

Current Affairs MONTHLY

MAY 2023

By
CivilsTap Himachal



**For HPAS & Other
Competitive
Exam in
Himachal Pradesh**

Prelims

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1. POLITY

1.1. HUE AND CRY

- ❖ Recently, the Punjab government has issued a **“hue and cry notice”** against the fugitive pro-Khalistan preacher Amritpal Singh.
- ❖ Its **origins** lie in England's 13th and 14th-century policing system.
- ❖ The **'Statute of Winchester' signed by King Edward I in 1285** mandated that anyone who witnessed a crime not only had to report it but take up a cry to alert the police.
- ❖ These notices are governed by specific rules and procedures and are used sparingly to stress the seriousness of the matter and create panic among the public.
- ❖ A 'hue and cry' notice is **issued by the state or central authorities** when it comes to any fugitive. A hue and cry notice is the **process of seeking the help of the public in nabbing a criminal**. This means that the public can tip off the police to help them catch a fugitive.
- ❖ A 'hue and cry' notice against a fugitive **contains a description of the criminal and the last known location**, as well as a **tip line number** that the public might call regarding the information on the fugitive or if they have seen him somewhere.
- ❖ While the term 'hue and cry' may have diminished in usage in contemporary times, it remains a legal procedure that must be followed to alert other states about fugitives.

1.2. CENTRAL ADMINISTRATIVE TRIBUNAL

- ❖ Parliamentary committee on Personnel, Public Grievances, Law and Justice has asked CAT to decide cases pending for more than 10 years on a priority basis.
- ❖ According to CAT (Procedure) Rules, 1987, **every application should be heard and decided as far as possible, within six months** from date of its registration.
- ❖ CAT had been **established (under Administrative Tribunal Act, 1985) under Article 323 -A for adjudication of disputes and complaints** with respect to recruitment and conditions of service of persons appointed to public services and posts.
- ❖ **Members of defence forces, officers and servants of Supreme Court and secretarial staff of Parliament are not covered** by it.
- ❖ CAT is a **multi-member body** consisting of a chairman and members.
- ❖ There are **17 Benches and 21 Circuit Benches** in the Central Administrative Tribunal all over India.
- ❖ It is **guided by the principles of natural justice**.
- ❖ Appeals against the orders of CAT lie before concerned High Court.

1.3. AAP NOW A NATIONAL PARTY

- ❖ Election Commission of India has granted **'National Party'** status to **Aam Aadmi Party**.
- ❖ Citing Election Symbols (Reservation and Allotment) Order, 1968, which stipulates criteria for recognition as a national or state party, **ECI now recognises six national parties**:
 - ✓ Bharatiya Janata Party (BJP),
 - ✓ Indian National Congress,
 - ✓ Bahujan Samaj Party (BSP),
 - ✓ Communist Party of India (CPI) (Marxist),
 - ✓ National People's Party (NPP) and
 - ✓ AAP.
- ❖ **Trinamool Congress (TMC), Nationalist Congress Party (NCP) and CPI** lost their national party status.
- ❖ ECI reviewed parties' performances in 2014 and 2019 Lok Sabha polls and 21 state assembly polls since 2014.

Criteria for National Party

- ❖ **Votes in LS, state polls:** A party should secure **at least 6% of votes** polled in **four or more states** in LS or assembly elections, and, in addition, have **at least four members in LS**, or
- ❖ **Seats in LS:** It should have **at least 2% of total Lok Sabha seats**, and have candidates from **not less than three states**, or
- ❖ **Must be a state party:** in at least four states.

Benefits of being a National Party

- ❖ Exclusive allotment of its **reserved symbol** to candidates set up by it throughout India.
- ❖ Need only **one person to propose a candidate's name** to enable them to file nominations.
- ❖ Get **broadcast/telecast facilities over Akashvani/Doordarshan** during general elections.
- ❖ Can have **up to 40-star campaigners** while other can have up to 20-star campaigners.

1.4. NATIONAL PANCHAYATI RAJ DAY APRIL 24TH

- ❖ The **Ministry of Panchayati Raj**, in partnership with the **Government of Madhya Pradesh**, marked the National Panchayati Raj Day.
- ❖ The Prime Minister inaugurated an integrated **e-GramSwaraj and GeM portal for public procurement** at the Panchayat level.
 - ✓ The objective of **eGramSwaraj–GeM Integration is to enable the Panchayats to procure their goods and services through GeM leveraging the eGramSwaraj platform.**

About National Panchayati Raj Day

- ❖ **National Panchayati Raj Day** is observed on **24th April every year** to commemorate the **73rd constitutional amendment** that came into effect on the same day in **1993**.
 - ✓ The first National Panchayati Raj Day **was celebrated in 2010**.

About 73rd constitutional amendment

- ❖ **73rd amendment** accorded **panchayats a constitutional status** as the **third tier of local self-governance** in India.
 - ✓ Although **some states such as Rajasthan, Andhra Pradesh and West Bengal had already recognized panchayats as local self-governance institutions**, the 73rd and 74th amendments made this a pan-India phenomenon.
- ❖ This Act added a new chapter into the Constitution called **'Part IX: The Panchayats'**.
- ❖ This Act made the Panchayati Raj institutions in the country **constitutional bodies**.
- ❖ Under **Article 243-B**, it has become **compulsory for every state to establish panchayats in their territories**.
- ❖ **Article 243-G** makes it mandatory for the **state governments to devolve powers, responsibilities and authority** to the panchayats.
- ❖ The **gram panchayats** have a **fixed tenure of 5 years**.
- ❖ **State election commissions** have been provided with the mechanism to conduct **independent elections to the village panchayats**.
- ❖ **Article 243-D** gives provisions for the **due representation of women and SC/STs**.
- ❖ The **State Finance Commission** should also evaluate the financial position of the **panchayats every five years**.

1.5. 50 YEARS SINCE KESAVANANDA BHARATI CASE

- ❖ Kesavananda Bharati case , in which the Supreme Court laid down the “basic structure” doctrine on the limits of Parliament’s power to amend the Constitution, **completed 50 years** recently .
- ❖ Kesavananda Bharati case (1973) was involved **several key legal issues, including:**
 - ✓ **Constitutional Validity of Kerala Land Reforms Act** which placed a limit on amount of land that a person could hold.
 - ✓ Whether **Parliament's power to amend Constitution was unlimited**.
 - ✓ **Doctrine of basic structure of Constitution**.
- ❖ SC, in its judgment, established doctrine of basic structure, which holds that **certain fundamental features of Constitution cannot be amended or abrogated by Parliament** through a constitutional amendment.

- ❖ **Features included** -supremacy of Constitution, Judicial review, Parliamentary system, Rule of equality, rule of law, independence of judiciary etc.
- ❖ Since then, SC has tested constitutional amendments against doctrine of basic structure in several cases including:
 - ✓ **Quota for OBC and Economically Weaker Section (EWS), reservations in promotions**, where SC upheld constitutional amendments challenged on grounds of violation of basic structure doctrine.
 - ✓ SC struck down **The Constitution (Ninety-ninth Amendment) Act, 2014**, which established **National Judicial Appointments Commission (NJAC)** on grounds that it threatened “judicial independence”, which the court ruled was a basic feature of the Constitution.
 - ✓ Other important cases include: *Kihoto Hollohan vs Zachillhu And Others* (1992) (Tenth Schedule), *Minerva Mills Case* (1980), *L Chandra Kumar v Union of India* (1997) (regarding administrative tribunals) etc.



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2. ECONOMY

2.1. 100% ELECTRIFIED RAILWAY NETWORK IN HARYANA

- ❖ In March 2023, the railway network in the state of Haryana in India was completely electrified by Indian Railways, making it the first state in the country to achieve 100% electrification of its railway network.
- ❖ The Indian Railways has set a target to achieve 100% electrification of its broad-gauge routes by December 2023.

2.2. RBI FOUNDATION DAY 2023 OBSERVED ON APRIL 1ST

- ❖ The Reserve Bank of India (RBI) was established on April 1, 1935, in accordance with the provisions of the Reserve Bank of India Act, 1934.
- ❖ The Central Office of the RBI, **initially set up in Kolkata**, was permanently moved to Mumbai in 1937.
- ❖ **Sir Osborne Smith** was the first Governor of the Bank. The Bank was constituted as a shareholders' bank.
- ❖ The RBI is the central bank of India and is responsible for regulating the country's monetary and credit system.

2.3. POLAVARAM PROJECT AND DISPLACEMENT

- ❖ Recent Rehabilitation efforts have caused significant cultural Trauma for the Particularly Vulnerable Tribal Groups in the region.
- ❖ Many PVTG's like **Konda Reddis** have their life intertwined with the river. Rehabilitation of such groups far away from the river causes **unbearable harm to their Tribal culture**.

About the project

- ❖ Polavaram is a National multi-purpose irrigation project on the Godavari River in Andhra Pradesh.
- ❖ It will facilitate an inter-basin **water transfer from the Godavari River to the Krishna river**.
- ❖ Its **reservoir spreads in parts of Chhattisgarh and Orissa** also.
- ❖ The project is a multipurpose major terminal reservoir project for the development of irrigation, hydropower and drinking water facilities.
- ❖ The project was **started in 2008**, accorded **national status in 2014** in the Andhra Pradesh Bifurcation Act.
- ❖ Although The Andhra Pradesh government extended the completion date to the 2022 Kharif season, work is still pending on the project.

2.4. NAGRI DUBRAJ RICE

- ❖ Nagri Dubraj rice variety from Chhattisgarh recently got a geographical indication tag.
- ❖ After **Jeeraphool** rice in 2019, Dubraj is the second brand to get the GI tag.
- ❖ A women's self-help group "**Maa Durga Swasahayata Samuh**" of Nagri in Dhamtari district has been harvesting Dubraj and had applied for the GI tag.
- ❖ The Nagri Dubraj is known as the **Basmati of Chhattisgarh** because of its fragrance.
- ❖ The rice is of an **indigenous variety** and has small grains.
- ❖ The grain finds **reference in Valmiki Ramayana**.

2.5. DOMESTIC QUALITY CONTROL ISSUES RAISED IN WTO

- ❖ India's quality control orders (QCOs) were flagged as an area of concern by Canada, Japan, the UK and the EU recently as non-compliant with Agreement on Technical Barriers.
- ❖ India has recently stepped up imposition of QCOs in order to ensure that cheap imports from China do not flood the Indian market.
- ❖ **Agreement on Technical Barriers to Trade**

- ✓ It provides regulations on technical standards including **packaging, labeling requirements**, and often environmental quality standards to be kept during the trade.
- ✓ The WTO prescribes that members shall not adopt unnecessary obstacles to international trade while following these measures.
- ✓ It harmonized the international standards of trade, technical regulations, and conformity assessment procedures.

❖ **About QCOs**

- ✓ The **Bureau of Indian Standards (BIS)**, is the certifying authority for the QCOs.
- ✓ The main aim of the QCO is to control the import of sub-quality and cheaper items and to ensure that customers get quality products.
- ✓ They are applicable for International as well as domestic products.

❖ As per India, all orders are completely in line with WTO norms and all countries have standards to ensure the safety of goods that are consumed.

- ✓ Each country can have its separate standards, despite international norms.

About World Trade Organisation (WTO)

- ❖ It is the only global international organization dealing with the rules of trade between nations.
- ❖ It covers **over 98% of world trade**.
- ❖ Ministerial conferences assemble every 2 years.
- ❖ HQ- **Geneva, Switzerland**
- ❖ **General Council** is the top day-to-day decision-making body.

2.6. GI TAG FOR BANARASI PAAN

- ❖ Recently, **Banarasi Paan** is granted with GI tag
- ❖ The religious and tourist city Kashi has emerged as a GI hub.
 - ✓ **Special Banarasi Langda Mango, Banarasi Paan, Ramnagar's Bhanta** (White Big Round Brinjal), and **Adamchini Rice** (District Chandauli) have got the Geographical Indications and Intellectual Property Rights (IPR) tag.
- ❖ Not only 'Banarasi Paan', but Mathura's 'Peda', Agra's 'Petha' and Kanpur's 'Sattu' and 'Bukunu' would also get tags as part of efforts of the **Uttar Pradesh government** to provide wider recognition to local goods.
- ❖ After the success of the One District One Product (ODOP), aiming to provide wider recognition to local goods.

2.7. GI TAG FOR LADAKH'S WOOD CARVING

- ❖ Recently, The Geographical Indication (GI) Registry in Chennai, responsible for registering products under the GI Act, 1999, has awarded the registration to **Ladakh's wood carving**.
 - ✓ The GI registration ensures that the product has a **unique identity and origin**,
 - ✓ It cannot be duplicated or sold under the same name by any other manufacturer from a different region.
- ❖ Ladakh's wood carving is renowned for its **intricate designs and unique patterns** that are mostly **inspired by Buddhist themes and motifs**.
- ❖ Local wood such as **willow and apricot** are used to make these wood carvings, which are often used to decorate doors, windows, and other household items.

2.8. MONETARY POLICY COMMITTEE

- ❖ MPC has decided unanimously to keep the policy repo rate unchanged at 6.50 per cent.
- ❖ By pausing, the RBI is trying to ensure that India's financial system does not suffer the kind of crises seen by banking collapses in the US and Europe.

About Monetary Policy Committee (MPC)

- ❖ The **Monetary Policy Committee (MPC)** is a committee of the Reserve Bank of India, **headed by its Governor**, which is entrusted with the task of fixing the benchmark policy interest rate (repo rate) to contain inflation within the specified target level.
- ❖ It was **constituted in 2016** under Section 45ZB of RBI Act 1934.
- ❖ There are a total of six members in the committee, three members are from RBI itself and the rest of them are appointed by the Government of India.
- ❖ The MPC consists of **six members**:
 - ✓ RBI Governor (Chairperson)
 - ✓ RBI Deputy Governor in charge of monetary policy,
 - ✓ One official nominated by the RBI Board
 - ✓ The Government of India will propose three members [committee chaired by the Cabinet Secretary].
 - ✓ Members of the MPC will serve for four years and are not eligible for reappointment.
- ❖ MPC is required to meet **at least four times in a year**.
- ❖ The **quorum** for the meeting is **four members**.

2.9. MIRCHA RICE

The Mircha rice variety from Bihar has recently been granted the GI tag.

About the Mircha or Marcha rice

- ❖ The GI tag has been awarded to the indigenous variety of paddy called Mircha Rice, which is produced exclusively in the **West Champaran region** of Bihar.
- ❖ This unique rice has a **grain size and shape similar to black pepper**, which is the reason behind its name.
- ❖ It is known for its **distinct aroma, palatability**, and the **quality of rice flakes** (chura) it produces.
- ❖ The application for the GI tag was submitted by the Marcha Dhan Utpadak Pragatisheel Samuh, a registered organization of paddy cultivators.
- ❖ The rice is primarily grown in the Mainatand, Gaunaha, Narkatiaganj, Ramnagar, and Chanpatia blocks of West Champaran district, with an **average yield of 20-25 quintals per hectare**.
- ❖ The tall plants of this paddy are ready for harvest in 145-150 days. Out of the 18 blocks in West Champaran, this rice is cultivated in six blocks.
- ❖ **Other agriculture and horticulture products from Bihar** that have received **GI tags** include-
- ❖ **Zardalu mango, Katarni rice of Bhagalpur, Shahi litchi of Muzaffarpur, Magahi paan of Magadh region, and Makhana of Mithila.**

2.10. CPI DECLINES TO 5.66%

- ❖ Recently, India's retail inflation rate declined to **5.66%**, below the Reserve Bank of India's (RBI) upper target of 6% in March 2023, primarily due to a decrease in food prices, especially for vegetables.
- ❖ **Core inflation**, which excludes food and fuel prices, was at **5.95%** in March, down from 6.12% in February.

About Retail Inflation

- ❖ **Retail inflation**, also known as **Consumer Price Index (CPI) inflation**, is the rate at which the prices of goods and services that consumers buy for personal use increase over time.
- ❖ It measures the change in the cost of a basket of goods and services that are typically purchased by households, including food, clothing, housing, transportation, and medical care.
- ❖ **Four types of CPI** are as follows:
 - ✓ CPI for Industrial Workers (IW).
 - ✓ CPI for Agricultural Labourer (AL).
 - ✓ CPI for Rural Labourer (RL).
 - ✓ CPI for Urban Non-Manual Employees (UNME).
- ❖ Of these, the **first three** are compiled by the **Labour Bureau in the Ministry of Labour and Employment**.
 - ✓ **Fourth** is compiled by the **NSO in the Ministry of Statistics and Programme Implementation**.
- ❖ **Base Year for CPI is 2012.**

- ❖ In 2020, the Ministry of Labour and Employment released the new series of **Consumer Price Index for Industrial Worker (CPI-IW)** with **base year 2016**.
- ❖ The **Monetary Policy Committee (MPC)** uses **CPI data to control inflation**.
- ❖ In April 2014, the RBI adopted the CPI as its key measure of inflation.

2.11. DABBA TRADING

- ❖ National Stock Exchange has issued notices naming entities involved in dabba trading.
- ❖ Dabba trading is **informal trading** that takes place outside the purview of stock exchanges.
- ❖ Traders bet on stock price movements without incurring a real transaction to take physical ownership of a particular stock as is done in an exchange.
- ❖ Since there are **no proper records of income or gain**, it helps dabba traders escape taxation.
- ❖ It is recognised as **an offence under Securities Contracts (Regulation) Act (SCRA), 1956**.

2.12. GI TAG FOR CUMBUM GRAPES

- ❖ Tamil Nadu's famous **Cumbum Panneer Thratchai**, also known as **Cumbum grapes** recently earned the Geographical Indication (GI) tag.
- ❖ The **Cumbum Valley** located at the **Western Ghats** in Tamil Nadu is known as the '**Grapes City of South India**' and cultivates the Panneer Thratchai.
- ❖ This variety, also known as **Muscat Hamburg**, is popular for its **quick growth and early maturity**, ensuring that the crop is available in the market almost throughout the year.
- ❖ The **Panneer grapes were first introduced in Tamil Nadu by a French priest in 1832** and are rich in **vitamins, tartaric acid and antioxidants** and reduce the risk of some chronic diseases.
- ❖ They are also known for a **superior taste** apart from the **purplish brown-colour**.

2.13. MISSION 50K-EV4ECO

- ❖ **SIDBI** has recently launched the **pilot version of the Mission 50K-EV4ECO** to promote the growth and development of value chain of India's electric vehicle industry.
- ❖ It is expected to promote EV adoption and strengthen associated infrastructure in the country.
- ❖ The project **prioritizes the uptake of 2-wheeler, 3-wheeler, and 4-wheeler EVs** through direct and indirect lending.
- ❖ **Objective -to provide access to affordable financing for electric vehicles and to develop charging infrastructure, including battery swapping.**
- ❖ The pilot scheme Mission 50K-EV4ECO shall enable quick replicability and scalability through multilateral support.
- ❖ The scheme is the **precursor to the EVOLVE scheme by SIDBI-World Bank**, which provides better financing terms and other solutions to address the issues faced in the EV ecosystem in India.

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2.15. LITHIUM IN INDIA

- ❖ The two hill States of **Himachal Pradesh and Uttarakhand** would be taken up by the Geological Survey of India (GSI) in its field season - 2023-24 for lithium exploration.
- ❖ The two States have been listed as probable destinations **“because of topographical and geological similarities to Jammu and Kashmir”** region.
- ❖ Recently, Geological Survey of India established Lithium inferred resources of 5.9 million tonnes in **Salal-Haimana area of Reasi District of Jammu & Kashmir**.
 - ✓ **‘Inferred’ mineral resource** is part of a resource for which quantity, grade and mineral content are estimated only with **a low level of confidence**.
- ❖ **Other potential sites in India**
 - ✓ **Igneous rocks of Marlagalla–Allapatna region** of Karnataka’s Mandya district.
 - ✓ From **brines of Sambhar and Pachpadra areas, Rajasthan and Rann of Kutch, Gujarat**.
- ❖ Lithium is generally produced from two different deposit types:
 - ✓ **Brines Operations:** Pump saline brines with high lithium content from beneath the surface and lithium is concentrated by way of evaporation, before brine is sent to processing facilities for production of lithium hydroxide.
 - ✓ **Hard-rock operations:** In this, ore is extracted using conventional mining techniques before it is concentrated by way of crushing, and separated to produce a concentrate.

About Lithium

- ❖ It is **soft , shiny grey metal** found in the earth's crust.
- ❖ It **has lowest density of all metals**.
- ❖ Reacts **vigorously with water**.
- ❖ It **does not occur as the metal in nature**.
- ❖ **Spodumene, petalite, lepidote, and amblygonite** are the important miner-als containing lithium.
- ❖ **Applications of Lithium**
 - ✓ Primarily used to build the rechargeable batteries.
 - ✓ Lithium alloys are lighter and strong in nature.
 - ✓ **Other compounds of Lithium**
 - **Lithium Chloride:** One of the **most hygroscopic materials known**, and is used in air conditioning and industrial drying systems
 - **Lithium Carbonate: Drugs** to treat manic depression.
 - **Lithium Stearate:** all-purpose and high-temperature lubricant.

2.16. STABLE COINS

- ❖ The United States Congress recently made an attempt to create a legislative framework for the increasingly popular stablecoins.

About Stablecoins

- ❖ They are cryptocurrencies whose **value is pegged, or tied, to that of another currency, commodity, or financial instrument**.
 - ✓ The first stablecoin, created in 2014, was **Tether**.
- ❖ Stablecoins aim to **provide an alternative** to the **high volatility of the most popular cryptocurrencies**, including Bitcoin (BTC).
- ❖ Unlike cryptocurrencies like Bitcoin, **stablecoins’ prices remain steady, in accordance with whichever fiat currency backs them**. Eg: USDC stablecoin is backed by dollar-denominated assets.
- ❖ **Advantages :**
 - ✓ They are open, global, and accessible to anyone on the internet.
 - ✓ They’re fast, cheap and secure to transmit.

About Cryptocurrency

- ❖ Cryptocurrencies are digital or virtual currencies in which encryption techniques are used to regulate the generation of their units and verify the transfer of funds.
- ❖ These currencies **operate independently of a central bank**.
- ❖ The economic transactions underlying cryptocurrency are decentralized, distributed and disbursed.
- ❖ The first and most famous cryptocurrency, bitcoin was introduced in 2009.
- ❖ Most cryptocurrencies are built on **blockchain technology**.

2.17. MILLETS AND OTHER ANCIENT GRAINS INTERNATIONAL RESEARCH INITIATIVE

- ❖ Participants of G20 Meeting of Agriculture Chief Scientists on “**Sustainable Agriculture and Food System for Healthy People and Planet**” in **Varanasi** unanimously supported launch of **MAHARISHI- Millets And Other Ancient Grains International Research Initiative**.
- ❖ Its **secretariat** will be housed at **Indian Institute of Millets Research (IIMR), Hyderabad** with technical support from ICRISAT, One CGIAR Centres and other International organisations.
- ❖ It will focus on **research and awareness** about agro-biodiversity, food security, and nutrition aligning with **International Year of Millets 2023**.
 - ✓ **2018** was observed as **National Year of Millets** in India.
- ❖ Millets are known as **nutri-cereals or superfoods**, mainly grown on **marginal land in dry areas of temperate, sub-tropical and tropical regions**.
- ❖ Some of the common millets available in India are **Ragi** (Finger millet), **Jowar** (Sorghum), **Sama** (Little millet), **Bajra** (Pearl millet), **Variga** (Proso millet) etc.
- ❖ India is the **largest producer** of millet in the world accounting for 20% of global production and 80% of Asia’s production.

2.18. ZOMBIE BANK

- ❖ **Zombie firms/companies** survive on borrowing as they **do not have enough profits to cover debt-servicing costs**.
- ❖ **Zombie Bank** is a bank that is **practically insolvent but continues to exist through hiding bad loans on their balance sheet**.
 - ✓ These are **kept afloat to prevent panic** from spreading to healthier banks.
- ❖ Zombie banks resort to **forbearance lending** i.e. **allows a borrower to temporarily stop or suspend payments of the loan**.

2.19. INTERNATIONAL FUND FOR AGRICULTURE DEVELOPMENT

- ❖ The **International Fund of Agricultural Development (IFAD)** will set up a new framework to facilitate cooperation between small agricultural producers in developing nations and businesses in Japan and elsewhere.
- ❖ The **Enhanced Linkages between Private Sector and Small-Scale Producers (ELPS) initiative** will be set up with an aim of strengthening developing nations’ agriculture and food systems.
- ❖ **Enhanced Linkages between Private Sector and Small-Scale Producers (ELPS) Initiative**:
 - ✓ It is an **initiative by IFAD** in cooperation with the Ministry of Agriculture, Forestry and Fisheries of Japan.
 - ✓ It aims to **connect small-scale food producers and marginalised farmer groups in developing countries with larger agrifood companies** to facilitate investment, capacity building and trade.
 - ✓ Small-scale producers can greatly benefit from the expertise, knowledge, and technologies of the private sector.

About IFAD

- ❖ IFAD is an **international financial institution** and **specialized United Nations agency** working in the field of poverty eradication in the rural areas of developing countries providing grants and loans with low interest for allied projects.
- ❖ It **works with marginalized and vulnerable groups such as farmers with small holdings, foresters, Pastoralists, Fishermen and small-scale entrepreneurs** by giving them disaster preparedness, access to weather information, technology transfer and social learning.
- ❖ It was created in 1977, which is the **outcome of the World Food Conference of 1974**.
- ❖ **Headquarters: Rome, Italy**
- ❖ It has **177 member countries including India**.
- ❖ IFAD is the **only multilateral development institution that focuses exclusively on transforming rural economies and food systems**.
- ❖ It brings out the **Rural Development Report every year**.
- ❖ **Objectives:**
 - ✓ To increase the productive capacity of poor people.
 - ✓ To increase benefits for them from market participation.
 - ✓ To strengthen the environmental sustainability & climate resilience of their economic activities.

2.20. LOGISTICS PERFORMANCE INDEX

- ❖ India's rank in the recently released **World Bank's Logistics Performance Index 2023** has improved by six places to 38 out of 139 countries.
 - ✓ **Singapore** topped the index.
- ❖ Significant investments in **both soft and hard infrastructure** as well as **technology** has led to an improvement in India's port performance.

About LPI

- ❖ LPI is a **benchmarking tool** created to help countries identify challenges and opportunities they face in their performance on trade logistics.
- ❖ LPI 2023 ranks countries on **six dimensions of trade** - including customs performance, infrastructure quality, and timeliness of shipments.
- ❖ The **LPI 2023, for the first time, measures the speed of trade with indicators** derived from big datasets tracking shipments.

2.21. SERIOUS FRAUD INVESTIGATION OFFICE

- ❖ The Serious Fraud Investigation Office (SFIO), which increased its capacity in FY23, has completed **23 investigations** during the year, up from 13 in the year before.
- ❖ SFIO is a **multi-disciplinary organization** under **Ministry of Corporate Affairs**.
- ❖ Headquarter: **New Delhi**
- ❖ It consist **experts** in field of **accountancy, forensic auditing, law, information technology, investigation, company law, capital market and taxation** for detecting and prosecuting or recommending for prosecution white-collar crimes/frauds.
- ❖ It was accorded **statutory status** under **Companies Act, 2013**.
- ❖ Has the **power to arrest accused people for violation of Company law**.
- ❖ **Computer Forensic and Data Mining Laboratory (CFDML)** was setup in 2013 to assist officers of SFIO on investigations.

2.22. MAHILA SAMMAN SAVING CERTIFICATE ACCOUNT

- ❖ The Union Minister for Women and Child Development and Minority Affairs opened a Mahila Samman Savings Certificate (MSSC) account.

About Mahila Samman Savings Certificate Scheme

- ❖ It is a **new small savings scheme launched** specifically for **female investors** and was announced in **Budget 2023** to promote investment among women.
- ❖ Accounts opened under this scheme will be **single-holder accounts** that can be **opened at the Post Office or any registered bank**.
- ❖ The **two-year tenure scheme** offers an attractive **interest rate of 7.5 per cent compounded quarterly**.
- ❖ The scheme is valid for a **two-year period upto 31st March 2025**.
- ❖ A woman for **herself or a guardian on behalf of a minor girl** can open a Mahila Samman account.
- ❖ A **time gap of three months** shall be maintained between the **existing account and the opening of other account**.
- ❖ The **minimum investment amount is Rs 1000**, and the **maximum investment** authorised under the plan is **Rs 2 lakh**.
- ❖ **After two years** from the date opening **eligible balance will be paid to the depositor**.
- ❖ The account holder may **withdraw up to 40% of the balance after the first year** from the date of account opening but before the account matures.
- ❖ Premature closure of account: The account shall not be closed before maturity **except** in the following cases, namely:
 - ✓ **On the death of the account holder**
 - ✓ **On extreme compassionate ground**
 - Life threatening disease of account holder
 - death of the guardian on production of relevant documents.
- ❖ When an account is closed prematurely, interest on the principal amount is payable at the rate applicable to the Scheme for which the account was held.

2.23. MANAMADURAI POTTERY

- ❖ Recently **Manamadurai pottery of Sivagangai district, Tamil Nadu** got the Geographical Indication (**GI**) tag.
- ❖ A **unique type of clay** is sourced from water bodies like **Nedunkulam, Nathapurakki, Sundaranadappu, Seikalathur** to make these pots.
- ❖ **Vaigai River** which runs through the **Manamadurai village** enriches the **clay** used for the pottery.

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3. GEOGRAPHY

3.1. NEVADO DEL RUIZ VOLCANO

- ❖ Authorities in Colombia have warned of an increase in seismic activity around the Nevado del Ruiz volcano.
- ❖ Nevado del Ruiz is situated in the **Andes mountain range**, approximately 129 km (80 mi) from the capital city of Bogotá.
- ❖ Nevado del Ruiz is **situated in the Ring of Fire**, a belt of intense seismic activity that encircles the Pacific Ocean.
- ❖ It is a **stratovolcano** and considered one of the most active and dangerous volcanoes in the country, with a history of generating destructive lahars and pyroclastic flows.
- ❖ The volcano's composition consists of **layers of lava, volcanic ash, and pyroclastic rocks**, which have built up over approximately two million years of volcanic activity.
- ❖ **History** - The eruption in 1985 caused the deadliest lahar in recorded history, known as the **Armero tragedy**. The lahar, which was triggered by the melting of snow and ice on the volcano's summit during the eruption, swept away the town of Armero and claimed the lives of over 23,000 people.

3.2. RARE EARTH ELEMENTS IN ANDHRA PRADESH

- ❖ Hyderabad-based National Geophysical Research Institute has found large deposits of 15 Rare Earth Elements (REE) in **Andhra Pradesh's Anantapur district**.
- ❖ REEs (aka rare earth oxides) are a **group of 17 silvery-white soft heavy metals** that occur together in periodic table.
- ❖ Group consists of **yttrium and 15 lanthanide elements** (lanthanum, cerium, praseodymium, neodymium, promethium, samarium, europium, gadolinium, terbium, dysprosium, holmium, erbium, thulium, ytterbium, and lutetium).
- ❖ REEs are **all metals** having many **similar properties**, and that **often** causes them to be **found together in geologic deposits**.
- ❖ REEs are used in high end technology, defence applications, electronic devices like cell-phones, computers, electric vehicle etc. because of their luminescent and catalytic properties.

Related news

- ❖ Scientists from Institute of Minerals and Materials Technology, Bhubaneswar, have estimated the quantity of REEs that can be recovered from **Red Mud**.
- ❖ **Red Mud** is a **toxic byproduct of aluminium extraction from bauxite ore** using Bayer process.
- ❖ Red Mud contains REEs.
- ❖ There are two strategies to recover REEs from red mud:
 - ✓ extract only REEs or
 - ✓ extract all metals (such as iron, titanium, and sodium) including REEs.
- ❖ Earlier an estimated **5.9-million tonne reserve of lithium**, a crucial mineral for the manufacturing of electric vehicles and solar panels, had been discovered in **Reasi district** of J&K by the Geological Survey of India (GSI).

3.3. WHISTLING VILLAGE

- ❖ An MP presented a development report on **Kongthong village in Meghalaya, India's whistling village**, to the PM.
- ❖ The village was adopted **under the Sansad Adarsh Gram Yojana (SAGY)**.

About Kongthong village

- ❖ Kongthong is located in the East Khasi Hills in Meghalaya.
- ❖ It is popular as the 'whistling village' due to its unique tradition of '**Jingrwai Lawbei**' (meaning the Song of the Clan's First Woman).

- ❖ It is a tradition under which **mothers create a tune for their newborns.**
 - ✓ These tunes are often used as names.
- ❖ Kongthong people belong to the **Seng Khasi Tribe** and **speak Khasi language.**
- ❖ According to Census 2011, the village has a population of 567, out of which 275 are males and 275 are females, and a literacy rate of 55%.

3.4. KILIMANJARO

- ❖ **Anjali Sharma**, a mountaineer from India, has made history by **successfully scaling the peak of Mount Kilimanjaro in Africa** while wearing a traditional Gaddi dress, or Luanchadi.
- ❖ She is the first Indian woman to achieve this feat while wearing the Gaddi costume.
 - ✓ The **Luanchadi, or Gaddi dress**, is a **traditional costume** from the Indian state of **Himachal Pradesh.**

About Mount Kilimanjaro

- ❖ Mount Kilimanjaro is a **dormant volcano** situated in **Tanzania**, in the eastern part of Africa.
- ❖ It is the **highest summit in the continent** and the **highest single free-standing mountain in the world**, with its summit reaching an elevation of **5,895 meters above sea level.**
- ❖ The mountain is **made up of three distinct volcanic cones**, namely **Kibo, Mawenzi, and Shira**, with Kibo being the highest and most well-known of the three.

3.5. IMD PREDICTS NORMAL MONSOON

- ❖ India Meteorological Department (IMD) has predicted that country as a whole is likely to receive **96% of Long Period Average (LPA)** for southwest monsoon from June to September 2023.
- ❖ LPA of rainfall is the precipitation recorded **over a particular region for a given interval** (like a month or season) average over a long period like **30 years or 50 years.**
- ❖ In last four years (2019 to 2022), India has received **normal to above normal rainfall.**
- ❖ IMD's forecast considers **following three factors** that affects Indian monsoon
 1. **El Nino**: it is associated with **diminished rainfall** in India.
 2. **Indian Ocean Dipole (IOD)**: IOD refers to the difference in sea-surface temperatures in **Eastern and Western parts of Indian Ocean.**
 - ✓ **Positive IOD** is considered **good for Indian monsoon.**
 3. **Snow Cover**: Winter and spring snow cover extent over Northern Hemisphere and Eurasia has a general inverse relationship with subsequent summer monsoon rainfall.

Category of Rainfall

- ❖ Deficient < 90% of LPA
- ❖ Below Normal 90 - 95% of LPA
- ❖ Normal 96 -104 % of LPA
- ❖ Above Normal 105 -110% of LPA
- ❖ Excess > 110% of LPA

About El Nino Southern Oscillation

- ❖ El Nino is **warm phase of El Nino-Southern Oscillation (ENSO)**, where unusual warming of surface waters in eastern tropical Pacific Ocean occurs.
- ❖ La Nina is **cool phase of ENSO**, and since 2019, India has been under influence of the La Nina, getting substantial monsoon rains.

About India Meteorological Department (IMD)

- ❖ It is an agency of the **Ministry of Earth Sciences.**
- ❖ It is the principal agency responsible for meteorological observations, weather forecasting and seismology.

- ❖ It is also **one of the six Regional Specialised Meteorological Centres** of the **World Meteorological Organisation**.
- ❖ IMD releases the **long range forecast** in **two stages** in **April and June**.

3.6. HEATWAVE ALERTS

- ❖ India Meteorological Department (IMD) has issued an orange alert over high temperatures in 3 states (West Bengal, Bihar and Andhra Pradesh) and claimed that heatwave conditions are to prevail in 4 other states (Sikkim, Jharkhand, Odisha and Uttar Pradesh).
- ❖ **Heatwave** is a condition of **air temperature** which becomes **fatal to human body when exposed**.
- ❖ It is defined **based on temperature thresholds** over a **region** in terms of actual temperature or its departure from normal.
- ❖ **Reasons for Heatwaves:** Prevalence of hot dry air over a region, Absence of moisture in upper atmosphere, Cloudless Sky, Anti-cyclonic conditions.

Criteria of declaring Heatwaves

- ❖ IMD has given following criteria for Heatwave –
- ❖ Heat wave is considered if the maximum temperature of a station reaches at least 40°C or more for Plains and at least 30°C or more for Hilly regions.

Based on Departure from Normal temperature,

- ❖ **Heat Wave** -Departure from normal is 4.50°C to 6.40°C.
- ❖ **Severe Heat Wave:** Departure from normal is >6.40 degree C.

Based on Actual Maximum Temperature:

- ❖ **Heat Wave:** When actual maximum temperature ≥ 45 degree C.
- ❖ **Severe Heat Wave:** When actual maximum temperature ≥ 47 degree C
- ❖ If the above criteria is met at least in 2 stations in a Meteorological subdivision for at least **two consecutive days** and is declared on the second day.

3.7. PINDARI GLACIER

- ❖ A group of 14 trekkers, including 13 US nationals, were recently stranded at Pindari glacier after an avalanche hit Uttarakhand's Bageshwar district.

About Pindari Glacier

- ❖ It is located in the Bageshwar district of **Uttarakhand in the Kumaon Himalayas**.
- ❖ It **lies on the edge of Nanda Devi** (7816 meters), which is the **highest peak in India**.
- ❖ **Zero Point of Pindari Glacier** is situated at an altitude of 3660 meters above sea level.
- ❖ It is the **source of the Pindari River, which meets the Alakananda River at Karnaprayag** in the Garhwal district.
- ❖ On the right side of the Pindari Glacier lies the **Kafani Glacier**.

3.8. ZERO SHADOW DAY

- ❖ **At 12:17 PM IST on April 25, Bengaluru and at all places along the 130 north Latitude** experienced a 'Zero Shadow Day'.

About 'Zero Shadow Day'(ZSD)

- ❖ A ZSD is a day on which the **Sun does not cast a shadow of an object at solar noon**, when the sun will be exactly at the zenith position(highest point in the sky)
- ❖ ZSD **happens twice a year for locations between the Tropic of Cancer and the Tropic of Capricorn**.

- ❖ One ZSD falls during **Uttarayan** (movement of the Sun from south to north from winter solstice to summer solstice) and one other during **Dakshinayan** (back from north to south).
 - ✓ The dates will vary for different locations on Earth.
- ❖ **Uttarayan** and **Dakshinayan** happen because **Earth's rotation axis is tilted at an angle of roughly 23.5°** to the axis of revolution around the Sun.
- ❖ When the Sun is at the zenith its rays make the shadow exactly under it, making it look like no shadow.

3.9. SEAMOUNTS

- ❖ Scientists have reportedly found **19,325 new seamounts** after poring through new high-resolution data.

About Seamounts:

- ❖ It is an **underwater mountain** formed through volcanic activity.
- ❖ These are **recognised as hotspots for marine life**. Like volcanoes on land, **seamounts can be active, extinct or dormant volcanoes**.
- ❖ These are **formed near mid-ocean ridges**, where the **earth's tectonic plates are moving apart**, allowing molten rock to rise to the seafloor.
 - ✓ The **planet's two most-studied mid-ocean ridges are the Mid-Atlantic Ridge and the East Pacific Rise**.
- ❖ Seamounts can also **occur at tectonic plate boundaries**; this includes **subduction zones** — where two tectonic plates collide and one dives under the other into the Earth's mantle — and at **seafloor spreading centres** where magma rises from between two plates which are moving away from each other.
- ❖ Some seamounts have also been found near **intraplate hotspots** – **regions of heavy volcanic activity within a plate** – and **oceanic island chains with a volcanic and seismic activity** called **island arcs**.
- ❖ Provide information about the **mantle's composition** and **how tectonic plates evolve**.
- ❖ **Oceanographers also study seamounts to understand their influence on how water circulates** and absorbs heat and carbon dioxide.
- ❖ They can **cause localised ocean upwelling** – the process by which nutrient-rich water from deep within the ocean moves up to the surface. Thus they support life.

Mid-Atlantic Ridge

- ❖ It is the **largest geological feature** on the planet.
- ❖ It is a **mostly underwater mountain range** in the Atlantic Ocean.
- ❖ It is **about 3 km in height above the ocean floor** and 1000 to 1500 km wide, has numerous transform faults and an axial rift valley along its length.
- ❖ It **separates the North American Plate from the Eurasian Plate in the North Atlantic** and the **South American Plate from the African Plate in the South Atlantic**.

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4. ART AND CULTURE

4.1. VAIKOM SATYGRAHA

- ❖ Tamilnadu is planning a year-long celebration of **Vaikom satyagraha movement** that was launched to end caste discrimination in a temple in colonial Kerala.

About Vaikom Satyagraha

- ❖ It was a **non-violent agitation or satyagraha** in Travancore, India (now part of Kerala) against untouchability in Hindu society.
- ❖ It was centered at the **Shiva temple at Vaikom, near Kottayam**.
- ❖ The Satyagraha aimed at securing freedom of movement for all sections of society through the public roads leading to the **Sri Mahadevar Temple at Vaikom**.
- ❖ Major Leaders- **Madhavan, K.P. Kesava Menon** and **K. Kelappan** (also known as **Kerala Gandhi**).
- ❖ The movement was backed by Gandhiji, Chatampi Swamikal, and Sree Narayana Guru.
 - ✓ The campaign gained popularity throughout India, and supporters arrived from around the country.
 - ✓ **Punjab's Akalis** helped by establishing kitchens (**langars**) to feed the Satyagrahis.
 - ✓ Even Muslim and Christian authorities backed the initiative.

4.2. YANGLI FESTIVAL

- ❖ **Tiwa tribesmen in Assam** celebrate the **Yangli festival once every three years** to mark the beginning of the sowing season.
- ❖ The Yangli festival, which is related to agriculture, is a significant event for the Tiwas as farming is the main source of income for their community.
- ❖ During the festival, the **Tiwas perform dances and offer prayers for a successful harvest**, seeking protection for their crops from pests and natural calamities.

4.3. ICHR ON ANCESTRAL RECORDS

- ❖ Recently, Indian Council of Historical Research has been preparing to release records of people's ancestors kept by genealogy priests.

About

- ❖ Genealogy priests called **Panda** have been collecting **records of families going back 15 to 20 generations**, with details like place of origin, names, births, deaths, reason of death, place of residence, grants made to temples, caste, and clan.
 - ✓ **Genealogy** is the study of ancestry.
- ❖ Many Hindu families undertake a pilgrimage to religious places like **Haridwar or Varanasi** upon the death of a family member, where they also visit their family priest to register the death as well as other family developments.
- ❖ These **records can be a rich source to understand past famines, epidemics, migration, movement of people**, as well as social history on how clans and communities were organised.
- ❖ The ICHR plans to help make these records available to researchers, scholars, and historians.

About Indian Council of Historical Research (ICHR)

- ❖ The **Indian Council of Historical Research (ICHR)** is an autonomous organisation under the **Ministry of Education**, Government of India.
- ❖ It was established by the Ministry of Education & Social Welfare, Govt. of India (now, Ministry of Education) in 1972.
- ❖ ICHR was **registered under the Societies Registration Act**.
- ❖ The primary **aim and objective of the Indian Council of Historical Research are to promote and give directions to historical research and to encourage and foster objective and scientific writing of history**.

- ❖ It **provides fellowships and financial assistance to young teachers in colleges**, universities and registered research organisations.
- ❖ It publishes a biannual Journal – **the Indian Historical Review**, and another journal **Itihas in Hindi**.

4.4. THIRAMAHOTSAVAM

- ❖ Poothan and Thira' is an ancient folk dance was performed during celebration of **Thiramahotsavam** in Thrissur district, **Kerala**.
- ❖ **Poothan and Thira** are usually performed every year during the Pooram festival.
- ❖ According to mythology, **Thira and Poothan are the lieutenants of Lord Siva** who were sent along with Goddess Kali to kill the **demon king Darika**.
 - ✓ After slaying the demon, Thira and Poothan danced along with Kali to celebrate their victory.
- ❖ This dance form is usually performed by people belonging to **Mannan and Perumannan** communities.
- ❖ Artistes clad in vibrant costumes, simple makeup and huge semi-circular headgear that is made of intricately carved wooden pieces perform the Thira, and this dance is a true delight to watch.
- ❖ The main musical instrument used is **Para** (a percussion instrument).

4.5. TRAFFICKED INDIAN SCULPTURES

- ❖ The **Metropolitan Museum of Art in New York** has announced that it will return 15 Indian sculptures that were trafficked and sold.
 - ✓ All the works were sold by **Subhash Kapoor**, a convicted Indian-American antiquities smuggler. Kapoor was arrested by Interpol in Germany in 2011 and is currently imprisoned in India.
- ❖ The works date from the **1st century BCE to the 11th century CE**.
- ❖ These include terracotta, copper, and stone artifacts such as a **Celestial Dancer (Apsara)** valued at over \$1 million and a **stone bust of Kamadeva, the God of Love** from the 8th century CE and a **Svetambara** enthroned Jina from the 8th century CE.
- ❖ Before Independence, the **Antiquities (Export Control) Act was passed in 1947** to ensure that no antiquity could be exported without a license.
- ❖ Antiquities in India are governed by the **Antiquities and Art Treasures Act, 1972** which falls within the purview of the **Archaeological Survey of India (ASI), Union Ministry of Culture**.

4.6. MAHAVIR JAYANTI

- ❖ Recently, on The Vice President, Shri Jagdeep Dhankhar has greeted the people of the nation on the occasion of Mahavir Jayanti.
- ❖ It is an auspicious day for the followers of Jainism as it marks the **birth anniversary of Lord Mahavira**, who was the last Tirthankara of Jainism.
- ❖ Lord Mahavira was **born on the 13th day of the bright half of the moon in the month of Chaitra**.
 - ✓ As per the Gregorian calendar, it is usually celebrated in the month of March or April.
- ❖ On Mahavir Jayanti, a procession is held with the idol of Lord Mahavira called the Rath Yatra, and the statue is given a ceremonial bath called abhisheka.

About Vardhaman Mahavira

- ❖ He was the 24th and last Tirthankara; succeeded the 23rd Tirthankara, **Parshvanatha**.
- ❖ Born to King Siddhartha of Kundalgram and Queen Trishala, a Lichchhavi princess in 6th century BC in Vajji kingdom (modern day Vaishali, Bihar)
- ❖ He abandoned worldly life at age 30 and **attained 'kaivalya' (omniscience) at age 42**.
- ❖ Delivered his **first sermon at Pava** (near Patna).
- ❖ Mahavira's teachings revolved around the principles of ahimsa, **Satya, brahmacharya, and aparigraha**.
- ❖ He emphasized the importance of **non-violence, truth, non-stealing, chastity, and non-attachment**, which were later compiled into **Jain Agamas**.

- ❖ His teachings were simple and easy to understand as they were in **Prakrit, a language** that ordinary people could comprehend.
- ❖ It is believed that Lord Mahavira passed away at the age of 72 and attained moksha or liberation from the cycle of birth and death **at Pavapuri near modern-day Rajgir in Bihar.**

4.7. BASHOLI PAINTING

- ❖ Recently, the world-famous **Basohli Painting** which is **popular for its miniature art style** from **Kathua district of Jammu** has obtained the Geographical Indication (GI) Tag.
- ❖ It is the first independent GI-tagged product from the Jammu region.
- ❖ It is considered the **first school of Pahari paintings.**
- ❖ These are painted on **paper, cloth, or wood** using natural pigments and dyes.
- ❖ **Themes:** The portraits of local rulers, Radha-Krishna, and Madhava-Malati love themes and themes from the Bhagavata Purana.
- ❖ The colours are always brilliant, with **ochre yellow, brown, and green grounds** predominating.
- ❖ The Basholi painting style flourished during the **17th and 18th centuries** under the patronage of local rulers and wealthy merchants.

4.8. BIDRIWARE ART

- ❖ Bidri craftsman Shah Rasheed Ahmed Quadri recently received Padma Shri Award by President Droupadi Murmu.

About Bidriware

- ❖ Bidriware is a metal handicraft from the city of Bidar in Karnataka.
- ❖ This art form has obtained a **Geographical Indications (GI) Tag.**

Process

- ❖ Bidriware techniques are **influenced by Persian art.**
- ❖ **Flowers, leaves and geometric designs** are commonly used Patterns.
- ❖ The metal used is **white brass** that is **blackened and inlaid with silver.**
- ❖ Bidri artisans **blacken their wares using soil** obtained from a 15th-century fort in **Bidar**, which is **rich in potassium nitrate.**
- ❖ This craft was developed by the Bahamani sultans.

About Bahmani Sultanate

- ❖ Ruled Bidar in the **14th–15th centuries.**
- ❖ The Bahmani Sultanate was the **first independent Muslim kingdom of the Deccan.**
- ❖ It was **founded in 1347 by Ala-ud-Din Bahman Shah.**
- ❖ It later **split into five successor states** that were collectively known as the **Deccan sultanates.**

4.9. NATIONAL MISSION ON CULTURAL MAPPING

- ❖ Under the '**Mera Gaon Meri Dharohar**' (**My Village My Heritage**) programme of the **National Mission for Cultural Mapping**, the government has identified and documented distinctive features of **more than one lakh villages** across the country, in a bid to harness the unique cultural heritage of rural India.
- ❖ In cultural asset mapping, villages have been broadly divided into **seven-eight categories based on whether they are important ecologically, developmentally and scholastically**, and if they are connected to some historical or mythological events.
 - ✓ Ecological category includes **Bishnoi village** (for living in harmony with nature) near Jodhpur, Rajasthan, and Uttarakhand's **Raini village** (Chipko movement).
 - ✓ Developmental category includes **Modhera in Gujarat** (first solar-powered village in India).

- ✓ Historical category includes **Kandel in Madhya Pradesh** (famous Jal Satyagraha site), **Suketi** in Himachal Pradesh (Asia's oldest fossil park), **Pandrethan** in Kashmir (the village of Shaivite mystic Lal Ded) and villages of **Hanoli** Uttarakhand and **Vidurashwathar** of Karnataka are linked to Mahabharata.

About NMCM

- ❖ NMCM was **launched by Ministry of Culture (MoC) in 2017** and handed over to **Indira Gandhi National Centre for Arts (IGNCA)** in 2021.
- ❖ It aims to develop a comprehensive database of art forms, artists and other resources across the country.
- ❖ **Objective-**
 - ✓ Preserve rich cultural heritage of country for future generations.
 - ✓ Create a strong "Cultural Vibrancy" throughout the nation.
 - ✓ Convert vast and widespread cultural canvass of India into an objective Cultural Mapping.
- ❖ MoC has **partnered with Common Services Centres, under Ministry of Electronics & IT (MeitY)** to conduct NMCM.

4.10. SEWRI FORT

- ❖ Sewri Fort will get flamingo-viewing gallery as part of its makeover in Mumbai.

About Sewri fort

- ❖ It is a **fort in Mumbai built by British in 1680 at Sewri, Island of Parcel.**
- ❖ It was served as **watch tower**, atop a quarried hill overlooking the **Mumbai Harbour.**
- ❖ In **1689**, The Siddi general **Yadi Sakat invaded Mumbai** and they first captured the Sewri Fort.
 - ✓ The **Siddhis were allies of Mughal** emperor Aurangzeb.
- ❖ It had a **garrison of 50 sepoys** and was managed by a subedar or local chief. It was also armed with **eight to ten cannons.**
- ❖ This fort is later also involved in **the battle that repelled The Portuguese attack** in 1772.
- ❖ It was **later used as a jail**, but today it stands neglected in many parts.
- ❖ Still, parts of the fort have been protected by the state's department of archaeology and museums.
- ❖ It serves as the **site of the annual Flamingo Festival.**

4.11. JALLIANWALA BAGH MASSACRE

- ❖ Jallianwala Bagh Massacre Day 2023 marks **104 years** since the tragic incident.
- ❖ The Jallianwala Bagh massacre was a tragic incident that occurred on 13th April 1919 in Amritsar, India, where **British Gurkha soldiers**, on the **orders of Brigadier-General Dyer**, fired upon a large crowd of unarmed protestors who had gathered at Jallianwala Bagh to demonstrate **against the Rowlatt Act 1919** peacefully.
 - ✓ **Rowlatt Act 1919** gave the government enormous powers to **repress political activities** and allowed **detention of political prisoners without trial for two years.**
- ❖ Background:
 - ✓ **Mahatma Gandhi** gave a call for non-violent civil disobedience against such unjust laws.
 - ✓ In Punjab, on 9th April 1919, two nationalist leaders, **Saifuddin Kitchlew and Dr. Satyapal, were arrested** and taken to unknown destination.
 - ✓ This caused resentment among the Indian protestors who came out in thousands on **10th April** to show their solidarity with their leaders.
 - ✓ To curb any future protest, the government put **martial law in place and law and order in Punjab** was handed over to Brigadier-General Dyer.
- ❖ The incident
 - ✓ On **13th April, Baisakhi day**, a large crowd of people mostly from neighbouring villages, unaware of the prohibitory orders in Amritsar gathered in the Jallianwala Bagh.

- ✓ **Brigadier-General Dyer** arrived on the scene with his men and ordered the troops to surround the gathering and blocked the only exit point and opened fire on the unarmed crowd killing more than **1000 unarmed men, women, and children.**

Aftermath

- ❖ The Jallianwala Bagh tragedy was one of the causes that led Mahatma Gandhi to begin organising his **first large-scale and sustained nonviolent protest (satyagraha) campaign, the Non Cooperation Movement (1920-22).**
- ❖ The Bengali poet and Nobel laureate **Rabindranath Tagore renounced the knighthood** that he had received in 1915.
- ❖ **Hunter Commission** was setup to investigate the incident, which in 1920 censured Dyer for his actions and ordered him to resign from the military.

4.12. AMBEDKAR CIRCUIT

- ❖ The **Bharat Gaurav Tourist train tour on Ambedkar Circuit** was flagged from Hazrat Nizamuddin Railway Station.

About Ambedkar circuit

- ❖ The Ambedkar Circuit was the **fourth in the list of special tourist circuits** namely, the **Ramayana Circuit, Buddhist Circuit, and North East Circuit.**
- ❖ **IRCTC** in association with the **Ministry of Tourism** is operating its **first tour on the Ambedkar circuit.**
- ❖ The eight-day special tour will include visits to prominent places associated with the life of Dr. Ambedkar like **New Delhi, Mhow, Nagpur,** and the **sacred Buddhist sites of Sanchi, Sarnath, Gaya, Rajgir, and Nalanda.**
- ❖ It aims to attract a wider tourist base besides the Dalit community, who frequent these key destinations as a pilgrimage.

About 'Bharat Gaurav Tourist Train'

- ❖ The Ministry of Railways is promoting the cultural and religious heritage of India through its fleet of **Bharat Gaurav Tourist Trains** which are being operated by Railways on various famous **theme-based circuits** to showcase the cultural heritage of this great nation.
- ❖ It is being operated under the 'Dekho Apna Desh' initiative which is aimed at promoting domestic tourism and is a joint collaboration between the Ministries of Tourism and Railways.

'Dekho Apna Desh' scheme

- ❖ The **Ministry of Tourism** launched the 'Dekho Apna Desh' initiative with the objective of creating awareness among the citizens about the rich heritage and culture of the country and encouraging citizens to travel within the country.
- ❖ The scheme aims to push people, especially middle-class citizens, to travel broadly in India rather than flying abroad.

4.13. AHMADIYYAS

- ❖ Radical Islamists in Pakistan demolished an over 100-year-old worship place of the minority Ahmadi community.

About Ahmadiyyas

- ❖ Origins of religious sect are in **Qadian near Amritsar in Punjab, India.**
- ❖ **Mirza Ghulam Ahmad** founded **Ahmadiyya Muslim Community in 1889** as a revival **movement within Islam,** emphasizing its essential teachings of **peace, love, justice, and sanctity of life.**
- ❖ Ahmadiyya Muslim Community is the leading Islamic organization to **categorically reject terrorism.**
- ❖ The movement spread **Western liberal education among the Indian Muslims.**
- ❖ The Ahmadiyya community is the only Islamic sect to believe that the **Messiah had come in the person of Mirza Ghulam Ahmad** to end religious wars and bloodshed and to reinstate morality, peace and justice.
- ❖ They **believed in separating the mosque from the State** as well as in human rights and tolerance.

- ❖ The Ahmadiyya Movement was plagued by **mysticism**.

4.14. THAWE FESTIVAL

- ❖ The 11th Annual Thawe Festival was recently held in Gopalganj, **Bihar**.
- ❖ The festival's objective is to promote tourism in the region and encourage visitors to explore the Thawe Durga Temple.
- ❖ The festival has been **organized annually since 2012**.

4.15. KAMAKHYA TEMPLE

- ❖ **Kamakhya temple corridor** is to be revamped on lines of Kashi Vishwanath and Shree Mahakal Mahalok corridor.
- ❖ Temple dedicated to **Goddess Kamakhya** is **one of the 51 Shakti Peeths in country**.
- ❖ It is **located in Nilanchal Hills near Guwahati** by banks of **Brahmaputra River**.
- ❖ It is a centrepiece of **Tantrik Shaktism cult** in India.
- ❖ **Ambubachi mela of Kamakhya temple** is considered as the **biggest religious congregation in North East India**.

4.16. ABHILEKH PATAL

- ❖ PM praised "Abhilekh patal" a portal with over 1 Crore Pages of Historical Records of National Archives.

About Abhilekh Patal

- ❖ It is a full-featured web-portal to access **National Archives of India's (NAI)** reference media and its **digitized collections through internet**.
- ❖ It is an **initiative of NAI** to make its Indian Archival Records available to all.
- ❖ It contains the **reference media of more than 2.7 million files** held by the National Archives of India.
- ❖ **Abhilekh** is a Sanskrit term used in India for records since ancient times and **Patal** is a Sanskrit word meaning a board, platform, or a surface.
 - ✓ Combined, it is used as an acronym for **Portal for Access to Archives and Learning**.

The National Archives of India

- ❖ NAI is an Attached Office of the **Ministry of Culture** and act as **repository of non-current records** of Government of India.

4.17. HAKKI PIKKI TRIBE

- ❖ Members of the **Hakki Pikki tribal community from Karnataka** are stuck in violence-hit Sudan and the government is making efforts to bring them back.

About Hakki Pikki Tribe

- ❖ Hakki in Kannada means '**bird**' and Pikki means '**catchers**', they are a **semi-nomadic tribe**, traditionally of bird catchers and hunters.
- ❖ They **live in several states in west and south India**, especially near forest areas.
- ❖ According to the 2011 census, the **Hakki Pikki population in Karnataka is 11,892**.
- ❖ They are **believed to hail originally** from the **bordering districts of Gujarat and Rajasthan**.
- ❖ In different regions, they are known by different names, such as **Mel-Shikari in northern Karnataka and Maharashtra**.

4.18. ZAFAR MAHAL

- ❖ The **Archaeological Survey of India (ASI)** is set to initiate conservation works at Zafar Mahal in south Delhi's Mehrauli.

About Zafar Mahal

- ❖ This is the **last structure built by the Mughals** and served as a **summer palace for the Mughal family**.
- ❖ It is **located in Mehrauli village**, which is in the Southern part of Delhi.
- ❖ It consists of the **Mahal** (built by Akbar Shah II) & **Hathi Gate** (built by Bahadur Shah Zafar).
 - ✓ **Hathi Gate** got its name because of the fact that an elephant can pass through it with the 'houdah' (seat, where people sit on elephant) mounted over it.
- ❖ It was **built in memory of the Hazrat Khwaja Qutubuddin Bakhtiar Kaki**, the renowned Sufi saint to whom almost all the Mughal Emperors were disciples.
- ❖ **Zafar Mahal stands next to the Dargah of Qutubuddin Bakhtiyar Kaki**.
- ❖ The complex contains the **beautiful white marble Moti Masjid** and several royal graves.
 - ✓ There's even an **empty grave for Bahadur Shah Zafar**.
- ❖ The palace was used during the **Phool Walon ki Sair (procession of florists) festival** held after every monsoon.

4.19. JAGADGURU BASAVESHWARA

- ❖ PM recently paid tributes to Basaveshwara on his birth anniversary.

About Basaveshwara

- ❖ He was a **12th century poet** and was born in Karnataka.
- ❖ Known for Socio-Religious Reforms, **Anubhava Mantapa** (facilitated gathering for philosophy and experience), **Vachana Literature** and **Lingayat Movement** in south India.
- ❖ **Basava Purana**, written by **Palkuriki Somanatha in 13th-century**, holds full account to Basavanna's life and ideas.
- ❖ Basaveshwara is well-known for his teachings of **gender equality, social reforms, eradication of social discrimination, clarification of superstitions, and unnecessary rituals**.
- ❖ His philosophy was based on principles of **Arivu** (true knowledge), **achara** (right conduct), and **Anubhava** (divine experience).
- ❖ He developed and inspired a **new devotional movement named Virashaivas**, or ardent, heroic worshippers of Shiva.
- ❖ Basaveshwara introduced the practice of wearing the **Ishtalinga necklace**, which symbolizes Lord Shiva and is worn by all Lingayats.

4.20. PUSHKARALU FESTIVAL

- ❖ Pushkaralu festival has returned to the Ganga after a gap of 12 years.
- ❖ The 12-day Pushkaralu festival of **Telugu-speaking people** has **commenced in Varanasi**.
- ❖ Pushkaralu refers to the **worship of the 12 sacred rivers** in which the **god Pushkar appears every 12 years**.
 - ✓ Rivers are: **Ganga, Yamuna, Godavari, Krishna, Kaveri, Bhima, Tapti, Narmada, Saraswati, Tungbhadra, Sindhu, and Pranhita**.
- ❖ The celebration happens annually, **once in 12 years along each river** which are associated with a **zodiac sign**.

4.21. THRISSUR POORAM

- ❖ Festivities of the famous Thrissur Pooram began with **Kodiyettam**, ceremonial flag hoisting, at the participating temples.

About Thrissur Pooram:

- ❖ Thrissur Pooram is an annual Hindu festival celebrated in Kerala during the Malayalam month of Medom (April-May).
- ❖ It is considered to be the **Mother of all Poorams**, a cultural highlight that towers above all other festivals.
- ❖ It is **celebrated in the grand assembly of Gods and Goddesses in and around Thrissur**.

- ❖ It was the **brainchild of Raja Rama Varma**, famously known as **Sakthan Thampuran**, the **Maharaja of Cochin** (1790–1805).
- ❖ It is centred on the **Vadakkunnathan Temple**, with all these temples sending their processions to pay obeisance to **Shiva, the presiding deity**.
- ❖ The processions and rituals of each of deities **follow a very strict itinerary, scheduled** in such a way that the tempo of the **Pooram celebrations - 36 hours non-stop** - is maintained without any loss of energy.
- ❖ A massive parade is planned on temple grounds, accompanied by **Chenda Melam** and **Pancha Vadyam music**.
- ❖ The final day of the pooram occurs on the seventh day referred as "**Pakal Pooram**".

4.22. THIRUNELLY TEMPLE

- ❖ **Indian National Trust for Art and Cultural Heritage (INTACH)** has urged the government to conserve **15th century Vilakkumadom structure at Sree Mahavishnu Temple at Thirunelly** during the ongoing renovation of temple.
- ❖ Built in **traditional Kerala architecture**, it is **situated on banks of stream Papanashini**, on the side of Brahmagiri hills in **Wayanad, Kerala**.
- ❖ It is also known as "**Sahyamala Kshetram**" and "**Kashi of the South**".
- ❖ Thirunelli Temple is the **only temple in the world** where the **devotees can perform all the rituals related to one's life**, starting from birth to death and life after death.
- ❖ The **temple is blessed with trinity of Shiva, Vishnu** (main diety) and **Brahma**.
 - ✓ It is believed that here the **idol of Lord Vishnu was installed by Lord Brahma**.
 - ✓ On western side is the cave temple **Gunnika**, dedicated to Lord Shiva.

Indian National Trust for Art and Cultural Heritage

- ❖ It is a **non-profit charitable organisation**, founded in **1984**, and registered under the **Societies' Registration Act, 1860**.
- ❖ **Vision-** To spearhead heritage awareness and conservation in India.
- ❖ It has pioneered the conservation and preservation of natural and built heritage along with intangible heritage.
- ❖ In 2007, the United Nations awarded INTACH a **special consultative status** with the **United Nations Economic and Social Council**.

4.23. SANCHI TO BE INDIA'S FIRST SOLAR CITY

- ❖ Sanchi, a world heritage site located in the **Raisen district** of Madhya Pradesh, is all set to become **India's first solar city**.
- ❖ It lies in an upland plateau region just west of the **Betwa River**.
- ❖ Sanchi is a religious place with **historical and archaeological significance**.
- ❖ It has **India's best-preserved group of Buddhist monuments**, collectively designated a **UNESCO World Heritage site** in 1989.

Buddhist Monuments at Sanchi

- ❖ Comprise a group of Buddhist monuments like monolithic pillars, palaces, temples and monasteries etc which date back to the **2nd and 1st centuries B.C.**
- ❖ The **most prominent stupa** found here is the **Sanchi Stupa**, also known as the **Great Stupa**.
- ❖ Other remains at the site include several **smaller stupas**, an **assembly hall** (chaitya), an **Ashokan pillar with inscriptions**, and several monasteries (4th–11th century CE).
- ❖ It is the **oldest Buddhist sanctuary** in existence and was a **major Buddhist centre in India until the 12th century A.D.**

The Sanchi Stupa

- ❖ It was built by the **Mauryan emperor Ashoka** in the **third century BC**.
- ❖ It enshrines **religious relics or remains of the Buddha** and his most revered disciples.
- ❖ It is enclosed by a **massive stone railing** pierced by four gateways, which are adorned with elaborate carvings (known as Sanchi sculpture).
- ❖ The stupa itself consists of a **base bearing a hemispherical dome (anda)**, symbolizing the dome of heaven enclosing the earth.
- ❖ It is surmounted by a **squared rail unit (harmika)** representing the world mountain, from which rises a **mast (yashti)**, symbolizing the cosmic axis.
- ❖ The mast bears umbrellas (**chatras**) that represent the various heavens (devaloka).

4.24. SUN TEMPLE AT KONARK

- ❖ A petition was filed in Orissa High Court regarding minimum eligibility criteria set by Archaeological Survey of India for photographers who can operate inside Sun Temple.

About Sun Temple at Konark:

- ❖ Located in **Puri**, Odisha.
- ❖ **Built by King Narasimha Deva I** of the **Eastern Ganga Dynasty** in **1244**.
- ❖ Declared a **World Heritage Site** in **1984** by UNESCO.
- ❖ Also called the **Surya Devalaya**, the temple is dedicated to the **Hindu god Surya**.
- ❖ It is a classic example of the **Odisha style of Architecture** or **Kalinga Architecture**.
- ❖ The temple complex has the appearance of a **100-foot high solar chariot**, with **24 wheels** and pulled by **six horses, all carved from stone**.
- ❖ The **wheels of the temple are sundials**, which can be used to calculate time accurately to a minute.
- ❖ Around the **base of the temple**, there are **images of animals, foliage, warriors on horses and other interesting structures**.
- ❖ It is built using **Khondalite rocks** which are a sub-type of Metamorphic rocks.
- ❖ Also known as '**Black Pagoda**' due to its dark colour.
- ❖ The temple remains a site of contemporary worship for Hindus, during the annual **Chandrabhaga Festival**, around the month of February.
- ❖ **Konark** together with **Puri** and with **Bhubaneshwar** completes the **Golden Triangle of Odisha**, which is a major pilgrimage route for the Hindus in the state of Orissa.

4.25. MONASTERIES IN LADAKH

- ❖ Delegates of G20 summit visited Hemis and Thiksey Monasteries.

About Hemis Monastery

- ❖ Hemis Monastery is the **largest monastic institution in Ladakh**.
- ❖ It is situated on **western banks of the Indus River**.
- ❖ It belongs to **Dragon Order of Mahayana Buddhism** (or the **Drupka Lineage**).
- ❖ Hemis has more than **200 branch monasteries** in the Himalayas.

About Thiksey Monastery

- ❖ It is a **Tibetan Buddhist gompa** (monastery) linked with the **Gelugpa sect**.
- ❖ It is located on top of a hill in **Thiksey hamlet, Ladakh**.
- ❖ It is notable for its **resemblance to Tibet's Potala Palace**.
- ❖ It is also known for its **annual Gustor Festival**.

4.26. RANG GHAR

- ❖ Assam government has proposed a plan to develop **26 acres** on the **northwest side of Rang Ghar** as an **international tourist destination**.

- ❖ The **124-crore project** includes an **artisan village, guest house, tourist information center, amphitheater, boat house, and sound and light show.**
- ❖ The **primary objective** of the project is to encourage local artisans and craftsmen to showcase their handicraft products, traditional dresses, and local cuisines to the tourists.

About Rang Ghar

- ❖ Rang Ghar is a **two-storeyed building** located in the northeastern state of Assam, India.
- ❖ Rang Ghar is considered to be **one of the most ancient amphitheatres in Asia** that has managed to survive over time.
- ❖ It **served as a royal sports pavilion** during the reign of the **Ahom kings and nobles.**
- ❖ The amphitheatre is situated near **Sivasagar Town**, by the side of the Assam Trunk Road.
- ❖ It was originally built during the era of **Swargadeo Rudra Singha**, and the primary building materials used in its construction were **bamboo and wood.**
- ❖ Later, **Swargadeo Pramatta Singha rebuilt the structure with brick** between 1744-1751 AD.
- ❖ The unique construction techniques and prominent architectural features of Rang Ghar showcase the rich heritage of Assamese culture and architecture.



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5. SCIENCE AND TECHNOLOGY

5.1. EINSTEIN TILE

Recently Mathematicians have discovered an “**einstein tile**”

- ❖ An “**einstein tile**” – a shape that could **be singularly used to create a non-repeating** (aperiodic) **pattern on an infinitely large plane**.
 - ✓ Here, “einstein” is a play on **German ein stein** or “one stone” – not to be confused with Albert Einstein, the famous German physicist.

Aperiodic tiles

- ❖ **Aperiodic tiles** are a **set of tile-types** whose **copies can form Patterns without repetition**.
- ❖ **History**
 - ✓ In 1961, mathematician Hao Wang conjectured that aperiodic tilings were impossible. But his student, **Robert Berger**, disputed this, **finding a set 104 tiles**, which when arranged together will never form a repeating pattern.
 - ✓ In the 1970s, **Nobel prize-winning physicist Roger Penrose** found a **set of only two tiles** that could be arranged together in a non-repeating pattern ad infinitum. This is now known as Penrose tiling and has been used in artwork across the world.
- ❖ But since Penrose’s discovery, mathematicians have been looking for the “holy grail” of aperiodic tiling – a **single shape or monotile** which can fill a space up to infinity without ever repeating the pattern it creates.
- ❖ Mathematicians call this the einstein problem in geometry.
- ❖ The **recent discovery named “the hat”** is a **13-sided shape** which has presented a deceptively simple solution.
- ❖ The **hat comprises eight copies of a 60°–90°–120°–90° kite, glued edge-to-edge**, and can be generalised to an infinite family of tiles with the same aperiodic property.
- ❖ **Applications:**
 - ✓ aperiodic tiling will help physicists and chemists understand the structure and behaviour of quasicrystals, structures in which the atoms are ordered but do not have a repeating pattern.
 - ✓ The newly discovered tile might become a springboard for innovative art.

5.2. SODIUM CYANIDE

- ❖ India has initiated an **anti-dumping probe into imports of poisonous chemical sodium cyanide** from China, the European Union, Japan and Korea following a complaint by domestic players.
- ❖ Sodium cyanide **appears as a white crystalline solid or powder**.
- ❖ It **releases hydrogen cyanide gas**, a highly toxic chemical asphyxiant that interferes with the body’s ability to use oxygen.
- ❖ It is **odorless when dry**.
- ❖ It is **used for extraction of gold and silver from their respective ores, manufacturing insecticides, dyes, pigments and bulk drugs**.

5.3. CABINET APPROVES LIGO- WAVE OBSERVATORY

- ❖ Cabinet has recently approved Laser Gravitational-Wave Observatories (LIGO)-India, a gravitational-wave detector to be built in **Hingoli, Maharashtra**.
- ❖ It is estimated to be built by 2030.
- ❖ LIGO will be **built by Department of Atomic Energy** and the **Department of Science and Technology** with an MoU with the U.S. National Science Foundation.
- ❖ The observatory will be the **third of its kind**. It is **made to the exact specifications of the twin LIGO, in Louisiana and Washington** in the U.S.
- ❖ A **fourth detector in Kagra, Japan**, is in the pipeline.

- ❖ Four **comparable detectors need to be operating simultaneously around the globe to localise a source of gravitational waves anywhere in the sky.**

About LIGO

- ❖ LIGO currently consists of two interferometers, each with **two 4 km long arms arranged in the shape of an “L”**.
- ❖ These **instruments act as 'antennae' to detect gravitational waves.**
- ❖ It comprises **stable high-power lasers**, precisely figured mirrors, etc.

About Gravitational Waves (GW):

- ❖ When **two massive objects collide**, they create a **ripple in space and time** in such a way that waves of undulating space-time would propagate in all directions away from the source.
- ❖ Predicted in **Einstein's General Theory of Relativity (1915)**
- ❖ They **travel at the speed of light**, carrying with them information about their origins

5.4. INCOIS

Recently, the Indian National Centre for Ocean Information Services(INCOIS) deployed two deep sea gliders into the Bay of Bengal to study climate change.

About Indian National Centre for Ocean Information Services (INCOIS)

- ❖ It was established as an **autonomous body in 1999** under the **Ministry of Earth Sciences (MoES)** and is a unit of the Earth System Science Organisation (ESSO).
- ❖ It is located in **Hyderabad, Telangana.**
- ❖ Objective-To provide ocean data, information and advisory services to society, industry, the government and the scientific community.
- ❖ It is **chaired by the Secretary of the Ministry of Earth Sciences.** A director along with a governing council oversees its functioning.
- ❖ Other functions –
 - ✓ To establish an Early Warning System for Tsunami and Storm Surges.
 - ✓ To promote research in the field of ocean information and related services including satellite oceanography.

5.5. GENOME INDIA PROJECT

- ❖ About 10,000 genomes are expected to be completely sequenced by the end of the year 2023 under the **Genome India Project.**
- ❖ Under GIP, **Department of Biotechnology (DBT)** is close to have sequenced 7,000 genomes and 3,000 of these are already available for public access.
 - ✓ **United Kingdom, China, and United States** are among the countries that have programmes to sequence at least 1 lakh of their genomes.

About GIP

- ❖ DBT initiated GIP in 2020 (inspired from Human Genome Project) to sequence 10,000 Indian human genomes and create a database.
- ❖ Creating a database of Indian genomes means that researchers from anywhere can learn about genetic variants that are unique to India's population groups and use that to customise drugs and therapies.
- ❖ GIP is led by **Centre for Brain Research at Bengaluru-based Indian Institute of Science**, which acts as **central coordinator** between a collaboration of 20 leading institutions.
- ❖ **Genome sequencing** is figuring out the order of DNA nucleotides, or bases, in a genome—the order of Adenine, Cytosine, Guanines, and Thymine that make up an organism's DNA.
 - ✓ **Genome** is the complete set of genetic information in an organism.

- ❖ **Applications of Genome sequencing:** Identifying inherited disorders and mutations that drive cancer progression, and tracking disease outbreak; Personalised medicines based on genomic make up etc

5.6. NEW URANIUM ISOTOPE DISCOVERED

- ❖ Physicists in Japan discovered a previously unknown isotope of uranium, with **atomic number 92 and mass number 241**, i.e **Uranium-241** and its **half-life**, according to theoretical calculations, could be **40 minutes**.

About Uranium

- ❖ Uranium is a naturally occurring chemical element with the **symbol U** and **atomic number 92**.
- ❖ It is a **silvery-grey metal** in the actinide series of the periodic table.
- ❖ Uranium has **several isotopes**, which are **atoms that have the same number of protons but different numbers of neutrons** like **U-235 and U-238**.
- ❖ It is a heavy metal that is radioactive and found in small quantities in rocks and soils worldwide.

Static Information

- ❖ **Atomic number** = No. of Protons = No. of Electrons
- ❖ No. of Neutrons = **Atomic mass**- Atomic No.

Uranium-241 discovery

- ❖ The researchers accelerated **uranium-238** nuclei into **plutonium-198** nuclei at the KEK Isotope Separation System (KISS).
- ❖ In a process called **multinucleon transfer**, the **two isotopes exchanged protons and neutrons**.
- ❖ The resulting nuclear fragments contained different isotopes.
- ❖ This is how the researchers identified uranium-241 and measured the mass of its nucleus by using time-of-flight mass spectrometry.

Magic numbers

- ❖ In nuclear physics, a **magic number** is a **number of nucleons** (either protons or neutrons, separately) such that they are **arranged into complete shells within the atomic nucleus**.
- ❖ As a result, **atomic nuclei with a 'magic' number of protons or neutrons** are much **more stable than other nuclei**.
- ❖ The heaviest known 'magic' nucleus is lead (82 protons).

5.7. INDIA'S FIRST 3D PRINTED POST OFFICE

- ❖ The country's first 3D-printed post office is coming up in Bengaluru.
- ❖ It is being **implemented by Larsen & Toubro**
- ❖ It is a **1,100 sqft building** which is **expected to cost 30-40 per cent less than** conventional buildings because of the technological intervention.
- ❖ It is being built at a cost of Rs 23 lakh.

About 3D-printing

- ❖ 3D printing or **additive manufacturing** is a process of making **three-dimensional solid objects** from a digital file.
- ❖ In an additive process, an object is created by laying down successive layers of material until the object is created.
- ❖ Each of these layers can be seen as a thinly sliced cross-section of the object.

5.8. NATIONAL CENTRE OF EXCELLENCE IN TECHNOLOGY FOR INTERNAL SECURITY

- ❖ UIDAI – IIT Bombay join hands (under NCETIS) to develop touchless biometric capture system.

- ❖ It will allow fingerprint authentication from home alike face authentication making Universal authenticator a reality.

About NCETIS

- ❖ NCETIS is a **joint initiative by IIT Bombay and Ministry of Electronics and Information Technology (MeitY)**, under its flagship Digital India Programme.
- ❖ NCETIS is aimed at developing indigenous technology solutions for Internal Security forces in broad areas of Electronic System Design and Manufacturing (ESDM).

5.9. ZERO CLICK SPYWARE

- ❖ According to research by Microsoft and Citizen Lab, spyware developed by Israeli company has been used against journalists, opposition figures and advocacy organizations across **at least 10 countries**.
- ❖ Spyware developed by **QuaDream** is a **no-interaction-needed hacking tool**, known as “Zero-Click”.
- ❖ Zero-Click tools can **remotely compromise devices without an owner needing to open a malicious link or download a tainted attachment**.
- ❖ Zero-click attacks often rely on **zero-days**, which are **vulnerabilities that are unknown to the software maker** and for which no fix is presently available.
 - ✓ Earlier, **Pegasus** was also such a spyware.
- ❖ Zero-click attacks are **hard to detect** given their nature and hence even harder to prevent.
- ❖ Detection becomes **even harder in encrypted environments** where there is no visibility on the data packets being sent or received.

5.10. ETHYLENE OXIDE

- ❖ The European Commission (EC) has classified ethylene oxide as a pesticide.
 - ✓ Earlier it was classified as fumigant.
- ❖ This means agricultural products being exported to European Union will now be mandatorily tested.

About Ethylene oxide

- ❖ A **flammable colorless gas** with a sweet odour.
- ❖ Used primarily to produce other chemicals, including **antifreeze**.
- ❖ In smaller amounts, **ethylene oxide** is used as a **pesticide and a sterilizing agent**.
- ❖ It has been classified as **carcinogenic and mutagenic reproductive toxin**.

5.11. MAGNETORESISTANCE IN GRAPHENE

- ❖ Nobel laureate Andre Geim has recently discovered that Graphene displays an anomalous giant magnetoresistance (GMR) at room temperature.

About GMR

- ❖ **Magnetoresistance** is the tendency of a material to **change the value of its electrical resistance in an externally-applied magnetic field**.
- ❖ Giant Magnetoresistance (GMR) is the **large change in the electrical resistance** which is induced by the application of a magnetic field to thin films composed of alternating ferromagnetic and nonmagnetic layers.
 - ✓ When **materials are magnetised in same direction**, electrical **resistance** in the conductor is **low**.
 - ✓ When **directions are opposite** each other, **resistance increases**.
- ❖ **Application of GMR**: Hard disk drives and magnetoresistive RAM in computers, biosensors, automotive sensors, microelectromechanical systems, and medical imagers.
- ❖ New study has found that **a graphene-based device, unlike conventional counterparts, wouldn't need to be cooled** to a very low temperature to sense magnetic fields.

About Graphene

- ❖ Graphene is **'a two-dimensional single-atom-thick layer of carbon atoms** bonded in a hexagonal honeycomb lattice structure.

- ❖ It has exceptionally high tensile strength, electrical conductivity, transparency, and thinnest two-dimensional material in the world.
- ❖ It is **almost perfectly transparent** since it **only absorbs 2 percent of light**.
- ❖ It is **extracted from graphite**.
- ❖ Applications include Energy (Solar cell, Fuel cell, Super computers etc); Sensor, Bio-sensor; Biomedical (diagnostic, drug delivery etc); Environment treatment etc

5.12. EPSTEIN-BARR VIRUS

- ❖ Study reveals how 'EBV' virus that spreads through saliva can lead to cancer.

About Epstein-Barr virus (EBV):

- ❖ It is one of the **most common human viruses** in the world.
- ❖ It spreads through bodily fluids, especially saliva (spit).
- ❖ **Symptoms:** Fatigue, fever, inflamed throat, swollen lymph nodes in the neck, enlarged spleen, swollen liver, rash.
- ❖ EBV **can cause infectious mononucleosis**, also called mono, and other illnesses.
- ❖ There is **no vaccine to protect against EBV** infection.
- ❖ Most EBV infections are small and transient, however, in some cases, long-lasting latent infections, i.e., infections by an organism that has for some time been inactive in the body, are associated with **a number of cancers** as well as several chronic inflammatory disorders.
- ❖ The researchers found that the **virus induces cleavage of human chromosome 11**, and triggers **genomic instability**, which **can activate a leukaemia-causing oncogene** and **reduce the function of a major tumour suppressor**.

5.13. BLASTOMYCOSIS

- ❖ **Blastomycosis** is a **rare** fungal infection caused by the **Blastomyces fungus** that is found in the midwestern, south-central, and southeastern states of the US.
- ❖ The fungus is **endemic to Michigan state, US**.
- ❖ The fungus is typically **present in moist soil** and **decomposing wood and leaves**.
- ❖ The disease is **contracted by inhaling the spores** of the fungus, which can be dispersed in the air if the soil is disturbed.
- ❖ **Symptoms:** Fever, Cough, Breathing difficulty and muscle aches etc.
- ❖ **Itraconazole** is a type of antifungal medication that is typically used to treat mild to moderate blastomycosis.

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6. DEFENCE

6.1. AFINDEX-2023

- ❖ The 2nd edition of the joint military exercise “the Africa-India Field Training Exercise (AFINDEX-2023)” concluded recently in **Maharashtra**.
- ❖ A total of **25 nations of the African continent** with 124 participants and Indian troops from the Sikh, Maratha and Mahar Regiments participated in the multinational exercise.
- ❖ The multinational military drill was aimed at promoting the idea of **Africa-India Militaries for Regional Unity (AMRUT)** and focused on incorporating the current dynamics of **UN Peacekeeping Forces (UNPKF)** through practical and comprehensive discussions and tactical exercises.

6.2. COPE INDIA EXERCISE

- ❖ The **Air Forces of India and the U.S.** are set to conduct the Cope India exercise from April 10 to 21 at the Kalaikunda airbase in West Bengal, with Japan as an observer.
- ❖ Cope India Exercise is a **bilateral combined training session** involving the Indian Air Force (IAF) and the US Air Force (USAF).
- ❖ Cope India started out as a fighter-training drill in 2004.
- ❖ Other joint defence exercises between India and the US include
 - ✓ **Yudh-Abhyas** (Military Exercise),
 - ✓ **Vajra Parhar**
 - ✓ And a Trilateral Maritime **Exercise Malabar** is scheduled between the navies of India, Japan, and the USA.

6.3. OFEK-13 SPY SATELLITE

- ❖ Recently, Israel successfully launched a new spy satellite, named **Ofek-13**, into orbit.
- ❖ The satellite, Ofek-13, launched from the Palmachim Airbase in central Israel, is intended to provide **advanced intelligence capabilities to the Israeli military** and intelligence agencies.

6.4. MK 54 LIGHTWEIGHT TORPEDO

- ❖ As per the report India is going to sign a weapons deal worth Rs. 2400 crore with the United States that includes Mark 54 anti-submarine torpedoes.
- ❖ These will be used to upgrade **MH 60 ‘Romeo’ helicopters**, the most advanced multi-role helicopters currently in service with the Indian Navy.
- ❖ **MK 54 lightweight torpedoes** are used by US surface ships, fixed-wing aircraft, and helicopters, and are their primary anti-submarine warfare weapon.
- ❖ It can **operate in shallow waters** and in the presence of countermeasures.
- ❖ It is powered by a **reciprocating external combustion engine**.
- ❖ It can track, classify, and attack underwater targets.

6.5. COMBINED COMMANDERS CONFERENCE

- ❖ Recently, The Prime Minister of India, participated in the **Combined Commanders’ Conference** in Bhopal, Madhya Pradesh for three days.
- ❖ The **theme** of the conference was **‘Ready, Resurgent, Relevant’**.
- ❖ Combined Commanders’ Conference is a **biennial event** where the country’s top military brass come together to brainstorm on military matters and national security.

- ❖ The Military Commanders discussed a wide range of **issues** related to **national security, including jointness and theaterisation** in the Armed Forces.

6.6. SLINEX- 23

- ❖ The 10th edition of India Sri Lanka **annual bilateral maritime** Exercise SLINEX-23 is underway at Colombo .
- ❖ The Indian Navy is represented by INS Kiltan, an indigenous Kamorta class ASW corvette and INS Savitri, an Offshore Patrol Vessel.
- ❖ SLINEX aims at enhancing interoperability, improving mutual understanding and exchanging best practices while jointly undertaking multi-faceted maritime operations.

6.7. NATIONAL TECHNICAL RESEARCH ORGANISATION

- ❖ NTRO recently informed about an information-stealing malware, known as **Raccoon Stealer** to eight central government entities.
- ❖ It is usually delivered through email, and retrieves sensitive data from infected machines.

About National Technical Research Organisation

- ❖ NTRO was established in **2004**, post Kargil war as a dedicated technical intelligence agency, on the recommendations of **Girish Chanda Saxena** taskforce.
- ❖ It is a **technical intelligence agency** under **National Security Adviser** in Prime Minister's Office, India.
- ❖ It also includes the **National Institute of Cryptology Research and Development (NICRD)**.
- ❖ It has the **right to lawfully intercept and monitor communications** externally.
- ❖ It has been brought **under The Intelligence Organisations (Restriction of Rights) Act, 1985**.
 - ✓ The Act **prevents employees of a notified agency from forming unions/associations, puts restrictions on the employee's freedom of speech, bars any communication with the press, or publishing a book or other document** without the permission of the head of the intelligence organisation.

6.8. EXERCISE KAVACH

- ❖ The Andaman and Nicobar Command (ANC) recently concluded a two-month-long joint military exercise named 'Ex KAVACH.'
- ❖ The exercise involved the **assets of the Army, Navy, Air Force, and Coast Guard** and aimed at fine-tuning **joint warfare capabilities** and enhancing interoperability and operational synergy between the forces.
- ❖ It involved **amphibious landing, air-landed operations, heliborne operations**, and rapid insertion of the Special Forces on a remote Island of the Andaman and Nicobar Islands.

6.9. CENTRAL BOARD OF NARCOTICS

- ❖ Unified Portal of CBN was launched recently to **facilitate a balance between narcotics substance availability for medical/scientific/industrial use and law compliance**.
- ❖ The portal is designed to be integrated with other government services, including **Bharat Kosh, GST, PAN-NSDL validation, e-Sanchit, and UIDAI**, providing **single-point services** for obtaining licenses from the Central Bureau of Narcotics.
- ❖ It'll instil **efficiency and transparency** and reduce time taken by pharma industry to get a trade licence.

About CBN

- ❖ CBN is a subordinate office under **Department of Revenue of Ministry of Finance**.
- ❖ It deals with **international trade of narcotic drugs**, under ambit of various United Nations Conventions and provisions of Narcotics Drugs & Psychotropic Substances (NDPS) Act, 1985.

6.10. MERAJ- 532

- ❖ **Iran** recently tested a homemade long-range, high-precision kamikaze drone named Meraj-532, equipped with a 50-kg warhead.

About Meraj-532:

- ❖ It is a kamikaze drone equipped with a piston engine having a range of 450 km.
- ❖ It is **capable of flying at a maximum altitude of 12,000 feet** for three straight hours.
- ❖ It has a **50-kg warhead** and can be assembled and prepared for flight easily, making it suitable for rapid reaction operations.

About Kamikaze drones

- ❖ These are also called **suicide drone** or, more formally, a **loitering munition**,
- ❖ It is an **unmanned aerial vehicle** that is **designed to self-destruct after serving its purpose**.
- ❖ They **can hover around the target area** for some time (much longer than a cruise missile) and attack only once a target is located.
- ❖ It may also feature a built-in warhead or payload, which is intended to detonate during the engagement

6.11. ORION WARGAME

- ❖ **France** is hosting the **multinational wargame codenamed Orion**, which is expected to be held from the third week of April to May 5. This exercise will involve various countries, including India, and will test their combat capabilities in a simulated war scenario.
- ❖ The aim of the exercise is to test the preparedness of the participating countries' air forces and their ability to operate in a multi-national environment.
- ❖ The Indian Air Force (IAF) will participate in Orion with **its Rafale fighter jets from the Western Air Command's Golden Arrows squadron**.
- ❖ Some 7,000 NATO troops have reportedly participated in the drill involving the land forces of their NATO allies.

6.12. PRALAY MISSILE

- ❖ India is going to buy 250 more Pralay ballistic missiles for the services to strengthen them on the northern borders, further boosting the firepower of the defence forces.

About Pralay missile:

- ❖ It is a quasi-ballistic **surface-to-surface missile**.
- ❖ It can **hit targets 150-500 km away**.
- ❖ The missile **can carry 350-700 kg of high-grade explosives**.
- ❖ It is developed by the Defence Research Development Organisation (DRDO).
- ❖ It is **powered by a solid propellant rocket motor** and other new technologies.
- ❖ The missile guidance system includes state-of-the-art navigation and integrated avionics.
- ❖ It **can change its path after covering a certain range in mid-air**.

6.13. INIOCHOS-23

- ❖ Indian Air Force will participate in **Exercise INIOCHOS-23**, a multi-national air exercise hosted by the **Greece Air Force**.

6.14. SEA-BASED BALLISTIC MISSILE INTERCEPTOR

- ❖ **DRDO and Indian Navy** recently successfully conducted a maiden flight trial of **sea-based endo-atmospheric interceptor missile** off the coast of Odisha.
- ❖ India **entered an elite club of nations** with the capability to fire a Ballistic Missile Defense (BMD) interceptor **from a naval platform**.

- ❖ Prior to this, DRDO has successfully demonstrated land-based ballistic missile defence system with capability to neutralize ballistic missile threats, emerging from adversaries.

India's Ballistic Missile Defence Programme

- ❖ India launched the BMD program **after Kargil war in 1999** to counter the enemy nation's widening spectrum of ballistic missiles that usually delivered both conventional and nuclear warheads.
- ❖ At present, the **BMD system includes the endo-atmospheric Advanced Air Defence (AAD) interceptor and the exo-atmospheric Prithvi Air Defence (PAD) systems.**

Advanced Air Defence Missile

- ❖ Advanced Air Defence (AAD) Missile is for lower altitude interception.
- ❖ Developed by the DRDO, with the Hyderabad-based **Research Centre Imarat (RCI).**
- ❖ It was first tested in 2007 and designed to knock down hostile missiles in the endo-atmosphere at altitudes of 15-40 KM.
- ❖ The endo-atmospheric missiles are the ones that operate within the earth's atmosphere that covers an **altitude below 100 KM.**

Prithvi Air Defence missile

- ❖ It was originally tested in 2006 and is capable of intercepting and destroying missiles at **exo-atmospheric altitudes ranging from 50 to 180 kilometres.**
- ❖ The Pradyumna interceptor has already replaced the **Prithvi Air Defence BMD.**
- ❖ **Exo-atmospheric missiles are capable of completing missions in the Earth's upper atmosphere.**

6.15. OPERATION KAVERI

- ❖ India has launched '**Operation Kaveri**' to bring back its citizens stranded in war-torn **Sudan.**
- ❖ The estimated number of Indians in Sudan is **around 4,000.**
- ❖ As part of the operation, **two C-130 aircraft** and the **navy ship INS Sumedha** is on standby to safely evacuate stranded Indians.

6.16. EXERCISE AJEYA WARRIOR

- ❖ It is India - UK Joint Company Level Military Training exercise being conducted at UK's **Salisbury Plains.**
- ❖ Ajeya Warrior is a **biennial training** event with the UK which is conducted **alternatively in both countries.**
- ❖ The **last edition** was held at **Chaubatia, Uttarakhand** in October 2021.

6.17. BUREAU OF CIVIL AVIATION SECURITY

- ❖ The **Bureau of Civil Aviation (BCAS)**, the national Regulator for Civil Aviation Security, recently commemorated its **37th raising day.**

About Bureau of Civil Aviation Security

- ❖ Initially set up as a **Cell in the Directorate General of Civil Aviation (DGCA)** in January 1978 on the recommendation of the **Pande Committee** constituted in the wake of the **hijacking of the Indian Airlines flight on September 10, 1976.**
 - ✓ The role of the Cell was to coordinate, monitor, inspect and train personnel in Civil Aviation Security matters.
- ❖ The BCAS was **reorganized into an independent department on April 1, 1987**, under the **Ministry of Civil Aviation** as a sequel to the **Kanishka Tragedy** in June 1985.
- ❖ **Function:** To lay down Aviation Security Standards for civil flights at airports in India (in accordance with **Chicago Convention** of International Civil Aviation Organization (ICAO- HQ-**Montreal, Canada**) and monitoring their implementation.
- ❖ HQ: New Delhi.
- ❖ It is **headed by an officer** of the **rank of Director General of Police (DGP)** and is designated as Commissioner of Security (Civil Aviation).

7. SPACE

7.1. CORONAL HOLES

- ❖ NASA scientists have spotted a massive coronal hole on the Sun, which is **20 times larger than Earth**, unleashing solar winds towards Earth.
 - ✓ Solar winds impact Earth's magnetic field, satellites and technology.
- ❖ Solar winds also lead to generation of aurora at higher latitudes on Earth.

Coronal Holes

- ❖ Coronal holes are **areas which appear dark in solar corona in extreme ultraviolet and soft x-ray solar images**.
- ❖ These are regions on the sun's surface from where **fast solar wind gushes out into space**.
- ❖ In these regions, **the magnetic field is open to interplanetary space**, sending solar material out in a high-speed stream of solar wind i.e. geomagnetic storm.
- ❖ They have **lower temperatures** and **appear much darker** than their surroundings as they contain little solar material.
- ❖ Coronal holes can **last between a few weeks to months**.
- ❖ The holes are not a unique phenomenon, appearing throughout the sun's approximately 11-year solar cycle. They can last much longer during solar minimum, a period of time when activity on the Sun is substantially diminished.

7.2. EOS-06 SATELLITE

- ❖ The Indian Space Research Organisation (ISRO) has recently released a **Global False Colour Composite (FCC) mosaic of images** captured by the **Ocean Colour Monitor (OCM)** payload on board the **EOS-06 satellite**.
- ❖ The OCM senses the Earth in 13 distinct wavelengths to provide information about global vegetation cover on land and ocean biota for global oceans.

About EOS-06

- ❖ The EOS-06 **third generation satellite** in the Oceansat series was launched by ISRO onboard the **PSLV-C54 along with eight Nano-satellites** on November 26, 2022.
- ❖ EOS-06 provides continued services of Oceansat-2 with enhanced payload capability and carries **four payloads OCM, Sea Surface Temperature Monitor, Ku-Band Scatterometer, and ARGOS**.
- ❖ The EOS-06 is envisaged to observe **ocean colour data, sea surface temperature** and wind vector data to use in Oceanography, climatic and meteorological applications.
- ❖ The satellite also supports value added products such as potential fishing zones using chlorophyll, SST and wind speed and land based geophysical parameters.

7.3. ULTRAMASSIVE BLACK HOLE

- ❖ Astronomers have discovered an ultramassive black hole using **gravitational lensing**, a phenomenon where a foreground object bends light from a distant object behind it.
- ❖ Researchers used supercomputer simulations to simulate light from a distant galaxy travelling through the Universe, each simulation had a black hole of a different mass.
- ❖ The path taken by the light in one simulation matched the path seen in actual images captured by the **Hubble Space Telescope**, leading to the discovery of an ultramassive black hole in the foreground galaxy.
- ❖ The ultramassive black hole is **over 30 billion times the mass of our Sun**.

About Black Hole

- ❖ Black holes are **regions of space-time where gravity is so strong** that nothing, not even light, can escape from them.

- ❖ They are formed when a massive star collapses in on itself at the end of its life, creating an incredibly dense object with a gravitational pull that is so strong that it warps space-time around it.
- ❖ Types of Black Holes:
 - ✓ **Stellar Black Hole:** It is formed by the collapse of a single massive star.
 - ✓ **Intermediate Black Hole:** Their masses are between 100 and 100,000 times that of the sun.
 - ✓ **Supermassive Black Hole:** Their masses ranging from millions to billions of times that of the sun, found at the centres of most galaxies including our own Milky Way galaxy.
- ❖ Studying black holes can also help us understand the fundamental properties of space, time, and gravity.

Gravitational Lensing

- ❖ Gravitational lensing is a phenomenon where the **path of light from a distant object is bent by the gravitational field** of a massive object, such as a galaxy or a black hole.
- ❖ This bending of light can cause distant objects to appear distorted or magnified, depending on the alignment of the massive object and the observer.
- ❖ The effect of gravitational lensing was first predicted by Albert Einstein in his theory of general relativity, and has since been observed and studied by astronomers.

7.4. ISRO's RLVTD

- ❖ Recently, ISRO successfully carried out the landing experiment of the Reusable Launch Vehicle-Technology Demonstration (RLV-TD) programme.
- ❖ Reusable Launch Vehicle Autonomous Landing Mission (RLV LEX) test was the second of five tests that are a part of ISRO's efforts to develop RLVs or space planes/shuttles under the RLV-TD Programme.
- ❖ RLV is essentially a **space plane** with a **low lift to drag ratio** and can travel to **low earth orbits** to deliver payloads and return to earth for use again.
- ❖ This vehicle will be scaled up to become the **first stage of India's reusable two-stage orbital (TSTO) launch vehicle**.
- ❖ RLV-TD Programme aims at developing essential technologies for a fully reusable launch vehicle to enable low-cost access to space.
- ❖ It includes technologies like **hypersonic flight (HEX), autonomous landing (LEX), return flight experiment (REX), powered cruise flight, and Scramjet Propulsion Experiment (SPEX)**.
 - ✓ NASA is using RLV for long time and private space agencies such as Space X demonstrating partially reusable launch systems
- ❖ RLV is considered a **low-cost, reliable, and on-demand mode of accessing space**.
- ❖ However, issues like- Selection of materials like special alloys, composites, and insulation materials, crafting of its complex parts, highly skilled manpower requirement, still remain

Global precedents

1. **NASA-** Reusable space vehicles have been in existence for a long time with NASA space shuttles carrying out dozens of human space flight missions.
2. **Space X:** The use case for reusable space launch vehicles has revived with the private space launch services provider Space X demonstrating partially reusable launch systems with its Falcon 9 and Falcon Heavy rockets since 2017. SpaceX is also working on a fully reusable launch vehicle system called **Starship**.

7.5. CASSIOPEIA A

- ❖ NASA's **James Webb telescope** reveals never before seen details in Cassiopeia A.
- ❖ **Cassiopeia A** is a **remnant of a massive star that exploded about 340 years ago**
- ❖ It is situated in constellation Cassiopeia.
- ❖ It is **located nearly 11000 light years away from earth**.
- ❖ It is one of the **strongest sources of radio emission in sky beyond solar system**.

- ❖ Cassiopeia Constellation ranks as **25th largest Constellation**. Constellation resembles an irregularly shaped letter “W”

7.6. BH1 AND GAIA BH2

- ❖ Scientists have made a groundbreaking discovery by finding the closest black hole to Earth.
- ❖ BH1 is the **closest black hole ever detected till date**.
 - ✓ It is **situated just 1,560 light-years away** from Earth in the direction of the constellation Ophiuchus.
- ❖ It was discovered by a team of astronomers using the **European Space Agency’s (ESA) Gaia satellite**, which is **designed to precisely measure the positions and movements of stars in the Milky Way** galaxy.
- ❖ In addition, Gaia also found the second closest black hole to Earth, **Gaia BH2**, which is **3800 light-years away** in the constellation Centaurus.
- ❖ Black holes are formed when massive stars collapse under the force of their own gravity, creating incredibly dense objects.
 - ✓ They are so dense that their gravity is strong enough to trap anything that comes too close, including light itself.

7.7. NISAR TO MAP HIMALAYAN SEISMIC ACTIVITY

- ❖ **NISAR** will map the most earthquake-prone regions in the Himalayas with unprecedented regularity.
- ❖ It will feature advanced radar systems, L- and S-band radar built by NASA and ISRO respectively, to add to current understanding on Earth’s crust.
- ❖ It will study Earth’s land and ice surfaces twice every 12 days to study natural hazards, melting sea ice, groundwater supply, volcanoes etc.
- ❖ It will also survey forests and agricultural regions to help understand carbon exchange between plants and atmosphere.

Significance of NISAR for Himalayan region

- ❖ Determining how strain is building up in various parts of the Himalayas.
 - ✓ **Strain** refers to **deformation that occurs in rocks** when it is under pressure from other rocks, usually due to movements of continental plates.
- ❖ Study deformation patterns, such as in Joshimath, and create a deformation map.
- ❖ Map out the most earthquake-prone regions in the Himalayas with unprecedented regularity.

About NISAR Satellite

- ❖ NISAR is an **Earth-observation satellite**, being jointly developed by the National Aeronautics and Space Administration (**NASA**) and the Indian Space Research Organisation (**ISRO**).
- ❖ It was envisioned by NASA and ISRO eight years ago in 2014.
- ❖ It is **slated to be launched in 2024** by **ISRO’s Geosynchronous Satellite Launch Vehicle Mark II** rocket.
- ❖ The satellite will operate for a minimum of three years. It is a **Low Earth Orbit (LEO) observatory**.
- ❖ NISAR will **map the entire globe in 12 days**

7.8. TROJAN ASTEROIDS

- ❖ Recently, **NASA’s Lucy spacecraft** first time caught a glimpse of the Jupiter and **Trojan asteroids**.

About Trojan asteroids:

- ❖ These are **mysterious space rocks** which have been gravitationally trapped in **Jupiter’s orbit** around the Sun for billions of years.
- ❖ These are thought to be remnants of the primordial material that formed the outer planets.
- ❖ They **orbit the Sun in two loose groups**, with **one group leading ahead of Jupiter in its path**, and the **other trailing behind**.
- ❖ They are **clustered around the two Lagrange points equidistant from the Sun and Jupiter**, the Trojans are stabilized by the Sun and its largest planet in a gravitational balancing act.

About Lucy Mission

- ❖ It was launched by **NASA** from the Cape Canaveral Space Force Station in Florida in 2021.
- ❖ It is a **12-year mission** which will take close observations of **nine of Jupiter's Trojans and two main belt asteroids** along with that.
- ❖ It is the **first spacecraft sent to study the Trojan asteroids**, which orbit the Sun in the same path that the planet Jupiter takes.
- ❖ It has recently captured the images of Eurybates, Polymele, Leucus and Leucus asteroids.

7.9. ISRO TO LAUNCH TELOS-2

- ❖ **Indian Space Research Organisation** is set to launch a **Singaporean Earth Observation satellite called TeLEOS-2**.
- ❖ The launch will take place on board ISRO's Polar Satellite Launch Vehicle (PSLV), marking the 55th mission for the rocket. The launch is known as the **C-55 mission**.

About TeLEOS-2 satellite

- ❖ TeLEOS 2 is an **Earth observation satellite** that weighs 750kg.
- ❖ It has **synthetic aperture radar technology** that provides **data at a resolution of 1 metre**.
- ❖ It was developed by **ST Engineering**.
- ❖ TeLEOS 2 will provide **imagery** that can be used for various applications, such as:
 - ✓ **Hotspot monitoring and haze management.**
 - ✓ Aviation accidents and search and rescue operations.
- ❖ ISRO has chosen to utilize the **XL variant of the PSLV launcher** for the upcoming C-55 mission.

7.10. SPACEX STARSHIP

- ❖ SpaceX's Starship, the **world's biggest rocket**, exploded during its first test-flight to space.

About Starship

- ❖ SpaceX's Starship spacecraft and Super Heavy rocket – collectively referred to as **Starship**
- ❖ **Super Heavy rocket:**
 - ✓ It is the **first stage, or booster**, of the Starship launch system.
 - ✓ Powered by **33 Raptor engines using sub-cooled liquid methane (CH₄) and liquid oxygen (LOX)**.
 - ✓ The **Raptor engine is a reusable methane-oxygen staged-combustion engine** that powers the Starship system.
 - ✓ Super Heavy is **fully reusable and will re-enter Earth's atmosphere** to land back at the launch site.
- ❖ **Starship spacecraft:**
 - ✓ It is the **second stage** of the Starship system.
 - ✓ It is also capable of **point-to-point transport on Earth**, enabling travel to anywhere in the world in one hour or less.
 - ✓ It is a **fully reusable transportation system** designed to carry both crew and cargo to Earth orbit, the Moon, Mars, and beyond.
- ❖ It is the **world's most powerful launch vehicle ever developed**, capable of carrying up to 150 metric tons fully reusable and 250 metric tons expendable.
- ❖ **Future deployment**
 - ✓ NASA has picked the Starship spacecraft to ferry astronauts to the Moon in late 2025 — a mission known as **Artemis III** — for the **first time since the Apollo program ended in 1972**.

7.11. EELS- EXO BIOLOGY EXTANT LIFE SURVEYOR

- ❖ **NASA** is developing a snake-like robot - **EELS** - which can boost space exploration through its **diverse adaptability** to various terrains.

- ❖ EELS is capable of **exploring internal and enclosed dynamic terrain structures** to assess evidence for life.
- ❖ The EELS architecture is a **snake-like, self-propelled robot and made of multiple, identical, segments** containing both the **actuation and propulsion mechanisms** as well as the power and communication electronics to drive them.
- ❖ EELS uses first-of-a-kind rotating propulsion units that act as **tracks, gripping mechanisms and propeller units underwater**, enabling the robot to access a plume vent exit and follow it to its ocean source.
- ❖ It's special focus is on **Enceladus, the sixth largest moon of Saturn**.
- ❖ Besides Enceladus, EELS system can explore Martian polar caps and descending crevasses in Earth's ice sheets.

7.12. QUASARS

- ❖ **Quasars** — the brightest and the most powerful objects in the universe — have a violent origin story.
- ❖ A recent study revealed that merger of galaxies ignites quasars.
- ❖ Quasars are **very bright, distant and active supermassive black holes** that are **millions to billions of times mass of the Sun**.
- ❖ The quasi-stellar radio sources (Quasars) were **first discovered six decades ago**.
- ❖ Typically **located at the centers of galaxies**, they feed on infalling matter and unleash torrents of radiation.
- ❖ **A quasar's light outshines that of all the stars in its host galaxy combined**.
- ❖ **Most quasars are larger than our solar system**.
- ❖ A quasar is approximately 1-kilo parsec in width.
 - ✓ **1 parsec** is a unit of **distance** used in astronomy, equal to **about 3.26 light years**.

8. ENVIRONMENT

8.1. PENCH TIGER RESERVE

- ❖ Two orphaned tiger cubs rescued from **Pandharkawada forest range** in Maharashtra have been moved to Pench Tiger Reserve.

About Pench Tiger reserve

- ❖ It is named after **Pench river**, which **flows from north to south** through Reserve dividing the reserve into equal eastern and western parts.
- ❖ Located in southern reaches of **Satpura hills in Seoni and Chhindwara districts in Madhya Pradesh**, and continues in **Nagpur district in Maharashtra** as a separate Sanctuary.
- ❖ It is among the sites notified as **Important Bird Areas (IBA) of India**. Birds like peafowl, magpie robin, pintail, drongo, unia, myna etc. are found.
- ❖ **Flora**: A mixture of **Southern dry broadleaf teak forests** and **tropical mixed deciduous forests** is present. E.g Sal trees, Terminalia Arjun, Amaltas and Flame of The Forest (Butea frondosa) etc.
- ❖ **Fauna**: Tiger, Leopard, Sloth Bear, Jackal, Wolf, Deer, Porcupine, Hyena, wild dogs, nilgai etc.

8.2. SALT MARSHES

- ❖ Salt marshes have been playing an outsized role in stabilising the environment.
- ❖ But more than 90 per cent of these biologically productive ecosystems may soon succumb to sea level rise by the turn of the century, according to a recent study.

About Salt marshes

- ❖ Salt marshes are **coastal wetlands** that are **flooded and drained by salt water** brought in by the tides.
- ❖ They are **found in intertidal zones along coastlines**, usually in protected areas such as estuaries or bays.
- ❖ They are **dominated by grasses and other salt-tolerant plants** such as **sedges, cordgrass, rushes, and mangroves**.
- ❖ Salt marshes occur **worldwide**, particularly in **middle to high latitudes**.
- ❖ Salt marshes protect shorelines from erosion by buffering wave action and trapping sediments.
- ❖ They reduce flooding by slowing and absorbing rainwater and protect water quality by filtering runoff, and by metabolizing excess nutrients.

Coastal squeeze

- ❖ Marshes all over the globe experience '**coastal squeeze**,' where their **movement is obstructed by sea level rise, anthropogenic activities and geographical factors**. For instance, a seawall that protects a home from inundation will prevent a wetland from naturally migrating to higher ground.
- ❖ Sea level rise is the most important threat to salt marshes.

8.3. MUKUPIRNA FORTIDENTATA

- ❖ Scientists in **Australia** have discovered evidence of a previously unknown **ancient marsupial** called **Mukupirna fortidentata**.
- ❖ This ancient species roamed the country around 25 million years ago.
- ❖ The Mukupirna fortidentata is thought to **have weighed up to 50 kg**, making it one of the largest marsupials alive at the time.
- ❖ It is believed to have consumed tough fruits and nuts. It is related to **Mukupirna nambensis, another marsupial species**.
- ❖ The mukupirnids seemed to have gone extinct sometime before the end of the late Oligocene (25-23 million years ago) during a period of changing climate as ancient forest regions in Australia's centre became increasingly arid.

8.4. ERAVIKULAM NATIONAL PARK

The ENP has got its first fernarium.

About Ferns

- ❖ Ferns are part of the Epiphytic family. They grow **naturally in a soilless condition**. The **plants obtain water and nutrients through leaching** from trees.
- ❖ Ferns are a diverse group of plants that **do not produce flowers or seeds** but instead **reproduce through spores**.
- ❖ Some ferns are used for food.

About Eravikulam National Park (ENP)

- ❖ It is located in Southern Western Ghats near **Idukki, Kerala**.
- ❖ **Anamudi** is the highest peak at 2695 meters (also the highest peak of the Indian Peninsula).
- ❖ Vegetation includes **grasslands, shrublands and Shola forests**.
- ❖ It was declared a sanctuary in 1975 and later a National Park (1978) with the intention of protecting the indigenous population of **Nilgiri Tahr** (IUCN status- **endangered**). Other animals include Nilgiri Marten, Ruddy Mongoose, Small Clawed Otter, etc.
- ❖ **"Neelakurinji"**, the flower that blooms once in twelve years grows here.

8.5. 50 YEARS OF PROJECT TIGER

- ❖ Project Tiger was launched in the year 1973 to protect Tigers in India.
- ❖ It is a **centrally Sponsored Scheme** of the Ministry of Environment, Forests and Climate Change (MoEFCC) providing central assistance to the tiger States for tiger conservation in designated tiger reserves.

About NTCA

- ❖ **National Tiger Conservation Authority (NTCA)** is its implementing authority established in 2005 under **Wildlife (Protection) Act, 1972**.
- ❖ It has overarching supervisory/coordination role and approves the **Tiger Conservation Plan** prepared by the State Governments.
- ❖ NTCA consists of the **Minister in charge of the MoEFCC (as Chairperson)**, the Minister of State in the MoEFCC (as Vice-Chairperson), **3 MPs, Secretary, MoEFCC**.
- ❖ **A Success story**
 - ✓ With a current population of about **3,000 tigers**, **India is home to more than 70%** of the global tiger population.
 - ✓ While Project Tiger initially covered **9 tiger reserves**, India now has **53 reserves** covering approximately **2.4% of the country's geographical area**.
 - ✓ India achieved a **doubling of tiger population in 2018**, 4 years ahead of the targeted year 2022.

Protection status for Tiger

- ❖ IUCN red list categorises - **Endangered**
- ❖ **Appendix I** of CITES
- ❖ Included in **Schedule I and Schedule IV** of Wildlife Protection Act

8.6. WORLD'S FIRST LIQUID HYDROGEN-POWERED FERRY 'MF HYDRA'

- ❖ **Norwegian company Norled** has successfully launched the world's first ferry that runs on liquid hydrogen.
- ❖ The vessel, called **MF Hydra**, is a hybrid that uses both batteries and liquid hydrogen fuel cells.
 - ✓ It underwent sea trials for two weeks after initial testing at Hjelmeland quay earlier this year.
- ❖ The Norwegian Maritime Authority (NMA) has given final approval for the ferry to operate.

8.7. COOL ROOF POLICY

- ❖ India's first cool roof policy was recently announced by **Telangana government** to reduce the impact of heat on building.

- ❖ Cool roof policy is **mandatory for all government and non- residential commercial buildings**.
- ❖ It aims to make buildings **thermally resilient** and reduce their energy consumption.
- ❖ Occupancy certificate would only be given after compliance.
- ❖ A cool roof is mandatory for residential buildings that have a **plot area of 600 sq yards or more**. For those with a plot area of 600 sq yards or less, it is optional.
- ❖ It enumerates **three different materials** to insulate the roof
 - ✓ **Paints or liquids** with high reflectivity (lime wash or white plastic coating),
 - ✓ **Prefabricated material** like poly-vinyl chloride (PVC) membranes or bitumen-based sheeting,
 - ✓ **High albedo, ceramic mosaic tiles or shingles**.

8.8. NEW BUTTERFLY SUBSPECIES IN KERALA

- ❖ Recently, a butterfly subspecies (**Caltoris bromus sadasiva**) from the fringes of Akkulam and Vembanad lakes in Kerala has been discovered.
- ❖ It **belongs to the skipper butterfly family** of Lepidoptera (moths and butterflies).
- ❖ It is the **first documented subspecies of the Bromus swift** (Caltoris bromus) butterfly in the Western Ghats and Peninsular India.
- ❖ The discovery of Caltoris bromus sadasiva brings the **count of butterfly species in the Western Ghats to 336** and the count of skipper butterflies to 83, with the last skipper butterfly discovery being almost 75 years ago.

8.9. PROSOPIS CHILENSIS

- ❖ A recent study shows that prosopis chilensis, an alien invasive plant, is threatening to pulverize native vegetation across 21 islands in the Gulf of Mannar Biosphere Reserve (GoMBR).

About Prosopis chilensis

- ❖ It is a drought-resistant plant native to the arid regions of **four South American countries-** Argentina, Bolivia, Chile, and Peru.
- ❖ It is a small to medium-sized legume tree that grows up to 12 m in height and 1 m in diameter.
- ❖ The Prosopis chilensis is also known as Chilean mesquite.

About Gulf of Mannar Biosphere Reserve

- ❖ The GoMBR, India's **first marine biosphere reserve**, is one of the important habitats for coastal birds migrating from the Arctic Circle.
- ❖ It is the also the first Marine Biosphere Reserve in South and South East Asia.
- ❖ This Biosphere Reserve encompasses a chain of 21 islands and adjoining coral reefs off the coasts of the Ramanathapuram and the Tuticorin districts.

8.10. PARAMBIKULAM TIGER RESERVE

- ❖ Kerala High court has ordered translocation of rogue tusker Arikompan to Parambikulam reserve.
- ❖ PTR is located in **Palakkad district of Kerala**.
- ❖ It lies **between Nelliampathy Hills of Kerala and Anamalai Range of Tamil Nadu** within a cluster of Protected Areas.
- ❖ It was **declared as Tiger Reserve during 2008-09**.
- ❖ The reserve is credited with the **first scientifically managed teak plantation** in the world which was later merged with the forest land.
- ❖ It has the one of the **world's largest and oldest teak tree named "Kannimara"**.
- ❖ **Flora:** Evergreen, semi-evergreen, moist deciduous, dry deciduous, and shola forests.
- ❖ **Fauna:** Tiger, leopard, dhole, sloth bear, Nilgiri tahr gaur, elephant, sambar, Grey-headed Fishing Eagle, the Peninsular Bay Owl, the Nilgiri Wood Pigeon, the Black-capped Kingfisher, the Great Black Woodpecker and the Lesser Grey-headed Fish Eagle.

8.11. NETRAVALI WILDLIFE SANCTUARY

- ❖ A rescued Black Panther will be released into the **Netravali Wildlife Sanctuary**.

About Netravali Wildlife Sanctuary

- ❖ Located in South-Eastern **Goa**, **River Netravali or Neturli** originates in this sanctuary which is an important **tributary of the Zuari River**.
- ❖ It has two all-season waterfalls, namely **Savri and Mainapi**.
- ❖ On eastern side, it is bounded by **Cotigao Wildlife Sanctuary** and on northern side by **Bhagwan Mahaveer Wildlife Sanctuary**.
- ❖ Forests mostly consist of **moist deciduous vegetation** interspersed with **evergreen and semi-evergreen habitat**. The high-altitude areas in the hills have **natural grassy patches** that provide ideal habitat for the herbivorous population.
- ❖ **Fauna:** Leopard, Giant Squirrel, Mouse Deer, Nilgiri Wood Pigeon and Ceylon Frogmouth, Indian gaur, spotted deer, sambar deer, barking deer, wild boar, black-faced langur, the Great Pied Hornbills, Black Panther, Slender Loris and the Giant Squirrel.

8.12. SUBANSIRI LOWER DAM PROJECT

- ❖ Subansiri Lower Dam project i.e., SLHP is hit by a landslide during pre-monsoon rain.
- ❖ SLHP is **located on Subansiri River** (tributary of **River Brahmaputra**), which is on border of India's two north-eastern states, Arunachal Pradesh and Assam.
- ❖ It is the **biggest hydroelectric project undertaken in India** so far and is a **run-of-river scheme** on river Subansiri.
- ❖ Construction of SLHEP was awarded to National Hydroelectric Power Corporation (NHPC) Limited.

8.13. IDU MISHMI OPPOSE TIGER RESERVE

- ❖ The Dibang Wildlife Sanctuary (WLS) in Arunachal Pradesh would soon be notified as a tiger reserve.
 - ✓ **Dibang Wildlife Sanctuary**, a biodiversity hotspot is home to **rare Mishmi takin, musk deer, goral** as well as **clouded leopards, snow leopards and tigers**.
 - ✓ It was notified in 1998.
- ❖ The **Wild Life (Protection) Act, 1972 (WPA)**, require that rights of people recognized in forest areas within core and critical tiger reserves may be modified and resettled for providing inviolate spaces to tiger or wild animals. This provision also flows from the Forest Rights Act 2006.
- ❖ **Idu Mishmi people** feel that a tiger reserve would hinder their access to the forest.
- ❖ There are fewer restrictions in WLS compared to Tiger Reserve.
 - ✓ WLS is open to the public and its boundaries are fluid.

About Tiger reserves

- ❖ Notified by **State Governments** as per Section 38V of WPA, 1972 on advice of NTCA.
- ❖ Consists of:
 - ✓ **'Core' or 'Critical Tiger Habitat'**, managed as an inviolate area for tiger conservation.
 - ✓ **'Buffer' or Peripheral area** immediately abutting a Core area, which may be accorded a lesser degree of habitat protection.

About Idu Mishmi tribe

- ❖ It is a **major sub-tribe of Mishmi group**.
- ❖ They inhabit the **Lohit district, Dibang Valley district and Lower Dibang Valley district**.
- ❖ They are of **mongoloid stock** and **speak the Tibeto-Burman language**.
- ❖ They are known for their **weaving and craftsmanship skills**.
- ❖ The tribe is estimated to comprise around 12,000 people (as per census 2011), and their language (also called Idu Mishmi) is considered endangered by UNESCO.

8.14. SEA LAMPREY

- ❖ This 'vampire fish', as it is called due to its nature to extract the blood of its prey, was discovered on the **Dutch island of Texel**.
- ❖ They belong to the **oldest group of vertebrates, the Agnatha**, which existed more than 400 million years ago before there were fish with jaws.
- ❖ According to the National Oceanic and Atmospheric Administration (NOAA), a US government agency, sea lamprey is a **parasitic fish** native to the **northern and western Atlantic Ocean**. It is often confused with eels.
- ❖ Unlike other fish, **lampreys lack scales, fins, and gill covers** and their skeletons are made of cartilage.
- ❖ The lampreys attack fish to suck the blood out using their sucker-shaped mouth.
- ❖ NOAA said the fish uses its rough tongue to rasp away other fish's flesh so it can feed on its host's blood and body fluids.
- ❖ It further said that **one sea lamprey kills about 40 pounds of fish every year**.

8.15. GAJ UTSAV- PROJECT ELEPHANT

- ❖ President of India inaugurates **Gaj Utsav at Kaziranga National Park in Assam** to mark 30th anniversary of Project Elephant (PE).
- ❖ Project Elephant was launched by Ministry of Environment, Forest and Climate Change (**MoEF&CC**) in **1992** as a **Centrally Sponsored Scheme**.
- ❖ Objective: To protect elephants, their habitat & corridors; address issues of man-animal conflict; and Welfare of captive elephant.
- ❖ **MoEF&CC provides financial and technical support to major elephant range states** in country through Project Elephant.

About Asian Elephant (*Elephas Maximus Indicus*)

- ❖ Found in central and southern Western Ghats, North East India, eastern India and northern India and in some parts of southern peninsular India.
- ❖ The Asian elephant is the **largest land mammal on the Asian continent**.
- ❖ Highly intelligent with strong family bonds;
- ❖ They have **longest gestation period** of all mammals (18 to 22 months);
- ❖ As per Elephant Census, 2017, **Karnataka** has highest number of elephants, followed by Assam and Kerala.
- ❖ **Protection status**
 - ✓ IUCN- **endangered**
 - ✓ **Appendix I** of CITES
 - ✓ Included in Schedule I and IV of WPA 1972

Other info

- ❖ Recently **Terai Elephant Reserve** in Uttar Pradesh became 33rd India's ER.

8.16. TROPOSPHERIC EMISSIONS MONITORING OF POLLUTION (TEMPO)

- ❖ NASA's high-resolution air pollution monitoring instrument TEMPO lifted atop a SpaceX Falcon 9 rocket from the Cape Canaveral Space Force Station in Florida.
- ❖ **TEMPO** will allow scientists to monitor air pollutants and their emission sources and air quality across **greater North America on an hourly basis during daytime**.
- ❖ Situated in **geostationary orbit 35,786 kilometers above the equator**.
- ❖ Among the pollutants tracked by TEMPO will be nitrogen dioxide, produced from the combustion of fossil fuels, formaldehyde and ozone.
- ❖ It will be able to measure atmospheric pollution down to a **spatial resolution of 10 square kilometers** or neighborhood level.

8.17. INDIA'S FIRST SOLAR-POWERED TOURIST BOAT

- ❖ Kerala State Inland Navigation Corporation (KSINC) has launched a **solar-powered tourist boat** called **Sooryamshu** that can produce **27 KW of energy**.
- ❖ The boat also comes equipped with generators, which will help power passenger lift systems and air-conditioners.
- ❖ The solar panels will provide about 75% of the vessel's energy needs, while the rest will be met by the generators.
- ❖ The boat was built in Sri Lanka for Rs. 3.95 crores.

8.18. INTERNATIONAL BIG CAT ALLIANCE (IBCA)

- ❖ International Big Cat Alliance was launched by PM recently.
- ❖ IBCA aims to **protect and conserve seven major big cats** — tiger, lion, leopard, snow leopard, puma, jaguar and cheetah - in collaboration with membership of **97 range of countries** harbouring these species.
- ❖ IBCA will provide **assured support over five years with guaranteed funding of over Rs. 800 crores**.
- ❖ Earlier in 2019, PM called for an Alliance of Global Leaders to curb poaching and illegal wildlife trade in Asia.
- ❖ India is the **only country in world to have 5 big cats in wild** (except pumas and jaguar).
- ❖ **IUCN Status of cat species** in India:
 - ✓ **Endangered** -Royal Bengal Tiger, Asiatic Lions;
 - ✓ **Vulnerable**- Snow Leopards, African Cheetahs;
 - ✓ **Least Concern**- Common Leopard.
- ❖ **Need of protecting these species**
 - ✓ 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.
 - ✓ Protecting tiger habitats means protecting forests which facilitates fighting climate change.
 - ✓ Ecotourism helps economic growth.

Other related news

- ❖ In addition, PM also released **5th cycle of India's Tiger Census**.
- ❖ The number of **tigers** in India has increased by 6.74 percent from 2,967 in 2018 to **3,167** in 2022.
- ❖ The tiger population has **grown the most in the Shivalik hills and Gangetic flood plains**, followed by central India, the north eastern hills, the Brahmaputra flood plains, and the Sundarbans.

8.19. ASIAN KING VULTURE CONSERVATION CENTRE

- ❖ The world's **first conservation and breeding center** for the **Asian king vulture** is set to open in Uttar Pradesh's Maharajganj district.
- ❖ The center, named **Jatayu Conservation and Breeding Centre (JCBC)**, is **spread over 1.5 hectares** and is designed to maintain a sustainable population of the species by breeding king vultures in captivity and releasing them into the wild.
- ❖ The JCBC, worth approximately Rs 15 crore, features **multiple aviaries, including breeding and holding aviaries, nursery aviaries for juveniles, hospital and recovery aviaries**, a food processing center, and an incubation center.
- ❖ The forest department has partnered with the **Bombay Natural History Society** for technical guidance.

About Asian King vulture

- ❖ It is also called the **Red headed vulture or Pondicherry Vulture** and was extensively found in India but its numbers drastically reduced after diclofenac poisoning.
- ❖ IUCN Status: **Critically Endangered**
- ❖ Wildlife Protection Act, 1972: **Schedule 1**

8.20. MIYAWAKI FOREST

- ❖ To tackle climate change and pollution, the **Brihanmumbai Municipal Corporation (BMC)** recently started creating a Miyawaki forest at **Deonar village in Govandi**.
- ❖ Miyawaki method is named after **Japanese botanist Akira Miyawaki**.
- ❖ The technique involves **planting two to four types of indigenous trees within every square meter**.
- ❖ Miyawaki forests grow **10x faster**, are **30 x denser** and contain **100x more biodiversity**.
- ❖ These trees **become self-sustainable** and **grow to their full length within three years**.
- ❖ It helps lower temperatures in concrete heat islands, reduce air and noise pollution, attract local birds and insects, and create carbon sinks.

8.21. DAKAR DECLARATION

- ❖ **Dakar Declaration** has been adopted in principle by **21 African countries** after the first African sub-regional conference on implementing **Global Plan for Road Safety**.
- ❖ It is a guiding document to support the implementation of **Decade of Action for road safety 2021–2030**.
- ❖ It sets the ambitious target of **preventing at least 50% of road traffic deaths and injuries by 2030**.
- ❖ It includes actions to **enhance data capture, analysis, sharing and coordination** to shape better road safety policies.

Other info

- ❖ Dakar is the **largest city and capital of Senegal**.

8.22. MUDUMALAI TIGER RESERVE

- ❖ PM visited Theppakadu Elephant Camp in Mudumalai Tiger Reserve.

About MTR

- ❖ It is located in **Nilgiris District of Tamil Nadu** at **tri-junction of 3 states**- Karnataka, Kerala and Tamil Nadu.
- ❖ It is a part of **Nilgiri Biosphere Reserve (1st Biosphere Reserve in India)** along with **Wayanad Wildlife Sanctuary** (Kerala) in the West, **Bandipur National Park** (Karnataka) in the North, **Mukurthi National Park and Silent Valley** in the South.
- ❖ Received accreditation of **Global Conservation Assured Tiger Standards (CA|TS)**.
- ❖ Flora:
 - ✓ The Reserve has tall grasses, commonly referred to as **'Elephant Grass'**.
 - ✓ Bamboo of the giant variety, valuable timber species like Teak, Rosewood, etc.
- ❖ Fauna:
 - ✓ **Flagship Species: Tiger and Asian Elephant**.
 - ✓ Other species include Common Langur, Indian Gaur, Spotted Deer, Malabar Giant Squirrel, Wild Dog among others.

8.23. FROG SPECIES DISCOVERED

- ❖ Zoological Survey of India researchers have discovered a new species of **frogs** from deep within the **Siju cave system** in the South Garo Hills district of Meghalaya.

About Amolops siju

- ❖ It has been named after the **Siju cave** where it was discovered.
- ❖ It belongs to the **cascade Ranidae family** and **genus Amolops**.
- ❖ Genus Amolops is among the **largest groups of ranid frogs** (family Ranidae) with **73 known species** widely distributed across India's North East and north, Nepal, Bhutan, China, the Indochina region and the Malaya Peninsula.
 - ✓ Cascade frogs are named so because they prefer small waterfalls.
- ❖ It is the **second time** that a frog was **discovered from inside a cave in the country**, the first being the discovery of the *Micrixalus spelunca* in 2014 from a cave in Tamil Nadu.

About Siju caves

- ❖ It is **one of the longest cave systems** in the world situated in the state of **Meghalaya**.
- ❖ It is a **4 km long natural limestone cave** famous for its stalactites and stalagmites.

8.24. BIOLUMINESCENCE IN VIZAG BEACH

- ❖ A group of students witnessed phenomenon of bioluminescence along the coast of Visakhapatnam recently.

About Bioluminescence

- ❖ Bioluminescence occurs due to the presence of some **marine planktons called dinoflagellates** that **produce light when the water is disturbed**.
- ❖ These planktons emit light on the ocean surface at night.
- ❖ **Many marine creatures like sponges, jellyfish, worms, species of fish, anthropods, echinoderms** and unicellular alga **exhibit bioluminescence** to either evade predators, attract prey or during mating.
- ❖ In **Visakhapatnam**, this phenomenon is most likely the result of an algal bloom of the **dinoflagellate species of noctiluca and ceratium**.
- ❖ This occurs when the **luciferase enzyme reacts with luciferin compound in the presence of oxygen** to produce a cold light.
- ❖ The **dinoflagellates follow a circadian cycle (24-hour cycle)** and as a result this phenomenon occurs during the night which is visible in low light conditions.
- ❖ This unique phenomenon has been visible in some other beaches in India including Havelock Island in the Andamans, Thiruvananthapuram beach in Chennai, Mattu beach in Karnataka and Bangaram Island in Lakshadweep.

About Planktons

- ❖ Plankton are a group of **marine and freshwater organisms that drift along ocean currents** because they are too small or weak to swim against them.
- ❖ Their name comes from the Greek word planktos which means **“wandering.”**
- ❖ The range in size from 2 micrometers to more than 20 centimeters.
- ❖ There are two types of plankton: **phytoplankton**, which are tiny plants, and **zooplankton**, which are tiny animals.

8.25. BARNAWAPARA WILDLIFE SANCTUARY

- ❖ Recently, the Chhattisgarh forest department has carried out a **successful translocation of four sub-adult wild buffaloes** from **Assam to Barnawapara wildlife sanctuary**.

About Barnawapara wildlife sanctuary

- ❖ It is located in the district of **Raipur in Chhattisgarh**.
- ❖ The **rivers Balmedhi, Jonk and Mahanadi** are the lifeline river which runs along the sanctuary.
- ❖ River Balamdehi forms the western boundary and Jonk River forms the northeastern boundary of the Sanctuary.
- ❖ The sanctuary contains major vegetation of Teak, Sal and Mixed forest.
- ❖ Fauna: Cheetal, Sambhar, Nilgai and Wild Boar, Sloth Bear, Wild Dog, are commonly seen.

About Wild buffalo

- ❖ The Indian Wild Buffalo is the **state animal of Chhattisgarh** (India) and is a large species of bovine native to the Indian Sub-continent and South East Asia.
- ❖ It is **mainly found in the alluvial grasslands, marshes, swamps** and river valleys.
- ❖ In India, they **are generally concentrated in North East India** in Kaziranga National Park, Manas and Dibrugarh National Parks, Laokhowa Wildlife Sanctuary and Bura Chapori Wildlife Sanctuary, D’Ering Memorial Wildlife Sanctuary in Arunachal Pradesh.
- ❖ Protection status
 - ✓ IUCN: **Endangered**

- ✓ Wild Life (Protection) Act, 1972: Schedule 1

8.26. TOQUE MACAQUE

- ❖ Cash-strapped **Sri Lanka is considering exporting 1 lakh endangered monkeys to China.**

About Toque Macaque (*Macaca sinica*):

- ❖ It is a **reddish-brown-coloured Old World monkey** endemic to Sri Lanka, where it is locally known as the "rilewa" or "rilawa".
- ❖ They are **native and endemic exclusively to Sri Lanka.**
- ❖ They generally occupy three types of habitat; hence can be divided into three subspecies. These are
 - ✓ the **Common toque macaque** (*Macaca sinica sinica*), occurring in dry habitat;
 - ✓ the **Pale-fronted toque macaque** (*Macaca sinica aurifrons*), inhabiting wet areas;
 - ✓ the **Hill-zone toque macaque** (*Macaca sinica opisthomelas*), found at high elevations;
- ❖ The most characteristic feature of this primate is the **toque-like swirl of hair on its head top.**
- ❖ **Males are physically larger than females.**
- ❖ They are fitted with **exceptionally long, thin tails.** They **have the distinction of being the smallest species belonging to the genus Macaca with the longest tails relative to their body size.**
- ❖ They are **highly social animals**, living in units of up to 40 individuals.
- ❖ IUCN red list categorises it as 'Endangered'.

8.27. GARRA LAISHRAMI

- ❖ In a significant discovery, researchers from the **Central University of Odisha (CUO)** and the Zoological Survey of India (ZSI) have recently found a **rare freshwater fish in the Koraput district.**

About Garra Laishrami

- ❖ It is a **new cyprinid fish species** of the Garra genus found in the **Kolab River.**
- ❖ These are characterised by the **presence of a gular disc** developed from tissues of the gular region that exhibit variation in the size, shape, and arrangement of the snout tubercles.
- ❖ It is **usually found under rocks, stones and boulders of torrential streams and rivers.**
- ❖ Geographical distribution: Borneo, southern China and southern Asia through Middle East Asia, Arabian Peninsula and East Africa to West Africa.

About Kolab River(or Sabari river)

- ❖ It is **one of the main tributaries of Godavari.**
- ❖ It **originates from the western slopes of Eastern Ghats in Odisha state from the Sinkaram hill ranges.**
- ❖ It forms the common **boundary between Chhattisgarh and Odisha states** and later enters Andhra Pradesh to merge with River Godavari.

8.28. MANGROVE PITTA BIRD

- ❖ A first-ever census of **mangrove pitta birds** was carried out in Bhitarkanika in Odisha and around 179 birds were sighted.

About Mangrove Pitta Bird(*Pitta Megarhyncha*)

- ❖ The mangrove pitta belongs to the family of pittas, the Pittidae.
- ❖ These are **colourful birds** which have black head with brown crown, white throat, greenish upper parts, buff under-parts and reddish vent area.
- ❖ They are **small secretive birds**, measuring 17 to 19 cm in length and weighing 45 to 65 grams.
- ❖ This bird **usually feeds on insects** and other small invertebrates.
- ❖ It is found in eastern part of India **especially in Odisha and West Bengal** along with countries like Myanmar, Bangladesh, Malaysia, Singapore etc.
- ❖ IUCN status- **Near threatened**

About Bhitarkanika National Park

- ❖ Bhitarkanika National Park is the **2nd largest Mangrove ecosystems** of India.
- ❖ It's located in the **estuaries where the rivers Brahmani and Baitarani meet**.
- ❖ This is the habitat of the **endangered saltwater crocodile**.
- ❖ The **Gahirmatha Beach** which **forms the boundary** of the sanctuary in the east is the **largest colony of the Olive Ridley Sea Turtles**.

8.29. SEA CUCUMBER

- ❖ Nearly 105 kilograms of sea cucumber was seized by the Indian Coast Guard (ICG) near Attangarai in Ramanathapuram district in Tamil Nadu recently.

About Sea Cucumber:

- ❖ These are **part of a larger animal group called echinoderms** and are **invertebrates** that live on the seafloor (benthic).
- ❖ Their body shape is similar to a cucumber, but they have **small tentacle-like tube feet** that are used for **locomotion and feeding**.
- ❖ There are about **1,250 species of sea cucumber**, all of which belong to the taxonomic class Holothuroidea.
- ❖ They are **found in all marine environments throughout the world**, from shallow to deep-sea environments.
- ❖ They **excrete inorganic nitrogen and phosphorus**, enhancing the productivity of benthic biota.
- ❖ Sea cucumbers **exhibit sexual and asexual reproduction**.
- ❖ Unlike most terrestrial animals, **sea cucumber eggs undergo external fertilization**—females release eggs into the water that are fertilized when they come into contact with sperm that males have released.
- ❖ Protection status
 - ✓ Wildlife Protection Act of 1972: **Schedule I**
 - ✓ CITES: **Appendix II**
- ❖ In 2020, the **Lakshadweep** administration created the **world's first conservation area for sea cucumbers**.

8.30. HELOPELTIS THEIVORA

- ❖ The **United Planters Association of Southern India (UPASI)** has raised concerns over heavy crop losses in all the tea districts of South India due to the rapid spread of the bug- **Helopeltis theivora**.
- ❖ Tea production in India is under threat due to the infestation of the **Tea Mosquito Bug (TMB)**.
- ❖ The **Tea Mosquito Bug (Helopeltis theivora)** is a **common pest that sucks the sap** from the tender parts of tea plants, leading to heavy crop losses.
- ❖ It also **damages the plants by inserting eggs into their tissues**.
- ❖ TMB has **affected both low and high-elevation tea plantations**.

Current Scenario

- ❖ The **Tea Board of India** removed several pesticides from its approved list of **Plant Protection Code (PPC)** to make Indian teas free from harmful pesticides.
- ❖ Currently, **only seven pesticides are approved for use in South India** under the PPC, and tea growers are unable to achieve effective control of the pest.
- ❖ The **UPASI has sought government approval to use effective molecules** that have been evaluated and approved **by the Central Insecticide Board & Registration Committee (CIBRC)** for other crops in India and have minimum residue levels for tea.

About CIBRC

- ❖ The CIBRC was **established by the Ministry of Agriculture in 1970** to regulate insecticides under the Insecticides Act, 1968 and Insecticides Rules, 1971.
- ❖ The **CIBRC advises the government on technical matters** and has other assigned functions.
- ❖ **Insecticide importers and manufacturers need to register** with the Registration Committee.

8.31. SST RISES TO ALL TIME HIGH

- ❖ The **global average Sea Surface Temperature (SST) reached 21.1° Celsius (C)** according to data released by Climate Change Institute at University of Maine.
 - ✓ In the Indian Ocean, it was 29 to 31° C on April 16 - which is 1-2° C above normal.
- ❖ Due to this, there are **patches of strong marine heat waves** over the south Arabian Sea and Bay of Bengal.

About Sea Surface Temperature

- ❖ SST is the **water temperature** close to the ocean's surface.
- ❖ It varies mainly with latitude, **warmest near equator** and **coldest at poles**.
- ❖ It provides fundamental information on the **global climate system**.
- ❖ It helps in the study of marine ecosystems, weather prediction and atmospheric model simulations; including the onset of El Niño and La Niña cycles, i.e. the Warm and Cool phases of a recurring climate pattern across the tropical Pacific—the El Niño-Southern Oscillation (ENSO).
- ❖ **Reasons Behind SST Rise:** Global Warming (Climate Change), high solar radiation combined with certain ocean dynamics etc.
- ❖ **Impact:** Helping in the onset of Monsoon and rain through development of low-pressure systems, Coral Bleaching and Fish mortality.

Other information

Ocean Mean Temperature (OMT)

- ❖ OMT is measured up to a depth of **26-degree C isotherm**, is **more stable and consistent**, and the spatial spread is also less.
- ❖ The 26-degree C isotherm is seen **at depths varying from 50–100 metres**.
- ❖ Scientist have found out that OMT which is analysed by measuring the ocean thermal energy during the January-March period – can better predict Indian summer monsoon than the SST.

8.32. WHEAT BLAST

- ❖ A new study shows that wheat, the world's most important food crop, is threatened by a blast disease pandemic.

About Wheat Blast

- ❖ The wheat blast is a **fungal disease** that **affects wheat production in tropical and subtropical regions**.
- ❖ It is **caused by Magnaporthe oryzae pathotype Triticum (MoT)**.
 - ✓ It was **identified in Brazil in 1985**.
- ❖ The fungus **infects wild and cultivated grasses, most notably rice and wheat**.
- ❖ It **spreads through infected seeds**, and **crop residues** as well as by spores that can travel long distances in the air.
- ❖ It **spread to major-wheat producing areas in the country** and then to **other South American countries like Bolivia, Paraguay, and Argentina**.
- ❖ **Asia's first outbreak** of this pathogenic wheat blast **was reported in Bangladesh** in 2016.

8.33. CORALS IN GALAPAGOS

- ❖ A scientific expedition has discovered a previously unknown coral reef with abundant marine life off **Ecuador's Galapagos Islands**. Reef has **more than 50% living coral**.
 - ✓ Corals are **invertebrate animals** belonging to a **large group of colourful animals called Cnidaria**.

About Galapagos island

- ❖ Galapagos Islands, a UNESCO world heritage site, are situated in eastern Pacific Ocean at confluence of three ocean currents (**Humboldt current, Panama Flow and Cromwell current**).
- ❖ They are **distributed on each side of the equator in the Pacific Ocean**, surrounding the centre of the Western Hemisphere.
- ❖ The islands are known for their **large number of endemic species** that were studied by **Charles Darwin** during the second voyage of **HMS Beagle**.
- ❖ They are home to giant tortoise, albatross, cormants etc.

8.34. SATKOSIA WILDLIFE SANCTUARY

- ❖ Recently, **Satkosia wildlife sanctuary** witnessed **breeding of Indian Skimmer** for the first time.

About Satkosia wildlife sanctuary

- ❖ It is located around **Satkosia gorge of Mahanadi** river and is spread over Angul, Cuttack, Boudh and Nayagarh districts in **Odisha**.
- ❖ Flora: Tropical moist deciduous Forests and Moist peninsular low level sal.
- ❖ It is known for **Gharials, Mugger crocodile**, rare freshwater turtles like **Chitra indica** and **Indian softshell turtle, Tiger, Elephant, Gaur, bison, wild dog**, sloth bear etc.

About Indian skimmer

- ❖ Another common name for Indian skimmers is **Indian scissors bill**.
- ❖ They are **more widespread in winter**; the Indian skimmer is found in the coastal estuaries of western and eastern India.
- ❖ The species can be sighted near the **Chambal River in Central India**, in few **parts of Odisha** and in Andhra Pradesh.
- ❖ Threats include habitat degradation, excessive and widespread increases in disturbances near the rivers.
- ❖ IUCN Red List Status: **Endangered**

8.35. FIRST CENSUS OF WATER BODIES

- ❖ The **Ministry of Jal Shakti** recently released the report of its first-ever census of water bodies, revealing crucial insights into the country's water resources.
- ❖ **Objective-** to develop a national database for all water bodies by collecting **information on subject including their size, condition, status of encroachments, use, storage capacity**, status of filling up of storage etc.
- ❖ Census was **launched in convergence with 6th Minor Irrigation Census** under **Centrally Sponsored Scheme "Irrigation Census"**.
- ❖ Water bodies include **all natural or man-made units bounded on all sides** with some or no masonry work used for storing water for irrigation or other purposes.
- ❖ **Findings**
 - ✓ **24.24 lakh water bodies** have been enumerated, out of which **97.1% are in rural areas** and **only 2.9% are in urban areas**.
 - ✓ **West Bengal, Uttar Pradesh, Andhra Pradesh** are top 3 states with most water bodies.
 - ✓ West Bengal's **South 24 Parganas district** has highest number of waterbodies.
 - ✓ States/UTs with **least water bodies: Sikkim, Chandigarh, Delhi**.
 - ✓ Maharashtra leads in **water conservation schemes**.
 - ✓ **78% are man-made water bodies** whereas **22% are natural water bodies**.
 - ✓ **55.2% are owned by private entities** whereas rest are under public ownership.
 - ✓ Water User Associations (WUA) has helped in preventing encroachments.

8.36. GANDHI SAGAR WILDLIFE SANCTUARY

- ❖ **Madhya Pradesh** Chief Minister recently announced that Gandhi Sagar Wildlife Sanctuary will be developed as a **second home for cheetahs within six months**.

About Gandhi Sagar Wildlife Sanctuary

- ❖ It is **situated in northwestern Madhya Pradesh**, with one of its **boundaries running along the border of Rajasthan**.
- ❖ The sanctuary was **notified in 1974** and is spread over an area of **368 sq. km**.
- ❖ A major part of the sanctuary consists of **vast open landscapes with sparse vegetation and rocky terrain**, with small patches of dense forests.

- ❖ **River Chambal flows through the sanctuary**, dividing it into two parts.
- ❖ The **principal tree species** found in the Gandhi Sagar Wildlife Sanctuary are **Khair, Salai, Kardhai, Dhawda, Tendu, Palash** etc.
- ❖ Flora: The principal tree species found here are Khair, Salai, Kardhai, Dhawda, Tendu and Palash.
- ❖ Fauna- Herbivores like **Chinkara, Nilgai and Spotted Deer**, and carnivores like the **Indian Leopard, Striped Hyena and Jackal** are found in good numbers in the region.
- ❖ It also has a **good population of crocodiles, fish, otters and turtles**.
- ❖ Gandhi Sagar Wildlife Sanctuary and the reservoir is also a **designated Important Bird and Biodiversity Area (IBA)**

8.37. NEW BHSS IN WEST BENGAL

- ❖ **West Bengal** has notified four new Biodiversity Heritage Sites (BHS):
 - ✓ **Char Balidanga** and **state Horticulture Research and Development Station campus** in Deypara.
 - ✓ Char Balidanga comprises two islands on the Hooghly with tropical riverine vegetation of tall grasses and swampy flat lands.
 - ✓ **Namthing Pokhar**: It is a Himalayan natural wetland.
 - ✓ **Amkhoi Fossil Park**: It has unique geological and paleo-botanical features and is the first wood fossil park in West Bengal.
- ❖ BHS are areas that are **unique, ecologically fragile ecosystems** having rich biodiversity.

8.38. EARTH DAY

- ❖ **Earth Day** is an annual event celebrated on **22nd April** to raise awareness about the need to protect our planet and its environment.
 - ✓ **In 2009**, the **United Nations designated 22nd April as International Mother Earth Day**.
- ❖ The **theme** for Earth Day 2023 is **"Invest in our planet,"** with a clear motto of 'everyone accounted for, everyone accountable.'
- ❖ It calls on businesses, investors, financial markets, and governments to lead the way in building a healthier and more equitable global system.
- ❖ **Earth Day was first observed in 1970** as a **response to environmental degradation** caused by issues such as smog, polluted rivers, and oil spills.
- ❖ **Earth Day** is globally **coordinated by EARTHDAY.ORG**, a **non-profit organization** formerly known as Earth Day Network. It aims to build the world's largest environmental movement to drive transformative change for people and the planet.
- ❖ The landmark **Paris Agreement**, which brings **almost 200 countries together** in setting a common target to reduce global greenhouse emissions, **was also signed on Earth Day 2016**.

8.39. PIAROSOMA ARUNACHALENSIS

- ❖ Recently, researchers discovered a **new moth** from **Talle Wildlife Sanctuary** in Arunachal Pradesh.

About Piarosoma arunachalensis

- ❖ It is a **moth species** belonging to the **genus Piarosoma**.
- ❖ It is a **Burnet moth** and is **largely day-flying**.
- ❖ It **belongs to the family Zygaenidae**, which includes Forester and Burnet moths.
- ❖ **Burnet and Forester's moths** are **brightly coloured day-flying moths**, often with clubbed antennae.
- ❖ Many species mimic butterflies and are **distasteful to predators**.
- ❖ Moths are **highly diverse organisms** and scientists estimate there are **160,000 moth species in the world** and **about 12,000 species in India**.
- ❖ Their **colours are either dazzling or so cryptic that easily camouflage** with their surroundings.

About Talle Wildlife Sanctuary

- ❖ It is a **wildlife sanctuary** as well as a **bio-diversity hotspot** located in the state of **Arunachal Pradesh**.
- ❖ **Pange, Sipu, Karing and Subansiri** rivers flow through this sanctuary.
- ❖ Flora: It comprises sub-tropical and alpine forests.
- ❖ Fauna: **Clouded leopard, Himalayan squirrel, Himalayan Black Bear** etc.

8.40. LESSER FLAMINGO IN PULICAT LAKE

- ❖ After a six-year absence, the **lesser flamingos**, resplendent with deep red legs and bills, have finally found their way back to **Pulicat lake**.

About Lesser Flamingo

- ❖ Scientific name - **Phoeniconaias minor**
- ❖ It is the **smallest of all flamingos** but has the **largest population**.
- ❖ It **possesses the "hallux" or hind toe** that some other flamingos do not have.
- ❖ **Males are taller than females**.
- ❖ It inhabits **coastal and inland wetlands**.
- ❖ Global distribution: **Africa, Asia continents** and in that **especially Sub-Saharan Africa, South Asia, North Africa**
- ❖ They **mostly eat blue-green algae** but **occasionally will take crustaceans and small insects**.
- ❖ **The birds form pairs that remain together** while they are raising the young.
- ❖ IUCN status : **Near Threatened**

About Pulicat Lake

- ❖ It is the **second-largest brackish water lake** in the country after Chilika lake.
- ❖ It lies at the **border** of the states of **Andhra Pradesh and Tamil Nadu** with major part lying in Andhra Pradesh.
- ❖ The long and narrow **Sriharikota Island, separates Pulicat Lake from the Bay of Bengal**.
- ❖ It is popular as a flamingo-watching site and for water activities.
- ❖ Both the **South West and North-East monsoons** provide rain to the area where Pulicat Lake is located.
- ❖ The **annual Flamingo Festival** is held in **January** at Pulicat lake.

8.41. KALESAR NATIONAL PARK

- ❖ A **tiger** was recently spotted in a camera trap at **Kalesar National Park** in Haryana's Yamunanagar district.
 - ✓ The last sighting of a tiger in the Kalesar area was in 1913.
- ❖ The recent sight of the tiger in the Kalesar area is after a gap of 110 years.

About Kalesar National Park:

- ❖ It covers an area of 11,570 acres and is situated in the **foothills of the Shiwalik ranges** of the Himalayas.
- ❖ It was **declared a National Park** in 2003.
- ❖ It is surrounded by:
 - ✓ **River Yamuna** lies to its east.
 - ✓ **Rajaji National Park**, which is located in Uttrakhand, lies to the northeast of the park.
 - ✓ **Simbalbara National Park** nestled in Shivalik Hills lies to the north, sharing a border with Himachal Pradesh.
 - ✓ **Morni Hills** lies to the west.
- ❖ The park was **named after a temple (known as Kalesar Mahadev temple) located inside** the premise of the park.
- ❖ The park is **also famous for its Dak bungalows** – the administrative architectural bungalows built in colonial times.
- ❖ Flora: trees like Sal, Semul, Bahera, Amaltas, Shisham, Khair, Sain, Chhal and Jhingan etc.
- ❖ Fauna: It houses many threatened animals like **leopards, Ghoral, Barking deer, Sambar, Chital, Python, King Cobra, Monitor lizard** etc.
- ❖ After the recent tiger sighting, wildlife enthusiasts have emphasised on establishing a **multistate tiger reserve comprising Rajaji Uttarakhand, Kalesar in Haryana and Simbalbara in Himachal Pradesh**.

9. POLICY AND PROGRAMME

9.1. SWACHHOTSAV 2023

- ❖ **Swachhotsav 2023** was launched by MoHUA on first **International Zero Waste Day (March 30th)**.
- ❖ Swachhotsav campaign aims at galvanizing participation and leadership of women to realize the goal of 'Garbage Free Cities'.
- ❖ The **first IZWD** has been jointly facilitated by the **UN Environment Programme (UNEP)** and the **UN Human Settlements Programme (UN-Habitat)**.
- ❖ MoHUA said that **1,000 cities are targeted to become 3-star Garbage Free Cities (GFC)** by October 2024 under the Swachh Bharat Mission Urban (SBM-U) 2.0.
 - ✓ **GFC-Star rating protocol** was launched in 2018 under **SBM-U 2.0** to encourage a competitive, mission-mode spirit among Urban Local Bodies (ULBs).

About SBM-U 2.0:

- ❖ It is being implemented as a **centrally sponsored scheme by MoHUA** and envisages to make all cities 'Garbage Free'.
- ❖ It focuses on **source segregation of solid waste**, utilizing the principles of **3Rs (reduce, reuse, recycle)**, etc for effective solid waste management.
- ❖ Under SBM-U 2.0, **Urban India** has become **Open Defecation Free (ODF)**.
 - ✓ All Urban Local Bodies (ULBs) are completely ODF, 3,547 ULBs are ODF+ with functional and hygienic community and public toilets and 1,191 ULBs are ODF++ with complete faecal sludge management.
 - ✓ Waste processing in India has gone up by over four times from 17% in 2014 to 75% today.

9.2. FAME-II SCHEME

- ❖ The Parliamentary Standing Committee on heavy industry highlighted that Phase 2 of the FAME scheme to subsidize electric vehicles has achieved only 51.96 per cent of its target.
- ❖ It suggested an extension of the FAME II scheme that was to end in 2024.

Data

- ❖ Around 1.2 million EVs were registered in India in 2022-23 — 2.7 times of that registered in 2021-22, according to VAHAN.
- ❖ As a share of all the vehicle registrations, only 5.6 per cent were EVs in 2022-23.

About FAME

- ❖ Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles in India (FAME India) Scheme was formulated by the **Union Ministry of Heavy Industries** in 2015 to promote adoption of electric / hybrid vehicles in the country.
- ❖ At present, Phase-II of the scheme (FAME II) is being implemented for a period of five years from April 1, 2019 with a total budgetary support of Rs. 10,000 crore.
- ❖ **Focused Areas:** (i) Demand Creation, (ii) Technology Platform, (iii) Pilot Project and (iv) Charging Infrastructure.
- ❖ Market creation through demand incentives was aimed at **incentivizing all vehicle segments** i.e. 2-Wheelers, 3-Wheelers Auto, Passenger 4-Wheeler vehicles, Light Commercial Vehicles and Buses.
- ❖ Phase II: Incentives are applicable mainly to vehicles used for public transport or registered for commercial purposes.
- ❖ The benefits of incentives will be extended to vehicles fitted with advanced batteries like Lithium-Ion batteries.

9.3. PM SVANIDHI

- ❖ The **Ministry of Housing and Urban Affairs** recently released data related to the **PM SVANidhi scheme**, which aims to provide **micro-credit support to street vendors** to alleviate the pandemic-induced economic stress.
- ❖ The data reveals that out of 42.7 lakh loans disbursed under the scheme, amounting to ₹5,152.37 crore, only 9.3% were given to street vendors from minority communities.
- ❖ Additionally, the share of loans given to minority street vendors has declined steadily from 10.23% in 2020-21 to an all-time low of 7.76% in 2022-23.
- ❖ The disbursement of loans across states appears to be aligned with the population of each state, with **Uttar Pradesh disbursing the highest number of loans** and Sikkim disbursing only one loan. Uttar Pradesh also gave the highest number of loans to minority street vendors at 95,032.

About PM SVANidhi Scheme

- ❖ The scheme was announced as a part of the Economic Stimulus-II under the Atmanirbhar Bharat Abhiyan.
- ❖ It has been implemented since 1st June 2020, for providing affordable working capital loans to street vendors to resume their livelihoods that have been adversely affected due to Covid-19 lockdowns.
- ❖ A total of 13,403 vending zones have been identified so far.
- ❖ 42 lakh street vendors are to be provided benefits under PM SVANidhi Scheme by December, 2024.
- ❖ It is a **Central Sector Scheme** i.e., fully **funded by Ministry of Housing and Urban Affairs** with the following objectives:
 - ✓ To facilitate working capital loan;
 - ✓ To incentivize regular repayment; and
 - ✓ To reward digital transactions

9.4. STAND UP INDIA SCHEME

- ❖ Stand up India Scheme recently completed 7 years.
- ❖ It was launched by **Ministry of Finance** in 2016 to promote entrepreneurship at grassroot level focusing on economic empowerment and job creation.
- ❖ This scheme has been **extended up to year 2025**.
- ❖ **Objective –**
 - ✓ Promote entrepreneurship amongst **women, SC & ST category**.
 - ✓ Provide loans for only **greenfield enterprises in manufacturing, services or trading sector** and activities allied to agriculture.
 - ✓ Facilitate bank **loans between Rs.10 lakh and Rs.1 crore** to at least **one Scheduled Caste/ Scheduled Tribe borrower** and at least one woman borrower per bank branch of Scheduled Commercial Banks.
 - ✓ However, **Government does not allocate funds for loans** under Stand-Up India Scheme.
- ❖ **Success**
 - ✓ More than 1.8 lakh women and SC/ST entrepreneurs have been sanctioned loans for more than Rs. 40,700 crores.
 - ✓ 68.8 percent rise in borrowers from SC/ST communities between 2021 and 2023.
- ❖ **Other initiatives regarding it**
 - ✓ Submission of online applications by potential borrowers through **standupmitra portal**.
 - ✓ Intensive publicity campaigns, simplified loan application form, convergence with State and Central government Schemes, etc.

9.5. SAI LINKS CERTIFICATES WITH DIGILOCKER

- ❖ The **Sports Authority of India** has integrated Khelo India Games Certificates with Digilocker.
- ❖ Khelo India Games certificate is a document that is awarded to athletes who participate in the Khelo India Games.
- ❖ The certificate recognizes the participation of the athlete in the games and serves as proof of their achievement.

About

This will allow athletes, support staff, technical officers and competition managers to access their certificates digitally. It would also provide for real time verification of Certificates.

About Sports Authority of India (SAI)

- ❖ Sports Authority of India (SAI) was set up in 1982 as a **Society registered under Societies Act, 1860**.
- ❖ SAI has been entrusted with the twin objectives of **promoting sports** and **achieving sporting excellence** at the national and international level.
- ❖ SAI has played a significant role in shaping India's sports development by providing training to elite athletes and at the same time operating a number of schemes for the identification and development of young talent.

About Digilocker

- ❖ DigiLocker is a flagship initiative of the **Ministry of Electronics & IT (MeitY)** under Digital India programme.
- ❖ DigiLocker aims at '**Digital Empowerment**' of citizens by providing **access to authentic digital documents** to citizen's digital document wallet.
- ❖ DigiLocker is a **secure cloud-based platform** for storage, sharing and verification of documents & certificates.

9.6. PM MUDRA YOJANA

- ❖ Pradhan Mantri Mudra Yojana recently completed 8 years.

About the scheme

- ❖ PMMY was launched by **Ministry of Finance** in 2015, to facilitate **easy collateral-free microcredit of up to 10 lakh to non-corporate, non-farm small**, and micro entrepreneurs for income generating activities.
- ❖ MUDRA (Micro Units Development & Refinance Agency Ltd) Bank is a **refinancing institution**.
- ❖ Loans are provided by **Member Lending Institutions** i.e., Banks, Non-Banking Financial Companies (NBFCs), Micro Finance Institutions (MFIs) and other financial intermediaries.
- ❖ They **do not require any collateral/ security**.
- ❖ **Rate of interest** is decided by lending institutions in terms of RBI guidelines.
- ❖ Loans divided into three categories-
 - ✓ **SHISHU**-Loans upto Rs. 50,000 (For Start-ups and First-time Entrepreneurs)
 - ✓ **KISHOR**-Loans from Rs. 50,000 - Rs. 5 lakh (For Entrepreneurs with existing business)
 - ✓ **TARUN**-Loans from Rs. 5 lakh - Rs. 10 lakh (For Businessmen, loan amount to be used for business expansion)
- ❖ **A success story**
 - ✓ About ₹23.2 lakh crore has been sanctioned in 40.82 crore loan accounts.
 - ✓ About **68% of accounts under the scheme** belong to **women** entrepreneurs.
 - ✓ **51% of accounts** belong to **entrepreneurs of SC/ST and OBC categories**.

9.7. THE LANGUAGE FRIENDSHIP BRIDGE

- ❖ The **Indian Council for Cultural Relations (ICCR)** has envisaged a special project called 'The Language Friendship Bridge', which **plans to train five to 10 people** in the **official languages of Myanmar, Sri Lanka, Uzbekistan, Indonesia**.
- ❖ **Objective**
 - ✓ To expand its cultural footprint in nations with which it has historical ties.
 - ✓ To facilitate better people-to-people exchanges.
- ❖ As of now, the **ICCR has zeroed in on 10 languages**: Kazakh, Uzbek, Bhutanese, Ghoti (spoken in Tibet), Burmese, Khmer (spoken in Cambodia), Thai, Sinhalese and Bahasa (spoken in both Indonesia and Malaysia).
- ❖ Implementation- ICCR has discussed two possibilities for implementing this project

- ✓ One is to institute tie-ups wherein teachers from these countries come and teach courses in India.
- ✓ The second approach is ICCR offering scholarships to Indian students to go and study these languages in the countries where they are spoken.

About ICCR

- ❖ The **Indian Council for Cultural Relations (ICCR)**, is an autonomous organisation under the administrative control of **Ministry of External Affairs**.
- ❖ It is involved in India's global cultural relations, through cultural exchange with other countries and their people.
- ❖ It was **founded on 9 April 1950** by **Maulana Abul Kalam Azad**, the **first Education Minister of independent India**.
- ❖ **Headquarters- New Delhi**.
- ❖ The council also operates missions internationally.

9.8. VIBRANT VILLAGE PROGRAMME

- ❖ Union Home Minister launched VVP in **Kibithoo village in Anjaw district in Arunachal Pradesh**.

About Vibrant Village Programme

- ❖ VVP, a **Centrally Sponsored Scheme**, provide **funds for development of essential infrastructure and creation** of livelihood opportunities.
- ❖ VVP (approved for 2022-23 to 2025-26) will cover **Himachal Pradesh, Uttarakhand, Arunachal Pradesh, Sikkim and Ladakh**.
- ❖ It will cover 2,963 villages with 663 of them to be covered in the first phase.
- ❖ **Vibrant Village Action Plans** will be created by the **district administration** with the help of Gram Panchayats.
- ❖ There will **not be overlap with Border Area Development Programme**.
- ❖ **Objective**
 - ✓ To **identify and develop the economic drivers** based on local, natural, human and other resources of the border villages on the northern border;
 - ✓ Development of growth centres on **'hub and spoke model'**
 - ✓ Leveraging the **tourism potential** through promotion of local, cultural, traditional knowledge and heritage;
 - ✓ Development of sustainable eco-agri businesses on the concept of **'one village-one product'**

9.9. AMRIT BHARAT STATION SCHEME

- ❖ South Western Railway (SWR) is all set to revamp two railway stations, **Krishnarajapuram and Whitefield stations in Bengaluru** under Amrit Bharat Station scheme.

About Amrit Bharat Station Scheme:

- ❖ Amrit Bharat Station Scheme was introduced by the **Union Ministry of Railways** in December 2022 with the goal of **modernizing over 1,000 minor stations** during the ensuing years.
- ❖ It envisages **development of stations on a continuous basis** with a long term vision.
- ❖ The plan's objective is to create **master plans for railroad stations** and implement them gradually to improve the facilities.
- ❖ **Longer platforms, ballastless rails, space for rooftop plazas, and 5G connectivity** are important aspects of these proposed stations.
- ❖ **Other Facilities** planned under this Scheme
 - ✓ Smooth access by **widening of roads**, properly designed signages, dedicated pedestrian pathways, well planned parking areas, improved lighting.
 - ✓ High level platforms(760-840 mm) shall be provided at all categories of stations.
 - ✓ Provide good **cafeteria/retail facilities**.

- ✓ Space shall also be created for Executive Lounges and places for small business meetings.
- ✓ Drainage of **platform areas**.
- ✓ Ceremonial flags may be provided at appropriate space in the station.
- ✓ **Special amenities** for the disabled.

Gradual shift to sustainable and environmentally friendly solutions as per availability of funds and condition of existing assets is considered.

9.10. PM MITRA PARKS IN UP

- ❖ Ministry of Textiles signed Memorandum of Understanding (MoU) of Integrated Textile Park in **1,000 acres** in **Lucknow and Hardoi districts** of UP.
- ❖ The textile sector is one of the critical sectors of the Indian economy, accounting for **more than 2% of the total GDP** (Gross Domestic Product) and **more than 12 % of the manufacturing sector GDP**.
- ❖ The sector is the **2nd largest provider of employment in India**, after agriculture.

About the PM MITRA

- ❖ PM Mega Integrated Textile Sector and Apparel (MITRA) scheme aims to develop integrated large scale and modern industrial infrastructure facilities for the entire value-chain of the textile industry.
- ❖ It is inspired by the **5F vision** i.e., - **Farm to Fibre to Factory to Fashion to Foreign**.
- ❖ **Special Purpose Vehicle** owned by Centre and State Government jointly to be **set up for each park** which will oversee the implementation of the project.
- ❖ The **setting up the 7 PM MITRA Parks** was announced in the Union Budget 2021-22.
- ❖ Each MITRA Park will have **an incubation centre, common processing house and a common effluent treatment plant** and other textile related facilities such as **design centres and testing centres**.
- ❖ **Benefits**
 - ✓ It **reduces logistics cost** by housing entire value chain at one location.
 - ✓ It will give an **impetus to local weavers and a skilled workforce**.
 - ✓ It will help in **achieving the SDG 9** ("Build resilient infrastructure, promote sustainable industrialization and foster innovation").
- ❖ Other **initiatives** for promotion of textiles Industry
 - ✓ Allowed **100% FDI in the sector** under the automatic route.
 - ✓ National Technical Textiles Mission.
 - ✓ **Production Linked Incentive (PLI) Scheme** for Textile.
 - ✓ SAMARTH Scheme
 - ✓ Amended Technology Up-gradation Fund Scheme' (**A-TUFS**).

9.11. PTP-NER SCHEME

- ❖ The **Ministry of Tribal Affairs** has launched "**Marketing and Logistics Development for Promotion of Tribal Products from the North-Eastern Region (PTP-NER)**".
- ❖ It is a **Central Sector Scheme** for the **benefit of Scheduled Tribes of the North-eastern Region**.
- ❖ It will assist **tribal craftsmen through backward and forward linkages** via. incubation support, aggregation, skill and entrepreneurial development, marketing, transportation, etc.
- ❖ **Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Tripura, and Sikkim** would be covered under the scheme.
- ❖ The **scheme will be implemented by TRIFED**, the nodal agency under the Ministry of Tribal Affairs.
- ❖ The empanelment of tribal artisans will be done directly or through Tribal Artisan Melas (TAMs). Partners: North Eastern Handicrafts and Handlooms Development Corporation (NEHDC), India Post and North Eastern State Government Departments/ Agencies.
- ❖ **Benefits:** Increased Livelihood and earning opportunities, increased efficiency in procurement, logistics and marketing.

9.12. SATHI PORTAL

- ❖ **Ministry of Agriculture & Farmers' Welfare** recently launched **SATHI portal and mobile app**.
- ❖ SATHI (**Seed Traceability, Authentication and Holistic Inventory**) Portal and Mobile App is a **Centralized Online System for seed traceability, authentication and inventory** designed to deal with challenges of seed production, quality seed identification and seed certification.
- ❖ Seeds authenticity can be traced **through a QR code system**.
- ❖ Portal has been **developed by National Informatics Centre** in collaboration **with MoA&FW** on theme of **Uttam Beej – Samriddh Kisan**.
- ❖ It'll **consist of integrated 7 verticals of seed chain** - Research Organisation, Seed Certification, Seed Licensing, Seed Catalogue, Dealer to Farmer Sales, Farmer Registration and Seed DBT.
- ❖ Training should be imparted through **Indian Council of Agricultural Research (ICAR)**, Krishi Vigyan Kendras and State Governments.

About Seed certification

- ❖ **Seed certification** is a process designed to maintain and make available to the general public continuous supply of high quality seeds.
- ❖ **Seeds with valid certification can only be sold by valid licensed dealers to centrally registered farmers who will receive subsidy through DBT** directly into their pre-validated bank accounts.
- ❖ In India, **legal status to seed certification** was given by **Enactment of Seeds Act, 1966**.
- ❖ **Seed certification is voluntary but labelling is compulsory in India**.
- ❖ India established **Protection of Plant Varieties and Farmers Rights (PPV&FR) Authority**, under PPV&FR Act, 2001 to ensure availability of **quality seeds and planting material to farmer**

9.13. 100 FOOD STREETS INITIATIVE

- ❖ **Ministry of Health and Family welfare**, in partnership with **Ministry of Housing and Urban Affairs, (MoHUA)** has proposed the development of 100 food streets in 100 districts across the country.
- ❖ To be **implemented as a pilot scheme**, it aims to **promote safe and healthy practices in the food industry, reduce food-borne illnesses, and improve overall health outcomes**.
- ❖ This initiative will **support the "eat right campaign"** and food safety and enhance the **credibility of local food businesses**.
- ❖ The initiative will be implemented through the **National Health Mission (NHM)** in convergence with the MoHUA and with technical support from the **Food Safety and Standards Authority of India (FSSAI)**.
- ❖ **States and Union Territories** will receive **financial assistance of ₹1 crore per food street/district**, with assistance under the NHM **provided in the ratio of 60:40 or 90:10**, subject to standard branding according to FSSAI guidelines.

9.14. UDAN 5.0

- ❖ Ministry of Civil Aviation launches Regional Connectivity Scheme (RCS)- UDAN (Ude Desh Ka Aam Nagrik) 5.0
- ❖ UDAN Scheme was launched as a **Regional Connectivity Scheme (RCS) under the Ministry of Civil Aviation in 2016**, to provide affordable, economically viable and profitable air travel on regional routes to the common man even in small towns.
- ❖ It envisages **providing connectivity to un-served and underserved airports of the country** through the revival of existing airstrips and airports.
- ❖ It was formulated based on the review of **National Civil Aviation Policy (NCAP)-2016**.

UDAN 5.0

- ❖ Focuses on **Category-2 (20-80 seats)** and **Category-3 (>80 seats)**.

- ❖ Length cap of 600 km is waived off.
- ❖ **No predetermined routes would be offered.**
- ❖ **Viability gap funding (VGF) increased to 600km** from 500km earlier.
- ❖ Airlines would be required to commence operations **within 4 months** of the award of the route (earlier it was six months).
- ❖ The same route will not be awarded to a single airline more than once, whether in different networks or in the same network.

9.15. PRADHAN MANTRI URJA GANGA PROJECT

- ❖ PM recently praised the completion of Bihar portion of Barauni-Guwahati pipeline under Pradhan Mantri Urja Ganga Project.

About Pradhan Mantri Urja Ganga Project

- ❖ The project is also known as **Jagdishpur – Haldia & Bokaro – Dhamra Pipeline Project (JHBDPL)** project.
- ❖ It was **launched in 2016** and will cater to the energy requirements of **five states namely Uttar Pradesh, Bihar, Jharkhand, Odisha and West Bengal.**
- ❖ **Total length** of pipeline under Pradhan Mantri Urja Ganga Project is **3,384 km**, out of which 766 km of pipeline is in Odisha state and the balance 2,618 km is in the states of Uttar Pradesh, Bihar, Jharkhand, West Bengal & Assam.
- ❖ This pipeline **will connect six districts in Bihar to the National Gas Grid.**
- ❖ The project will provide **access to clean natural gas for industries, CNG for vehicles and PNG for homes**, promoting a sustainable lifestyle.
- ❖ The **seven main station cities include Varanasi, Patna, Bokaro, Jamshedpur, Kolkata, Ranchi, Bhubaneswar and Cuttack** as the major beneficiaries of the project.
- ❖ The main trunk of the pipeline ends at Haldia (West Bengal) and Dhamra (Odisha).
- ❖ The project is **being implemented by GAIL.**

9.16. ULPIN

- ❖ The Ministry OF Rural Development recently said that **ULPIN has been adopted by 26 states and union territories** so far.

About Unique Land Parcel Identification Number (ULPIN):

- ❖ It is part of the Digital India Land Records Modernization Programme (DILRMP).
- ❖ **ULPIN or Bhu-Aadhar** is a **14-digit identification number** accorded to a land parcel.
- ❖ It would **uniquely identify every surveyed parcel of land and prevent land fraud**, especially in rural India.
- ❖ The identification is based on the **longitude and latitude coordinates of the land parcel and depends on detailed surveys and geo-referenced cadastral maps.**
- ❖ **ULPIN is a Single, Authoritative Source of Truth** for information on any parcel of land or property to provide Integrated Land Services to the citizens as well as all stakeholders.
- ❖ Various types of **data relating to the landed properties**, which are currently under the **possession of different ministries and departments**, too will be linked with the ULPIN.

Digital India Land Records Modernization Programme (DILRMP)

- ❖ It is a **central sector scheme being implemented by the Department of Land Resources** under the **Ministry of Rural Development.**
- ❖ It attempts to build upon the commonalities that exist in the arena of land records in various States to develop an appropriate **Integrated Land Information Management System (ILIMS)** across the country.
- ❖ The ILIMS **integrates all the processes and lands records databases** with the banks, financial institutions, circle rates, Registration Offices and other sectors.

9.17. SUPREME PROGRAMME

- ❖ It stands for **Support for Up-gradation Preventive Repair & Maintenance of Equipment**.
- ❖ It is a programme launched by **Department of Science and Technology**.
- ❖ It is a first-of-its-kind program to provide financial support for **repair/ upgradation/ maintenance/ retrofitting or acquiring additional attachments** to increase functional capabilities of existing Analytical Instrumentation Facilities (AIFs).
- ❖ Analytical Instruments are vital for pursuing research through sample analysis in many areas of modern science and technology.
- ❖ Funding pattern: **75:25 for all private and government owned institutions** except for **state funded institutions which will get 100% funding**.
- ❖ Support under the scheme will be **upto 3 years**.

9.18. SVAMITVA SCHEME

- ❖ The UP state government recently completed the distribution of **55,14,921 'gharaunis'** (rural house records) in Uttar Pradesh under the **Svमित्वा scheme**.

About SVAMITVA scheme:

- ❖ A Survey of Villages and Mapping with Improvised Technology in Village Areas (SVAMITVA) is a **Central Sector Scheme** launched in 2021.
- ❖ It seeks to **give ownership of property in rural inhabited areas**, by mapping land parcels using **drone technology** and providing a **'Record of Rights' to village household owners** with the issuance of legal ownership cards (Property cards/Title deeds) to the property owners.
- ❖ It is **implemented** with the collaborative efforts of the **Ministry of Panchayati Raj, State Revenue Department, State Panchayati Raj Department** and **Survey of India**.
- ❖ Full coverage of nearly 6.62 lakh villages in India and establishment of an extensive **CORS network with 567 CORS stations**.
- ❖ **CORS network**
 - ✓ A **Continuously Operating Reference Stations (CORS) network** provides **regional positioning service**.
 - ✓ It plays a **major role in achieving centimetre accuracy positioning in many applications**, for example, **cadastral mapping, land information management, large-scale mapping** etc.

9.19. PM JAN DHAN YOJANA

- ❖ A recent RTI reply highlighted that **only half of PMJDY insurance claims settled in last two year**.

About PMJDY

- ❖ PMJDY is a **National Mission on Financial Inclusion** to ensure access to financial services, namely, Banking/ Savings & Deposit Accounts, Remittance, Credit, Insurance, Pension in an affordable manner.
- ❖ PMJDY has been the foundation stone for people-centric economic initiatives like **Direct Benefit Transfer (DBT), Covid-19 financial assistance, PM-KISAN, increased wages under Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGA), life and health insurance cover** etc.
 - ✓ The first step of all these initiatives is **to provide every adult with a bank account, which PMJDY has nearly completed**.
- ❖ **Objectives:**
 - ✓ **Ensure access** to financial products & services at an affordable cost.
 - ✓ **Use of technology** to lower cost & widen reach.
- ❖ **Basic tenets of the scheme:**
 - ✓ Banking the unbanked
 - ✓ Securing the unsecured
 - ✓ Funding the unfunded
- ❖ **Six Pillars**
 - ✓ **Universal access to banking services:** Branch and Banking Correspondants.

- ✓ Overdraft Facility: Basic savings bank accounts with **overdraft facility of Rs. 10,000/- to every eligible adult.**
 - **Upper age limit for OD** has been increased from 60 to 65 years.
 - Overdraft up to **Rs 2000 is allowed without any conditions.**
- ✓ **Financial Literacy Programme**-Promoting savings, use of ATMs, getting ready for credit, availing insurance and pensions, using basic mobile phones for banking.
- ✓ **Creation of Credit Guarantee Fund**- To provide banks some guarantee against defaults.
- ✓ **Insurance**- Free accident insurance cover up to Rs. 2,00,000 (initially it was Rs. 1lakh)
- ✓ **Pension scheme** for Unorganized sector.

9.20. SWAGAT

- ❖ **Statewide Attention on Grievances by Application of Technology-SWAGAT** initiative of **Gujarat government** successfully completed 20 years.
- ❖ It was started by PM in 2003 when he was the CM of Gujarat.
- ❖ **SWAGAT acts as a bridge between citizens and government** by using technology to solve their day-to-day grievances in a time-bound manner.

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10. INDEX AND REPORTS

10.1. WORLD ENERGY TRANSITION OUTLOOK 2023

- ❖ It was released by **International Renewable Energy Agency (IRENA)**.
- ❖ Current pledges and plans fall well short of IRENA's 1.5°C pathway and will result in an emissions gap of 16 gigatonnes (Gt) in 2050.
- ❖ Global investment across **all energy transition technologies** reached a record high of **USD 1.3 trillion** in 2022.
- ❖ Deployment is also limited to certain parts of the world. **China, the European Union and the United States** accounted for **two-thirds of all additions** last year, leaving **developing nations further behind**.
- ❖ Recommendations
 - ✓ To keep 1.5°C target alive, deployment levels must grow from some 3,000 gigawatt (GW) today to over 10,000 GW in 2030, an average of 1,000 GW annually.
 - ✓ Net-zero commitments must be embedded in legislation and translated into implementation plans.
 - ✓ Every investment and planning decision should consider structure and geography of low-carbon economy of the future.

About International Renewable Energy Agency (IRENA)

- ❖ It is an **intergovernmental organisation**; it was officially founded in Bonn, Germany, in January **2009**.
- ❖ It has **167 members** and **India is the 77th Founding Member** of IRENA.
- ❖ Headquarters- **Abu Dhabi, UAE**.

10.2. GLOBAL TRADE OUTLOOK AND STATISTICS 2023

- ❖ It was released by **World Trade Organization**.
- ❖ World merchandise trade volume is projected to grow 1.7% in 2023 before picking up to 3.2% in 2024.
- ❖ Value of world commercial services trade increased 15% in 2022 to US\$ 6.8 trillion.
- ❖ Risks to the forecast are tilted to downside, including geopolitical tensions, food insecurity, potential financial instability stemming from monetary policy tightening, and increasing levels of debt.

10.3. ENVIRONMENT STATISTICS

Recently, Volume 1 of Environment statistics 2023 was released by **Ministry of Statistics and Programme Implementation (MoSPI)**.

- ❖ Key findings
 - ✓ In 2022, annual rainfall measured in India has increased in comparison to 2021.
 - ✓ In 2022, maximum heatwave days were reported in **Rajasthan**, followed by Punjab and Haryana, Jharkhand, and Delhi.
 - Notably, Assam and Himachal Pradesh have not reported a heatwave day since 2010.
 - ✓ **Number of cyclonic storms** experienced by North Indian Ocean (NIO) **increased substantially in 2018** which persisted in subsequent year but again reduced in 2022.

10.4. MOP RELEASES SEEI 2021-22

- ❖ **Ministry of Power** recently released **State Energy Efficiency Index 2021-22**.
- ❖ SEEI assesses the **annual progress of states and UTs** in energy efficiency (EE) implementation.
- ❖ It **improves data collection, enables cross-state collaboration, and develops EE program** ideas.
- ❖ Index uses **51 indicators** across **seven sectors**: buildings, industry, municipality, transport, agriculture, distribution companies (DISCOMs), and cross-sectoral initiatives.
- ❖ Index has been **developed by Bureau of Energy Efficiency (BEE)** in collaboration with **Alliance for an Energy Efficient Economy (AEEE)**.

- ✓ AEEE is an industry led, membership based not-for-profit organization that drives EE markets and policies in India.

❖ Findings

- ✓ **Categorizes states and UTs** as 'Front runner' (>60), 'Achiever' (50-60), 'Contender' (30-49.5), and 'Aspirant' (<30).
- ✓ **Front Runner states:** Andhra Pradesh, Karnataka, Kerala, Rajasthan and Telangana.
 - **Telangana** and **Andhra Pradesh** showed most improvement since the last index.
- ✓ **Achiever states-** Assam ,Haryana, Maharashtra, Punjab.

About Bureau of Energy Efficiency

- ❖ The Bureau of Energy Efficiency is a statutory body established under the **Energy Conservation Act, 2001** to assist in developing policies and strategies with a thrust on self-regulation and market principles.
- ❖ **Headquarters:** New Delhi
- ❖ Important functions
 - ✓ Create awareness and disseminate information on energy efficiency and conservation.
 - ✓ Promote **innovative financing of energy efficiency projects**.
 - ✓ **Energy Conservation Building Code (ECBC)** sets minimum energy standards for certain new commercial buildings.
 - ✓ **Perform Achieve and Trade (PAT) scheme** under National Mission for Enhanced Energy Efficiency(NMEEE).

10.5. BUSINESS ENVIRONMENT RANKINGS

- ❖ BER is released by **Economist Intelligence Unit (EIU)**,
- ❖ It measures the attractiveness of the **business environment in 82 countries on a quarterly basis across 91 indicators**.
- ❖ Singapore topped the latest rankings.
- ❖ India **improved its ranking by six spots** due to its improved score in parameters like technological readiness, political environment, and foreign investment among others.

10.6. CERT-IN RELEASE RANSOMWARE REPORT 2022

- ❖ **CERT-In**, under **Ministry of Electronics and Information Technology**, is the **national nodal agency** for responding to computer security incidents.

Important highlights of the report

- ❖ **Ransomware incidents have gone up by 53%** in 2022 over 2021. Not only money, but Geo political conflicts also influenced ransomware attacks this year.
- ❖ Broadened Ransomware attacks across critical sectors with increased frequency and complexity of the attacks.
- ❖ **Lockbit** was the **most prevalent ransomware variant** in India, followed by Makop and DJVU/Stop ransomware.
- ❖ New variants such as **Vice Society** and **BlueSky** were noticed in 2022.
- ❖ IT and IT-enabled services sector was the most impacted sector, followed by finance and manufacturing sectors.
 - ✓ Ransomware-as-a-service (RaaS) ecosystem becoming prominent.
- ❖ **Makop** and **Phobos Ransomware families** mainly targeted medium and small organizations, while **Djvu/Stop variants** used for attacks on **individuals**.

About Ransomware

- ❖ Ransomware is a category of malware that **gains access to systems and makes them unusable to its legitimate users**, either by: Encrypting different files on targeted systems, also known as Crypto Ransomware.

- ❖ **Locking the system's screen** unless a ransom is paid, also known as **Locker Ransomware**.

10.7. FARMER DISTRESS INDEX

- It is a warning system to identify stress (and its level) among farmers at least 3-4 months ahead of its actual occurrence.
- Developed by **Central Research Institute for Dryland Agriculture (CRIDA)** of **Indian Council of Agricultural Research (ICAR)**.
- It was developed as part of **NABARD-funded project on 'Farmers Distress and Pradhan Mantri Fasal Bima Yojana (PMFBY)**.
- The **21-question survey** built around **seven key pillars** captures financial, economic, emotional health status of farmers in vulnerable areas.

10.8. UNFPA RELEASES STATE OF WORLD POPULATION 2023

- ❖ The State of World Population report is UNFPA's **annual flagship publication**.
- ❖ It has been published **yearly since 1978**.
- ❖ This year the report is titled as **SOWP 2023: 8 Billion Lives, Infinite Possibilities**.
- ❖ India is most populous country in world.
 - ✓ India's population is pegged to reach **142.86 crore** against **China's 142.57 crore** by mid- 2023.
- ❖ More than two-thirds of India's population (**68 percent**) belongs to **age group of 15- 64 years**, followed by 10-24 years group (26%), making India one of the youngest countries in world.
- ❖ In India, **life expectancy at birth** is estimated at **71 years for men and 74 years for women** in India.
- ❖ India's **total fertility rate** is estimated at **2.0**.
- ❖ Globally, **Central and Southern Asia** is expected to become the most populous region in world by 2037.
- ❖ The world's population hit the **800-crore mark in November 2022**.
- ❖ More than **half of projected increase in global population up to 2050** will be concentrated in **eight countries** —**Democratic Republic of Congo, Egypt, Ethiopia, India, Nigeria, Pakistan, Philippines and Tanzania**.

About UN Population Fund (UNFPA)

- ❖ **HQ- New York**
- ❖ It is the **United Nations sexual and reproductive health agency**.
- ❖ It supports **access to a wide range of sexual and reproductive health services** – including voluntary family planning, maternal health care and comprehensive sexuality education.
- ❖ Its mandate is established by **United Nations Economic and Social Council (ECOSOC)**.

10.9. GLOBAL UNICORN INDEX

- ❖ India has retained **3rd spot**, in the **list of countries with most number of Unicorns** as per **Hurun Research Institute's Global Unicorn Index 2023**.
- ❖ Edtech giant **BYJU'S** is the leading unicorn in India with a valuation of **\$22 billion**, followed by food delivery and quick commerce startup **Swiggy** and fantasy sports platform **Dream11**, both worth \$8 billion.
 - ✓ Unicorn refers to a privately held startup company with a value of over \$1 billion.
- ❖ As per the index, **India (68 unicorns)** added **14 new unicorns** since **pandemic** began and stands **behind USA (666)** and **China (316)**.
- ❖ **India and China** produce more offshore unicorns than any other country.
 - ✓ **Number of offshore unicorns by Indians is more than that of Chinese**.

10.10. STATE OF THE GLOBAL CLIMATE 2022 REPORT

- ❖ The **State of the Global Climate 2022 report** was recently released by **World Meteorological Organization (WMO)**
- ❖ **Annual report** gives details of **climate indicators** such as **temperatures, ocean heat, sea level rise, extreme weather etc.**
- ❖ It **complements the IPCC Sixth Assessment report.**

Important highlights

- ❖ **Global mean temperature in 2022 was 1.15°C above the 1850–1900 average.**
- ❖ **Years 2015 to 2022 were eight warmest on record** despite cooling impact of a La Niña event for past three years.
- ❖ Concentrations of three main greenhouse gases – **carbon dioxide, methane and nitrous oxide** – reached record highs in 2021.
- ❖ Overall, **58% of ocean surface experienced at least one marine heatwave** during 2022.
- ❖ **Glaciers around the world are melting** at an alarming rate, with reference glaciers showing an average decrease in thickness of over 1.3 meters between October 2021 and October 2022.
- ❖ Rate of **global mean sea level rise** has doubled between 1993-2002 (2.27 mm·yr-) and 2013-2022 (4.62 mm·yr).
- ❖ The **Antarctic sea ice** reached a record low of 1.92 million km² on February 25, 2022, which is almost 1 million km² less than the long-term (1991-2020) average.

Socio-economic and environmental impacts

- ❖ **Heatwaves in 2022 pre-monsoon season in India and Pakistan** caused a decline in crop yields.
- ❖ Recent assessment around **Tibetan Plateau, largest storehouse of snow and ice outside Arctic and Antarctic**, found that **global warming is causing temperate zone to expand.**
- ❖ In **East Africa**, rainfall has been below average in five consecutive wet seasons, longest such sequence in 40 years.

About WMO

- ❖ The World Meteorological Organisation (WMO) is a **specialised agency of the United Nations.**
- ❖ **Established in 1950**, it is **headquartered at Geneva, Switzerland**
- ❖ **193 Member States** and Territories including India.

10.11. TRENDS IN WORLD MILITARY EXPENDITURE, 2022 REPORT

- ❖ **'Trends in World Military Expenditure' Report 2022** was recently released by SIPRI.
 - ✓ **Stockholm International Peace Research Institute (SIPRI)** is a **Sweden-based independent international institute** dedicated to research into conflict, armaments, arms control, and disarmament.

Major findings

- ❖ **Five biggest spenders** in 2022 were **United States, China, Russia, India and Saudi Arabia**, which together accounted for **63% of world military spending.**
- ❖ World military **expenditure rose by 3.7% in real terms** in 2022, to reach a record high of \$2240 billion (2.2% of global GDP).
- ❖ With military expenditure of \$81.4 billion, **India was fourth largest spender** in 2022.
- ❖ **Personnel expenses** (salaries and pensions) remained the **largest expenditure category** (around 50%) in **Indian military budget.**
- ❖ India's expenditure **on capital outlays amounted to 23% of total military spending** in 2022.
- ❖ India's **defence exports** have reached an **all-time high of Rs 16,000 crore** in FY 2022-23.
- ❖ India aims at achieving annual defence export target of ₹35,000 crore by 2025.
- ❖ India's **major platforms being exported** include **Dornier-228, 155 mm Advanced Towed Artillery Guns (ATAGs), Brahmos Missiles, Akash Missile System** etc.

10.12. WORLD DEVELOPMENT REPORT 2023

- ❖ World Development Report 2023 was recently **released by World Bank**.
- ❖ Report is titled **“Migrants, Refugees and Societies”** and proposes an **integrated framework to maximize development** impacts of **cross-border movements** on both destination and origin countries and on migrants and refugees themselves.
- ❖ It **categorised migrants into four types – Refugees with skills in demand, economic migrants with skills that match with demand, distressed migrants and refugees.**

Major Findings

- ❖ About **184 million people across the world**, including **37 million refugees lack citizenship** in country in which they live.
- ❖ There is **120% income gain for Indians working abroad** as compared to 40% income gain through internal migration.
- ❖ **Low skilled Indian migrants**, who migrated to U.S, tend to see a significant **gain in their income of around 500%.**
- ❖ **India-US, India-Bangladesh and India- Gulf Cooperating Council** considered among the **top migrant corridors.**
- ❖ The share of **working-age adults will drop sharply in many countries** over the next few decades e.g. **Spain.**
 - ✓ However, **developing nations such as India** are observing an increase in the number of young people.

Recommendations

- ❖ The report introduces the **“Match-Motive Framework,”** a labour economics-based approach that emphasizes how well migrants’ skills and attributes match the needs of the destination countries.
- ❖ **Countries of destination promote migration in sectors** where migrant skills are highly sought after.
- ❖ **International cooperation and multilateral efforts** to strengthen the match of migrants’ skills with the needs of destination societies.

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11. INTERNATIONAL, SUMMITS

11.1. COMPREHENSIVE AND PROGRESSIVE AGREEMENT FOR TRANS-PACIFIC PARTNERSHIP (CPTPP)

- ❖ Recently, **Britain** has decided to join Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP).
- ❖ **Britain will be the first new member** since the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) was **created in 2018**, and the first European country in the bloc.
- ❖ The bloc, which is home to 500 million people, will be worth 15% of global GDP once the UK joins.

About CPTPP

- ❖ Comprehensive and Progressive Agreement for Trans-Pacific Partnership is **an 11-nation Indo-Pacific free-trade bloc**.
- ❖ Its members are **Australia, Brunei, Canada, Chile, Japan, Malaysia, Mexico, New Zealand, Peru, Singapore, and Vietnam**.
- ❖ The agreement mandates the duty-free entry of commercial samples having almost negligible value and printed advertising material from the territory of a signatory party.
- ❖ It establishes clear rules that help create a consistent, transparent and fair environment to do business in CPTPP markets
- ❖ It eliminates tariffs and **reduces barriers for 98% of exports to CPTPP member countries**.

11.2. FINLAND JOINS NATO

- ❖ Finland has officially **become the 31st member** of the **North Atlantic Treaty Organization (NATO)**.
- ❖ It marks a major shift in the security landscape in northeastern Europe as it **adds some 1,300 kilometers (830 miles)** to the **alliance's frontier with Russia**.

About NATO

- ❖ It is a military alliance established by the **North Atlantic Treaty** (also called the **Washington Treaty**) of April, 1949, by the **United States, Canada, and several Western European nations** to provide collective security against the Soviet Union.
- ❖ There are **currently 30 member states (Finland became 31st)**.
- ❖ Its **original members** were Belgium, Canada, Denmark, France, Iceland, Italy, Luxembourg, the Netherlands, Norway, Portugal, the United Kingdom, and the United States.
- ❖ Headquarters: Brussels, Belgium.
- ❖ **Objectives** of NATO
 - ✓ NATO's essential and enduring purpose is to safeguard the freedom and security of all its members by political and military means.
 - ✓ NATO promotes democratic values and enables members to consult and cooperate on defense and security-related issues to solve problems, build trust and, in the long run, prevent conflict.

11.3. 5TH ICDRI MEET

- ❖ International Conference On Disaster Resilient Infrastructure (ICDRI) is an annual international conference by the **Coalition for Disaster Resilient Infrastructure (CDRI)**
 - ✓ **Disaster resilient infrastructure** include vital buildings, public communal facilities, transit systems, telecommunications, and power systems that are strategically designed to withstand the impact of a natural disaster like a flood, earthquake, or wildfire.
- ❖ It could bring down the economic cost of rebuilding the whole infrastructure after natural disasters.
- ❖ Assist in achieving targets pertaining to a reduction in mortality due to disasters.
- ❖ Help in non-disruption of Energy, transportation, and telecommunications for an effective post-disaster response.

❖ Initiatives

- ✓ India announced the creation of a CDRI after the Asian Ministerial Conference on Disaster Risk Reduction (2016).
- ✓ **Sendai Framework for Disaster Risk Reduction (2015-2030)** identifies investing in Disaster Risk Reduction (DRR) for resilience and to “build back better” in reconstruction as priorities
- ✓ **Infrastructure Resilience Accelerator Fund** was announced in 2023 acts as a financial resource and is key to the success of initiatives.
- ✓ Inclusion of the CDRI in working groups of G20.

About Coalition for Disaster Resilient Infrastructure (CDRI)

- ❖ A global partnership of national governments, UN agencies and programmes, private sector, and academic and research institutions, **launched in 2019 by Indian Prime Minister at UN Climate Action Summit (New York)**.
- ❖ **Objective:** To promote resilience of infrastructure systems to climate and disaster risks, thereby ensuring sustainable development.
- ❖ **Membership:** Currently, it has **31 Countries** (including India), 6 International Organisations and 2 private sector organisations as members.
- ❖ **HQ- New Delhi**
- ❖ It'll work at intersection of Sendai Framework for Disaster Risk Reduction and Paris Climate Agreement.

11.4. INTERNATIONAL FINANCE CORPORATION (IFC)

- ❖ The **International Finance Corporation (IFC)**, the private sector arm of The World Bank, has said it will **not support investments in new coal projects**.
- ❖ Earlier, in 2020, IFC had unveiled a policy requiring clients to reduce their exposure to coal projects by half by 2025, and to zero by 2030, but did not prevent new investments.
- ❖ The IFC funds banks and other financial institutions that in turn lend to infrastructure and energy projects. The IFC has reportedly lent close to \$5 billion to almost 88 financial institutions in India.

About International Finance Corporation (IFC)

- ❖ Established in the 1950s, the International Finance Corporation (IFC) **headquartered** in the United States of America.
- ❖ It is the **largest global development institution** focused **exclusively on the private sector** in developing countries.

WORLD BANK GROUP comprises of 5 institutions

Collectively, all 5 institutions are known as the "World Bank Group"

1. **International Bank for Reconstruction and Development** Financing for middle-income developing countries
2. **International Development Association**-Financing for low-income developing countries

Together IBRD and IDA are known as the "World Bank"

3. **International Finance Corporation**- Investments and advisory services to encourage private-sector development.
4. **Multilateral Investment Guarantee Agency**- Political risk insurance and credit enhancement guarantees.
5. **International Centre for the Settlement of Investment Disputes (ICSID)** - International arbitration of investment disputes. (India is not a member)

11.5. UNITED NATIONS STATISTICAL COMMISSION

- ❖ India has been elected to United Nations Statistical Commission for a **four-year term beginning January 1, 2024**.

About United Nations Statistical Commission

- ❖ HQ-New York, USA

- ❖ Established in 1947, it is the **highest body of global statistical system** bringing together Chief Statisticians from member states from around the world.
- ❖ It **oversees the work of United Nations Statistics Division (UNSD)**, and is a Functional Commission of **UN Economic and Social Council (UNESCO)**.
- ❖ Membership: Consists of **24 member countries** of UN elected by UNESCO on basis of an **equitable geographical distribution**.
- ❖ Term of office: **4 years**.

11.6. UNESCAP

- ❖ Conference on **Accelerating Rail Digital Transformation in Asia and Pacific region** was organized by **ESCAP**, an intergovernmental platform, in collaboration with **Ministry of Railways**.

About UN-ESCAP

- ❖ United Nations Economic and Social Commission for Asia and Pacific (ESCAP) has headquarters in **Bangkok, Thailand**.
- ❖ It supports **inclusive and sustainable development** in region by generating action-oriented knowledge, and by providing technical assistance and capacity-building services in support of national development objectives, regional agreements.
- ❖ It was first established by Economic and Social Council in **1947** as **United Nations Economic Commission for Asia and Far East (ECAFE)**.
 - ✓ Renamed in **1974** as ESCAP.
- ❖ **Membership**: 53 member States and 9 associate members.

11.7. UN DEMOCRACY FUND

- ❖ India has no objections to the Fund giving grants to **NGOs funded by George Soros**, while he is put on the watchlist in India.

About UNDEF

- ❖ UNDEF was **created by UN Secretary-General Kofi A. Annan in 2005** as a UN General Trust Fund to support democratization efforts around the world.
- ❖ It funds projects that empower civil society, promote human rights, and encourage participation of all groups in democratic processes.
- ❖ UNDEF subsists **entirely on voluntary contributions** from Governments.
- ❖ Composition:
 - ✓ The Advisory Board, constituted by the Secretary General, includes **eight largest Member State contributors** and **six other states** to reflect diverse geographical representation.
 - ✓ **India has been a member of the Board since the beginning**.

11.8. GOOD FRIDAY AGREEMENT

- US President is visiting Northern Ireland to mark 25th anniversary of Good Friday Agreement.
- GFA was **signed in 1998**, between **factions of Northern Ireland**, and **governments of Britain and Ireland**, to end 30 years of violence known as **'The Troubles'**.
- The agreement is hailed as a **model deal to end long-standing conflicts**, and fetched a **joint Nobel peace prize** for **David Trimble and John Hume**, then leaders of the two opposing parties in Northern Ireland.
- **Northern Ireland**, created in **1921** by **partitioning Ireland**, **remained with United Kingdom** after Ireland's independence from UK.
- This resulted in violence between those who wished to remain with UK and those who wanted to join Ireland.

11.9. WORLD FOOD PROGRAMME

- ❖ India signed a MoU with WFP for sending wheat to Afghanistan.
- ❖ WFP is the **food-assistance branch of UN** and **world's largest humanitarian organization addressing hunger** and promoting food security.
- ❖ It was **founded in 1961** by the **Food and Agriculture Organization (FAO)** and **United Nations General Assembly (UNGA)** with its **headquarters in Rome, Italy**.
- ❖ WFP works in over 120 countries and territories to enhance nutrition in women and children, support smallholder farmers, help prepare for climate-related shocks, and boost human capital.
- ❖ **Executive Board** (India's term to end in 2024) is **WFP's supreme governing body**.
- ❖ WFP's funding comes from governments, corporations, individuals etc.

11.10. CHABAHAR PORT

- ❖ First meeting of India-Central Asia Joint Working Group on Chabahar port took place in Mumbai.
- ❖ Chabahar Port is located in **Sistan-Baluchestan province** in South-eastern **Iran**, on **Gulf of Oman**.
- ❖ In 2016, **India signed a tripartite agreement with Iran and Afghanistan** to develop the **Shahid Beheshti Terminal** at Chabahar.
- ❖ It is considered a crucial gateway that would **enable India to bypass Pakistan** and access Afghanistan, and ultimately Central Asia.
- ❖ It is at a **strategic location near Strait of Hormuz and Indian Ocean**.

11.11. ARAB LEAGUE

- ❖ A meeting to debate Syria's readmission to Arab League has ended without agreement.

About Arab League

- ❖ It is an **intergovernmental pan-Arab organisation** of Arab states in Middle East and North Africa.
- ❖ Formal Name – **Al-Jamia ad-Duwal al-Arabiya** (Arabic)
- ❖ It was **established in Cairo (HQ) in 1945**, following adoption of **Alexandria Protocol in 1944**.
- ❖ Currently it has **21 Arab countries** as **members** (Syria suspended since 2011).
- ❖ **Founding members** are **Egypt, Iraq, Lebanon, Saudi Arabia, Syria, Jordan, and Yemen**.
- ❖ It was established in response to concerns about post-war colonial divisions of territory and also strong opposition to emergence of a Jewish state on Palestinian territory.
- ❖ India was granted **an observer status in 2007**.

11.12. OLKILUOTO 3 NUCLEAR REACTOR

- ❖ **Finland's** next-generation Olkiluoto 3 nuclear reactor, the largest in Europe, has gone into regular production.

About Olkiluoto 3 nuclear reactor (OL3):

- ❖ OL3 is an EPR (European Pressurized Water Reactor) located in Finland.
- ❖ It is built by the French-led Areva-Siemens consortium.
- ❖ It is the **most powerful nuclear reactor in Europe**, with a capacity of generating 1,600 megawatts.
- ❖ It covers approximately 14% of Finland's electricity demand.

11.13. EAM INAUGURATES BUZI BRIDGE IN MOZAMBIQUE

- External Affairs Minister Dr Jaishankar recently inaugurated the **Buzi Bridge** virtually, which is a part of the 132 km Tica-Buzi-Nova-Sofala Road project.
- The bridge has been constructed by India and is a symbol of the solidarity and friendship between **India and Mozambique**

11.14. PREPAREDNESS AND RESILIENCE FOR EMERGING THREATS (PRET) INITIATIVE

- ❖ It is a **World Health Organisation (WHO)** initiative to improve the **disease pandemic preparedness**.
- ❖ PRET focuses on improving pandemic preparedness for groups of pathogens based on their modes of transmission.
- ❖ PRET operates under the aegis of the **International Health Regulations (IHR)**, which is a critical international legal instrument for managing public health emergencies.
- ❖ PRET recognizes **three tiers of systems** and **capacities** relevant for pandemic preparedness:
 - ✓ those that are cross-cutting for all or multi-hazard,
 - ✓ those that are relevant for groups of pathogens, and
 - ✓ those that are specific to a pathogen.

11.15. CARIBBEAN COMMUNITY AND COMMON MARKET (CARICOM)

- ❖ 4th India-CARICOM ministerial meeting was held recently.

About CARICOM

- ❖ **CARICOM** is a grouping of twenty countries:
 - ✓ **Fifteen Member States**- Antigua and Barbuda, The Bahamas, Barbados, Belize, Dominica, Grenada, Guyana, Haiti, Jamaica, Montserrat, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Suriname, and Trinidad and Tobago.
 - ✓ and **Five Associate Members**- Anguilla, Bermuda, the British Virgin Islands, the Cayman Islands, and the Turks and Caicos Islands.
- ❖ **CARICOM** came into being in **1973** with the signing of the **Treaty of Chaguaramas**.
- ❖ **CARICOM** is the **oldest surviving integration movement in the developing world**.
- ❖ The **CARICOM Secretariat** in **Georgetown, Guyana**, is the principal administrative organ of the Community and is headed by a **Secretary General** who is the **Chief Executive Officer** of the Community.

11.16. UNITED NATIONS PERMANENT FORUM ON INDIGENOUS ISSUES (UNPFII)

- ❖ The **22nd session** of the UNPFII held recently.
- ❖ The body called for **full inclusion of indigenous people in realising their socio-economic development** and preservation of culture, languages as well as environment.
 - ✓ Also, the **International Day of the World's Indigenous Peoples** is observed every year on **9th August**.

About United Nations Permanent Forum on Indigenous Issues (UNPFII)

- ❖ UNPFII is a **high level advisory body** to the **Economic and Social Council**.
- ❖ Forum was **established in 2000 by resolution 2000/22** with a mandate to discuss indigenous issues related to economic and social development, culture, the environment, education, health and human rights.
- ❖ It is **one of three UN bodies to deal specifically with indigenous peoples' issues**.
 - ✓ Others are **Expert Mechanism on Rights of Indigenous Peoples** and **Special Rapporteur Rights of Indigenous People**.
- ❖ **Functions:** To promote the integration and coordination of activities relating to Indigenous Peoples' issues within the UN system; and promote respect for and full application of the provisions of the UN Declaration on the Rights of Indigenous Peoples and follow up on its effectiveness.
- ❖ **Headquarter: New York, USA.**

11.17. NAGORNO-KARABAKH

- ❖ **Azerbaijan** had established a checkpoint at **Lachin corridor**, the **only land route linking Armenia to Nagorno-Karabakh**.
- ❖ Nagorno-Karabakh, known as **Artsakh by Armenians**, is a **landlocked mountainous area** in South Caucasus.

- ❖ It was **claimed by both Azerbaijan and Armenia** after the **fall of Russian Empire in 1917** and has remained a point of tension ever since.
- ❖ The territory is **internationally recognised as part of Azerbaijan**, but its **inhabitants are predominantly ethnic Armenians**.

11.18. NET ZERO INNOVATION VIRTUAL CENTRE

- ❖ **India and United Kingdom** will create **India-UK NET Zero Innovation Virtual Centre**.
 - ✓ It was announced during the India-UK Science & Innovation Council meeting.
- ❖ It will provide a platform to bring **stakeholders from both countries** together to work in some of the **focus areas** including **Decarbonization of manufacturing process & transport systems** and **Green Hydrogen** as renewable source.



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12. DAYS TO REMEMBER

12.1. WORLD BACKUP DAY 2023 OBSERVED ON 31ST MARCH

- ❖ World Backup Day is an annual event that takes place on March 31st to raise awareness about the importance of data backup and protection.
- ❖ World Backup Day was first observed on March 31, 2011.

12.2. WORLD AUTISM AWARENESS DAY- APRIL 2

- ❖ World Autism Awareness Day is observed every year on **April 2nd**.
- ❖ This day is dedicated to spreading awareness about autism, a neurological condition that manifests during early childhood.
- ❖ The **theme** for World Autism Awareness Day 2023 is **“Transforming the narrative: Contributions at home, at work, in the arts, and in policymaking”**.
- ❖ It is a common misconception that all autistic people have the same abilities and needs. Some people with autism are highly functioning and require minimal support, while others require life-long care and support.

About Autism

- ❖ Autism Spectrum Disorder (ASD) is **a group of conditions associated with brain development**.
- ❖ People with autism often have **co-occurring conditions** such as epilepsy, depression, anxiety, attention deficit hyperactivity disorder (ADHD), difficulty sleeping, and self-injury.
- ❖ **Intellectual capacity of autistic people are unique and distinctive**, extending from intense impairment to superior levels.
- ❖ The term “Autism Spectrum” refers to a range of characteristics, including difficulties with communication, social interaction, and repetitive behaviors.

12.3. UTKAL DIBASA- APRIL 1ST

- ❖ Odisha Day or Utkal Divas is a significant day which marks the formation of the state on **April 1, 1936**.
- ❖ This year, Odisha celebrated its 88th foundation day.

12.4. INTERNATIONAL DAY OF CONSCIENCE 2023 - APRIL 5TH

- ❖ International Conscience Day is celebrated on April 5th to promote peace.
- ❖ To lead a conscientious life, one must respect human rights and dignity as well as protect other living beings.
- ❖ The International Day of Conscience has been established by the United Nations General Assembly in 2019.

12.5. INTERNATIONAL DAY OF SPORT FOR DEVELOPMENT AND PEACE 2023- APRIL 6TH

- ❖ On April 6, the International Day of Sport for Development and Peace (IDSDP) is celebrated to acknowledge the significance of sports and physical activity in our personal lives and communities worldwide.
- ❖ The 2023 global **theme** for the International Day of Sport for Development and Peace is **“Scoring for People and the Planet.”**

12.6. NATIONAL MARITIME DAY

- ❖ On April 5th, India celebrated National Maritime Day, which commemorates the **maiden voyage of the first Indian commercial vessel, the SS Loyalty, from Mumbai to London** in 1919.
- ❖ This year's **theme** was **"Propelling Indian Maritime to Net Zero."**

- ❖ It was organized by the **Directorate General of Shipping, Ministry of Ports, Shipping and Waterways** in Mumbai concluded with a ceremony at the Domestic Cruise Terminus in Mumbai Port Trust, highlighted the need for a coordinated and collaborative approach to achieve the net-zero target in the maritime sector.
- ❖ During the program, **Sagar Samman Awards** were awarded to the contributors to the growth of the Indian maritime industry.

12.7. WORLD HEALTH DAY- APRIL 7TH

- ❖ The World Health Day is celebrated every year on **April 7th**, to bring global attention to a specific health issue that impacts people worldwide.
- ❖ This day is also significant as it coincides with the founding day of the World Health Organisation (WHO) in 1948.
 - ✓ This year marks the 75th anniversary of WHO.
- ❖ The World Health Day 2023 has adopted the theme **“Health for All”** with the objective of reflecting on the accomplishments of public health in enhancing people’s quality of life over the past seven decades.
- ❖ History- In July 1946, the World Health Organization’s constitution was ratified, and on **April 7th, 1948**, it came into effect with the participation of 61 nations in its establishment.
 - ✓ The first World Health Day was celebrated on July 22, 1949, but later moved to April 7th.

12.8. WORLD HOMEOPATHY DAY 2023- APRIL 10TH

- ❖ World Homeopathy Day is celebrated on **April 10th** every year, to honour the **birth anniversary of Samuel Hahnemann**, the **founder of homeopathy** and a German physician.
- ❖ The focus of World Homeopathy Day 2023 is centered around the theme **‘One Health, One Family’**. The primary objective of this theme is to advocate for **evidence-based homeopathic treatment** for the well-being of every family member through the involvement of family physicians within the community.
- ❖ Principle- **Likes can heal likes**, according to homoeopathy’s **“similia similibus curantur”**.
 - ✓ It is a notion that a disease can be cured by a substance that produces similar symptoms in healthy people.

12.9. NATIONAL SAFE MOTHERHOOD DAY 2023- APRIL 11TH

- ❖ National Safe Motherhood Day is an annual event that is celebrated on **April 11 in India**.
- ❖ The **White Ribbon Alliance India (WRAI)** initiated this day to highlight the importance of maternal health and reduce maternal mortality rates in the country.
- ❖ India has **one of the highest maternal mortality rates in the world, with 12 per cent** of all maternal deaths occurring in the country.
- ❖ The **Indian government officially recognised National Safe Motherhood Day in 2003**, to emphasise the importance of ensuring that women have access to adequate care throughout pregnancy, childbirth and the postnatal period.
- ❖ The day was **marked on April 11** to commemorate the **birth anniversary of Kasturba Gandhi**, wife of Gandhiji.

12.10. WORLD ART DAY—APRIL 15TH

- ❖ **April 15** is celebrated as **World Art Day** to **commemorate Leonardo da Vinci’s birthday**.
- ❖ World Art Day was officially established on April 15 during the General Assembly of the International Association of Art in **2012**.

12.11. WORLD CHAGAS DAY APRIL 14TH

- ❖ World Chagas Disease Day is observed **every year on April 14** to raise awareness about Chagas Disease.

- ❖ The **theme** for World Chagas Disease Day 2023 is “**Time to integrate Chagas disease into primary health care**”.

About Chagas Disease

- ❖ It is also called **American trypanosomiasis** and is a **communicable parasitic disease**.
- ❖ It is caused by the **parasite protozoan Trypanosoma cruzi**.
- ❖ The disease is named after physician Carlos Chagas who first detected it in a Brazilian child in 1909.
- ❖ **Symptoms**- Fever, headaches, rashes and inflammatory nodules, nausea or diarrhoea and muscle or abdominal pain.
 - ✓ A **majority of the patients** (70-80 per cent) show an **asymptomatic clinical course throughout their lives**, making early detection challenging.
- ❖ Transmission- The parasites are mainly transmitted by a **family of bugs called ‘triatomines’**, also known as the **‘kissing bug’**.
- ❖ An individual can also contract this disease through **congenital transmission** (pregnant woman to their baby), **blood transfusions, organ transplantation**, consumption of uncooked food contaminated with the faecal matter of infected bugs or even accidental laboratory exposure.
- ❖ The disease cannot propagate by casual contact with infected humans or animals.
- ❖ The disease **remains most prevalent in Latin America**.
- ❖ There are **currently no vaccines available** for Chagas disease. However it can be treated with **antiparasitic medicines Benznidazole and Nifurtimox**.

12.12. WORLD HEMOPHILIA DAY 2023-APRIL 17TH

- ❖ **World Hemophilia Day** is celebrated every year on **April 17th** to honor the birth anniversary of Frank Schnabel, who established the World Federation of Hemophilia.
- ❖ The **theme** for World Hemophilia Day in 2023 is “**Access for All: Partnership, Policy, Progress – Engaging Governments to Integrate Inherited Bleeding Disorders into National Policy**”.

About Hemophilia

- ❖ Hemophilia is an uncommon medical condition where the **blood is incapable of clotting correctly** because of a shortage of specific clotting factors.
- ❖ This **leads to prolonged bleeding**, which can pose a life-threatening risk in some cases.
- ❖ Although there is no known cure for this disorder, available treatments can help control and manage the condition.
- ❖ Hemophilia can **either be present from birth** (congenital) or **develop later in life** (acquired).

12.13. WORLD HERITAGE DAY 2023 –APRIL 18TH

- ❖ **April 18th** is observed as **World Heritage Day**, also referred to as International Day for Monuments and Sites.
- ❖ The primary objective of this day is to raise awareness of the significance of safeguarding cultural heritage, including historical structures, landmarks, and archaeological locations, and to celebrate the variety of global heritage.
- ❖ The **theme** for World Heritage Day 2023 is “**Heritage Changes.**”
- ❖ The **International Council on Monuments and Sites (ICOMOS)**, headquartered in **Paris**, proposed the notion of observing World Heritage Day in 1982, and it was subsequently endorsed by the United Nations General Assembly in 1983.

12.14. WORLD LIVER DAY 2023 APRIL 19TH

- ❖ World Liver Day is observed on **April 19** in order to raise awareness about liver-related diseases.
- ❖ Liver plays a pivotal role in our body’s immunity, digestion and metabolism.
- ❖ Plus, it also carries out the filtration of toxins, stores vitamins and minerals, and produces bile, among other functions.

- ❖ The **theme** for this year's World Liver Day is **"Be vigilant, do a regular liver check-up, fatty liver can affect anyone."**

12.15. WORLD CREATIVITY AND INNOVATION DAY 2023- APRIL 21ST

- ❖ **World Creativity and Innovation Day** is celebrated annually on **April 21st** to raise awareness about the crucial role that innovation and creativity play in human development.
- ❖ World Creativity and Innovation Day is a part of the World Creativity and Innovation Week that begins on April 15, celebrated as World Art Day in honor of Leonardo da Vinci's birthday and ends on April 21.

12.16. WORLD BOOK AND COPYRIGHT DAY 2023: APRIL 23RD

- ❖ **World Book and Copyright Day** is observed on **April 23rd** every year to promote reading books, particularly among the younger generation.
- ❖ The United Nations Educational, Scientific and Cultural Organization (UNESCO) initiated this event with the aim of combating the reduced importance given to reading due to the excessive availability of information from various sources.
- ❖ The **theme** for World Book Day 2023 is **'Indigenous Languages.'**

12.17. WORLD ENGLISH DAY- APRIL 23RD

- ❖ It is observed on **April 23rd every year**, and the year 2023 marks the **10th anniversary of the event**.
- ❖ English is one of the most widely spoken languages in the world, and it is estimated that **over 1.5 billion** people speak it as their first, second or foreign language.
- ❖ The **theme** for World English Day 2023 is **"English as a global language: bridging cultures, connecting the world."**

12.18. WORLD INTELLECTUAL PROPERTY DAY- APRIL 26TH

- ❖ **World Intellectual Property Day** is observed annually on **April 26th**.
- ❖ The World Intellectual Property Organization (WIPO) **officially established World IP Day on August 9, 1999**, coinciding with WIPO's 30th founding anniversary.
- ❖ April 26th was **designated as the date for the annual observance of World Intellectual Property Day**.
- ❖ The **inaugural celebration of World IP Day took place in the year 2000**, with 59 member countries participating in the event.
- ❖ The **primary objective** of observing World Intellectual Property Day is to create consciousness about the significance of protecting intellectual property.
- ❖ It **serves as a platform to emphasize the importance of intellectual property protection** and to generate awareness about copyrights, patents, trademarks, and other related subjects.
- ❖ The **theme for the World Intellectual Property Day 2023** is **"Women and IP: Accelerating Innovation and Creativity."**

12.19. WORLD VETERINARY DAY 2023 –APRIL 29TH

- ❖ World Veterinary Day is an annual event celebrated on the **last Saturday of April** to increase awareness about the important work of veterinarians in promoting animal health, welfare, and public health.
 - ✓ This year, the event falls on April 29th.
- ❖ **Theme** for World Veterinary Day 2023 is **"Promoting Diversity, Equity, and Inclusiveness in the Veterinary Profession"**.
- ❖ The **World Veterinary Day (WVD)** was **established on April 29, 2000**, by the World Veterinary Association (WVA)
- ❖ **World Veterinary Association** was founded in 1863 with HQ at **Brussels, Belgium**.

13. APPOINTMENTS

13.1. NEW VICE-CHIEF OF NAVY

- ❖ Vice-Admiral **Sanjay Jasjit Singh** assumed the position of **Vice-Chief of Naval Staff (VCNS)** as part of a series of high-level changes in the Indian Navy.

14. PERSON IN NEWS

14.1. SHYAMJI KISHAN VERMA

- ❖ On March 30, 2023 the death anniversary of **Shri Shyamji Krishna Varma** was commemorated.
- ❖ Born in **Mandavi Gujarat**, Shyamji Krishna Varma completed his education in India and **taught Sanskrit at the Oxford University**.
- ❖ In 1905 he founded '**The India House**' and '**The Indian Sociologist**', that acted as a meeting point for radical nationalists among Indian students in Britain.
- ❖ He **moved to Paris in 1907** avoiding prosecution.
- ❖ He became the **first President of Bombay Arya Samaj** and he **inspired Veer Savarkar** who was a member of India House in London.
- ❖ A memorial called **Kranti Teerth** dedicated to him was inaugurated in 2010 near Mandvi.

14.2. FORMER CRICKETER SALIM DURANI PASSES AWAY

- ❖ **Salim Durani**, a former Indian cricketer known for his striking looks, humor, and ability to hit powerful sixes, passed away at the age of 88.
- ❖ Salim Durani, who was originally from Kabul, Afghanistan, was a talented cricketer known for his explosive batting and left-arm orthodox bowling.

14.3. BABU JAGJIVAN RAM

- ❖ Prime Minister recently paid tributes to Babu Jagjivan Ram (1908-1986) on his 116th birth anniversary.
- ❖ He was born on April 5, 1908, in Chandwa village, Bihar to Sobhi Ram and Vasanti Devi.
- ❖ He was a freedom fighter, prominent leader of the untouchable.
- ❖ In 1934, he **founded Akhil Bhartiya Ravidas Mahasabha** and the **All-India Depressed Classes League**.
- ❖ In 1935, he appeared before **Hammond Commission** and demanded, for the **first time, voting rights for Dalits**.
- ❖ Participated in Civil Disobedience Movement, Satyagraha movement, and Quit India Movement.
- ❖ Babu Jagjivan Ram holds the world record for being a **parliamentarian for 50 uninterrupted years**, from 1936 to 1986.
- ❖ He also served as **India's defence minister** during the **Indo-Pak war of 1971**.

14.4. JYOTIBA PHULE

- ❖ Every year April 11 is celebrated as Jyotiba Phule Jayanti.

Abput Jyotiba Phule

- ❖ **Jyotirao 'Jyotiba' Govindrao Phule** was an Indian writer, social activist, thinker and anti-caste social reformer born in the **Satara district of Maharashtra** in 1827.
- ❖ He was bestowed with the honorific **Mahatma** title by Maharashtrian social activist **Vithalrao Krishnaji Vandekar** in 1888.
- ❖ He is **believed to be the first Hindu to start an orphanage** for the unfortunate children.

Major Contribution

1. Women Empowerment

- ❖ Established an ashram for young widows.
- ❖ Along with his longtime friend Sadashiv Ballal Govande and Savitribai, he started an infanticide prevention centre.
- ❖ At home he began educating his wife Savitribai and opened a girl's school in 1848 in Pune.

2. Rights of Untouchables

- ❖ Jyotirao Phule was the **first person to coin the term 'Dalits'** to apply to all people considered lower caste and untouchables by the Brahmins.
- ❖ In 1868, Jyotirao constructed a **common bathing tank** outside his house to exhibit his embracing attitude towards all human beings.
- ❖ In 1873, Jyotirao Phule formed the **Satya Shodhak Samaj** (Society of Seekers of Truth) which undertook a systematic deconstruction of existing beliefs and history, only to reconstruct an equality promoting version.

3. Literary Works

- ❖ **Major Publications:** Tritiya Ratna (1855); Powada: Chatrapati Shivajiraje Bhosle Yancha (1869); Gulamgiri (1873), Shetkarayacha Aasud (1881), 'Brahmananche Kasab', 'Ishara'.
- ❖ He also wrote books for the Satyashodhak Samaj that dealt with the history of Brahminism and outlined Puja protocols that the lower caste people were not allowed to learn.

14.5. INDIA'S TALLEST AMBEDKAR STATUE

- ❖ Telangana Chief Minister unveiled a **125-foot tall bronze statue** of Dr B R Ambedkar at the Hussain Sagar lake in Hyderabad on his 132nd birth anniversary.
- ❖ It is claimed to be the **tallest statue in the country** ever built for Dr B R Ambedkar.
- ❖ It has an **overall height of 175 feet**, including a **50 feet high circular base** resembling the edifice of the Parliament of India.
- ❖ **360 tonnes of stainless steel** and **114 tonnes of bronze** was used for building the statue.
- ❖ It was designed by renowned **sculptors Ram Vanji Sutar and his son Anil Ram Sutar** of Ram Sutar Art Creations who also designed the world's tallest statue — the Statue of Unity (597 feet) of Sardar Vallabhbhai Patel in Gujarat.

About Dr B R Ambedkar-

- ❖ Bhimrao Ramji Ambedkar is popularly known as **Babasaheb**, meaning "respected father" in Marathi and Hindi.
- ❖ He was an Indian jurist, economist, politician and social reformer.
- ❖ Ambedkar was born into a **poor low Mahar (dalit) caste**, who were treated as untouchables and subjected to socio-economic discrimination.
- ❖ In 1930, Ambedkar launched the **Kalaram Temple movement** to enter Kalaram Temple.
- ❖ **Poona Pact** was an agreement made **in 1932 between Ambedkar and Mahatma Gandhi** on the reservation of electoral seats for the depressed classes.
- ❖ He was the **architect of the Constitution of India** by serving as the Chairman of the Constitution Drafting Committee.
- ❖ He was **independent India's first law and justice minister**.
- ❖ In 1956, he converted to Buddhism initiating mass conversions of Dalits.
- ❖ In **1990**, the **Bharat Ratna** was **posthumously** conferred upon Ambedkar.
- ❖ In honour of Ambedkar, Indian Constitution Day (National Law Day) is celebrated on 26 November.
- ❖ Political parties/groups formed by him:
 - ✓ **Depressed Classes Federation (DCF)** in 1930
 - ✓ **Independent Labour Party (ILP)** in 1936
 - ✓ **Scheduled Castes Federation (SCF)** in 1942

- ❖ Key Literary works:
 - ✓ Annihilation of Caste
 - ✓ Ranade, Gandhi and Jinnah
 - ✓ **Castes in India: Their Mechanism, Genesis and Development**
 - ✓ The Buddha and His Dhamma
 - ✓ **Waiting for a Visa**

14.6. TELUGU ACTOR AND COMEDIAN ALLU RAMESH PASSES AWAY

- ❖ **Telugu actor and comedian Allu Ramesh** passed away.
 - ✓ He suffered cardiac arrest in his hometown, Visakhapatnam.
- ❖ He **made his debut in Tollywood with Tarun's Chirujallu** and starred in almost 50 films.
- ❖ Allu Ramesh acted in movies like Napoleon, Tholubommatala, Madhura Wines, and Ravana Desam.

14.7. J C BOSE

- A group of Israeli researchers have been able to pick up **distress noises made by plants**.
- The plants made very distinct, **high-pitched sounds in the ultrasonic range** when faced with some kind of stress. This was the first time that plants had been caught making any kind of noise.
- This development is seen as a **logical extension of the work of Indian scientist Jagadish Chandra Bose**, who demonstrated that plants could experience sensations and feel pleasure and pain

About Jagadish Chandra Bose

- He was born on 30th November 1858 to Bama Sundari Bose and Bhagawan Chandra, Bengal.
- He was a **physicist-turned-biologist** who had shown, more than a century ago, that **plants experienced sensations and were able to feel pleasure and pain** just like animals.
- He invented the **crescograph**, a device for measuring the growth of plants.
- He is also credited as **one of the first contributors to solid state physics**.
- He had **anticipated the p-type and n-type semiconductors**.
- Bose is **widely believed to be the first one to generate electromagnetic signals in the microwave range**.
- He was the **first one to come up with radio receivers**, which enabled **wireless telegraphy**.
- His books include **Response in the Living and Non-Living** (1902) and **The Nervous Mechanism of Plants** (1926).

14.8. FORMER PUNJAB CM PARKASH SINGH BADAL PASSES AWAY

- ❖ Parkash Singh Badal, a **former Chief Minister of Punjab** and leader of the Akali Dal, has passed away at the age of 95 in Mohali.
- ❖ Badal was born in **Abul Khurana**, a village in Punjab near the Rajasthan border, and received his **education at Lahore's Forman Christian College**.
- ❖ He **started his political career as a village sarpanch** and went on to contest assembly elections for the first time in 1957 as a member of the Congress party.
- ❖ He **became the youngest Chief Minister of Punjab** at the age of 43.
- ❖ **CM terms** 1970-1971, 1977-1980, 1997-2002, 2007-2012, 2012-2017.
- ❖ Badal received the **Padma Vibhushan award**, the second-highest civilian honour in the country from the government in 2015.
 - ✓ He had **returned the same in 2020** in protest against the **treatment of protesting farmers by the Central government**.

14.9. SHAHABUDDIN CHUPPU IS BANGLADESH'S 22ND PRESIDENT

- ❖ Mohammed Shahabuddin Chuppu has become the **22nd president of Bangladesh**, taking over from **Abdul Hamid**, in a ceremony attended by **Prime Minister Sheikh Hasina**, politicians, judges, and senior officials.

14.10. VETERAN ACTOR MAMUKKOYA PASSES AWAY

- Popular **Malayalam actor Mamukkoya** passed away. He was 76 years old.
- He made his acting debut in the theatre in 1979.
- In his four-decade-long career, Mamukkoya acted in over 450 Malayalam films.
- He also appeared in a **French film titled Flammens of Paradise**.

15. AWARDS AND HONOURS

15.1. OLIVE CROWN AWARDS

- ❖ The 13th edition of the **Olive Crown Awards** was held in **Mumbai**, India, to commend individuals and corporates that **promoted sustainability or 'green advertising'**.
- ❖ This award is awarded by the **International Advertising Association**.
- ❖ The awards featured 17 categories, including 'Green Agency of the Year' and 'Green Campaign of the Year'.
- ❖ Notable winners included
 - ✓ **P. N. Mohan- 'Green Crusader of the Year award** for his commitment to restoring seven lakes near Chennai.
 - ✓ **Kirloskar Limitless** received the gold award in the 'Corporate Crusader of the Year' category for their work on 'A Minute for Nature'.
- ❖ **Chirag Rural Development Foundation** and **People for Animals Wildlife Rescue and Conservation Centre** were awarded the gold prize in the 'Green NGO of the Year' category.

15.2. INTERNATIONAL PRIZE IN STATISTICS

- ❖ Indian American **Calyampudi Radhakrishna Rao** won the Nobel Prize equivalent in statistics at the age of 102.
- ❖ **International Prize in Statistics was established in 2016** by a group of five major statistical organizations,
 - ✓ American Statistical Association,
 - ✓ Institute of Mathematical Statistics,
 - ✓ International Biometric Society,
 - ✓ International Statistical Institute, and
 - ✓ Royal Statistical Society
- ❖ It is **awarded once in every two years** to an individual or a team.
- ❖ Prize is given for major achievements using statistics to advance science, technology and human welfare.

Contribution of C R Rao

- ❖ In his 1945 paper published in the Bulletin of the Calcutta Mathematical Society, he demonstrated **three fundamental results** that paved the way for the modern field of statistics and provided statistical tools heavily used in science.
 - ✓ The **Cramér-Rao inequality** is the first of the three results of the 1945 paper with applications even in quantum physics, signal processing, spectroscopy, radar systems, multiple-image radiography, risk analysis, and probability theory, among other fields.
 - ✓ The second outcome was the **Rao-Blackwell Theorem**, which offers a method to improve an estimate to an optimal estimate.
- ❖ A new interdisciplinary area called '**information geometry**' was born as a result of the paper's third finding.

15.3. MALCOLM ADISESHIAH AWARD 2023

- ❖ **Utsa Patnaik**, a renowned economist, has been selected for the **Malcolm Adiseshiah Award 2023**.

About Malcolm Adiseshiah Award

- ❖ It is one of the most prestigious national awards in India that recognizes and honours the outstanding contributions of **social scientists to the field of development studies**.
- ❖ It was **instituted in 2000 by the Malcolm and Elizabeth Adiseshiah Trust**.
- ❖ The award is **given annually** to an outstanding social scientist selected from nominations received by a specially constituted national jury.
- ❖ The award includes a **citation and prize money of Rs 2 lakh**.
- ❖ The **Malcolm Adiseshiah award for distinguished contributions** to Development Studies carries a cash award of **Rs. 1 lakh and a citation**.
- ❖ **Malcolm Sathiyathan Adiseshiah (1910 – 1994), was an Indian development economist and educator.**
 - ✓ He was awarded the Padma Bhushan in 1976.

15.4. RAJ SUBRAMANIAM RECEIVES PRAVASI BHARATIYA SAMMAN

- ❖ **Raj Subramaniam**, the CEO of **FedEx**, a renowned global transportation company, and an Indian-American, was recently honored with the distinguished Pravasi Bharatiya Samman award.
- ❖ This award is the **highest civilian recognition bestowed by India** upon individuals of Indian descent and Indian diaspora.

15.5. NATIONAL PANCHAYAT AWARDS

- ❖ The Union Ministry of Panchayati Raj celebrating **National Panchayat Awards Week** from 17th – 21st April 2023 as part of **Azadi Ka Amrit Mahotsav (AKAM) 2.0** in the run-up to the **National Panchayati Raj Day (24th April 2023)**.

About National Panchayat Awards:

- ❖ The award was **given to the best-performing Panchayats by assessing their performance** in the attainment of SDGs.
- ❖ These annual awards were **first instituted in 2011**.
- ❖ The Awardee Panchayats under various categories of National Panchayat Awards–2023 namely,
 - ✓ **Deen Dayal Upadhyay Panchayat Satat Vikas Puraskar(DDUPSVP)** for the performance under individual LSDG themes,
 - ✓ **Nanaji Deshmukh Sarvottam Panchayat Satat Vikas Puraskar(NDSPSVP)** for the aggregate performance under all 9 LSDG themes and green initiative-related Special Categories.
 - ✓ **Gram Urja Swaraj Vishesh Panchayat Puraskar.**
 - ✓ **Carbon Neutral Vishesh Panchayat Puraskar.**
- ❖ During the event Union Minister of Rural Development launched the **GS NIRNAY (National Initiative for Rural India to Navigate, InnovAte and Resolve Panchayat decisions)**, a mobile application.
 - ✓ It will provide **easy access to critical information discussed during a Gram Sabha**; acting as a means of verification of facts where necessary or in case of queries that may arise regarding the resolutions undertaken during the **Gram Sabha**.

15.6. WING COMMANDER DEEPIKA MISRA IS FIRST IAF WOMAN OFFICER TO RECEIVE GALLANTRY AWARD

- ❖ Wing Commander Deepika Misra has made history as the **first female Air Force officer to receive a gallantry medal**.
- ❖ She was **awarded the Vayu Seva Medal for gallantry** by the President of India on Independence Day in the previous year, and recently received the award from the Air Chief Marshal of the Indian Air Force at an investiture ceremony in New Delhi.
- ❖ She was awarded for exhibiting exemplary courage while carrying out **Humanitarian Assistance and Disaster Relief operations** following **flash floods in northern Madhya Pradesh**.

16. SPORTS

16.1. MAX VERSTAPPEN WINS AUSTRALIAN GP

- ❖ Red Bull's **Max Verstappen** has claimed his first Australian Grand Prix 2023.
- ❖ Seven-time world champion **Lewis Hamilton**, who drove superbly in his Mercedes, finished second, while Aston Martin's **Fernando Alonso** filled third spot on the podium.

16.2. DANIIL MEDVEDEV WINS MIAMI OPENS TITLE

- ❖ Russian tennis star Daniil Medvedev claimed his fourth title of the year by defeating Jannik Sinner in a closely-contested final match in Miami Opens 2023.

16.3. SANJITA CHANU FACES 4-YEAR BAN BY NADA

- ❖ **Sanjita Chanu**, a **weightlifter from India** who has won the **Commonwealth Games twice**, has been banned for four years by the National Anti-Doping Agency (NADA) of India after she tested positive for banned drugs.
- ❖ The testing took place during the National Games held in Gujarat in September-October 2022, and the results showed the presence of **drostanolone**, an anabolic-androgenic steroid prohibited by the World Anti-Doping Agency (WADA).

16.4. KNOW YOUR MEDICINE

- ❖ **National Anti-Doping Agency (NADA)** has developed the **Know Your Medicine web and mobile application** with an aim to create a clean sporting environment in India.
- ❖ Paving the path for clean sport, the application will enable the sports ecosystem to:
 - ✓ Check if any prohibited substance is present in medicines.
 - ✓ Make informed choices about use of medicines.
- ❖ Available in **Hindi and English**, the users can search by image and text options and search by medicines and ingredient options.

About NADA

- ❖ The **National Anti-Doping Agency** was set up as a registered society under the Societies Registration Act of 1860 on 24th November, 2005 with a mandate for Dope free sports in India.
- ❖ It is under the purview of **Ministry of Youth Affairs and Sports**.
- ❖ The primary objectives are to implement anti-doping rules as per WADA (World Anti-Doping Agency) code, regulate dope control programme, to promote education and research and creating awareness about doping and its ill effects.

16.5. KAGISO RABADA BECOMES THE FASTEST PLAYER TO TAKE 100 WICKETS IN IPL

- Recently Kagiso Rabada achieved a significant milestone by taking his **100th wicket** in the **Indian Premier League (IPL)**.
- He **became the fastest bowler** to reach this milestone in terms of matches played, completing it in his **64th IPL match**.
- He is a right arm fast bowler from **South Africa**.

17. SOCIAL ISSUES, HEALTH, EDUCATION

17.1. FIRST FLNAT HELD

- ❖ The Foundational Literacy and Numeracy Assessment Test (FLNAT) under **Nav Bharat Saaksharta Karyakram (New India Literacy Programme, NILP)** was held **across 10 States and UTs** to assess the basic Reading, Writing and Numeracy skills of the neo-literates.
 - ✓ A **neo-literate** is an adult or an adolescent who did not or could not make use of the available educational opportunities on time, and who at a later stage acquired the skills of literacy through formal or non-formal approaches.
- ❖ **Non-literates of 15 years and above age group participated** in the event so that they can be declared as literates on qualifying.

About NILP

- ❖ It is a **Centrally Sponsored Scheme** approved for implementation during FYs 2022-27.
- ❖ The scheme is in alignment with the recommendations of **National Education Policy (NEP) 2020**.
- ❖ The scheme **targets all non-literates of age 15 years and above** in the country, with more focus on females and educationally backward states.
- ❖ It has **five components**: FLN; Critical Life Skills; Basic Education; Vocational Skills and Continuing Education.
- ❖ The scheme is to be implemented through volunteer teachers and students of schools and Higher Education Institutions and Teacher Education Institution.
- ❖ Target for FYs 2022-27 is **5 crore learners** (1 crore per year) by using **“Online Teaching, Learning and Assessment System (OTLAS)”** in collaboration with National Informatics Centre, NCERT and NIOS.

17.2. TYPE 1 DIABETES

- ❖ The **National Commission for Protection of Child Rights (NCPCR)** has written to all States and Union Territories, suggesting that children with **Type 1 diabetes (T1D)** are provided with proper care and required facilities.

About T1D-

- ❖ T1D is a **chronic condition** in which the **pancreas produces little or no insulin**, which is a hormone needed to regulate blood sugar levels. This type of diabetes **usually occurs in children and young adults**, although it can occur at any age.
- ❖ According to data from the International Diabetes Federation Atlas 2021, **India** has the **world’s highest number of children and adolescents living with Type I Diabetes Mellitus (T1DM)**, at over 2.4 lakh, in the southeast Asia region.
- ❖ It is an **autoimmune disorder**, which means that the **body's immune system mistakenly attacks and destroys the insulin-producing cells in the pancreas**. The exact cause of this condition is not known, but genetic and environmental factors are thought to play a role.
- ❖ **Type 1 diabetes typically require insulin injections** or an insulin pump to manage the blood sugar levels.
- ❖ Complications of type 1 diabetes in children can include **hypoglycemia (low blood sugar), hyperglycemia (high blood sugar), ketoacidosis** (a potentially life-threatening condition that occurs when the body breaks down fat for energy instead of glucose), and long-term complications such as eye, kidney, nerve, and cardiovascular damage.

Other Types of Diabetes

- ❖ **Type 2 Diabetes:**
 - ✓ It affects the way the body uses insulin. While the body still makes insulin, unlike in type I, the cells in the body do not respond to it as effectively as they once did.
 - ✓ Type 2 diabetes can occur at any age, even during childhood. However, this type of diabetes occurs most often in middle-aged and older people.
 - ✓ This is the most common type of diabetes and it has strong links with obesity.
- ❖ **Gestational Diabetes:**

- ✓ This type occurs in women during pregnancy when the body sometimes becomes less sensitive to insulin.

Gestational diabetes does not occur in all women and usually resolves after giving birth.

17.3. KALA AZAR

- ❖ Recent work by the Indian Association for the Cultivation of Science (IACS) has shown the potential of the quinoline derivatives to treat drug-resistant leishmaniasis or kala-azar (black fever).
- ❖ The **quinoline derivative** is a potent inhibitor of enzyme topoisomerase 1, which is essential for maintenance of DNA architecture in the parasites.
- ❖ Current annual estimates of kala-azar are about 1,00,000, with more than 95% of cases reported to WHO from India and other tropical countries.

About Kala azar

- ❖ **Kala azar or leishmaniasis** is one of the most dangerous neglected tropical diseases (NTDs) which is endemic in 76 countries, with **approximately 200 million people** at risk of infection.
- ❖ According to World Health Organization (WHO), **Leishmania parasites** are transmitted through the bites of infected **female phlebotomine sandflies**, which feed on blood to produce eggs.
- ❖ Some **70 animal species, including humans**, have been found as **natural reservoir hosts of Leishmania parasites**.
- ❖ There are 3 main forms of leishmaniasis – **visceral** (also known as kala-azar, which is and the most serious form of the disease), **cutaneous** (the most common where skin is affected), and **muco-cutaneous**.
- ❖ In India, the four States endemic for kala-azar are: Bihar, Jharkhand, West Bengal, and Uttar Pradesh.

17.4. HIKIKOMORI

- ❖ Hikikomori is a widespread issue in **Japan**, with an estimated 1.5 million working-age people living in isolation.
- ❖ The term hikikomori was coined in Japan in the 1990s to describe **young adults who had withdrawn from society and remained isolated** in their homes for extended durations.
- ❖ Hikikomori is **not a clinical diagnosis** but rather a **social issue** that affects individuals who choose to isolate themselves from society due to **various reasons**, including social anxiety, depression, academic pressure, and bullying.

17.5. GHANA APPROVES MALARIA VACCINE

- ❖ Ghana **became the first country to approve a new malaria vaccine - R21/Matrix-M vaccine** - developed at Oxford University.
- ❖ It is being **manufactured by Serum Institute of India**.
- ❖ It has exceeded the WHO target of 75% efficacy.
- ❖ However, WHO is yet to recommend the R21 vaccine for widespread use.
- ❖ WHO has earlier approved RTS,S malaria vaccine in 2021.
 - It acts against Plasmodium falciparum.
- ❖ There are **5 Plasmodium parasite species that cause malaria** in humans and 2 of these species – **P. falciparum and P. vivax** – pose the greatest threat.
- ❖ Malaria kills **more than 600,000 people each year**, most of them children in Africa.

17.6. NDMA

- ❖ Gujarat High Court recently issued a notice to the Drug Controller General of India (DCGI), under the Union Health Ministry, and the Gujarat Food and Drugs Control Administration (FDCA), in a public interest litigation

(PIL) seeking immediate removal of drugs and medicines containing “cancerous impurities” such as **NDMA** from the Indian market.

About N-nitrosodimethylamine (NDMA):

- ❖ It is a **volatile organic chemical** that occurs **widely in the environment** due to its ready formation from commonly found precursors.
- ❖ It is **classified as a probable human carcinogen** (a substance that could cause cancer) on the basis of animal studies.
- ❖ It is a **yellow, odourless liquid chemical** once used to make rocket fuel.
- ❖ It is also a **byproduct of several manufacturing processes and water chlorination**.
- ❖ **NDMA breaks down when sunlight hits it.**
- ❖ **Exposure:**
 - ✓ **Normally**, people are exposed to **small amounts of NDMA in the environment** and through food and water.
 - ✓ Chemicals found in food and water, such as **nitrosamines or alkylamines, can turn into NDMA in the stomach.**
 - ✓ NDMA is also created **when food or drink is processed**. Foods such as cured meats (particularly bacon), beer, fish, cheese and even vegetables may contain NDMA.
 - ✓ Some people may have had exposure to NDMA through the use of **contaminated medications**.
- ❖ **Risk associated-**
 - ✓ Exposure to small amounts isn't a problem. The **liver breaks down NDMA**, which leaves the body through exhaled air or urine. This process occurs **within 24 hours of ingesting** the chemical.
 - ✓ But higher exposures over time may increase cancer risk, and sudden exposure to large quantities can be toxic.

17.7. WORLD MALARIA DAY

- ❖ World Malaria Day is observed every year on **25th April**.
 - ✓ World Malaria Day was **first held in 2008**. It was developed **from Africa Malaria Day**.
- ❖ **Theme** for World Malaria Day 2023 is "**Time to deliver zero malaria: invest, innovate, implement**".
- ❖ **WHO officially endorses disease-specific global awareness days for only four diseases** namely, **HIV-AIDS, Tuberculosis, Malaria and Hepatitis**.

About Malaria

- ❖ Malaria is caused by **parasites (Plasmodium vivax, Plasmodium falciparum, Plasmodium malariae and Plasmodium ovale)** that are transmitted through the **bite of infected female Anopheles mosquitoes**.
- ❖ In the human body, **parasites initially multiply in liver cells** and then **attack the Red Blood Cells**.
- ❖ There are 5 Plasmodium parasite species that cause malaria in humans and 2 of these species – **P. falciparum and P. vivax** – **pose the greatest threat**.
- ❖ It is predominantly found in the **tropical and subtropical areas of Africa, South America and Asia**.
- ❖ It is **preventable and curable**.
- ❖ **Symptoms**-high fever, chills, headache and other flu-like symptoms.
- ❖ Infants, children under 5 years, pregnant women, travelers and people with HIV or AIDS are at **higher risk of severe infection**.

Malaria in India

- ❖ In 2021, India accounted for **79% of all malaria cases in Southeast Asia**, according to the World Malaria Report 2022, released by the WHO.
- ❖ India also accounted for about **83% of all malaria deaths in the region**.

Initiatives to counter Malaria

- ❖ **WHO's Initiatives:**

- ✓ The WHO has also identified **25 countries** with the potential to **eradicate malaria by 2025** under its **'E-2025 Initiative'**.
- ✓ The WHO's Global technical strategy for malaria 2016–2030 aims to reduce **malaria case incidence and mortality rates** by at least **40% by 2020**, at least **75% by 2025** and at least **90% by 2030** against a **2015 baseline**.
- ✓ WHO has initiated the **High Burden to High Impact (HBHI) initiative** in **11 high malaria burden countries**, including **India** (in West Bengal, Jharkhand, Chhattisgarh and Madhya Pradesh).

❖ India's Initiatives:

- ✓ National Framework for Malaria Elimination (2016-2030) aims at India being malaria-free by 2027 and to **eliminate the disease by 2030**.
- ✓ **Malaria Elimination Research Alliance-India (MERA-India)**- established by the **Indian Council of Medical Research (ICMR)** It is a conglomeration of partners working on malaria control.
- ✓ **Distribution of Long Lasting Insecticidal Nets (LLINs) to high burden areas**

Related info

R21 vaccine

- ❖ R21, otherwise referred to as **Matrix-M malaria vaccine**, is the **second vaccine ever developed** for a disease.
- ❖ **Ghana** and **Nigeria** have recently granted approval.
- ❖ Developed by the **University of Oxford** and manufactured by the **Serum Institute of India**.
- ❖ Has **not been approved by WHO yet**.
- ❖ The **first-ever malaria vaccine, RTS, S or mosquirix** was **approved by the WHO in 2021**.

17.8. SHINGLES DISEASE

- ❖ Recently, **GlaxoSmithKline Pharmaceuticals (GSK India)** announced the much-awaited launch of its globally top-selling shingles vaccine **Shingrix** in India.

About Shingles disease:

- ❖ It is caused by the **varicella-zoster virus** the same virus that causes chickenpox.
- ❖ It can **occur anywhere in the human body**.
- ❖ It typically looks **like a single stripe of blisters** that wraps around the **left side or the right side of the torso**.
- ❖ **Non contagious** disease.
- ❖ The risk of **shingles increases with older age** and it is most common in people over age 50.
- ❖ **Symptoms:** Pain, burning, tingling sensitivity to touch etc.
- ❖ A vaccine called **Shingrix** is available which helps in **preventing shingles** and its complications.

17.9. GUAIFENESIN: WHO ISSUES ALERT

- ❖ The World Health Organization reported that a batch of contaminated **India-made cough syrup** has been found in the **Marshall Islands** and **Micronesia**.

About

- ❖ **Guaifenesin** is an expectorant used to relieve **chest congestion** and **symptoms of cough**.
- ❖ Samples of the Guaifenesin Syrup TG Syrup from the Marshall Islands were analysed and it was found that **the product contained unacceptable amounts of diethylene glycol** and **ethylene glycol** as contaminants.
 - ✓ Diethylene glycol and ethylene glycol **are toxic to humans when consumed**, and can prove fatal.
- ❖ The latest alert comes months after the **WHO linked other cough syrups made in India** to child deaths in **Gambia** and **Uzbekistan**.

Regulation of Drugs in India

- ❖ **Drugs and Cosmetics Act, 1940:** The Act regulates the import, manufacture, and distribution of drugs in India.

- ❖ The Drugs and Cosmetics Act, 1940 was **amended by the Drugs & Cosmetics (Amendment) Act, 2008** to provide for more stringent penalties for manufacture and trade of spurious and adulterated drugs.
- ❖ **Central Drugs Standard Control Organization (CDSCO)** is a **regulatory body** for Indian pharmaceuticals and medical devices.
 - ✓ It comes under the purview of **Ministry of Health and Family Welfare**.
 - ✓ It is headed by **Drugs Controller General of India (DCGI)**.
 - ✓ It is responsible for approval of licences of specified categories of drugs such as blood and blood products, IV fluids, vaccines, and sera in India.
 - ✓ DCGI also sets standards for manufacturing, sales, import, and distribution of drugs in India.

17.10. THE BIG CATCH-UP

- ❖ A consortium of organizations such as the **World Health Organization, UNICEF, Gavi the Vaccine Alliance, Immunization Agenda 2030** and **Bill & Melinda Gates Foundation** are implementing the **“The Big Catch-up”**.
- ❖ It is a **targeted global effort to boost vaccination among children** aiming to **reverse the declines in childhood vaccinations** driven by **COVID-19 pandemic**.
- ❖ It will have a **particular focus on 20 countries including India** where three quarters of the children who missed vaccinations in 2021 live.
- ❖ It will **strengthen healthcare workforces, improve health service delivery, build demand for vaccines** and **address obstacles to restoring immunization**.

17.11. IIT MADRAS- FIRST INTERNATIONAL CAMPUS IN TANZANIA

- ❖ **IIT Madras** is set to establish the **first Indian Institute of Technology in Africa in Tanzania**, with classes scheduled to begin in October.
- ❖ The new campus will be located in **Zanzibar**, and marks **IIT Madras’ first international campus**.

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18. MISCELLANEOUS

18.1. KOLKATA METRO RUNS UNDER RIVER

- ❖ **Kolkata Metro** has become the **first metro rail in India to complete an under-river journey**.
- ❖ The Kolkata Metro is will cover the 520-meter distance under the **Hooghly river** in just 45 seconds.
- ❖ Once operational, **Howrah** will become the **deepest metro station in the country**, situated 33 meters below the surface.

18.2. ZEMITHANG

- ❖ RECENTLY, a major Buddhist Conference was hosted in **Zemithang, Arunachal Pradesh**.
- ❖ Zemithang was **first stop** of the **14th Dalai Lama** during his flight from **China-occupied Tibet** in 1959.
- ❖ Zemithang or Zimithang, in the **Pangchen Valley**, is a village and the **last circle headquarters bordering Bhutan and Tibet**.
- ❖ Zemithang means **“sand valley”** and the people of the area are referred to as **Pangchenpa**, meaning **“people who gave up sin”**.
- ❖ It is on the **Nyamjang Chu** riverbank.

18.3. PRAYAG PLATFORM

- ❖ PRAYAG stands for **Platform for Real-time Analysis of Yamuna, Ganga and their Tributaries**
- ❖ Prayag is a **real time monitoring centre for planning and monitoring of projects, river water quality, etc.** through various online dashboards such as Ganga Tarang Portal, Ganga Districts Performance Monitoring System, etc.
- ❖ It was launched by **Ministry of Jal Shakti**, under the ambit of **Namami Gange Programme**.

18.4. INDIA HANDMADE PORTAL

- ❖ **Ministry of Textiles** developed the **E-Commerce portal for handicrafts and handloom sector**.
- ❖ **India handmade portal** offers a wide range of products, including clothing, home decor, jewellery, accessories, and more.
- ❖ Portal will provide an opportunity to **total 62 Lakh weavers and artisans become future e-entrepreneurs**.
- ❖ It'll provide products from more than 35 Lakh Handloom weavers & 27 Lakh Handicraft artisans directly to consumers while eliminating middlemen.

18.5. INDIA'S FIRST WATER METRO

- ❖ PM recently inaugurated the first phase of **Kochi Water Metro in Kerala – first-ever metro system of its kind**.
- ❖ It's a **public boat service integrated with the metro rail network**.
- ❖ The project is being implemented by **Kochi Metro Rail Corporation** with the financial assistance provided by a **German funding agency**.
- ❖ Objective- to **link ten island communities in Kerala's city with the mainland**
- ❖ Kochi Water Metro is a modern ferry transport project consisting of numerous boats running along 16 routes across Greater Kochi.
- ❖ The **boats in the Kochi Water Metro are powered by batteries** and **require only 10 to 20 minutes to traverse** each route.

19. HIMACHAL NEWS

19.1. KANGRA TEA GETS EUROPEAN GI TAG

- ❖ The European Union (EU) has granted the Geographical Indicator (GI) tag to Kangra tea. This will help the tea growers of Kangra export their produce to Europe.
 - ✓ The Kangra tea had got the Indian GI tag in 2005.
- ❖ According to experts, the production of Kangra tea has fallen to just 8 lakh kg per annum against 17 lakh kg per annum, the highest production recorded in 1998.
- ❖ The said production is just .01 per cent of the total 90 million kg tea produced in the country.
- ❖ The low yield and lack of initiative among local tea farmers are primary responsible for less production of Kangra tea, according to experts.
- ❖ At present, the average yield of tea in Kangra is 230 kg per hectare.
 - ✓ However, the average yield of tea is 1,800 kg per hectare at the country level.
- ❖ Despite low yield, farmers are carrying out tea plantation in Kangra as the government does not allow the land under tea for any other use.

19.2. HEALTH SERVICES FOR SENIOR CITIZENS ON DOORSTEP IN MANDI

- ❖ The Mandi district administration was taking a special initiative to provide health facilities to senior citizens and especially abled persons living in remote areas of the district on their doorstep.
- ❖ The initiative named **Sahara** will be launched by the district administration through Red Cross, Mandi.
- ❖ Under this initiative, a **camp will be organised every month in remote areas of the district**. In the camp, an ENT, an eye and other specialist doctors, besides a gynaecologist, will check the health of senior citizens.
- ❖ At the same time, the specially abled persons will also be examined so that they can be provided assistive devices by the administration.
- ❖ According to the 2011 census, the number of senior citizens in the district is more than 9 lakh.

19.3. 41% RAIN DEFICIT RECORDED IN MARCH IN HIMACHAL

- ❖ Even as the state has been witnessing steady rainfall since around March 20, the last month ended with 41 per cent rain deficit.
- ❖ As against the normal rainfall of 113.4 mm, the state received 66.8 mm rainfall from March 1 to March 31.
- ❖ While Sirmaur, Bilaspur and Solan received excess rainfall, Kangra, Hamirpur, Mandi, Una and Shimla recorded normal rainfall. However, Chamba, Kullu, Lahaul Spiti and Kinnaur recorded less rain than normal.
- ❖ The current precipitation, has, however, dragged down the maximum temperature even as minimum temperatures are normal. The average maximum temperature has slipped 6.9 degree below normal, with Una, Sundernagar, Chamba, Solan and Mandi recording a deviation of around 10 degree Celsius.

19.4. ANCIENT IDOL FOUND

- ❖ An ancient idol was found in **Bhalthi Narayan temple** in the Lug valley region during excavation in Kullu district.
- ❖ **Kahika festival** is to be organised in the temple this year after 30 years.
- ❖ The work of constructing the retaining wall and renovating the temple premises was underway when the idol was found.
- ❖ It is said that such an idol is also present in the religious town of Manikaran, which dates back to the 16th century.
- ❖ This idol is believed to be of the **deity Bhalthi Narayan** from the 16th century.
- ❖ There are hundreds of temples of Gods and Goddesses in Kullu and sculptures and artefacts are found during excavation around these temples.

- ❖ Some temples here are believed to have been constructed by the Pandavas during the period of their exile.
- ❖ About two months ago, an ancient idol was found from the temple premises of the deity Jwani Mahadev in Neuli in Kharal valley, adjacent Kullu town.

19.5. PARAGLIDING CHAMPIONSHIP

- ❖ The Pre-International Paragliding Accuracy World Cup Championship was inaugurated in **Palampur**.
- ❖ A total of 103 pilots representing more than one dozen countries took off from Billing in the championship that will conclude on April 9.
- ❖ The **Bir Billing Paragliding Association (BPA)** is the organiser of the event, while the HP State Tourism Department is the title sponsor.
- ❖ In the five-day championship top ranking pilots from **India, the USA, Nepal, Spain and the Netherlands** are participating.
- ❖ Ten pilots from Indian Army, one each from Navy and Air Force and five from the paramilitary are also participating.

19.6. KASAULI ROPEWAY PROJECT STUCK

- ❖ The Rs 206-crore ropeway project aimed at connecting **Jabli** on the **Kalka-Shimla national highway (NH) with Kasauli** is stuck at the tendering stage.
- ❖ The Ropeways and Rapid Transport System Development Corporation (RTDC) is executing the project.
- ❖ The **3.88-km ropeway**, which will reduce the journey time from an hour to about 20 minutes, will be an eco-friendly transportation mode. It will have the twin advantages of easing traffic snarls as well as saving fuel to promote cleaner environment.
- ❖ The lower terminal point of the project will be situated at Mohal Bhat ka Gaon (Jabli) on the Parwanoo-Dharampur section of the NH-5. The upper terminal point has been identified near the Public Works Department Circuit House in Kasauli.
- ❖ Tourists were eagerly awaiting the setting up of the ropeway, which is slated to emerge as a major tourist attraction.

19.7. KARSOG FARMER GETS PADMA SHRI

- ❖ President Droupadi Murmu had awarded **Padma Shri** to **Nek Ram Sharma**, a farmer of **Nanj village in Karsog subdivision of Mandi district**, in Delhi.
- ❖ He has been conferred the award for reviving the **traditional crop system of nine foodgrains**.
- ❖ Sharma started an Angora farm in 1990, which continued till 1995.
- ❖ He then switched to organic farming to revive the traditional crop system of nine foodgrains.
- ❖ By 2000, he made good progress and developed **finger millet, foxtail millet, barn yard, proso millet, kodo millet, buck beat, sorghum and pearl millet**.
 - ✓ These traditional foodgrains were on the verge of extinction.
- ❖ These nine foodgrains are known as **Nau Anaj**, which is a **natural inter-cropping method** in which these are grown on the same piece of land without using any chemical, cutting down water usage by 50 per cent and raising land fertility.

19.8. COMMITTEE ON LEGALITY OF CANNABIS USE

- ❖ Himachal Pradesh assembly constituted a committee of legislators to legalise cultivation of cannabis for its medicinal properties.
- ❖ The committee will be headed by **Revenue Minister Jagat Singh Negi**.
- ❖ Under NDPS (Narcotic-Drugs and Psychotropic Substances) Act, **state** has been given the **right to cultivate cannabis and transport of cannabis**.

- ❖ Central government has given legal status to cultivation of cannabis **in some districts of Rajasthan, Madhya Pradesh and Uttar Pradesh.**
- ❖ Apart from this, cannabis is also being cultivated **in Uttarakhand for industrial use.**
- ❖ **Primary psychoactive constituent** in cannabis is **Delta9 tetrahydrocannabinol (THC).**

19.9. MUKHYAMANTRI VIDYARTHI PROTSAHAN YOJANA

- ❖ The state government is launching the Mukhyamantri Vidyarthi Protsahan Yojana from the current financial year to **provide educational loans at one per cent interest rate** to underprivileged students to help them pursue higher studies and professional courses.
- ❖ The scheme covers a wide range of professional courses such as engineering, medical, management, Ph.D, courses in ITIs, polytechnics, B. Pharma, Nursing, General Nursing and Midwifery (GNM).
- ❖ The government has **proposed Rs 200 crore for the scheme** under which **students having family income less than Rs 3 lakh per annum** can avail loans from partner financial institutions and banks

19.10. ANANDPUR SAHIB-NAINA DEVI ROPEWAY

- ❖ Keen to give a fillip to tourism, the state government has stepped up efforts for setting up the Anandpur Sahib-Naina Devi ropeway which has been hanging fire for over a decade.
- ❖ The process for appointing a technical consultant has now been entrusted to Himachal Pradesh Infrastructure Development Board (HPIDB).
- ❖ Initially, the ropeway having a span of 2.5 km was supposed to have three terminal points - Rampur (lower), Toada (intermediate) and Naina Devi (upper). Later the span of the ropeway was increased to 3850 mts.
- ❖ The project is expected to reduce the traffic congestion on the land route connecting the two pilgrim centres.
- ❖ Thousands of people from Punjab and Haryana make a beeline to the hill top temple to pay their obeisance.
- ❖ The cost of the project initially pegged at Rs 85 crore has now shot up to over Rs 100 crore

19.11. SANJEEVANI PROJECT

- ❖ Himachal Pradesh's economy is **largely banking on agriculture and animal husbandry.** With a livestock population of about 4.41 million, their care is an essential part of every rural household.
- ❖ The state government has initiated a project named **Sanjeevani** in this regard.
- ❖ The project aims to enhance the lives of farmers by **providing them with convenient and high-quality livestock care services at their doorstep**, utilizing telemedicine and technology.
- ❖ This will aid in reducing the turnaround time for services and potentially prevent outbreaks.
- ❖ The **Animal Husbandry Department of Himachal Pradesh** has collaborated with **Bharat Financial Inclusion Ltd. (BFIL), a subsidiary of IndusInd Bank**, for the National Animal Disease Control Programme-Mobile Veterinary Van (NADCP-AHD-MVU) project.
- ❖ The collaboration aims to provide doorstep livestock care through a toll-free telephone number that will be operational soon.
- ❖ The project intends to ensure the timely delivery of quality treatment to livestock, saving farmers the additional expenses of traveling for availing veterinary services like artificial insemination, medicines, vaccination, surgery, and infertility testing.

19.12. CM CELEBRATES HIMACHAL DAY FUNCTION AT LAHAUL SPITI'S KAZA

- ❖ Chief Minister unfurled the flag on the occasion of state-level Himachal Day function at Kaza in the tribal district of Lahaul Spiti.
- ❖ It is for the first time that the state level function is being held at Kaza.

- ❖ On the occasion he announced three per cent DA for 2.15 lakh employees and 90,000 retiree's employee which will put a burden of Rs 500 crore on the exchequer.

History

- ❖ Himachal Pradesh was organised as a province on April 15, 1948 by merging several princely states.
- ❖ On December 18, 1970, the **State of Himachal Pradesh Act was passed by Parliament** and the **new state came into being on January 25, 1971**.
 - ✓ Since then, **January 25** is being celebrated as **Statehood Day** in Himachal Pradesh each year.

19.13. 4G SERVICES IN SPITI VALLEY

- ❖ Himachal Pradesh CM recently said that 4G services would be extended to the **Spiti Valley**.

About Spiti Valley

- ❖ It is a **cold desert mountain valley** located in the northeastern part of Himachal Pradesh.
- ❖ It is located in the rain shadow region of the Greater Himalayan ranges.
- ❖ The name **Spiti or Piti** means '**The middle land**' that is the land between India and Tibet.
- ❖ The valley is bounded by the districts of Kinnaur in the southeast, Kullu in the south, and the valleys of Zaskar & Ladakh in the north.
 - ✓ In the east, Spiti shares its boundary with Tibet.
- ❖ Natives communicate in Stod Bhoti, a subgroup of the Tibetan languages.
- ❖ The famous **Tabo Monastery** (a favourite of the Dalai Lama) is located in Spiti Valley.

19.14. HP FIRST TO HAVE DNA DATABASE OF UNIDENTIFIED BODIES

- ❖ **Himachal Pradesh has become the "first state" to create a DNA database of unidentified bodies**, as per, Assistant Director (DNA), Directorate of Forensics Services, Junga.
- ❖ The process was started in April last year and so far the records of 150 DNA samples of unidentified bodies had been stored in the database.
- ❖ The database would help in the identification of bodies, giving a big relief to families searching for their loved ones.

19.15. ACTING CJ OF HIGH COURT

- ❖ Justice **Tarlok Singh Chauhan**, the senior-most judge of the Himachal Pradesh High Court, has been appointed **Acting Chief Justice** with effect from April 20, consequent upon the retirement of Justice Sabina.
- ❖ Justice Chauhan was born at Rohru in Shimla district on January 9, 1964.
- ❖ He did his schooling from Bishop Cotton School, Shimla, and graduated from DAV College, Chandigarh.
- ❖ He obtained a degree in law from Panjab University, Chandigarh.
- ❖ He enrolled as an advocate with the Bar Council of Himachal Pradesh in 1989.

19.16. MOUNTAINEER RESCUED FROM NEPAL PEAK

- ❖ Solan-based mountaineer **Baljeet Kaur** (27) was found on **Mt Annapurna** in Nepal today, a day after she reportedly went missing near Camp IV while descending from the peak.
 - **Annapurna** is the **tenth-highest mountain in the world**, standing at 8,091 metres above sea level.
- ❖ Baljeet successfully scaled Mt Everest (8,848.46 m) with her guide Mingma Sherpa in May 2022. This was her third feat in the last spring season. The duo scaled Mt Annapurna (8,091 m) on April 28 and Mt Kanchenjunga (8,586 m) on May 12.
- ❖ A resident of the non-descript **Panjrol village in Solan**, **Baljeet** has become the **first Indian woman mountaineer to successfully scale 7,161-m Pumori peak in Nepal**.
 - She was part of a 12-member delegation that achieved that feat under the Government of India-sponsored "Mt Everest Masiff Expedition-2021".

19.17. UHL–III HYDRO POWER PROJECT

- ❖ Himachal Pradesh CM recently directed officials to make the 100 MW UhlIII hydropower project functional by May next year.

About Uhl–III hydropower project

- ❖ It is located at the **Rana Neri Khad River** in the **Mandi district** of Himachal Pradesh.
- ❖ The **Project comprises the diversion of tail water of Uhl Stage-II (Bassi), Neri Khad & Rana Khad.**
- ❖ Installed capacity: 99.99 MW.
- ❖ The power plant is **owned and operated by Beas Valley Power Corporation Limited.**

19.18. PRESIDENT DEDICATES MASHOBRA RASHTRAPATI NIWAS TO PUBLIC

- ❖ President Droupadi Murmu dedicated the **Rashtrapati Niwas at Mashobra**, earlier known as the **Presidential Retreat**, to the general public.
- ❖ People can visit the heritage building of the **Rashtrapati Niwas**, which is 13 km from here, from April 23.
- ❖ Spread over an area of 10,628 sq feet, the **Rashtrapati Niwas has expansive lawns and a tulip garden.**
- ❖ The then medical superintendent of Shimla built the wooden building with **'dhajji' walls in 1850.**
- ❖ The Retreat was **taken on permanent lease from the Raja of Koti in 1895.**
- ❖ **Earl of Elgin** was the **first Viceroy of India** to use this Retreat as the viceregal residence.
- ❖ Thereafter, it was used by all the viceroys, who used to spend the weekend here.
- ❖ **The Retreat at Mashobra and Rashtrapati Nilayam in Hyderabad** are the **two residences of the President of India outside Delhi.**
- ❖ All Presidents have visited the Rashtrapati Niwas at Mashobra in summer.

19.19. SHIMLA BYPASS CONSTRUCTION STARTS

- ❖ The much-awaited work to construct **the Shimla bypass and widening of the Kaithlighat-Shakral** section of National Highway-5 kick-started today from Kaithlighat.
- ❖ The work involves construction of **four tunnels whose total length is 3.7 km.**
- ❖ Besides, 18 big bridges and 53 box culverts would be constructed.
- ❖ An expenditure of Rs 1,850 crore would be incurred.
- ❖ The bypass, when completed, will rid the city of accidents, pollution and traffic jams.
- ❖ Deadline- project is supposed to be completed by **April 20, 2026.**

19.20. BRIDGE OVER PABBAR OPENS

- ❖ PWD Minister recently inaugurated a bridge **over Pabbar river in Rohru.**
- ❖ Built at a cost of Rs 19 crore, thousands of people from half a dozen panchayats adjoining Rohru would be benefited by this bridge.
- ❖ The panchayats would now be connected directly with the main market in Rohru. Earlier, the people of these panchayats had to come to Rohru by traveling an additional distance of 10 to 12 kilometres via Samoli.
- ❖ The **Pabbar River** is a **tributary of the Tons river** and **finally drains into the river Yamuna.**
 - ✓ The river begins from the **Dhauladhar range.**

19.21. SOLAN TOPS IN USE OF RATION CARD BY MIGRANTS

- ❖ Among the migrants who availed the benefits of the **'One Nation, One Ration Card' (ONORC)** in the state in April so far, **a massive 93.9 per cent** are residing in **Solan district.**
- ❖ With the district housing the maximum number of migrants in its industrial belts of Baddi-Barotiwala-Nalagarh (BBN) as well as Parwanoo, the maximum number of migrant users of this scheme are from there.

- ❖ The scheme was introduced in the state in May 2020.

19.22. SHOOLINI UNIVERSITY AWARDED PURSE GRANT

- ❖ Shoolini University has been awarded the **Promotion of University Research and Scientific Excellence (PURSE) Grant** from the **Department of Science and Technology**.
- ❖ The grant, worth Rs 9 crore, will be **used to further research in the fields of cancer and water**.
- ❖ Under the PURSE scheme, the grant is awarded to institutions with an exemplary research record.
- ❖ Shoolini University is **one of only 12 universities and four private universities to have received** the grant, along with **Ashoka, Manipal, and BITS Pilani**.

19.23. SPRING FESTIVAL IN KULLU

- ❖ The **three-day state-level Spring Festival**, locally known as **Pipal Jatra**, is set to begin on April 28 in Kullu.
- ❖ During the event, various cultural programmes will be organised at the Kala Kendra.
- ❖ Kullu Municipal Council president said local artistes would be given preference to perform at the event.
- ❖ The events to be held during the festival will include the Spring Queen beauty pageant among other competitions.

19.24. HARIPUR HERITAGE TOWN FACES UTTER NEGLECT

- ❖ The small heritage town of Haripur in **Kangra district** is in a state of neglect.
- ❖ Situated on the **banks of the Beas river**, the 600-year-old cultural heritage of the '**Guler Riyasat**' needs maintenance and refurbishing to save it from further degradation.
- ❖ The town is best known for the ancient Haripur fort.
- ❖ It is surrounded by the **Banganga rivulet** on three sides.
- ❖ Founded in 1464, it is said to be the **place where the famous Kangra miniature paintings originated**.
- ❖ The town was known as the '**cradle of the Kangra School of Paintings**' before the art form saw a dip at the end of 19th century.

19.25. HIMACHAL TO CUT LEASE PERIOD

- ❖ The Himachal Government has decided to reduce the lease period of government land given to the industry, educational institutions and charitable institutions and for tourism projects **from 99 to 40 years**.
- ❖ The Revenue Department has issued a notification in this regard while inviting objections from any affected person within 30 days, which will be considered before finalising these new rules.
- ❖ The amendment will be made to Rule 7 of the Himachal Pradesh Lease Rules, 2013, by way of the Himachal Pradesh Lease (Amendment) Rules, 2023.
- ❖ The period for leasing out government land will be reduced to 40 years even though this **can be further extended by five, 10, 15 or more years**.
- ❖ However, **no amendment has been proposed for making changes in the lease amount**, which varies depending upon the purpose for which it is being leased out.
- ❖ Huge chunks of government land have been given on lease for hydro-power projects, mining, tourism projects, industries, charitable and religious institutions, and for creating sports infrastructure.



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