRANSITION (SET) REPORT RELEASED BY INSTITUTE FOR ENERGY ECONOMICS AND FINANCIAL ANALYSIS (IEEFA)

❖ Report provides progress and performance of Indian states on various aspects of clean electricity transition.
  ✓ Electricity Transition refers to the shift from fossil-based power production and consumption to renewable energy sources (RES) like wind and solar.
❖ It has analysed 16 states on electricity transition pathway with 17 parameters based on four broad dimensions-
  ✓ **Decarbonisation**- Evaluate states' preparedness to shift from fossil-based power to RES.
    ➢ Decarbonisation is reduction of carbon dioxide emissions through use of low carbon power sources, achieving lower output of greenhouse gasses into atmosphere.
  ✓ **Performance of power system**- Evaluate states' ability to create greener market pulls effectively
  ✓ **Readiness of power ecosystem and policies**- Transform power systems while ensuring reliable electricity supply.
  ✓ **Political commitments**- Evaluate proactiveness in promoting innovative policies.
❖ These states together account for 90% of India's annual power requirement.
❖ Important findings-
  ✓ Bihar, UP and West Bengal need to expand their potential and transition commitments.
  ✓ Karnataka is only state that scored well across all four dimensions followed by Gujarat.

About IEEFA

❖ Institute for Energy Economics and Financial Analysis (IEEFA) examines issues related to energy markets, trends and policies.
❖ It's mission is to accelerate the transition to a diverse, sustainable and profitable energy economy.
❖ It is based in Ohio, USA.

10.2. 'CARBON DIOXIDE EMISSIONS IN 2022' REPORT RELEASED BY IEA

❖ Report is first in IEA's new series, Global Energy Transitions Stocktake- tracking progress towards Paris Agreement, provides complete picture of energy-related greenhouse gas (GHG) emissions in 2022.

Key findings

❖ Global energy-related CO2 emissions grew by 0.9% in 2022, reaching a new high of over 36.8 Gt.
❖ CO2 emissions are caused by burning of fossil fuels such as oil, coal and natural gas.
❖ Despite the rise, CO2 growth was well below global GDP growth of 3.2% - reverting to a decade-long trend of decoupling emissions and economic growth.
❖ Clean energy technologies (wind and solar energy, electric vehicles etc.) helped keeping the emission level of CO2 lower.
❖ **Global Energy Transitions Stocktake**
  ✓ It tracks technology, investment and people-centered progress toward Paris Agreement and supports first Global Stocktake (GST) which will conclude at COP 28 in 2023.
  ✓ GST, started at COP 26, assesses world's collective progress towards Paris Agreement and long-term climate goals.
  ✓ Paris Agreement is a **legally binding** international treaty on climate change adopted by 196 Parties at UN Climate Change Conference (COP21) in 2015.

About International Energy Agency

❖ It is an autonomous Intergovernmental Organisation established in 1974
❖ HQ- Paris, France.
❖ It mainly focuses on its energy policies which include economic development, energy security and environmental protection. These policies are also known as the 3 E's of IEA.
❖ It was established in the wake of the oil crisis of 1973-1974, to help its members respond to major disruptions in oil supply.
❖ Over time, the mandate of the IEA has expanded to include tracking and analyzing key global energy trends, promoting sound energy policy and encouraging multinational energy technology cooperation.
❖ **Major Reports:**

- ✓ World Energy Outlook Report.
- ✓ India Energy Outlook Report.
- ✓ World Energy Investment Report.
- ✓ World Energy Statistics.
- ✓ Energy Technology Perspectives.

10.3. WOMEN, BUSINESS AND THE LAW 2023 REPORT

- ❖ Recently, the World Bank released the Women, Business and the Law 2023 report.
- ❖ The Report relies on eight indicators to measure if women are on an equal standing with men.
  - ✓ A perfect score of 100 on the Index means that women are on an equal standing with men. Only 14 countries scored a perfect 100
- ❖ India scored 74.4 in the index which was higher than the 63.7 average for the South Asian region, but lower than Nepal which had the region's highest score of 80.6.
- ❖ The Index used data on the laws and regulations applicable in **Mumbai**.
- ❖ India gets a perfect score in indicators like constraints on freedom of movement, laws affecting women's decisions to work, and constraints related to marriage, maritime cooperation.
- ❖ India lags behind when it comes to laws affecting women's pay, laws affecting women's work after having children, constraints on women starting and running a business, gender differences in property and inheritance, and laws affecting the size of a woman's pension.

10.4. GLOBAL EDUCATION MONITORING REPORT

- ❖ GEM Report was released by United Nations Educational, Scientific and Cultural Organization (UNESCO).

Important takeaways

- ❖ Only 17% of countries cover sexual orientation, gender identity and gender expression issues - least covered areas in CSE curricula.
  - ✓ Comprehensive sexuality education (CSE) is a curriculum-based process of teaching and learning about cognitive, emotional, physical and social aspects of sexuality.
- ❖ Only 20% countries have laws and 39% have a national policy that specifically addresses sexuality education.
- ❖ Sexuality education in primary education is compulsory in 68% countries and in secondary education in 76%.
- ❖ Contraception issues are covered in school curriculum in two-thirds of countries.

10.5. GLOBAL TERRORISM INDEX

- ❖ The 10th edition of **Global Terrorism Index** (GTI) was released by Sydney-based **Institute for Economics and Peace (IEP)**.
  - ✓ GTI covers global trends and patterns in terrorism.
- ❖ **Afghanistan** remains **most impacted by terrorism** for fourth consecutive year, followed by Burkina Faso and Somalia.
- ❖ **India remained at 13th** while Pakistan ranked at 6th.
- ❖ Deadliest terrorist groups of world are Islamic State (IS) and its affiliates, followed by al-Shabaab, Balochistan Liberation Army (BLA) and Jamaat Nusrat Al-Islam wal Muslimeen (JNIM).
- ❖ The report said many countries face severe ecological changes, which are more likely to exist in conflict settings and intersect with terrorism.

10.6. WORLD HAPPINESS REPORT 2023

- ❖ It is released by UN Sustainable Development Solutions Network.
- ❖ Report evaluates levels of happiness by taking into account **6 key variables -Healthy life expectancy, GDP per capita, Social support, Low corruption, Generosity in a community** and **Freedom to make key life decisions**.
- ❖ The goal of the report is to identify key determinants of well-being.
- ❖ It is based on people's own assessment of their happiness, as well as economic and social data.
- ❖ Ranking of happiness based on a 3-year-average 2020-22.
- ❖ **Report highlights**
  - ✓ **Top three** countries are **Finland, Denmark and Iceland** respectively.
  - ✓ **Afghanistan, Lebanon, Sierra Leone** were in the **bottom** of the chart.

- ✓ **India** has been ranked at the **126th place** among 146 countries.
- ✓ India ranked below neighbours China, Nepal, Sri Lanka and Bangladesh.
- ✓ Bhutan is not listed in the WHR 2023.

About UN Sustainable Development Solutions Network (SDSN)

- ❖ It was launched in 2012 under UN Secretary General, it mobilizes global scientific and technological expertise to promote practical solutions for sustainable development, including implementation of Sustainable Development Goals (SDGs) and Paris Climate Agreement.
- ❖ It publishes annual reports like **Sustainable development Report** and **World Happiness Report**.

10.7. UNCTAD- TECHNOLOGY AND INNOVATION REPORT 2023

- ❖ The report **Technology and Innovation Report 2023** was recently released by United Nations Conference on Trade and Development (**UNCTAD**).
- ❖ It is built around the concept of **green innovation** i.e., creating or introducing new or improved goods and services that leave lighter carbon footprints and open up green windows of opportunity.
- ❖ **Major findings of report**
  - ✓ Expenditure variance -While EU countries spend 3% of GDP on Research & Development, only a few developing countries reach 1% of GDP expenditure.
  - ✓ After Paris Agreement of 2015, most countries have increased their climate-change-related, green official development assistance(ODA).
  - ✓ Within UN system, **Global Environmental Facility** (GEF) is **largest public sector funding source** for transferring Environmentally Sound Technologies(ESTs).
- ❖ **Recommendations** to foster international cooperation for green innovation
  - ✓ Align trade with Paris Agreement on Climate Change.
  - ✓ Partnership oriented approach to green technology development.
  - ✓ Shifting research for green innovations from national to international levels, including open innovation approaches.

About UNCTAD

- ❖ UNCTAD is a **permanent body** of the United Nations General Assembly, **formed in 1964,** that deals with trade issues, investments and other matters concerning development.
- ❖ Headquarters- **Geneva, Switzerland**

10.8. UNWWDR 2023 REPORT

- ❖ Recently, '**United Nations World Water Development Report 2023: partnerships and cooperation for water**', was **released by** UN Education, Scientific and Cultural Organization **(UNESCO)** on **behalf of UN-Water**.
- ❖ It is published annually on World Water Day (WWD), celebrated on 22nd March.
  - ✓ **Theme** of WWD 2023 is **"Accelerating the change to solve the water and sanitation crisis"**.
- ❖ Coordinated by UN-Water since 1993, WWD raises awareness and inspires action to tackle water and sanitation crisis.
- ❖ **Major findings of report**
  - ✓ At current rates, progress towards all targets of **SDG 6** (clean water and sanitation for all) is off-track.
  - ✓ Globally, **two billion people** do **not have safe drinking water** and **3.6 billion lack access to safely managed sanitation**.
  - ✓ The global **urban population** facing **water scarcity** is projected to increase from **one-third (2016) to nearly half of the global urban population in 2050**, with India projected to be the most severely affected.
  - ✓ **Water use** has been **increasing** globally **by roughly 1% per year over** last 40 years and is expected to grow at a similar rate through to 2050.
  - ✓ 80% of people living under water stress lived in Asia; in particular, northeast China, as well as India and Pakistan.
- ❖ **Recommendations**
  - ✓ Education and Capacity Development for sustainable and equitable water management practices.
  - ✓ Involvement of women in delivery of targeted water, sanitation, and hygiene (WASH) services and broader water-related goals.

11.   NATIONAL NEWS

11.1. KERALA TEMPLE USES ROBOTIC ELEPHANT FOR RITUALS.

- ❖ The Irinjadappilly Sree Krishna Temple in Kerala's Thrissur district has become the first in the country to use a mechanical, lifelike elephant for temple rituals.
- ❖ The temple priests performed 'Nadayiruthal' or ceremonial offering to the deity, of Irinjadappilly Raman, a magnificent, lifelike mechanical or "robotic" elephant.
- ❖ Irinjadappilly Raman' will help conduct ceremonies at the temple in a safe and cruelty-free manner and thereby support real elephants' rehabilitation in forests.

11.2. NEWS BROADCASTING AND DIGITAL STANDARDS AUTHORITY

- ❖ The News Broadcasting and Digital Standards Authority (NBDSA) has instructed some news channels to remove from their online platforms videos of certain programmes aired by them after it found them to be in violation of the Code of Ethics and Broadcasting Standards and Specific Guidelines.

ABOUT NBDSA

- ❖ The NBDSA is an independent body set up by the News Broadcasters & Digital Association (NBDA), which serves as a representative of private television news, current affairs and digital broadcasters.
- ❖ It describes itself as the collective voice of the news, current affairs and digital broadcasters in India.
- ❖ It is funded entirely by its members.
- ❖ It aims to protect all its members from carrying out unfair and/or unethical practices or discredit television news broadcasters, digital news media and other related entities.
- ❖ NBDSA includes a chairperson who is to be an eminent jurist, and other members such as news editors, and those experienced in field of law, education, literature, public administration etc. nominated by a majority of Board.

11.3. SECURITY COVERS

- ❖ The Supreme Court has directed to provide the Z+ security cover to Reliance Industries CMD Mukesh Ambani and his family members throughout India and abroad.
- ❖ There are mainly six categories of security cover provided by Government
    1. SPG (Special Protection Group) is meant only for the Prime Minister and his immediate family. Other protection categories can be provided to anyone about whom the central or state government has inputs about a threat.
    2. X category security usually entails one gunman protecting the individual.
    3. Y has one gunman for mobile security and one (plus four on rotation) for static security.
    4. Y+ has two policemen (plus four on rotation) for mobile security, and one (plus four on rotation) for residence security.
    5. Z has six gunmen for mobile security, and two (plus eight) for residence security.
    6. Z+ has 10 security personnel for mobile security and two (plus eight) for residence security

12.   INTERNATIONAL, SUMMITS

12.1. JAPAN EXTENDS OFFICIAL DEVELOPMENT ASSITANCE (ODA).

❖ Japan has extended the ODA for Mumbai Trans-Harbour Link Project.
  ✓ ODA is defined as government aid that promotes and specifically targets the economic development and welfare of developing countries.
❖ India has been the largest recipient of Japanese ODA loans for the past decades.
❖ Japan initiated its economic cooperation with India in 1958.
❖ Japan's ODA for India is one of the important tools to strengthen Japan-India relations set forth by "Japan-India Strategic and Global Partnership."

12.2. WINDSOR FRAMEWORK

❖ UK government reached a landmark deal with European Union on post-Brexit trade rules that will govern Northern Ireland.
❖ Windsor Framework will replace the Northern Ireland Protocol.
❖ Framework has two crucial aspects
  1. The introduction of a Green lane and Red lane system for goods
    ✓ **Green lane**: British goods meant for Northern Ireland will use the green lane at the ports and will be allowed to pass with minimal paperwork and checks.
    ✓ Physical checks will be conducted if the goods are deemed suspicious, in place of the routine checks now.Also, people in Northern Ireland can order goods online from Britain easily now.
    ✓ **Red lane**: Goods destined for Ireland or the rest of the EU will have to take the red lane, with the attendant customs and other checks.
  2. **'Stormont Brake'**: It allows Northern Ireland lawmakers and London to veto any EU regulation they believe affects the region adversely.
    ✓ It means the democratically elected Northern Ireland Assembly can oppose new EU goods rules that would have significant and lasting effects on everyday lives in Northern Ireland.
    ✓ For this, they will need the support of 30 members from at least two parties.
    ✓ The British government can then veto the law.

12.3. YOUNG PROFESSIONALS SCHEME

Recently, India decided to open applications for residents of the U.K to apply for the young professional scheme.
About the scheme
❖ Under the scheme Indian and British nationals aged between 18 and 30 can apply to live and work in either country for a period of up to two years.
❖ It highlights the strength UK-India Mobility and Migration Partnership, signed in 2021.
❖ Criteria for application
  ✓ It requires an applicant to show funds equivalent to INR 2,50,000 held for a minimum period of 30 days at the time of submission of the application.
  ✓ Every professional coming to India is required to register with the Foreigners Regional Registration Office/ Foreign Registration Office (FRRO/FRO).

12.4. RAISINA DIALOGUE.

❖ It is a multilateral conference committed to addressing the most challenging issues facing the global community, held annually in New Delhi since 2016.
❖ It takes its name from Raisina Hill- the seat of the Indian government.
❖ It is hosted by the Observer Research Foundation in collaboration with the Ministry of External Affairs.
❖ It brings together global leaders in policy, business, media, civil society, defence and foreign policy.
❖ The Chief Guest of Raisina Dialogue 2023 was the Giorgia Meloni, the Prime Minister of Italy.
❖ The **theme** of Raisina Dialogue 2023 is "Provocation, Uncertainty, Turbulence: Lighthouse in the Tempest".

12.5. FIRST MEETING OF BIMSTEC ENERGY CENTRE GOVERNING BOARD.

- ❖ India recently hosted the first meeting of BIMSTEC Energy Centre (BEC) Governing Board.
- ❖ It recommended the addition of cyber security, green hydrogen, and energy transition areas under the specialized wings of BEC.

About BEC
- ❖ The First BIMSTEC Energy Ministers Conference of 2005, agreed to the setting up of a BEC to share experience in reforms, restructuring, regulation, and best practices in the energy sector.
- ❖ Objectives of the Centre: create, manage, and evaluate energy-related databases to suggest a road map for meaningful intra-BIMSTEC cooperation.
- ❖ Initiatives for BIMSTEC Energy Cooperation
    - ✓ The grid interconnection MoU, signed in 2018 by member-states, for the trade in electricity with optimal power transmission in the BIMSTEC region.
    - ✓ The 1125 MW Dorjilung hydropower project involving Bangladesh, Bhutan, and India will allow Bhutan to export electricity to Bangladesh through India.

About BIMSTEC
- It is a regional organization that was established on 06 June 1997 with the signing of the Bangkok Declaration.
- BIMSTEC aims to foster regional and economic cooperation among the member countries i.e India, Thailand, Myanmar, Nepal, Bangladesh, Sri Lanka, and Bhutan.
- **Secretariat-** Dhaka, Bangladesh

12.6. INDONESIA NEW CAPITAL IN BORNEO

- ❖ The new capital Nusantara is located in East Kalimantan province on the Indonesian part of Borneo.
    - ✓ East Kalimantan is an area with immense water resources and habitable terrain on Borneo island which is shared by Indonesia, Malaysia and Brunei.
    - ✓ Indonesian officials say the new metropolis will be a "sustainable forest city" that puts the environment at the heart of the development and aims to be carbon-neutral by 2045.
- ❖ **Reasons For Shift**
    - ✓ Jakarta is home to about 10 million people and extremely congested.
    - ✓ Jakarta is the **world's most rapidly sinking city** and at the current rate, it is estimated that one-third of the city could be submerged by 2050.
        - ➢ Uncontrolled groundwater extraction and rising Java Sea due to climate change are considered main reasons for sinking.
    - ✓ It floods regularly and its streets are so clogged that it's estimated congestion costs the economy $4.5 billion a year.
    - ✓ Jakarta's air and water are heavily polluted. It is also prone to earthquakes.
- ❖ **Issues**
    - ✓ East Kalimantan is rich in flora and fauna. Moving the capital to East Kalimantan would lead to massive deforestation and put the habitat of animals and trees in danger and damage the ecosystem.
    - ✓ Relocation of Indigenous Balik people because of the construction,

12.7. SUMMIT FOR DEMOOCRACY

- ❖ Election Commission of India (ECI) hosted an international conference as the lead for Cohort on Elections Integrity which was established as a follow up to Summit for Democracy.
- ❖ Summit for Democracy was an initiative of US President to set forth an affirmative agenda for democratic renewal and to tackle greatest threats faced by democracies today.
- ❖ Following this Summit, a Year of Action was proposed and Summit also developed two platforms: **Focal Groups** and **Democracy Cohorts** to facilitate participation in the Year of Action.
    - ✓ ECI is leading Democracy Cohort on Election Integrity.

12.8. JAPAN JOINS MPIA

- ❖ Japan has become the latest member to join Multi-Party Interim Appeal Arbitration Arrangement (MPIA).

ABOUT MPIA

- ❖ MPIA (formed in 2020) is an alternative system for **resolving WTO disputes** that are appealed by a Member in the absence of a functioning WTO Appellate Body.
- ❖ WTO members can resort to MPIA under Article 25 of WTO Dispute Settlement Understanding.
- ❖ Any member can join MPIA (India not a member yet) by notifying the Dispute Settlement Body (composed of representatives of all WTO Members).
- ❖ In a dispute between members, MPIA will supersede the previous appeal processes and also apply to future disputes between members.
- ❖ WTO's dispute settlement process functioning is impacted since 2019 in the backdrop of USA blocking appointments to Appellate Body.
- ❖ There are **two main ways** to settle a dispute once a complaint has been filed in WTO:
    1. Parties find a **mutually agreed solution**, particularly during the phase of bilateral consultations.
    2. Through **adjudication**, including the subsequent implementation of the panel and Appellate Body reports.
- ❖ There are three main stages to WTO's dispute settlement process:
    1. consultations between the parties;
    2. adjudication by panels and, if applicable, by Appellate Body; and
    3. implementation of the ruling.

12.9. IBSA AND DIGITAL GOVERNANCE REFORM

- ❖ According to the **Geneva-based Diplo Foundation**, India, Brazil, and South Africa, which have together formed the tripartite IBSA Forum, may play a prominent role in the process of reforming digital governance.
- ❖ As per report, "The first tangible results from IBSA's digital momentum could be expected during India's G-20 presidency, which, among others, will promote 'a new gold standard for data".

About IBSA

- ❖ The IBSA is a trilateral, developmental initiative between India, Brazil and South Africa to promote South-South cooperation and exchange.
- ❖ Genesis- The grouping was formalised and named the IBSA Dialogue Forum when the Foreign Ministers of the three countries met in Brasilia (Brazil) on **6th June 2003** and issued the **Brasilia Declaration**.
- ❖ Collaboration:
    - ✓ **Joint Naval Exercise: IBSAMAR** (IBSA Maritime Exercise) is an important part of IBSA trilateral defence cooperation.
    - ✓ **IBSA Fund:** Established in 2004, **IBSA Fund** (India, Brazil and South Africa Facility for Poverty and Hunger Alleviation) is a unique Fund through which development projects are executed with IBSA funding in fellow developing countries. It is **managed by** the **United Nations (UN) Office for South-South Cooperation** (UNOSSC).

12.10.   RAM CHANDRA PAUDEL ELECTED AS NEPAL PRESIDENT

- ❖ Ram Chandra Paudel has been elected to serve as the new president of Nepal.
- ❖ According to the Nepalese Election Commission, he received 33,800 electoral votes, while his opponent, Subash Chandra Nembwang, received 15,500 votes.
- ❖ Ram Chandra Paudel received votes from 352 members of provincial assemblies and 214 members of parliament.

12.11.   JUDICIAL COOPERATION AMONG SCO MEMBERS

- ❖ The Chief Justice of India (CJI) recently addressed the 18th meeting of the Chief Justices/Chairpersons of the Supreme Courts of the Shanghai Cooperation Organisation (SCO) member states.
- ❖ The CJI highlighted the need for judicial cooperation and adoption of new mechanisms to simplify and make the court processes more smart and accessible to the common people.
- ❖ The CJI also stressed the importance of technology in bridging the gap between citizens and the justice system.
- ❖ The CJI shared recent endeavours made by the Supreme Court of India, such as launching an **e-version of Supreme Court reports**, **artificial intelligence-based live transcription of court proceedings**, and translation of judgments in multiple regional languages, among others.
- ❖ Also, various issues such as the overly populated prisons, access to quality legal representation, modern public judicial services, court work overload, limited judicial resources, high pendency of cases, and the need for adequate infrastructure facilities were highlighted.

About SCO
- The SCO is a regional intergovernmental organisation that promotes cooperation between its member states in the areas of security, economy, and culture.
- Prior to the creation of SCO in 2001, Kazakhstan, China, Kyrgyzstan, Russia and Tajikistan were members of the **Shanghai Five**.
- Following the accession of **Uzbekistan** to the organisation **in 2001**, the Shanghai Five was renamed the SCO.
- India and Pakistan became members in 2017. Iran will become full member in 2023 under India's chairmanship.
- **Structure:**
    - ✓ **Heads of State Council**: The Supreme SCO body which decides its internal functioning and its interaction with other States & international organisations, and considers international issues.
    - ✓ **Heads of Government Council:** Approves the budget, considers and decides upon issues related to economic spheres of interaction within SCO.
    - ✓ **Council of Ministers of Foreign Affairs:** Considers issues related to day-to-day activities.
    - ✓ **Regional Anti-Terrorist Structure (RATS):** Established to combat terrorism, separatism and extremism.
    - ✓ The official working language of the SCO Secretariat is **Russian and Chinese.**

12.12.   WAGNER GROUP

- There are reports of systematic recruitment of prisoners across Russia by Wagner Group.
- Wagner Group is a **private Russian military organisation**, which has been used in military operations in many countries.
- It is **owned and financed by Yevgeny Prigozhin**, a businessman with ties to Vladimir Putin and is playing a major role in the fighting in Ukraine.

12.13.   BLACK SEA GRAIN INITIATIVE

- Recently Russia agreed to extend Black Sea Grain Deal for 60 days.
- BSGI was **brokered by United Nations and Türkiye** in July 2022 between Russia and Ukraine.
- The deal endeavours to tackle escalating food prices emanating from supply chain disruptions due to effective blockage of Black Sea.
- The deal put in place a **Joint Coordination Centre** (JCC), comprising senior representatives from Russia, Turkey, Ukraine and the UN for oversight and coordination.
- Objective- To provide for a **safe maritime humanitarian corridor for Ukrainian exports** (particularly for food grains and fertilizer including ammonia) from three of its key ports, namely, **Chornomorsk**, **Odesa** and **Yuzhny/Pivdennyi** on Black Sea.
- **Ukraine** is among the **largest exporters** of **wheat, maize, rapeseed, sunflower seeds and sunflower oil**, globally.

12.14.   SCO CONFERENCE ON "SHARED BUDDHIST HERITAGE"

- Recently, the first international conference of Shanghai Cooperation Organization (SCO) on Shared Buddhist Heritage was held in **New Delhi**.
- Nodal Ministry: It was organized by the **Ministry of Culture**, the **Ministry of External Affairs** and the **International Buddhist Confederation**.
- Objective- **To re-establish trans-cultural links** and seek out commonalities, between Buddhist art of Central Asia, art styles, archaeological sites and antiquity in various museum collections of the SCO countries.
- Focus of the Conference: India's civilizational connection with the SCO nations.
- The event, under India's leadership of SCO has brought together Central Asian, East Asian, South Asian and Arab countries on a common platform to discuss Shared Buddhist Heritage. It will celebrate Buddhist common heritage and build stronger and deeper bonds amongst the countries.

Shanghai Cooperation Organization (SCO)
- It is a permanent intergovernmental international organisation of Eurasian Nations.
- The SCO currently comprises of eight Member States (**China, India, Kazakhstan, Kyrgyzstan, Russia, Pakistan, Tajikistan and Uzbekistan)**, four Observer States interested in acceding to full membership (Afghanistan, Belarus, Iran, and Mongolia) and six "Dialogue Partners" (Armenia, Azerbaijan, Cambodia, Nepal, Sri Lanka.

❖ Secretariat- **Beijing**, China.

12.15.   MᴄMᴏʜᴀɴ Lɪɴᴇ

❖ US senate has recognised McMahon Line as international boundary between China and India.
❖ The resolution reaffirms India's well-known and established position that Arunachal Pradesh, which China calls 'South Tibet', is an integral part of India.

About McMohan line

❖ McMahon Line serves as de facto boundary between **China and India in the Eastern Sector**.
❖ It specifically represents boundary between Arunachal Pradesh and Tibet, from Bhutan in the west to Myanmar in the east.
❖ It extends from corner of Bhutan to Isu Razi Pass on the Burma border.
❖ The McMahon Line was drawn during the **Simla Convention of 1914**, officially described as the Convention **between Great Britain, China, and Tibet**.
  ✓ The line was determined by **Sir Henry McMahon**, then Foreign Secretary in the Government of British India, and it is called the McMahon Line after his name.
❖ According to the Shimla Treaty, the McMahon Line is the clear boundary line between India and China. On behalf of India, the British rulers considered Tawang of Arunachal Pradesh and the southern part of Tibet as part of India and which was also agreed by the Tibetans. Due to this, the Tawang region of Arunachal Pradesh became part of India.

12.16.   Eᴜʀᴏᴘᴇᴀɴ Fʀᴇᴇ Tʀᴀᴅᴇ Aꜱꜱᴏᴄɪᴀᴛɪᴏɴ

❖ Government has ruled out any duty concessions for gold or easing of intellectual property rights regime for EFTA countries.
  ✓ Switzerland has been demanding a lower or zero import duty regime for gold and concessions on the patent regime.
❖ EFTA is an **intergovernmental organisation** of **Iceland, Liechtenstein, Norway and Switzerland**.
❖ It was set up in 1960 (**Stockholm Convention**) for the promotion of free trade and economic integration between its members.
❖ EFTA is the ninth largest trader in the world in merchandise trade and fifth largest in trade in services.

12.17.   ICC ᴀʀʀᴇꜱᴛ ᴡᴀʀʀᴀɴᴛ ᴀɢᴀɪɴꜱᴛ Pᴜᴛɪɴ

❖ Recently, the International Criminal Court issued an arrest warrant for war crimes for President Vladimir Putin and a second Russian official for the alleged war crime of unlawfully deporting and transferring children from occupied areas of Ukraine to the Russian Federation.
❖ The court says Putin bears individual criminal responsibility for the abduction and deportation of Ukrainian children since Russia's full-scale invasion began in February 2022.

About International Criminal Court (ICC)
❖ It is headquartered in **The Hague**, Netherlands.
❖ It was established under a 1998 treaty called the "**Rome Statute**".
❖ It "investigates and, where warranted, tries individuals charged with the gravest crimes of concern to the international community: genocide, war crimes, crimes against humanity and the crime of aggression."
❖ The ICC can also practice its jurisdiction over cases referred by the **UN Security Council** to it.
❖ Members: 123 countries are party to the Rome Statute, including Britain, Japan, Afghanistan, and Germany.
  ✓ **USA, India and China** are not.
❖ ICC prosecutes individuals(whereas ICJ tries deals with countries and inter-state disputes)
❖ ICC's jurisdiction is limited to offences occurring after it came into effect on July 1, 2002.
❖ Additionally, the offences should be committed either in a country that ratified the agreement or by a national of a ratifying country.

12.18.   Iɴᴅɪᴀ-Bᴀɴɢʟᴀᴅᴇꜱʜ Fʀɪᴇɴᴅꜱʜɪᴘ Pɪᴘᴇʟɪɴᴇ

❖ Prime Ministers of India and Bangladesh recently inaugurated the India-Bangladesh Friendship Pipeline (IBFPL).
❖ It is the **first cross-border energy pipeline** between the two countries.

About IBFPL

- ❖ The entire pipeline is 131.5 km long.
- ❖ The pipeline runs from the **Siliguri**-based marketing terminal of the Numaligarh Refinery Limited (NRL) to the **Parbatipur** depot of Bangladesh Petroleum Corporation (BPC).
- ❖ Cost:
- ❖ The pipeline has been built at an **estimated cost of Rs.377 crore**. Bangladesh's section of the pipeline cost Rs.285 crore.
- ❖ The construction of the project started in 2018 with the help of India's grant funding.
- ❖ It will be used to supply **diesel** from India to Bangladesh.
- ❖ The pipeline will **transport 1 million metric ton** of high-speed diesel every year to seven districts of North Bangladesh.
- ❖ The fuel transport **deal will be effective for 15 years** with an option for further extension.

Significance-

- ❖ The operation of India- Bangladesh Friendship Pipeline will put in place a sustainable, reliable, cost-effective and environment friendly mode of transporting HSD (High-speed diesel) from India to Bangladesh and will further enhance cooperation in energy security between the two countries.

12.19.   POLIO OUTBREAK IN BURUNDI

- ❖ **Burundi**, a landlocked east-African country, has declared its first polio outbreak in 30 years.
- ❖ The outbreak was confirmed after a four-year-old child in the Isale district of western Burundi, along with two other children he was in contact with, were diagnosed with vaccine-linked polio.
- ❖ Additionally, **poliovirus type 2** was detected in five samples from environmental surveillance of wastewater from the region.
  - ✓ Poliovirus type 2 is a **weakened strain** of the virus contained in the **oral polio vaccine**.

12.20.   ITU AREA OFFICE

- ❖ A new International Telecommunication Union (ITU) Area office & Innovation Centre in India was recently inaugurated by Prime Minister in New Delhi
- ❖ It will serve **India, Nepal, Bhutan, Bangladesh, Sri Lanka, Maldives, Afghanistan**, and **Iran** enhancing coordination among nations and fostering mutually beneficial economic cooperation in the region.
- ❖ India signed a Host Country Agreement in 2022 with ITU for establishment of Area Office.

About International Telecommunication Union (ITU)

- ❖ It was founded in **Paris in 1865** as **International Telegraph Union**.
- ❖ It took its **present name in 1932**, and in **1947 became a specialized agency** of United Nation.
- ❖ It is an intergovernmental organization that coordinates between governments and private sector bodies with respect to global telecommunication and information communication technology (ICT) services.
- ❖ Members- 193 member states
- ❖ Headquarters- **Geneva, Switzerland.**

12.21.   NATIONAL DEVELOPMENT BANK

Board of governors at NDB unanimously elected former Brazilian President **Mrs. Dilma Vana Rousseff** as its new President.

About New Development Bank

- ❖ It is a **multilateral development bank** established by BRICS as per agreement signed during the sixth BRICS Summit in **Fortaleza (2014)**.
  - ✓ Bank started operations in 2015.
- ❖ HQ- **Shanghai**
- ❖ **Objective:** To mobilise resources for infrastructure and sustainable development projects in emerging markets and developing countries (EMDCs).
- ❖ Members: **Brazil, Russia, India, China, South Africa, Bangladesh, United Arab Emirates and Egypt**.
- ❖ **Regional office:** Africa Regional Center (ARC) in Johannesburg; Americas Regional Office (ARO) in São Paulo; Eurasian Regional Centre (ERC) in Moscow; India Regional Office in Gujarat International Finance Tec-City (GIFT City).

12.22.   OPERTION INTERFLEX

❖ **Operation Interflex** is a part of **United Kingdom's (UK) commitment of £2.3 billion** for military aid and support to Ukraine.
❖ Under it, UK and other countries including Canada, New Zealand, Australia, Norway, Denmark, Finland, Sweden, Lithuania, and Netherlands are **training Ukraine's military**.

12.23.   ASIA-AFRICA LEGAL CONSULTATIVE ORGANISATION

❖ A seminar on 'Seven Decades of the Constitution of India' was held in context of India's Presidency of AALCO.
About
❖ AALCO was **established in 1956** as the outcome of **Bandung Conference (1955), held in Indonesia**.
❖ It was originally known as the Asian Legal Consultative Committee (ALCC)
❖ It has 47 member states including India.
❖ **HQ- New Delhi**
❖ Its main functions include assisting member states **in drafting constitutions**, **model legislations and bilateral agreements** upon request and providing expertise and assistance to member states in the appointment of arbitrators etc.
❖ It was **initially formed to serve as an advisory board** to member states on matters relating to international law.
❖ It launched the Integrated Scheme for Settlement of Disputes in the Economic and Commercial Transactions in 1978.

12.24.   SAUDI ARABIA JOINS SCO AS DIALOGUE PARTNER

❖ Saudi Arabia has approved to join the Shanghai Cooperation Organization (SCO) as a dialogue partner.
❖ This will increase the number of dialogue partners to 7.
❖ **Iran** also **signed documents for full membership in 2022**.
❖ The dialogue partner status for Saudi Arabia will be a first step within the organisation before granting the kingdom full membership in the mid-term.
About Shanghai Cooperation Organization
❖ SCO is a Eurasian political, economic and military organisation aiming to maintain peace, security, and stability in the region.
❖ It covers **40% of the global population**, nearly **20% of the global GDP**, and **22% of the world's landmass**.
❖ The Shanghai Cooperation Organisation was announced in 2001 by the Republic of Kazakhstan, the People's Republic of China, the Kyrgyz Republic, The Russian Federation, and the Republic of Tajikistan.
❖ The SCO currently comprises of
  ✓ **eight Member States** (China, India, Kazakhstan, Kyrgyzstan, Russia, Pakistan, Tajikistan and Uzbekistan),
  ✓ **four Observer States** interested in acceding to full membership (Afghanistan, Belarus, Iran, and Mongolia) and
  ✓ **six "Dialogue Partners"** (Armenia, Azerbaijan, Cambodia, Nepal, Sri Lanka and Turkey).
❖ **SCO Secretariat in Beijing** and **Executive Committee** of the Regional Anti-Terrorist Structure **(RATS) in Tashkent** are its two permanent bodies
❖ India and Pakistan became full members in 2017.

12.25.   ODA BY JAPAN

❖ Recently, Japan has approved Official Development Assistance (ODA) to India, for a few key projects.
❖ India and Japan have bilateral development cooperation **since 1958**.
Key Projects under ODA
1. **Patna Metro Rail Construction Project:**
   a. Rs. 5,521 crores have been approved for Patna Metro Rail Construction Project (I).
   b. It aims to cope with the increase of traffic demand in Patna by constructing the new metro corridor.
2. **The Project for Forest and Biodiversity Conservation for Climate Change Response in West Bengal**
   a. Rs. 520 crores approx. have been approved for the project.

b. It aims to mitigate and adapt to climate change, conserve and restore ecosystems by ecosystem-based climate change measures, biodiversity conservation and restoration, thereby contributing to sustainable socio-economic development in the State.

3. **Rajasthan Water Sector Livelihood Improvement Project:**
    a. Rs. 1,055.53 crores have been approved for Rajasthan Water Sector Livelihood Improvement Project.
    b. It aims to improve livelihoods of farmers as well as promote gender mainstreaming in agriculture and irrigation sector in the State, by improving water use efficiency and agriculture productivity, through improvement of existing irrigation facilities and agriculture support services.

4. **Project for the Construction of Mumbai-Ahmedabad High Speed Rail**
    a. Rs. 18000 crores have been approved for the project.
    b. This project aims to develop a high-frequency transportation system by constructing a high-speed rail along an approximately 500-km section between Mumbai in Maharashtra and Ahmedabad in Gujarat.
    c. Executing Agency- **National High Speed Rail Corporation Limited.**

Other ODAs to India from Japan

❖ **Delhi Metro** is one of the most successful examples.
❖ India's **Western Dedicated Freight Corridor** (DFC) project is funded by a soft loan provided by **Japan International Cooperation Agency** (JICA) under Special terms for economic partnership (STEP).
❖ **India Japan Nuclear Deal 2016** will help India build the **six nuclear reactors in southern India**, increasing nuclear energy capacity ten-fold by 2032.

13.   DAYS TO REMEMBER

13.1. NATIONAL SCIENCE DAY CELEBRATED ON FEBRUARY 28TH.

❖ National Science Day is celebrated in India every year on the 28th of February to commemorate the discovery of the Raman Effect by Indian Physicist Sir C V Raman, on this day in 1928.
❖ This day was designated by the Government of India in 1986.
❖ This year the theme is 'Global Science for Global Wellbeing'.

About C V Raman

❖ Sir Chandrasekhara Venkata Raman (1888 – 1970) was an Indian physicist known for his work in the field of light scattering.
❖ He became the first Indian director of the Indian Institute of Science in 1933.
❖ He founded the Indian Academy of Sciences in 1933.
❖ He established the Raman Research Institute in 1948.
❖ In 1954, the Government of India honoured him with the **first Bharat Ratna**.

Raman effect

❖ Using a spectrograph, he discovered that when light traverses a transparent material, the deflected light changes its wavelength and frequency. This phenomenon was subsequently termed the Raman effect or Raman scattering.
   ✓ Raman received the 1930 Nobel Prize in Physics for the discovery
   ✓ He was the first Asian to receive a Nobel Prize in any branch of science.

Importance of Discovery

❖ The character of the scattered radiations enables us to obtain an insight into the ultimate structure of the scattering substance.
❖ The discovery would also find its use in chemistry, giving birth to a new field known as Raman spectroscopy as a basic analytical tool to conduct non-destructive chemical analysis for both organic and inorganic compounds.
❖ It has a wide variety of applications, from studying art and other objects of cultural importance in a non-invasive fashion to finding drugs hidden inside luggage at customs.

13.2. WORLD SEAGRASS DAY- MARCH 1ST

❖ The first ever World Seagrass Day was celebrated on March 1 to raise awareness about seagrass and its important functions in the marine ecosystem.
❖ It was declared by the United Nations General Assembly on May 22, 2022, following a resolution passed by Sri Lanka to emphasize the conservation of seagrass in marine environments.

About Seagrass

❖ Seagrass is a flowering marine plant present along coastlines worldwide, acting as a crucial source of food for marine life and helping stabilize water quality.
   ✓ Except for Antarctica, various types of seagrass are found on coastlines around the world.
❖ There are currently 72 recorded types of seagrass in the world, covering an area of around 300,000 square kilometers in 159 countries.
❖ Seagrass evolved around 100 million years ago when most plant life was still found underwater. Over the course of its evolution, it has adapted to living and reproducing in various marine environments, bending and swaying with currents and dispersing its pollen through the water.
❖ Seagrass provides an important source of food for marine life.
❖ Seagrass acts as nursery habitats for commercially harvested fish and helps improve the water quality of the environment it inhabits.
❖ Seagrass sediments contain nearly twice the amount of carbon per area compared with land soil.
❖ It stores up to 18% of the world's oceanic carbon, which is greater than the percentage stored by rainforests. This function makes it a key influence in battling the effects of climate change.

13.3. WORLD WILDLIFE DAY 2023-MARCH 3RD

❖ Every 3rd of March, UN World Wildlife Day is celebrated all over the world.
❖ This global event is marked annually to celebrate and promote awareness of the planet's wild fauna and flora.

- ❖ The date also marks the adoption of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) in 1973.
  - ✓ CITES aims to prevent international trade from threatening species' survival.
- ❖ The World Wildlife Day 2023 falls on the 50th Anniversary of CITES coming into being.
- ❖ World Wildlife Day 2023 is celebrated under the theme **"Partnerships for wildlife conservation"**

13.4. NATIONAL SAFETY DAY 2023 OBSERVED ON 4TH MARCH

- ❖ National Safety Day is observed on March 4 annually with an in aim to promote safe working environment and ensure safety of people in all aspects.
- ❖ The campaign is comprehensive, general and flexible with an appeal to the participating organisations to develop specific activities as per their safety requirements.
- ❖ This year will mark the onset of the 52nd National Safety Day.
- ❖ The **theme** for 2023 National Safety Day is **'Our Aim – Zero Harm'**.
  - ✓ The National Safety Council of India (NSC) publishes the theme of National Safety Day.
- ❖ The National Safety Day was first marked in 1971 to commemorate the founding of the National Safety Council (on March 4, 1966) and raise safety awareness.

13.5. WORLD HEARING DAY CELEBRATED ON MARCH 3RD

- ❖ World Hearing Day is celebrated on the 3rd of March each year to raise awareness on how to prevent deafness and hearing loss and promote ear and hearing care across the world.
- ❖ The theme of this year is **"Ear and hearing care for all"**, determined by World Health Organisation.
- ❖ Normal hearing range is from 0 dBHL (Decibel Hearing Level), which is the audiometric zero, to 20 dBHL.
- ❖ A person who is not able to hear as well as someone with normal hearing – hearing thresholds of 20 dB or better in both ears is said to have hearing loss.
- ❖ **Hard of hearing** refers to people with hearing loss ranging from mild to severe.
- ❖ **Deaf people** mostly have profound hearing loss, which- implies very little or no hearing.

13.6. WORLD OBESITY DAY 2023 OBSERVED GLOBALLY ON MARCH 4TH

- ❖ World Obesity Day is observed on March 4 every year to promote practical solutions and help people achieve and maintain a healthy weight while undertaking proper treatment.
- ❖ The theme for World Obesity Day 2023 is: 'Changing Perspectives: Let's Talk About Obesity'.

13.7. INTERNATIONAL WOMEN'S DAY- MARCH 8TH

- ❖ International Women's Day is celebrated on March 8th every year to celebrate the social, economic, cultural, and political achievements of women, as well as to raise awareness of the ongoing struggle for gender equality.
- ❖ The first International Women's Day was observed in 1911.
  - ✓ The United Nations (UN) started celebrating International Women's Day in 1977, it was officially agreed that the day will be widely observed on March 8 every year.
- ❖ International Women's Day 2023 theme- "DigitALL: Innovation and technology for gender equality" to honours and celebrate the women and girls who are leading the way in the development of transformational technology and digital education.

13.8. NO SMOKING DAY 2023 OBSERVED ON MARCH 8

- ❖ Every year on the second Wednesday of March, No Smoking Day is observed. It falls on March 8 this year.
- ❖ This year's theme is: "Stopping smoking improves your brain health".

13.9. INTERNATIONAL DAY OF WOMEN JUDGES - MARCH 10TH

- ❖ The International Day of Women Judges, which is celebrated every year on March 10, honours all female judges who have taken the lead in the fight against social injustice.
- ❖ On March 10, 2022, the International Day of Women Judges was celebrated for the first time.

13.10.   54TH CISF RAISING DAY

- ❖ CISF Raising Day 2023 is celebrated on 10 March every year but this year the date got revised to 12 March.
- ❖ It is annually observed as the Raising Day when the Central Industrial Security Force (CISF) was set up under the Union ministry of Home Affairs.
- ❖ CISF is one of the seven Central Armed Police Forces in India and is responsible for providing security to various public sector undertakings, airports, and other important installations.
- ❖ The CISF was set up under the act of the Parliament of India on March 10, 1969.
- ❖ Since then, CISF Raising Day is being celebrated on March 10 each year.
- ❖ However, in 2023, the date was revised to 12th March.

13.11.   INTERNATIONAL DAY OF ACTION FOR RIVERS- MARCH 14TH

- ❖ Every year on March 14, the International Day of Action for Rivers (IDAR) is observed to promote awareness of the importance of the river systems on the planet earth.
- ❖ The 25th anniversary of the day was observed recently. The day was earlier known as International Day against Dams, for Rivers, Water, and Life.
- ❖ **Theme** for 2023: **Rights of Rivers**.
    - ✓ It calls for the designation of rivers as a national treasure.
    - ✓ It demonstrates how crucial rivers are to sustaining human life.
- ❖ Rivers and other freshwater environments are crucial sources of clean water for agriculture and drinking but are being subjected to significant quantities of pollution and contamination by both the general people and industries.
    - ✓ The day tries to focus on the uneven access to clean water and the pollution occurring due to human activities.

Related Indian Initiatives

- ❖ **Namami Gange Programme**: It is an Integrated Conservation Mission, approved as a 'Flagship Programme' by the Union Government in June 2014 to accomplish prevention of pollution and conservation and rejuvenation of National River Ganga.
    - ✓ Ganga was declared as the 'National River' of India in 2008.
- ❖ **Ganga Action Plan**: It was the first River Action Plan that was taken up in 1985, to improve the water quality by the interception, diversion, and treatment of domestic sewage.
    - ✓ The National River Conservation Plan is an extension to the Ganga Action Plan.
- ❖ **National River Conservation Plan (NRCP)**:
    - ✓ Centrally Sponsored Scheme implemented for abatement of pollution in identified stretches of rivers in the country, excluding those in Ganga basin, by providing financial and technical assistance to the States/Union Territories (UTs) on cost sharing basis.
- ❖ **National River Rejuvenation Mechanism**

13.12.   NATIONAL VACCINATION DAY- MARCH 16TH

- ❖ National Vaccination Day, also known as **Immunization Day or Polio Ravivar**, is an annual event celebrated in India on **March 16th**.
- ❖ The day is observed to promote vaccination campaigns and raise awareness about the importance of vaccines in preventing infectious diseases.
- ❖ The **first National Vaccination Day** was celebrated in India in **1995** to eradicate polio from the country.
    - ✓ Since then, it has become an important event in India's public health calendar.
- ❖ The **last case was reported in 2011** and **WHO declared India to be Polio free in 2014**.

13.13.   INTERNATIONAL DAY OF MATHEMATICS/ PI DAY- MARCH 14TH

- ❖ Every year on March 14, the International Day of Mathematics, also known as Pi Day, is observed to honour the mathematical constant Pi, which expresses the proportion of a circle's circumference to its diameter. The value for Pi is 3.14.
- ❖ At its 205th meeting, the Executive Council of UNESCO declared March 14 to be the International Day of Mathematics.
- ❖ The **theme** for Pi Day 2023 is **"Mathematics for Everyone"**.
    - ✓ The purpose of the holiday is to recognise and celebrate the value of mathematics in our daily lives.
    - ✓ Also, Albert Einstein's birthday anniversary falls on this day.

✓ The renowned theoretical scientist Stephen Hawking passed away on this day in 2018.

13.14.   GLOBAL RECYCLING DAY 2023- MARCH 18TH

❖ Every year on **March 18th**, Global Recycling Day is celebrated to increase people's awareness about the harmful effects of plastic on the environment.
❖ This day also promotes recycling as a crucial concept and encourages people to organize events throughout the year to spread awareness about this cause.
❖ The **theme** of Global Recycling Day 2023 is **"Creative Innovation".**
❖ Global Recycling Day was established on March 18th, 2018, by the Global Recycling Foundation

13.15.   WORLD SLEEP DAY

❖ World Sleep Day 2023 is an annual event observed on the **Friday before the Spring Vernal Equinox** to raise awareness about the significance of sleep.
    ✓ This year, it falls on **March 17, 2023**.
❖ The World Sleep Committee of the World Sleep Society, founded by World Association of Sleep Medicine (WASM) and World Sleep Federation (WSF), organizes this day.
❖ The World Sleep Day 2023- **theme** by World Sleep Society is **'Sleep is Essential for Health'.**

13.16.   INTERNATIONAL DAY OF HAPPINESS-20TH MARCH

❖ The International Day of Happiness is celebrated on **March 20**.
❖ Its purpose is to emphasize the importance of happiness and the overall well-being of individuals.
❖ **The theme** of International Day of Happiness 2023 **is "Be Mindful, Be Grateful, Be Kind."**
❖ On July 12, 2012, the United Nations General Assembly announced March 20 as the International Day of Happiness through its resolution 66/281.
❖ The United Nations initiated this event in 2013, following Bhutan's advocacy for national happiness.

13.17.   WORLD ORAL HEALTH DAY 2023-20TH MARCH

❖ World Oral Health Day is observed globally every year on March 20, with the primary objective of increasing awareness about the significance of oral health.
❖ The Oral Health Day aims to encourage individuals to adopt good oral hygiene practices, take care of their teeth, and learn ways to prevent dental problems.
❖ According to a report by the WHO Global Oral Health, approximately 75% of the world's population suffer from permanent teeth caries, while 514 million children experience caries in primary teeth.
❖ The **theme** for 2023 is **'Be Proud of Your Mouth,'** which is the same theme used for the past three years.

13.18.   INTERNATIONAL DAY OF FORESTS

❖ The International Day of Forests, also known as World Forests Day, is celebrated each year on March 21 to raise awareness about the importance of forests and trees for the survival of humanity and the planet.
❖ The **theme for 2023** is 'Forests and Health.'
❖ Initially in **1971** the Food and Agriculture Organization of the United Nations (FAO) established **World Forestry Day**. The day was established to create and raise awareness of the importance of forests for people and the planet.
❖ In 2011, the United Nations declared the years 2011 to 2020 as the International Decade of Forests.
    ✓ Its objective was to promote sustainable management, conservation, and development of all types of forests.
❖ In **2012**, the **International Day of Forests** was established.
Status of Forests in India
❖ India's total forest and tree cover was 80.9 million hectares, which accounted for **24.62%** of the geographical area of the country.
❖ As per the India State of Forest Report-2021, forest and tree cover in the country increased by 2,261 square kilometres since the last assessment in 2019.

13.19.   WORLD SPARROW DAY

- ❖ World Sparrow Day is observed every year on **March 20th**.
- ❖ It is designated to raise awareness about sparrow conservation and protection, as their numbers are declining globally.
- ❖ The **theme** of World Sparrow Day 2023 is **"I Love Sparrows"**.
- ❖ A sparrow is a member of the genus **Passer**. They are small passerine birds which belong to the family Passeridae.
- ❖ The genus has **about 30 species** around the world.
    - ✓ The best known of these is the **house sparrow**, **Passer domesticus**.
- ❖ World Sparrow Day is a joint initiative by the **Nature Forever Society**, India, an NGO by **Mohammed Dilawar** (internationally acclaimed conservationist) along with other global organisations.
    - ✓ The main purpose of the Nature Forever Society is to save common flora and fauna including sparrows by involving citizens.
- ❖ First World Sparrow Day was celebrated on March 20, 2010.

13.20.   WORLD DOWN SYNDROME DAY: MARCH 21ST

- ❖ **March 21** is observed as World Down Syndrome Day worldwide, aiming to increase public awareness and show support for individuals living with this genetic condition.
- ❖ The United Nations chose this date to highlight the link between Down syndrome and the triplication (trisomy) of the **21st chromosome**, which makes it unique.
- ❖ This year's World Down Syndrome Day **theme** is **'With Us, Not for Us',** emphasizing that people with disabilities should be treated equally and have access to the same opportunities as others.

13.21.   WORLD WATER DAY

- ❖ **World Water Day (WWD)** is celebrated on **22nd March** every Year.
- ❖ The United Nations General Assembly issued a **resolution in 1993** declaring every year March 22 as World Day for Water.
- ❖ The **theme** for WWD 2023 is **'Accelerating the change to solve the water and sanitation crisis'**, emphasizing the necessity of taking stern action to address the global water crisis.
- ❖ The main objective of the day is to aware and inspire people to sustainably manage freshwater resources and learn more about water-related issues like water pollution, water scarcity, inadequate water, and lack of sanitation, and take appropriate steps to make a difference.
- ❖ According to the United Nations, the idea behind celebrating the day is to "support the achievement of **sustainable development goal (SDG) 6**: water and sanitation for all by 2030."

13.22.   SHAHEED DIWAS

- ❖ **Shaheed Diwas** is celebrated across India on 23rd March since 1931 to remember the sacrifices made by three freedom fighters - **Bhagat Singh, Sukhdev Thapar, and Shivaram Rajguru** - who died while leading India's fight for freedom from British rule.
- ❖ The three freedom fighters were hanged by the British Government in 1931.
- ❖ The trio was found guilty of the murder of deputy police superintendent **JP Saunders** in **1928**, to **avenge the death of Lala Lajpat Rai**.

13.23.   WORLD TUBERCULOSIS DAY 2023

- ❖ **World Tuberculosis (TB) Day** is observed on **24th March** every year to spread awareness about the disease.
- ❖ India aims to make the nation TB-free by 2025, whereas the Global Target for TB elimination is 2030.
- ❖ Theme for 2023: **Yes! We can end TB!**
- ❖ **Significance -** On this day in 1882, **Dr. Robert Koch** announced the **discovery of Mycobacterium tuberculosis** that causes TB
- ❖ As per WHO World Health Organisation, every day, over 4100 people lose their lives to TB and about 28,000 people fall ill with this disease.
- ❖ India accounts for roughly 28% of TB cases in the world, as per the Global TB Report 2022.
About Tuberculosis

- Tuberculosis is an infection caused by **Mycobacterium tuberculosis**.
- The most common affected organs are lungs, pleura (lining around the lungs), lymph nodes, intestines, spine, and brain.
- It is **an airborne infection** that spreads through close contact with the infected, especially in densely populated spaces with poor ventilation
- **Symptoms**: Common symptoms of active lung TB are cough with sputum and blood at times, chest pains, weakness, weight loss, fever and night sweats.
- Treatment: TB is a treatable and curable disease. It is treated with **a standard 6-month course** of 4 antimicrobial drugs that are provided with information, supervision and support to the patient by a health worker or trained volunteer.
- **Multidrug-resistant tuberculosis (MDR-TB)** is a form of TB caused by bacteria that **do not respond** to **isoniazid and rifampicin**, the 2 most powerful, first-line anti-TB drugs.
  - ✓ MDR-TB is treatable and curable by using second-line drugs such as Bedaquiline.
- **Extensively drug-resistant TB (XDR-TB)** is a more serious form of MDR-TB caused by bacteria that do not respond to the most effective second-line anti-TB drugs, often leaving patients without any further treatment options.

13.24. WORLD THEATRE DAY- MARCH 27

- Every year on **March 27**, World Theatre Day is celebrated worldwide to promote the significance of theatrical forms.
- The **theme** of World Theatre Day is **"Theatre and a Culture of Peace"** set by the International Theatre Institute.
- World Theatre Day was first observed in 1961 by the International Theatre Institute (ITI).
- ITI is a worldwide organization that promotes international exchange in theatre arts and promotes the values of UNESCO. It was founded in 1948.
- Headquarters: Paris, France.

13.25. PURPLE DAY OF EPILEPSY- MARCH 26TH

- **Purple Day of Epilepsy** is an International Day of Awareness dedicated to raising understanding and reducing the social stigma associated with epilepsy, a neurological condition.
- It is **celebrated annually on March 26** with the goal of educating people about epilepsy, recognizing the signs of a seizure, and offering support to those who are impacted by it.
- The **first Purple Day of Epilepsy was celebrated on March 26, 2008**, and since then, it has grown into a global movement.
- Purple Day of Epilepsy was founded in 2008 by Cassidy Megan, a young girl from Nova Scotia, Canada, who wanted to raise awareness about epilepsy after her own struggles with the disorder.

14.   PERSON IN NEWS

14.1. ALES BIALIATSKI SENTENCED TO PRISON FOR 10 YEARS IN BELARUS

❖ Ales Bialiatski, a leading defender of human rights in Belarus and a candidate for the 2022 Nobel Peace Prize, was given a 10-year prison term in Minsk, the Capital of Belarus.
❖ Ales Bialiatski and three other key members of the Viasna human rights organisation he created were found guilty of funding rallies against the government.

14.2. FORMER CHIEF JUSTICE OF INDIA AM AHMADI PASSES AWAY

❖ Former Chief Justice of India A.M. Ahmadi has passed away at the age of 90.
❖ Ahmadi was the chief justice from 1994 to 1997.
❖ His judicial career as a City Civil and Session Court judge in Ahmedabad, he was the only Chief Justice of India who started at the very lowest rank to rise to the highest position of the Indian judiciary.

14.3. SWAMI SAHJANAND SARASWATI

❖ Swami Sahajanand Saraswati was an ascetic, a nationalist and a peasant leader of India.
❖ He played an important role in organizing **non-cooperation movement in Shahabad district of Bihar and Ghazipur district in Uttar Pradesh**.
❖ From 1924 to 1928 his activities centered on the propagation of Khadi and prohibition.
❖ He established a Khadi weaving center at **Simri** and an Ashram for political and Sanskrit teaching at **Bihata**.
❖ The Bihar Provincial Kisan Sabha (BPKS) was founded by Saraswati in 1929 to address peasants' complaints about zamindari attacks on their occupancy rights, and served as the foundation for the farmers' movements in India.
❖ **The All-India Kisan Sabha** (AIKS) was established at the Lucknow session of the Indian National Congress in April 1936, with Saraswati chosen as its **first President**.
❖ He organised the **Bakasht Movement** in Bihar during 1937-38.
❖ He along with other literary personalitites published a Hindi weekly, Hunkar from Patna.

14.4. ALLURI SITHARAMA RAJU AND KOMARAM BHEEM
❖ The Telugu movie 'RRR', which won the Best Original Song for 'Naatu Naatu' at the 2023 Oscars, is inspired by the lives of Indian freedom fighters Alluri Sitharama Raju and Komaram Bheem.
1. **Alluri Sitharama Raju**
    a. Alluri Sitarama Raju, born in Andhra Pradesh in 1897/1898, led the **Rampa or Manyam Rebellion** of 1922 and was involved in opposing the British in response to the 1882 Madras Forest Act.
    b. The Forest Act of 1882 banned the collection of **minor forest produce** such as roots and leaves, and tribal people were forced into labour by the colonial government.
    c. The Rampa or Manyam Rebellion continued in the form of a guerrilla war until May 1924, when Raju, the charismatic **'Manyam Veerudu'** (Hero of Jungle), was finally captured and executed.
2. **Komaram Bheem**
    a. Komram Bheem was born in 1900/1901 in the **Gond tribal community** at Sankepally village in Komaram Bheem dstrict of Telangana.
    b. He led the rebellion **against the feudal Nizams** of Hyderabad.
    c. He spread the **message of "Jal, Jangal, Zameen"** among tribal people, which became a clarion call for indigenous people's rights to natural resources.

14.5. HEMU KALANI

❖ 100th birth anniversary of the freedom fighter was celebrated on 23rd March 2023.
❖ He was born in **Sindh region** of United India.
❖ He was **a revolutionary and a freedom fighter** during the Indian Independence Movement.
❖ Also known as **Bhagat Singh of Sindh**, he joined Swaraj Sena (a youth organization).
❖ He distributed anti-British literature and also **joined the Quit India Movement in 1942**.
❖ In 1942, he attempted to derail and loot the British train loaded with weapons to crush the ongoing Balochistan agitation.

✓ But he was **caught and hanged** at the young **age of 19 years**.

14.6. RAM MANOHAR LOHIA

❖ The Prime Minister paid tribute to Dr. Ram Manohar Lohia on his birthday (March 23, 1910 – October 12, 1967).
❖ Ram Manohar Lohia was a prominent figure in socialist politics and in the movement towards Indian independence.
❖ He was **one of the founders of the Congress Socialist Party** and **editor** of its mouthpiece **Congress Socialist**.
❖ He was a **committed supporter of Mahatma Gandhi's non-violent struggle** against British rule and participated in the Quit India movement in 1942.
❖ He held the position of secretary of the Foreign Department of the All-India Congress Committee (A.I.C.C.), the Congress Party's highest body.
❖ He **formed the Socialist Party (Lohia) in 1956** and became editor of the journal, **Mankind**.
❖ In 1963 Lohia became a **member of the Lok Sabha** after a by-election in **Farrukhabad** (Lok Sabha constituency).
❖ He also won the Lok Sabha general election of 1967 from Kannauj (Lok Sabha constituency) but died a few months later.

15.   AWARDS AND HONOURS

15.1. PEN/NABOKOV AWARD

❖ Recently, Acclaimed Hindi writer Vinod Kumar Shukla won the 2023 PEN/Nabokov Award for achievement in international literature.

❖ He won the PEN America award for lifetime achievement in literature, after decades of composing acclaimed novels like Naukar Ki Kameez (1979) and poetry collections like Sab Kuch Hona Bacha Rahega (1992).

❖ His first published work was a poetry collection Lagbhag Jai Hind (1971), followed by Vah Aadmi Chala Gaya Naya Garam Coat Pehankar Vichar Ki Tarah (1981).

  ✓ Naukar Ki Kameez was his first novel.

❖ He has also won the Sahitya Akademi award and the Atta Galatta–Bangalore Literature Festival Book Prize.

About PEN/Nabokov Award

✓ The PEN/Nabokov Award for Achievement in International Literature is **awarded biennially** by PEN America (formerly PEN American Center) to writers, principally novelists, "whose works evoke to some measure Nabokov's brilliant versatility and commitment to literature as a search for the deepest truth and the highest pleasure— what Nabokov called the 'indescribable tingle of the spine'."

✓ It is one of the most coveted literary prizes worldwide. The winner is awarded $50,000.

✓ The award is financed by the Vladimir Nabokov Foundation, founded by Dmitri Nabokov. It has been called one of the most prestigious PEN prizes.

15.2. PORTER PRIZE 2023

❖ Union Health and Family Welfare Ministry has received the Porter Prize 2023.

❖ It recognized the government's strategy in managing COVID-19, also the approach, and involvement of various stakeholders especially the involvement of Accredited Social Health Activists (ASHA) workers.

❖ The country's contribution to developing and manufacturing vaccines was also lauded.

✓ India delivered more than 2.5 billion doses.

❖ Porter Prize is named after award-winning economist Michael E. Porter.

✓ He has brought economic theory and strategy concepts to bear on many of the most challenging problems faced by corporations, economies and societies

15.3. SIR DAVID CHIPPERFIELD SELECTED AS THE 2023 LAUREATE OF THE PRITZKER ARCHITECTURE PRIZE

❖ Civic architect, urban planner and activist, Sir David Alan Chipperfield has been selected as the 2023 Laureate of The Pritzker Architecture Prize, the award that is regarded internationally as architecture's highest honor.

❖ Chipperfield's career spans more than 40 years and includes 100-plus projects, ranging from civic, cultural, and academic buildings to residences and urban master planning throughout Asia, Europe, and North America.

15.4. NORWAY'S SAKHAROV FREEDOM AWARD

❖ Recently, Truth Hounds, which documents war crimes in the Ukraine conflict was awarded Norway's Sakharov Freedom Award.

  ✓ Truth Hounds is a Ukrainian rights group founded during the Maidan Revolution which led to the fall of pro-Russian former Ukranian president Viktor Yanukovych

❖ Sakharov Freedom Award is named after Soviet scientist and dissident Andrei Sakharov.

❖ It was established in 1980 by the Norwegian Helsinki Committee with the support and consent of Andrei Sakharov to help people who, because of their opinions, beliefs, and conscience are persecuted or imprisoned.

15.5. WOMEN ICONS LEADING SWACHHATA' (WINS) AWARDS 2023

❖ First edition of WINS Awards was announced by Ministry of Housing & Urban Affairs.

❖ Awards aim to recognize inspiring and exemplary initiatives in urban sanitation and waste management by women led organizations and individual women.

❖ State nominations will be evaluated at the national level on their innovativeness, impact, uniqueness, sustainability & replicability.

15.6. S C BOSE AAPDA PRABANDHAN PURASKAR

❖ The PM felicitated awardees of the Subhash Chandra Bose Aapda Prabandhan Puraskar during the 3rd Session of the National Platform for Disaster Risk Reduction (NPDRR).
  ✓ The main **theme** of the session is **"Building Local Resilience in a Changing Climate".**
❖ **Awardees for the Year 2023**
  ✓ Odisha State Disaster Management Authority (OSDMA)
  ✓ Lunglei Fire Station, Mizoram

About the Award

❖ Aims to recognize the excellent work done by individuals and Institutions in India in the field of Disaster Management like Prevention, Mitigation, Preparedness, Rescue, Response, Relief, Rehabilitation, Research/ Innovations or Early Warning.
❖ **Eligibility**
  ✓ Only Indian nationals and Indian institutions are eligible to apply for the award.
  ✓ For institutions, voluntary organisations, corporate entities, academic/research institutions, response/ uniformed forces or any other institution may apply as an institution for the award.
  ✓ The candidate for the award must have worked in the area of Disaster Management related work in India.
  ✓ The application must be accompanied by details of the work done in disaster management and must highlight achievements.
  ✓ Any individual and institution can nominate an individual or institution for the award.
  ✓ The awards are announced on 23rd January each year, on the birth anniversary of Netaji Subhash Chandra Bose.
  ✓ It carries a cash prize of **Rs. 51 lakhs** and a certificate in the case **of an institution** and **Rs. 5 lakhs** and a certificate in the case of **an individual**.

15.7. NAATU NAATU WINS OSCAR

❖ The 95th Academy Awards (Oscars 2023) have announced that RRR's "Naatu Naatu" won Best Original Song.
❖ The song's words were **written by Chandrabose**, with **music by MM Keeravaani**, and it was **performed by Kala Bhairava and Rahul Sipligunj**.
❖ "Naatu Naatu" also received the Golden Globe for best song.

15.8. VYAS SAMMAN 2022

❖ **Pagalkhana**, a 2018 satirical novel by renowned Hindi author **Dr. Gyan Chaturvedi**, has been chosen for the 32nd Vyas Samman.
❖ The **KK Birla Foundation** founded the annual Vyas Samman in 1991, which is awarded to a superb piece of Hindi literature authored by an Indian citizen and published within the previous ten years.
  ✓ It carries a cash reward of 4 lakh rupees.
❖ The KK Birla Foundation also awards the **Saraswati Samman** and the **Bihari Puraskar** in addition to these awards.

15.9. SARASWATI SAMMAN 2022

❖ The KK Birla Foundation has announced that **Tamil** writer **Sivasankari** will be the recipient of the prestigious Saraswati Samman award for the year 2022, for her 2019 memoir, **Surya Vamsam**.
❖ The award is one of the most esteemed recognitions in Indian literature, and comes with a cash prize of Rs 15 lakh, a plaque, and a citation.
  ✓ Apart from the Saraswati Samman, the KK Birla Foundation has also established two other literary awards: the **Bihari Puraskar** and the **Vyas Samman**.
❖ **Sivasankari** is a prolific writer with a career spanning over 50 years, during which she has written **36 novels, 48 novellas, 150 short stories, 15 travelogues, seven collections of essays, and three biographies**, including one on former Indian Prime Minister Indira Gandhi.
❖ Her literary contributions have been widely recognized, and her works have been **translated** into several Indian languages, as well as **English, Japanese, and Ukrainian**.

15.10.   PRESIDENT'S COLOUR TO INS DRONACHARYA

❖ The President of India presented the President's Colour to **INS Dronacharya**.
❖ It is the **highest award bestowed on a military unit** in India in recognition of its exceptional services to the nation.

- ❖ It is also known as 'Nishaan' which is an emblem that is worn by all unit officers on the left-hand sleeve of their uniform.
- ❖ The **Indian Navy** was the **first Indian Armed Force** to be awarded the President Colour by Dr. Rajendra Prasad in 1951.
- ❖ In India, as well as many Commonwealth nations, the tradition of Colours has been drawn from the British Army.
- ❖ Traditionally, there have been four kinds of symbols associated with Colours —Standards, Guidons, Colours and Banners.

About INS Dronacharya

- ❖ The Indian Navy's INS Dronacharya is a **prestigious gunnery school** located in **Kochi, Kerala**.
- ❖ It is responsible for training officers and ratings in various fields such as small-arms, naval missiles, artillery, radar, and defensive countermeasures.

15.11.   KALANIDHI AWARDS 2023

- ❖ The Madras Music Academy has announced the winner of the Sangita Kalanidhi and Nritya Kalanidhi for the year 2023.

Sangita Kalanidhi award

- ❖ Carnatic vocalist Bombay Jayashri, who is known for her melodic and meditative style of singing and is recognised by a Padma Shri from the Indian government has been selected for the **Sangita Kalanidhi award** of the Music Academy for 2023.
- ❖ Sangita Kalanidhi award is **considered the highest accolade in the field of Carnatic music**.
- ❖ The award comprises a gold medal and a birudu patra (citation).

Nritya Kalanidhi award

- ❖ **Vasanthalakshmi Narasimhachari** has been selected for The Nritiya Kalanidhi award for dance.
- ❖ She excels both in Bharathanatyam and Kuchipudi.

About Madras Music Academy

- ❖ It is a landmark institution in the history of the fine arts.
- ❖ It emerged as **an offshoot of the All India Congress Session** held in **Madras** in **December 1927**.
- ❖ It was conceived to be the institution that would set the standard for Carnatic music.
- ❖ It also confers the various awards such as the Sangita Kalanidhi, Nritya Kalanidhi, Sangita Kala Acharya, TTK, and Musicologist awards for the year.

15.12.   ABEL PRIZE

- ❖ The Abel Prize for mathematics was awarded to **Argentine-American Luis Caffarelli** for his seminal contributions to regularity theory for nonlinear partial differential equations.
- ❖ He is the first person born in South America to win the award.
- ❖ **Differential equations** are tools scientists use to predict the behaviour of the physical world. These equations play a prominent role in many disciplines including engineering, physics, economics, and biology.
- ❖ **Partial differential equations** arise **naturally** as laws of nature, to describe phenomena as different as the flow of water or the growth of populations.

About the Abel Prize

- ❖ It is named after the **Norwegian mathematician Niels Henrik Abel** (1802-1829) and is one of the most coveted awards in mathematics.
- ❖ The Abel Prize is funded by the **Norwegian government** and amounts to NOK 7.5 million ($710,000).
- ❖ The choice of the Abel laureate is based on the recommendation by the Abel Committee, which is composed of five internationally recognised mathematicians.

16. APPOINTMENTS

16.1. RASHMI SHUKLA APPOINTED AS DG OF SASHASTRA SEEMA BAL

- ❖ Senior Indian Police Service (IPS) officer, Rashmi Shukla has been appointed as the Director-General of the Sashastra Seema Bal (SSB).
  - ✓ SSB is the border-guarding force deployed along Nepal and Bhutan border.
- ❖ Rashmi Shukla, a 1988 batch IPS officer of the Maharashtra cadre, was posted with the Central Reserve Police (CRPF).

16.2. JISHNU BARUA IS NEW CHAIRMAN OF CENTRAL ELECTRICITY REGULATORY COMMISSION

- ❖ Jishnu Barua has become the new chairperson of power regulator Central Electricity Regulatory Commission (CERC).
- ❖ Barua has been appointed chairperson of the CERC on February 27, 2023.
- ❖ Earlier, Barua was chief secretary of Assam from October 2020 to August 2022.
- ❖ CERC headquarters- New Delhi.

16.3. S.S. DUBEY TAKES CHARGE AS NEW CONTROLLER GENERAL OF ACCOUNTS

- ❖ S.S. Dubey took charge as the new Controller General of Accounts (CGA). He is the 28th officer to hold the position of CGA.
- ❖ Prior to that, Dubey has served as Chief Controller of Accounts in Ministry of Housing & Urban Affairs.

16.4. ERIC GARCETTI – NEW US AMBASSADOR TO INDIA

- ❖ The US Senate Committee has announced the appointment of **Eric Garcetti** as the new US Ambassador to India.
- ❖ Eric Garcetti served as the President of the City Council of Los Angeles for four consecutive terms and is known to be a close acquaintance of President Biden. He has also emerged as a leader within the Democratic Party.

17. SPORTS

17.1. INDIA'S TRIPLE-JUMPER AISHWARYA BABU BANNED BY NADA FOR FOUR YEARS

- ❖ India's top triple-jumper Aishwarya Babu has been banned by the National Anti-Doping Agency's (NADA) disciplinary panel for four years for using a prohibited anabolic steroid.
- ❖ Aishwarya Babu, 25 years old, was dropped from the Birmingham Commonwealth Games in 2022, along with sprinter S Dhanalakshmi after testing positive for the steroid, which is on the World Anti-Doping Agency's (WADA) prohibited list.

17.2. MAX VERSTAPPEN WINS BAHRAIN GRAND PRIX 2023

- ❖ Max Verstappen won the season-opening Bahrain Grand Prix from pole position, leading almost the entire race.

Pole position
- ❖ **First- M. Verstappen**-Red Bull (Belgian-Dutch)
- ❖ **Second- S. Pérez-** Red Bull (Mexico)
- ❖ **Third- F. Alonso-** Aston Martin (Spain)

17.3. IRANI CUP 2022-23

- ❖ In the final of the Irani Cup 2022/23, Team Rest of India secured their 30th title win in the Indian domestic tournament, continuing their dominant performance. They defeated Madhya Pradesh by 238 runs.
- ❖ The Irani Cup, named after the late Z. R. Irani, was introduced in 1959-60 and is a traditional five-day match played between the Ranji Trophy winners and a Rest of India team.
- ❖ It is considered one of the most prestigious domestic cricket tournaments in India.

17.4. ROHAN BOPANNA-OLDEST TO WIN ATP TITLE

- ❖ Rohan Bopanna, a 43-year-old Indian tennis player, and his Australian partner Matthew Ebden have become the oldest duo to win an ATP Masters 1000 title.
- ❖ They won the men's doubles final at the Indian Wells Masters 2023 tournament in California by defeating the top-seeded team of Wesley Koolhof and Neil Skupski.

17.5. STADIUM NAMED AFTER RANI RAMPAL

- ❖ Rani Rampal, a prominent player on the **Indian hockey team**, has achieved a significant milestone as the **first woman in the sport to have a stadium named after her**.
- ❖ The MCF **Rae Bareli** has renamed the hockey stadium to **'Rani's Girls Hockey Turf'** in her honor.

17.6. PANKAJ ADVANI RETAINS ASIAN BILLIARDS TITLE

- ❖ **Pankaj Advani**, the Indian cue sports champion, has retained his Asian Billiards title in the 100-up format after defeating his compatriot Brijesh Damani 5-1 in the final held at Qatar Billiards and Snooker Federation (QBSF) Academy.
- ❖ In the women's category, Bai Yulu of China defeated Panchaya Channoi from Thailand 3-0 in the final.

17.7. SHAKIB AL HASAN BECOMES TOP T20I WICKET-TAKER

- ❖ **Shakib Al Hasan** has surpassed Tim Southee to become the leading wicket-taker in T20I cricket during the second T20I match against Ireland in Chattogram.
- ❖ With 136 wickets in T20I at an average of 20.67 and an economy rate of 6.8, Shakib is considered as one of the best all-rounders in T20 cricket.

18.   PLACES IN NEWS

18.1. BAKHMUT CITY

- ❖ Bakhmut is a small mining town in eastern Ukraine's Donetsk province.
- ❖ Bakhmut is currently in ruins, having been the focal point of Russian assaults and a site of dogged defence by the Ukrainian military.
- ❖ I**mportance of Bakhmut:**
    - ✓ Bakhmut is proximate to multiple important roads which may have some strategic value to the Russian advance.
    - ✓ It's an important transport hub, a lot of supply lines go through there and Russia could use it as a base.
    - ✓ Beyond its limited strategic value, the town has become a symbol for the war itself, guiding both sides' unrelenting resolve to control it.

19.   SOCIAL ISSUES, HEALTH, EDUCATION

19.1. AUSTRALIAN UNIVERSITIES TO SET UP CAMPUSES IN GIFT CITY.

- ❖ Two Australian universities will be establishing campuses in the GIFT City in Gujarat. The partnership with Australia will provide accessibility, affordability, and quality of education for youngsters.
- ❖ The two universities, both public, are **Deakin University** and **Wollongong University**.
- ❖ These are the first two foreign varsities to be setting up their campuses in GIFT (Gujarat International Finance Tec) City.
- ❖ The two universities will sign an agreement on setting up their campuses during Australian Prime Minister Anthony Albanese's maiden visit to India next week.

19.2. $1 BILLION LOAN BY WORLD BANK FOR HEALTHCARE

- ❖ Recently the Government of India and World Bank signed two complimentary loans worth $1 billion to support and enhance India's healthcare infrastructure.
- ❖ The World Bank is lending two complementary loans of $500 million to help India with preparedness for future pandemics as well as to strengthen its health infrastructure.
    - ✓ The $500-million Public Health Systems for Pandemic Preparedness Program (PHSPP) will support efforts to prepare India's surveillance system to detect and report epidemics of concern.
    - ✓ Another $500 million Enhanced Health Service Delivery Program (EHSDP) will support government's efforts to strengthen service delivery through a redesigned primary healthcare model.
- ❖ Both these loans utilise the Program-for-Results financing instrument that focuses on achievement of results rather than inputs.
- ❖ Through these loans, the bank will support India's flagship Pradhan Mantri-Ayushman Bharat Health Infrastructure Mission (PM-ABHIM) and health service delivery in **seven States of Andhra** Pradesh, Kerala, Meghalaya, Odisha, Punjab, Tamil Nadu, and Uttar Pradesh.

19.3. ERYTHITROL

- ❖ According to recent research, Erythritol, a popular artificial sweetener, is associated with an increased risk of heart attack and stroke.
- ❖ Erythritol activates platelets, the blood cells which cause clots when they clump together. Such aggregation of platelets blocks blood flow in blood vessels in different parts of the body.
    - ✓ When that happens in blood vessels supplying blood to the heart or brain, fatal or non-fatal cardiovascular events occur.

About Erythritol
- ❖ It is a type of sugar alcohol commonly used as a sugar substitute in foods and beverages.
    - ✓ Unlike traditional sugars, it has no calories and does not raise blood sugar levels.

- ❖ Artificial sweeteners are common replacements for table sugar in low-calorie, low-carbohydrate and "keto" products (high in fat and low in carbohydrates).
- ❖ **Low Glycemic Index** (GI): It is also believed to have a lower GI than other sweeteners, meaning it may not impact insulin levels as strongly.
  - ✓ GI is a value used to measure how much specific foods increase blood sugar levels.
- ❖ **Uses:** Sugar-free products containing Erythritol recommended for people who have obesity, diabetes or metabolic syndrome. People with these conditions also are at higher risk for adverse cardiovascular events like heart attack and stroke.

19.4. SCRUB TYPHUS

- ❖ Indian scientists have identified better drug treatment for severe Scrub typhus.
- ❖ Combination therapy using both doxycycline and azithromycin is far more effective in treating severe scrub typhus than monotherapies of either drug by itself.

ABOUT SCRUB TYPHUS
- ❖ Scrub typhus, a life-threatening infection caused by Orientia tsutsugamushi bacteria — is a major public health threat in South and Southeast Asia.
  - ✓ Nearly one million cases are reported from South and Southeast Asia with 10% mortality.
  - ✓ India is one of the hotspots with at least 25% of the disease burden.
- ❖ Scrub typhus is a major public health threat because of the high mortality rate in patients with severe disease despite diagnosis and treatment.
- ❖ It is transmitted to humans by bites from tiny, infected larvae of mites.
- ❖ Only the larval stage of the mite requires a blood meal, which is usually from rodents.
- ❖ The infection does not cause typical symptoms, thus making correct and early diagnosis difficult.
- ❖ Also, awareness about infection and disease is very low despite the high disease burden and mortality rate.

19.5. 6 DISEASES ADDED TO NATIONAL POLICY FOR RARE DISEASES

- ❖ Ministry of Health & Family Welfare included six rare diseases under NPRD, 2021.
- ❖ **Group 1- Laron's Syndrome**, a rare disease in which the body is unable to utilise the growth hormones resulting in short stature.
- ❖ **Group 2-**
  - ✓ **Wilson's disease**, a rare disorder in which copper is accumulated in vital organs like liver, brain and others;
  - ✓ **Congenital adrenal hyperplasia** (CAH), a group of genetic disorders that affect the adrenal glands; and
  - ✓ **Neonatal onset multisystem inflammatory disease** (NOMID) that causes continuous inflammation and tissue damage
- ❖ **Group 3-**
  - ✓ **Hypophosphatemic rickets**, caused due to the defects in the renal handling of phosphorus; and
  - ✓ **Atypical hemolytic uremic syndrome** (AHUS), which affects kidney function.

About Rare diseases
- ❖ WHO defines rare disease as often debilitating lifelong disease or disorder with a prevalence of 1 or less, per 1000 population.
  - ✓ There are between 7000 - 8000 rare diseases and about 95% have no approved treatment.
- ❖ NPRD aims at lowering incidence and prevalence of rare diseases through a comprehensive preventive strategy.

About NPRD
- ❖ Classification of diseases
  - ✓ **Group 1**: Disorders amenable to one-time curative treatment.
  - ✓ **Group 2**: Diseases requiring long term / lifelong treatment having relatively lower cost of treatment.
  - ✓ **Group 3**: Diseases for which definitive treatment is available but challenges are to make optimal patient selection.
- ❖ Government's support in treatment Financial support under Umbrella Scheme of Rashtriya Arogaya Nidhi by Central Government for treatment of Group 1 diseases.
- ❖ State Governments can support patients listed under Group 2.

19.6. ATL Sarthi

- ❖ **NITI Aayog** has launched **ATL Sarthi** under **Atal Innovation Mission** (AIM).
- ❖ ATL Sarthi is a comprehensive self-monitoring framework to strengthen the ever-growing ecosystem of Atal Tinkering Laboratories (ATL).
- ❖ It provides a Monitoring and Evaluation framework to enhance the performance of ATLs.
- ❖ AIM is establishing ATLs in schools across India to foster curiosity, creativity, and imagination in young minds.
- ❖ AIM is Government of India's flagship initiative to create and promote a culture of innovation and entrepreneurship across the country.

19.7. Rajasthan's Right to Health Bill

- ❖ **Rajasthan** has become the **first state** to pass in Assembly the **Right to Health Bill**.
- ❖ Under the Constitution, public health and sanitation, including hospitals and dispensaries, come under **State List**.
- ❖ Right to Health creates a legal obligation on states to ensure access to timely, acceptable, and affordable health care of appropriate quality.
- ❖ This includes safe and potable water, sanitation, food, housing, health-related information and education, and gender equality.
- ❖ Supreme Court in Bandhua Mukti Morcha v Union of India & Ors held that **right to life (Article 21) included RTH** within its fold.

Key Features of the Bill
- ❖ Extending a total of 20 rights, Bill gives every resident of the state right to avail **free Out Patient Department** (OPD) services and **In Patient Department** (IPD) services at all public health facilities.
- ❖ The Bill sets certain obligations on the state government to ensure the right to health and maintain public health.
- ❖ **Health Authorities** will be set up **at the state and district level**. These bodies will formulate, implement, monitor, and develop mechanisms for quality healthcare and management of public health emergencies

19.8. Marburg virus

- ❖ **Tanzania** has recently confirmed its first-ever outbreak of Marburg virus, a highly contagious and deadly virus that causes viral hemorrhagic fever.

About Marburg virus
- ❖ Marburg virus is an Ebola-like virus that causes viral hemorrhagic fever.
- ❖ The virus is the causative agent of Marburg virus disease (MVD), a disease with a **case fatality ratio of up to 88%**.
- ❖ Both Marburg and Ebola viruses are members of the Filoviridae family (filovirus), and the two diseases are clinically similar.
- ❖ Marburg virus disease was initially detected in 1967 after simultaneous outbreaks in Marburg and Frankfurt in Germany; and in Belgrade, Serbia.
- ❖ **Transmission**- Human MVD infection results from **prolonged exposure to mines or caves inhabited** by **Rousettus bat colonies**.
  - ✓ Marburg spreads through **human-to-human transmission** via **direct contact** (through broken skin or mucous membranes) with the blood, secretions, organs or other bodily fluids of infected people, and via **contaminated surfaces and materials** (e.g. bedding, clothing).
- ❖ **Symptoms**- incubation period (interval from infection to onset of symptoms) varies from 2 to 21 days. High fever, severe headache, severe malaise, Muscle aches and pains, diarrhea, abdominal pain and cramping, nausea, and vomiting are common symptoms.
- ❖ Many patients develop severe hemorrhagic manifestations and fatal cases usually have some form of bleeding, often from multiple areas.

19.9. IoE scheme

- ❖ As per reports, many institutes even after being selected for the Institution of Eminence (IoE) Status, are still waiting for the IOE status for more than three years.

About Institution of Eminence Scheme

- ❖ The central Government formulated the IoE scheme to establish **20 prestigious educational institutions** in the country.
- ❖ It was **introduced by the University Grants Commission** (UGC) in 2017 that required the IoE scheme to receive accreditation within five years of notification.
- ❖ The status of 'Institute of Eminence' was launched to empower higher education institutions in India and help them implement world-class teaching systems to enhance affordable access to high-quality education.
- ❖ **Twenty institutions** (10 Public and 10 Private Institutions) received the grant, and eleven among the selected ones got the Institutions of Eminence status in April 2021.
- ❖ **Objective:-**
    - ✓ To provide for higher education leading to excellence and innovations
    - ✓ To engage in areas of specialization to make distinctive contributions to the objectives of the university education system.
    - ✓ To aim to be rated internationally for its teaching and research as a top hundred Institution in the world over time.
    - ✓ To provide for high quality teaching and research and for the advancement of knowledge and its dissemination.
- ❖ **Criteria:**
    - ✓ Only those institutions which have appeared in any of the global/national ranks (e.g., QS, NIRF) shall be recommended for the IoE status.
    - ✓ The Institutions should be among:
        - ➢ **Top 50** in the **National institutional Ranking Framework (NIRF)** in their category.
        - ➢ **Top 500** in **internationally recognised rankings** like the Times Higher Education World University Rankings, QS.
    - ✓ **Greenfield Proposals**: Only after exhausting the above criterion, if any slot remains vacant, shall consideration be given to yet to be established (Greenfield) proposals.
        - ➢ The term **greenfield project** generally refers to the initiation of a project without the need to consider any prior work.
        - ➢ The Greenfield Institutions would get a 3-year period to establish and operationalize the institution, and thereafter, EEC will consider giving IoE status to such institutions.
- ❖ The public institutions under the IOE tag will receive a government grant of Rs **1,000 crore**, while the private institutions will not get any funding under the scheme.

19.10.   DELHI DECLARATION

- ❖ **Indian Council of Agricultural Research** (ICAR) and **World Bank** have issued **'Delhi Declaration'** on Modernisation of **Agricultural Education System** (AES) at International Conference on Blended Learning Ecosystem.
- ❖ Conference was held as part of **NAHEP's** Resilient Agricultural Education System (RAES) development initiative.

National Agricultural Higher Education Project (NAHEP).
- ❖ It aims to attract talent and strengthen higher agricultural education in the country.
- ❖ NAHEP is a **five-year project initiated in 2018 by World Bank** and Central Government to strengthen National AES.
- ❖ Funded by the **World Bank** and the **Indian Government** on a 50:50 basis.
- ❖ The objective of the NAHEP for India is to support participating agricultural universities and ICAR in providing more relevant and higher quality education to Agricultural University students.
- ❖ In addition, a four-year degree in Agriculture, Horticulture, Fisheries and Forestry has been declared a professional degree.
- ❖ **ICAR** is an autonomous organisation for coordinating, guiding and managing research and education in agriculture including horticulture, fisheries and animal sciences in India. It is headquartered in New Delhi.

19.11.   HEFA

- ❖ A Parliamentary panel has asked Ministry of Education (MoE) to ensure speedy disbursal of sanctioned loans by Higher Education Financing Agency (HEFA).

About Higher Education Financing Agency

- ❖ HEFA is a joint venture **between MoE** and **Canara Bank** to finance infrastructure development in premier educational institutions through long-term loans with an **agreed equity participation** in the **ratio of 90.91% and 09.09% respectively**.
- ❖ HEFA is registered under Section 8 as **Not-for-profit under the Companies Act 2013** as a Union Govt company and as **Non–deposit taking Systemically Important (NBFC-ND-SI) with RBI**.
- ❖ **Objective**- The main aim of HEFA is for the development of India's top-ranked institutions like IIT's, IIIT's, NIT's, IISCs, AIIMS into globally top ranking institutions through improvement in their academic and infrastructure quality.
- ❖ Government had expanded scope of HEFA in 2018 **under Revitalizing Infrastructure and Systems in Education or RISE** by 2022 initiative, bringing Kendriya Vidyalayas, Navodaya Vidyalayas, medical institutions etc. under its ambit.

20. MISCELLANEOUS

20.1. OLDEST HUMAN GENOME RECOVERED IN SPAIN

❖ Recently, oldest human genome (23000-year-old) was discovered in Spain.
❖ Genome is the entire set of DNA instructions found in a cell.
❖ In humans, genome consists of 23 pairs of chromosomes located in the cell's nucleus, as well as a small chromosome in the cell's mitochondria.
❖ A genome contains all the information needed for an individual to develop and function.

20.2. WORLD'S FIRST BAMBOO CRASH BARRIER

❖ Recently, the world's first 200-metre-long bamboo crash barrier has been installed on a Vani-Warora Highway connecting Chandrapur and Yavatmal districts in Maharashtra.
❖ Named 'Bahu Balli', the bamboo crash barrier made from 'Bambusa Balcoa' species underwent rigorous testing at various government-run institutions and was rated as Class 1 during the Fire Rating Test and it has also been accredited by the **Indian Road Congress** (IRC).
❖ This crash barrier offers a perfect alternative to steel and addresses environmental concerns.

About Indian Road Congress (**IRC**)
❖ Indian Roads Congress is the premier technical body of highway engineers which was formed in 1934 as India's national body for laying down and designing standards for roads and highway construction
❖ The IRC was set up on the recommendations of the Indian Road Development Committee best known as Jayakar Committee (1927) set up by the Government with the objective of Road Development in India.

20.3. MAUGANJ INTRODUCED AS THE 53RD DISTRICT OF MADHYA PRADESH

❖ Mauganj was declared as 53rd district of Madhya Pradesh by the chief minister of Madhya Pradesh.
❖ Mauganj is presently a tehsil of the Rewa district.

20.4. WORLD'S LONGEST RAILWAY PLATFORM IN HUBBALLI

❖ Prime Minister dedicated **World`s longest railway platform** of 1.5 kilometres at **Sri Siddhaarooda railway station in Hubballi** in Karnataka.
❖ It is to be noted that Indian Railways, South Western Railway Zones Hubbali is now registered in the Guinness Book of World Records for having the longest platform.
❖ **Gorakhpur platform in Uttar Pradesh is the second longest** at 1,366.33 meters, and **Kollam Junction in Kerala has the third longest platform** at 1,180.5 meters.

20.5. CALL BEFORE U DIG APP

❖ Recently, the Prime Minister launched the 'Call Before u Dig' (CBuD) app, to tackle uncoordinated digging and excavation.
❖ The Call Before u Dig mobile application, **an initiative of the Department of Telecommunications aims to prevent damage to underlying assets like optical fibre cables** that occurs because of uncoordinated digging and excavation.
   ✓ It is estimated that **uncoordinated digging and excavation causes losses of about Rs 3,000 crore** every year.
❖ The app will **connect excavators and asset owners** so that there are planned excavations in the country while ensuring the safety of underground assets.

20.6. NEW BOOK ON BASU CHATTERJI RELEASED

❖ A new book titled 'Basu Chatterji: And Middle-of-the-Road Cinema' has been released, which chronicles the life and times of the veteran Indian filmmaker Basu Chatterjee.
❖ The book is written by **Aniruddha Bhattacharjee**, an award-winning author, and has been published by Penguin Random House India (PRHI).

21. HIMACHAL NEWS

21.1. FLAG RAISING CEREMONY OF 300-YR-OLD HOLI FEST HELD.

- ❖ The flag raising ceremony for the Sujanpur Holi Utsav was organised today in Hamirpur.
- ❖ The ceremony is performed by the "Purohits" of the Katoch dynasty that started this festival around 300 years ago.
- ❖ The event was initially organised as a religious festival, but later it turned into a major trade fair.
- ❖ The state government has declared it an international festival.
- ❖ This festival also offers a number of recreational activities to the people.

21.2. THREE-DAY TSHECHU FESTIVAL GETS UNDERWAY AT REWALSAR.

- ❖ The three-day state-level Tshechu fair began at Rewalsar in Mandi district today with traditional fervour.
  - ✓ Sports competitions and cultural evening programs will be organised during the fair.
- ❖ Rewalsar town, known as Triveni worldwide, was an important religious spot for the Buddhists, the Sikhs and the Hindus. The place has a temple, a gurdwara and a monastery.
- ❖ Devotees come and perform puja as per their religious customs.
- ❖ Tshechu fair is organised every year in the memory of Guru Padmasambhava on his birthday in Rewalsar. Thousands of followers from all over the country and abroad participate in the festival.

21.3. ADB APPROVES RS 1,311.20 CRORE FOR INFRA DEVELOPMENT- CM

- ❖ The CM said that Asian Development Bank (ADB) has approved Rs 1,311.20 crore under the phase-1 of the proposed infrastructure development investment programme.
- ❖ the state government had been emphasising on making Himachal the best tourist destination in the country by developing unexplored tourist places.
- ❖ In the first phase, the beautification of Palampur would be undertaken. A convention centre would be built at Dharamsala, a thematic-cum-green park at Pragpur, wellness centres at Dharamsala, Shimla, Nadaun and Kullu-Manali and a high-end fountain tourist facility at Dharamsala.
- ❖ Besides, wayside amenities will be developed on the Mandi-Kullu highway, Nadaun, Kaleshwar Mahadev and Kangra, while rafting-cum-water park complex will be established at Nadaun.
- ❖ Facilities like shikaras, house boats, jetties, water biking at Pong Dam, Nadaun and Bangana, etc, would be developed.

21.4. THIRD LEGACY SCHEME OKAYED IN HIMACHAL TO SETTLE 50,000 VAT, GST CASES

- ❖ The state Cabinet, under the chairmanship CM , approved the Himachal Pradesh Sadhbhawana Legacy Cases Resolution Scheme 2023 to dispose of around 50,000 pending tax cases pertaining to the pre-Goods and Services Tax (GST) era.
- ❖ The Himachal Pradesh Sadhbhawana Legacy Cases Resolution Scheme 2023 will be notified for three months initially.
- ❖ Dealers can deposit their taxes along with the prescribed settlement fee, where interest and penalty have been waived.
- ❖ This is the third such legacy scheme rolled out since 2020 to settle pending casesof Value Added Tax (VAT) and Central Sales Tax (CST), which were later subsumed in the GST.
- ❖ The State Taxes and Excise Department had earlier floated the Himachal Pradesh Swarn Jayanti (Legacy Cases Resolution) Scheme-2021. It was applicable for four months initially and had generated a revenue of Rs 91 crore. There were 1.68 lakh pending cases — 13,705 in Solan, 20,108 in Baddi-Barotiwala-Nalagarh, 11,615 in Sirmaur and 9,869 in Una.

21.5. IIT-MANDI CELEBRATES 14TH FOUNDATION DAY.

- ❖ The Indian Institute of Technology (IIT), Mandi, celebrated its 14th foundation day on Wednesday.
- ❖ Prof TG Sitharam, Chairman, All India Council for Technical Education (AICTE), was the chief guest.
- ❖ Faculty members, other staff, students and several distinguished guests attended the event.
- ❖ Prof Prem Vrat, Chairman, Board of Governors, IIT-Mandi, presided over the event.

❖ The Foundation Stone of IIT Mandi was laid on 24 February 2009. IIT Mandi was registered as a society in Uttarakhand on 20 June 2009. Classes started in IIT Roorkee, the mentoring IIT, on 27 July 2009.

21.6. PRABODH TRIVEDI NEW DIRECTOR OF CSIR-IHBT

❖ Prabodh Kumar Trivedi today took charge as the Director of the CSIR-Institute of Himalayan Bioresource Technologies (IHBT), Palampur.
❖ At present, Trivedi is the Director of the CSIR-Central Institute of Medicinal and Aromatic Plants (CIMAP), Lucknow.
❖ Former Director Sanjay Kumar superannuated on February 28.

21.7. SOCIAL IMPACT SURVEY FOR GAGGAL AIRPORT EXPANSION

❖ The state government has asked an NGO to conduct a social impact survey of the project for the expansion of the Gaggal airport in Kangra.
❖ NGO members, while conducting the survey, faced resistance from people of Gaggal, whose land will be acquired for airport expansion.
  ✓ A social impact survey is a pre-condition before the process of land acquisition is started. In the survey, an independent agency hired by the government would solicit the views of the affected people.
❖ The Gaggal airport is proposed to be expanded in two phases. The Airports Authority of India (AAI) has decided to expand the airport from the current length of 1,372 metres to 1,900 metres in the first phase. In the second phase, its length was proposed to be increased from 1,900 metres to 3,110 metres.
❖ The airport expansion is a major demand of the tourism industry.

21.8. 286 SCHOOLS WITH ZERO ENROLMENT OF STUDENTS DENOTIFIED

❖ 286 primary and middle schools with zero enrolment of students have been de-notified, and the teaching and non-teaching staff in these facilities would be shifted to schools facing a staff crunch.
❖ About 3,000 schools in the state are running with one teacher, while 455 schools are running (with teachers) on deputation basis while 12,000 posts of teachers are vacant.
❖ There are 15,313 government-run schools in the state.

21.9. PENSION FOR EMERGENCY DETAINEES SCRAPPED

❖ The state Cabinet decided to scrap the Himachal Pradesh Loktantra Prahri Samman scheme under which Himachal residents, who were jailed during Emergency in 1975, were provided a monthly pension.
❖ Those who when went to jail under the two laws during Emergency for 15 days or less were granted an honorarium of Rs 12,000 per month while those, who were jailed for more than 15 days, were given an honorarium of Rs 20,000 per month.

21.10.   'PROTSAHAN PURASKAR' RAISED TO RS 1 LAKH

❖ The amount awarded under the 'Himachal Pradesh Mahila Vikas Protsahan Puraskar' would be increased from Rs 21,000 to Rs 1 lakh and the district-level awards from Rs 5,000 to Rs 25,000.

21.11.   WORLD-CLASS CANCER HOSPITAL TO COME UP IN HAMIRPUR

❖ The CM announced that a world-class cancer hospital will be set up at Jol Sapper village here, close to the Hamirpur Medical College which is under construction.
❖ Jol Sapper falls under the Nadaun assembly seat which is represented by the CM.

21.12.   GAGAN KAPOOR ELECTED CII STATE UNIT CHAIRMAN

❖ Gagan Kapoor and Navesh Narula were elected chairman and vice-chairman of the Confederation of Indian Industry (CII), Himachal Pradesh, respectively, for the year 2023-24 at Shimla today.

21.13.   Rs 20 cr double-lane bridge to be built over Beas at Pirdi

- ❖ A double-lane bridge will be built over the Beas at Pirdi, which will connect the National Highway-3 with the Kullu-Bhuntar main road.
- ❖ The work on the bridge will be started after receiving approval from National Bank for Agriculture and Rural Development (NABARD). A survey has been conducted and Rs 20 crore will be spent on the project.
- ❖ The Public Works Department (PWD) has also marked the site for the bridge.
- ❖ This bridge will be useful for the people of Mohal, Shamshi, Badah and adjoining areas and the load of vehicles on the Bailey bridge of Bhuntar will also be reduced.

21.14.   Holi celebrated at historical Nurpur temple

- ❖ Holi was celebrated with religious fervour at the historical Brijraj Swami temple of Lord Krishna in Nurpur. The temple management committee organised two-day celebrations on March 7 and 8 on the temple premises.On the first day, Holi was played with flowers whereas on Wednesday, the devotees played with 'gulal' on the next day. Thousands of devotees participated in the religious event.
- ❖ Nurpur formerly known as Dhameri in the ancient times is located in the scenic Kangra district of Himachal Pradesh.
- ❖ The beautiful fort of Dhameri was built by Raja Basu Dev, the then ruler of Pathankot of the Pathania clan in the late 16th century.
- ❖ The historic fort offers a mesmerizing view of Jabhar Khud, a tributary of a rivulet called Chakki.

21.15.   Snow marathon at Sissu

- ❖ Sailors of the Indian Navy are all set for gruelling session at the snow heights of Himalayan mountain range.
- ❖ A team of 24 sailors led by Commander Vivek Anand reached Sissu in Lahaul and Spiti yesterday to take part in the second edition of the snow marathon to be held at Sissu near Atal Tunnel on March 12.
- ❖ Apart from New Delhi, sailors from Visakhapatnam, Mumbai, Kochi, Port Blair and Karwar (Karnataka) will participate in the marathon.
- ❖ Out of 24 participants, 10 would participate in full marathon (42 km) while the rest would join half marathon (21 km).

21.16.   Tibetan Uprising Day - March 10th

- ❖ Hundreds of Tibetans carrying flags of Tibet took out a march here to mark the 64th anniversary of their Uprising Day.
- ❖ It was the first big protest by Tibetans in Dharamsala, the headquarters of Tibetan government-in-exile.

BRIEF HISTORY
- ❖ The communist government of China in 1949 launched an armed invasion, during which it took the lives of hundreds of thousands of Tibetan people.
- ❖ The Tibetan people felt compelled to stage an uprising in Tibet's capital Lhasa on March 10 in 1959 as a result of a rising oppression under the domination of China which remains an indelible mark in the history of the Tibetan nation.

21.17.   Calicut varsity overall champ at women's powerlifting championship

- ❖ The University of Calicut (Kerala) emerged the overall winner in the All-India Inter-University Powerlifting (Women) Championship 2022-23 that concluded in Dharamshala.
- ❖ Players from 88 registered teams took part in the 47-kg, 52-kg, 57-kg, 63-kg, 69-kg, 76-kg, 84-kg and 84 plus kg weight categories.
- ❖ Chandigarh University secured the overall second position while Preeti of Singhania University, Jhunjhunu (Rajasthan), was adjudged the best powerlifter.

21.18.   ADR centre in Kullu

❖ Acting Chief Justice of HP High Court Justice Sabina laid the foundation stone of Alternative Dispute Resolution Centre in Kullu.
❖ It will be constructed at a cost of Rs 1.50 crore.
❖ The five-storeyed building will have a parking facility, Lok Adalat, Mediation Centre, Alternative Dispute Resolution Centre and other offices.

21.19. MIGRANTS HAVING 'DOUBLE' RATION CARDS HIGHEST IN NALAGARH

❖ Maximum ration cards having double enrolment of the beneficiaries concerned (in Himachal as well as in some other state) have been detected in Nalagarh subdivision, comprising the industrial belt of Baddi-Barotiwala-Nalagarh (BBN), in Solan district.

21.20. MACHINERY DEPLOYED FOR ILLEGAL MINING IN CHAKKI RIVULET SEIZED

❖ The police recently seized 3 JCBs and 7 tippers engaged allegedly in illegal mining in Khanni, Maira and Batrah villages.
❖ Chakki river is a tributary of river Beas River.
❖ It flows through Indian states Himachal Pradesh and Punjab and joins Beas near Pathankot.
❖ It is fed by snow and rain in the Dhauladhar mountains.

21.21. FAIR BEGINS AT BABA BALAK NATH TEMPLE

❖ The annual Chaitra Mela at Baba Balak Nath Temple started at Deotsidh in the Hamirpur.
❖ Deputy Commissioner raised the religious flag of Baba Balak Nath temple and participated in the inaugural prayers.
❖ The festival would continue for one month and devotees from all parts of the country and also abroad come here to pay obeisance at the temple.

21.22. MOUNTAIN BIKING CHAMPIONSHIP

❖ The Cycling Association of Himachal Pradesh (CAHP) will conduct an open state MTB (Mountain Biking /Cycling) championship in Shimla on March 19.
❖ The venue for the championship will be Summerhill.
❖ Two events will be held in the championship — ITT (Individual Time Trial) and MTB XCO (Cross Country Olympic).
❖ Only a bona fide resident of Himachal Pradesh is allowed to participate in the state championship.

21.23. BRING MILLETS BACK TO FOOD PLATE: PADMA SHRI AWARDEE

❖ Padma Shri awardee and Millet Man of Himachal Nek Ram Sharma today urged students and women to play a leading role in bringing millets back to the food plate.

21.24. GDP GROWTH PEGGED AT 6.4%, PER CAPITA INCOME TO RISE BY 10.4%

❖ Chief Minister Sukhvinder Singh Sukhu, who also holds the finance portfolio, tabled the Economic Survey Report for 2022-23 in the Vidhan Sabha.
❖ The survey report pegged the Gross Domestic Product (GDP) growth rate for 2022-23 at 6.4 per cent compared to 7.6 per cent last year, a decline of 1.2 per cent.
❖ According to advance estimates, the per capita income (PCI) at current prices is estimated at Rs 222,227 in 2022-23 against Rs 201,271 in 2021-22, indicating a growth of 10.4 per cent against 13.1 per cent in 2021-22.
    ✓ However, the PCI of the state is more than the national PCI for 2022-23 by Rs 51,607.

21.25. NALWARI FAIR BEGINS AT BILASPUR

❖ Mandi Divisional Commissioner inaugurated the 134th edition of the state-level Nalwari fair at Bilaspur recently.
❖ She offered prayers at the Lakshmi Narayan temple and then took part in a religious procession.
❖ King Anand Chand of erstwhile Bilaspur state is believed to have started the fair.
❖ It is organised on the onset of harvesting and cultivation season.

- People buy or exchange their pair of oxen for the next crop.
- Thousands of people throng the fair to see best pairs of oxen that are brought here from Punjab and Haryana.

21.26.   RESPONSIBLE TOURISM AWARD FOR CHAMBA HOMESTAY

- NotOnMap H2O House, located in Chaminoo village of Chamba district, was awarded the "Gold Award" under the Outlook Indian Responsible Tourism Awards (IRTA)-2023 in the Sustainable Leadership Homestay category.
- H2O House is situated at the confluence of Sal and Hul nullahs about 12 km from the historical Chamba town.
- It is run in association with the local community members and self-help groups.

21.27.   BUTTERFLY MUSEUM DRAWS TOURISTS, RESEARCHERS

- A team led by Forest Range Officer has taken an initiative to research and conserve butterfly species found in Bhattiyat area, which falls under the Dalhousie forest division of Chamba district.
- There are around 120 species of butterflies in the Bhattiyat forest range, including 'Danaid eggfly', which is included in Schedule-I of the Wildlife Protection Act, 1972.
- Photographs of 57 of these species have been displayed in the recently set up forest museum at Sihunta in Bhattiyat.
- The museum has become a popular centre of attraction among researchers and tourists.
- The main purpose of documenting butterflies is to demonstrate the quality of environment and highlight need for forest conservation.
- Butterflies are an important part of our ecosystem, helping in pollination and complementing biodiversity.

21.28.   CM LAUNCHES DRIVE TO CHECK FOREST FIRES

- The CM launched the **'Hategi Fulnu, Lautegi Charagah' campaign** on the occasion of World Forestry Day here today.
- The campaign aims at sensitising people about the need to prevent forest fires and restore ecosystem in lantana-infested areas.
- Forest fires posed a widespread threat to forest wealth, including fauna and flora, as they disturb biodiversity, ecology and the environment of the region.
- Indirect effects of forest fires include loss of timber and soil fertility, soil erosion, drying up of water resources and the loss of biodiversity.
- The Chief Minister flagged off forest fire awareness vehicles to sensitise the community and stakeholders about the effects of forest fires.

21.29.   MILD QUAKE HITS STATE

- A mild intensity earthquake of 2.8 magnitude hit the state with epicentre in Kinnaur at 12:51 am on March 22nd.
  - ✓ However, no damage was reported, officials said.
- Earlier, tremors were felt in almost all parts of the state around 10:17 pm on March 21st, following a 6.6 magnitude earthquake having epicentre in Afghanistan's Hindu Kush area at a depth of 156 km.

21.30.   RESOLUTIONS IN PUNJAB, HARYANA HOUSES AGAINST HP WATER CESS

- The legislative Assemblies of Punjab and Haryana today unanimously passed a resolution opposing the Himachal Pradesh Government's proposal to impose water cess on hydropower projects even as the Congress regime in the hill state defended the move saying it was "well within its rights to do so".

21.31.   CENTRE REJECTS PROJECT TO REVIVE DRIED DAL LAKE IN DHARAMSALA

- The Centre has rejected the Rs 22-crore project submitted by the Irrigation and Public Health (IPH) Department to the Urban Development Department for the revival of the dried Dal Lake here.
- The lake, located at a distance of about 11 km from Dharamsala in Tota Rani village near Naddi, though small, is a natural water body, vital for the ecosystem of the surrounding hills.
- The lake, a famous tourist spot located in the Naddi area, is located at a height of 1,775 metre and is surrounded by deodars. There is a Shiva temple on its banks. However, silt from the adjoining mountains had reduced its depth.

21.32.   NDB URGED TO SANCTION FUNDS FOR ROPEWAY PROJECT

- ❖ The government has urged New Development Bank (NDB) to expedite the sanctioning of multilateral funding for Shimla Innovative Urban Transport Ropeway Project.
- ❖ The government assured the delegation full cooperation and support for the execution of the ropeway project.
- ❖ The Rs 1546.40-crore Shimla Ropeway Project will have a network of 14.13 km, with 15 stations.
- ❖ This urban ropeway project will be the second of its kind in the world and the first in India, which will go a long way in the decongestion of the city.
- ❖ Ropeway and Rapid Transport System Development Corporation (RTDC) has made substantial progress in the preparation for DPR of this project. The DPR is likely to be completed by June 30.

21.33.   LOCALS AGAINST AIRPORT IN BALH VALLEY

- ❖ The residents of Balh Valley have urged the state government to construct the proposed airport at some other place in the Mandi district, instead of this valley.
- ❖ A delegation of Balh Bachao Sangharsh Samiti met Chief Minister in Shimla recently and apprised him of the grievances of the people living in the valley.
- ❖ Balh Valley is known as **mini Punjab** because of its fertile land.
- ❖ The people here are primarily dependent on vegetable farming for their livelihood.

21.34.   NURPUR GETS WB ROAD SAFETY PROJECT

- ❖ In order to check road mishaps, road crash fatalities and injuries through improved road safety management and institutional reform in Nurpur police district, a World Bank-funded ambitious Road Safety Enforcement Project (RSEP) has been approved.
- ❖ The project will focus on strengthening and streamlining the management capabilities for road safety in this police district with inter-state border. Besides, it will also strengthen emergency medical and rehabilitation services for post-crash care.
- ❖ Official sources reveal that 25 locations are being identified in the district where evidence-based Artificial Intelligence Digital Surveillance Cameras (AIDSC) for monitoring road safety violations will be installed with centralised traffic enforcement control room at Shimla.

About the project
- ❖ Black spots on roads and shortcomings in road engineering will be worked out
- ❖ A special budget will be provided for police mobility and procurement of interceptor patrolling vehicles.
- ❖ The road engineering will be improved with roadside crash barriers.
- ❖ The highway patrol vehicles will be equipped with CCTV cameras, rescue equipment and medical first aid facilities

21.35.   YOUNGEST ZP CHIEF RESIGNS

- ❖ Muskan, the youngest Zila Parishad (ZP) chairperson in Himachal Pradesh from Bilaspur, resigned from her post today.
- ❖ She had won the ZP elections as an Independent candidate at the age of 20 years three years ago and was later elected as chairperson with the support of the BJP.

21.36.   DOPPLER SYSTEM AT BHUNTAR TO HELP LANDING IN BAD WEATHER

- ❖ The **Doppler Very High Frequency Omni Range** (DVOR) and **DME** (Distance Measuring Instrument) systems set up by the Airports Authority of India (AAI) at the top of Thachi hill about 60 km from Bhuntar aiport, near the Kullu-Manali border, have been commissioned.
- ❖ Now the aircraft will be able to land even in bad weather at Bhuntar airport.
- ❖ The global aviation watchdog ICAO (International Civil Aviation Organisation) considers DVOR coupled with DME standard navigational aids for the approaching aircraft.
- ❖ With the help of the DVOR and DME, the aircraft can accurately predict its direction and distance while in air.

21.37.   BRO RESTORES DARCHA ROAD VIA SHINKU LA

❖ The Border Road Organisation(BRO) restored **Darcha-Padum road** via Shinku La (16,580 ft) for traffic movement between Lahaul in Himachal and Zanskar valley in the union territory of Ladakh.
  ✓ The road was blocked for three days due to fresh snowfall near the Shinku La.

Related news

❖ Shinku-La Tunnel, also known as **Shinkula Tunnel or Shingo-La Tunnel**, is a planned motorable tunnel linking Himachal Pradesh's Lahaul Valley and Ladakh's Zanskar Valley in Northern India.
❖ The Shinku La tunnel is a part of **Project Yojak**. This project is implemented by BRO.
❖ The main objective of the project is to make sure Manali – Leh route is accessible all through the year.

21.38.	PAONTA COLLEGE GETS 'A' GRADE FROM NAAC

❖ Shree Guru Gobind Singh Ji Government College, Paonta Sahib, has become the **lone government college in the state to secure an 'A' grade from** the National Assessment and Accreditation Council **(NAAC).**
❖ It scored 2958 grade points out of 3900 points, earning it a Cumulative Grade Point Average (CGPA) score of 3.03.
❖ The college has significantly improved its score since its first cycle of NAAC accreditation in 2017 when it had secured a 'B++' grade with 2.79 CGPA.

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