

2021 JULY MAGZINE

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Economy

1. PMFME Scheme

Why in News?

The Pradhan Mantri Formalisation of Micro food processing Enterprises (PMFME) Scheme, launched under the Atmanirbhar Bharat Abhiyan, completed its one year on 29th June.

About

- Nodal Ministry → **Ministry of Food Processing Industries** (MoFPI).
- A **centrally sponsored scheme**. (GOI and the States in a ratio of 60:40)
- Implementation: Over a period of **five years from 2020-21 to 2024-25**.
- Features →
- One District One Product (ODOP) Approach →
 - The States would **identify food products for districts** keeping in view the existing clusters and availability of raw material.
 - The ODOP could be a **perishable produce based** or **cereal based** or a **food item widely produced in an area**. E.g. mango, potato, pickle, millet based products, fisheries, poultry, etc.
- Other Focus Areas →
 - **Waste to wealth products, minor forest products** and **Aspirational Districts**.
 - Capacity building and research: Academic and research institutions under MoFPI along with State Level Technical Institutions would be provided **support for training of units, product development, appropriate packaging** and **machinery for micro units**.
- Beneficiaries → It envisions **directly assist the 2,00,000 micro food processing units** for providing financial, technical, and business support for the up-gradation of existing micro food processing enterprises.

2. NATRAX

Why in News?

The Minister of Heavy Industries and Public Enterprises has inaugurated NATRAX- the High Speed Track(HST) in Indore, Madhya Pradesh.

About

- What is it? → It is an **11.3 kms long High-Speed Track (HST) facility**.
- Purpose → The facility is a **one-stop solution for all sorts of high-speed performance tests** for the widest categories of vehicles, from 2 wheelers to heavy tractor-trailers.
- Features →
 - The track has been designed for **neutral speeds up to 250 kmph** and a **maximum speed of up to 375 kmph** on curves. There is no limit to maximum speed on the straight patch.
 - The **zero-percent longitudinal slope** makes this track an open-air test laboratory for precise measurement of the performance of vehicles.
 - Moreover, the track is **open to having vehicles** from overseas being evaluated here as part of the testing process.
- Significance → The track is the **longest in Asia** and **fifth-largest in the world**.

 **High Speed Track (HST)**

- A High-Speed Track (HST) is used for measuring the maximum speed capability of high-end cars like BMW, Mercedes, Audi, Ferrari, Lamborghini, Tesla.
- At present, foreign OEMs go to their respective high-speed track abroad for high-speed test requirements.

3. BharatNet

Why in News?

Cabinet approves revised implementation strategy of BharatNet through Public-Private Partnership Model in 16 States with optical fibre connectivity to all inhabited villages.

About

- BharatNet project originally aimed to provide broadband services at 100 Mbps to around 2.5 lakh gram panchayats of the country.
- Aim → To provide on-demand, affordable broadband connectivity of 2 Mbps to 20 Mbps for all households of India especially in rural areas.
- Implementing Agency → The project is being implemented by Bharat Broadband Network Limited (BBNL) through a Special Purpose Vehicle (SPV).
- Funding → The entire project is being funded by the Universal Service Obligation Fund (USOF), which was set up for improving telecom services in rural and remote areas of the country.
- Importance →
 - It is a highly scalable network infrastructure accessible on a non-discriminatory basis.
 - It is the world's largest rural connectivity scheme to be connected by the Optical Fibre network.
 - States are contributing free Rights of Way for establishing the Optical Fibre Network.
- Support → Central Public Sector in Undertakings (CPSUs) BSNL, RailTel, and PGCIL are providing the optical fibre network for broadband connections for the BharatNet project.

Revised implementation strategy of BharatNet

- BharatNet will now extend up to all inhabited villages beyond Gram Panchayats (GPs), in the said States.
- The revised BharatNet Project will be implemented through Public-Private Partnership (PPP) model with a total cost of ₹29,430 crores. Of this, the Government will provide the viability gap fund of ₹19,041 crores.
 - Viability Gap Fund means a grant to support projects that are economically justified but not financially viable.

4. AIM-iLEAP Program

Why in News?

AIM-iLEAP, the first fintech cohort of the Atal Innovation Mission (AIM) concluded.

About

- This is a program under the Atal Innovation Mission to provide AIM-backed start-ups with the much-needed access to industry, markets and investors.
- The fintech cohort was done through a series of thematic virtual demo days organised by AIM in partnership with Startup Réseau and Visa as part of AIM-iLEAP (Innovative leadership for entrepreneurial agility and profitability) initiative.
- The objective of the initiative is to invite technology start-ups across a broad range of functions and have them present their solutions to the corporate leadership and innovation team for enabling market access and industry partnerships.

- On the other hand, individual and institutional investors participating in this program shall **consider investing** in the **curated set of AIM supported start-ups**.

Atal innovation mission (AIM)

- Set up by → **NITI Aayog** in **2016**.
- To promote a **culture of innovation and entrepreneurship** by creating institutions and programs that enhance innovation in schools, colleges, and entrepreneurs in general.

5. Revamped Distribution Sector Scheme

Why in News?

The scheme was recently approved by the Union Cabinet.

About

- It is a **reforms-based** and **results-linked scheme**.
- It seeks to **improve the operational efficiencies** and **financial sustainability** of all DISCOMs/Power Departments excluding Private Sector DISCOMs.
- The scheme envisages the provision of **conditional financial assistance** to DISCOMs for strengthening supply infrastructure.
- The **assistance will be based on meeting pre-qualifying criteria** as well as upon the achievement of basic minimum benchmarks by the DISCOM.
- The scheme involves **a compulsory smart metering ecosystem** across the distribution sector—starting from electricity feeders to the consumer level, including in about 250 million households.
- Scheme also focuses on **funding for feeder segregation** for unsegregated feeders.
- The Scheme has a **major focus on improving electricity supply for the farmers and for providing daytime electricity** to them through solarization of agricultural feeders.
- Implementation → It would be based on the **action plan worked out for each state** rather than a ‘one-size-fits-all’ approach.
- Nodal Agencies → **Rural Electrification Corporation and Power Finance Corporation**.
- Objectives →
 - **Reduction of AT&C losses** (operational losses due to inefficient power system) to pan-India levels of 12-15% by 2024-25.
 - **Reduction of cost-revenue gap** to zero by 2024-25.
 - **Developing Institutional Capabilities** for Modern DISCOMs.

6. Freight Smart Cities Initiative

Why in News?

The Logistics Division under the Ministry of Commerce & Industry has released the roadmap for the ‘Freight Smart Cities Initiative’.

About

- Objective → The objective is to **improve the efficiency of urban freight** and create an opportunity for **reduction in the logistics costs**.
- Implementation →
 - Under the initiative, **city-level logistics committees** would be formed.
 - These committees would have **related government departments and agencies** at the local level, state and from the related central ministries and agencies.

- These would also include **private sector** from the logistics services and also users of logistics services.
- These committees would **co-create City Logistics Plans** to implement performance improvement measures locally.
- Cities being covered → **Ten cities** will be identified **on immediate basis**. It is planned to **expand the list to 75 cities** in the next phase before scaling up throughout the country including all state capitals and cities that have more than one million population.
- Significance → **Improving city logistics** would also enable **efficient freight movement** and **bring down the logistics costs** boosting all sectors of the economy.

7. Financial Stability Report

Why in News?

Recently, the Reserve Bank of India (RBI) released its Financial Stability Report (FSR).

About

- The FSR which is **published biannually** reflects the collective assessment of the Sub-Committee of the Financial Stability and Development Council (FSDC) on risks to financial stability and the resilience of the financial system.
- The Report also **discusses issues** relating to **development and regulation of the financial sector**.

8. Harit Dhara

Why in News?

Indian Council of Agricultural Research (ICAR) has developed an anti-Methanogenic feed supplement 'Harit Dhara' (HD).

About

- It is an **anti-methanogenic feed supplement**.
- Developed by → an Indian Council of Agricultural Research (**ICAR**) institute - National Institute of Animal Nutrition and Physiology (**NIANP**), **Bengaluru**.
- When given to bovines and sheep, it **cuts down their methane emissions by 17-20%**.
- And also results in **higher milk production** and **body weight gain**.
- Emission → An average lactating cow or buffalo in India emits around **200 litres of methane per day**, while it is 85-95 litres for young growing heifers and 20-25 litres for adult sheep.
- Methane Production by Cattle → Methane is produced **by animals having rumen**, the first of their four stomachs.
 - In Rumen, the **plant material they eat** - cellulose, fibre, starch and sugars - **gets fermented** or **broken down by microorganisms** prior to further digestion and nutrient absorption.
 - **Carbohydrate fermentation** leads to production of **CO₂** and **hydrogen**.
- These are **used as substrate by archaea** - microbes in the rumen - to produce methane, which the animals then expel through burping.
- Working of Harit Dhara → Harit Dhara acts by **decreasing the population of protozoa microbes in the rumen**, responsible for hydrogen production and making it available to the archaea for reduction of CO₂ to methane.
 - It has been prepared using **condensed and hydrolysable tannin-rich plant-based sources** abundantly available in the country.
 - Tropical plants containing **tannins** (bitter and astringent chemical compounds) are known to **suppress** or **remove protozoa from the rumen**.
 - Rumen Fermentation continues as before, but due to Harit Dhara, there is **more production of propionic acid** now in proportion to acetic and butyric acid in this fermentation.
- Since propionic acid provides **much of the energy for lactose** (milk sugar) **production** and **body weight gain**, there is economic benefit for farmers.

9. Open Network for Digital Commerce

Why in News?

Department for Promotion of Industry and Internal Trade (DPIIT) has initiated a project on Open Network for Digital Commerce (ONDC).

About

- Nodal agency → The task has been assigned to the **Quality Council of India (QCI)**.
- Aim → ONDC aims at **promoting open networks developed on open sourced methodology**, using open specifications and open network protocols independent of any specific platform.
- It will **digitize the entire value chain, standardize operations, promote inclusion of suppliers**, derive efficiencies in logistics and enhance value for consumers.
- An **advisory council** has been constituted to **advise the Government** on measures needed to design and accelerate adoption of ONDC.

Quality Council of India

- The Quality Council of India (QCI) set up in **1997** is an **autonomous body** attached to the Department of Industrial Policy & Promotion, **Ministry of Commerce and Industry**.
- The Chairman of QCI is **appointed by the Prime Minister** on recommendation of the industry to the government.
- Its mandate is to **establish and operate the National Accreditation Structure (NAS)** for conformity assessment bodies and providing accreditation in the field of health, education and quality promotion.
- Indian industry is represented in QCI by three premier industry associations namely **ASSOCHAM; CII; and FICCI**.

10. Agriculture Infrastructure Fund

Why in News?

The Union Cabinet has approved modifications to the Agriculture Infrastructure Fund (AIF) to increase investment.

About

- Eligibility has now been **extended to State Agencies/APMCs, National & State Federations of Cooperatives, Federations of Farmers Producers Organizations (FPOs) and Federations of Self Help Groups (SHGs)**.
- Interest subvention → At **present** Interest subvention for a loan **upto Rs. 2 crore in one location** is eligible under the scheme.
- In case, one eligible entity puts up projects in **different locations** then all such projects will be **now be eligible** for interest subvention for loan upto Rs. 2 crore.
- Limitation → However, for a **private sector entity** there will be a **limit of a maximum of 25 such projects**.
- This limitation will **not be applicable to** state agencies, national and state federations of cooperatives, federations of FPOs and federation of SHGs.
- Location will mean physical boundary of a village or town having a **distinct LGD (Local Government Directory) code**. Each of such projects should be in a location having a separate LGD code.
- For **APMCs, interest subvention** for a loan **upto Rs. 2 crore** will be **provided for each project** of different infrastructure types.
- Power has been **delegated to Union Agriculture Minister** to **make necessary changes** with regard to addition or deletion of beneficiary.
- Duration → Period of financial facility has been extended **from 4 to 6 years upto 2025-26** and overall period of the scheme has been **extended from 10 to 13 upto 2032-33**.

Agriculture Infrastructure Fund(AIF)

- Agriculture Infrastructure Fund (AIF) is a **Central Sector Scheme** launched by the Department of Agriculture Cooperation and Farmers Welfare(DAC&FW), **Ministry of Agriculture**.
- Aim → To provide **medium – long term debt financing facility** for investment in viable projects. This includes **post-harvest management Infrastructure** and **community farming assets** through incentives and financial support.

11. Authorised Economic Operator (AEO) Programme

Why in News?

The Central Board of Indirect Taxes & Customs (CBIC) has inaugurated the online filing of Authorised Economic Operators (AEO) applications.

About

- AEO is a programme (2007) under the **aegis of the World Customs Organization** (WCO) **SAFE Framework** of Standards to secure and facilitate global trade.
- It aims to **enhance international supply chain security** and facilitate the movement of goods.
- AEO is a **voluntary compliance programme**.
- How it works? → Under this programme, an **entity engaged in international trade** is **approved by Customs** as compliant with supply chain security standards and granted AEO status & certain benefits.
- Benefits → Benefits of AEO status include **expedited clearance times**, **fewer examinations**, improved security and communication between supply chain partners.

SAFE Framework

- In June **2005** the **WCO Council adopted** the Framework of Standards to Secure and Facilitate Global Trade (SAFE Framework) that would **act as a deterrent to international terrorism**, to secure revenue collections and to promote trade facilitation worldwide.
- It prescribes **baseline standards** that have been tested and are working well around the globe.

12. India Industrial Land Bank

Why in News?

The GIS Enabled Land Bank is gaining immense popularity.

About

- What is it? → It is a **GIS-based portal** with **all industrial infrastructure-related information** such as connectivity, infra, natural resources and terrain, plot-level information on vacant plots, line of activity, and contact details.
- It acts as a **one-stop repository** of all industrial infrastructure-related information.
- It serves as a **decision support system** for investors scouting for land remotely.
- It has around **4,000 industrial parks mapped** across an area of 5.5 lakh hectare of land and is expected to achieve pan-India integration by December 2021.
- It is under the **Department for Promotion of Industry and Internal Trade (DPIIT)**.

13. Institute of Cost Accountants of India

Why in News?

Recently, the Union Cabinet has approved the Memorandum of Understanding (MoU) between Institute of Cost Accountants of India (ICoAI) and the Association of Chartered Certified Accountants (ACCA), United Kingdom (UK).

About

- It was first established in **1944** as a **registered company** under the Companies Act.
- The erstwhile objectives of ICoAI were **promoting, regulating** and **developing the profession of cost accountancy**.
- In **1959**, the Institute was **established by a special act** of Parliament, namely, **the Cost and Works Accountants Act, 1959** as a statutory professional body.
- It was established for the **regulation of the profession of cost and works accountancy**.
- It is the only recognised statutory professional organisation and licensing body in India **specializing exclusively in cost and works accountancy**.
- Objectives →
 - To develop the **Cost and Management Accountancy function** as a powerful tool of management control in all spheres of economic activities;
 - To promote and develop the **adoption of scientific methods** in cost and management accountancy; etc.

Key Highlights of MoU

- It will provide **mutual advanced entry** to the Members of both the Institutes through **exemptions from appearing in majority of papers** to acquire the qualification of the other Professional Body.
- It will lead to a focus attention towards **exchange of knowledge** and **exchange of research and publications** which will strengthen good governance practice.

14. RBI Retail Direct Scheme

Why in News?

The Reserve Bank of India(RBI) has announced the launch of the RBI Retail Direct scheme.

About

- RBI Retail Direct Scheme is a **one-stop solution** to **facilitate investment** in government securities (**G-secs**) **by individual investors**.
- Under the scheme, retail investors (individuals) will have the facility to **open and maintain** the '**Retail Direct Gilt Account**' (RDG Account) **with the RBI**.
- A gilt Account means an account **opened and maintained for holding Government securities**.
- This RDG account can be **opened through an online portal** provided for the purpose of the scheme.
- The online portal will then allow the registered users **access to primary issuance of G-secs** and **access to NDS-OM** (Negotiated Dealing System — **Order Matching** (NDS-OM)).

📌 Government Securities (G-secs)

- A Government Security(G-Sec) is a **tradable instrument issued by the Central Government** or **the State Governments**. It acknowledges the Government's debt obligation.
- Such securities are **short-term** (usually called treasury bills, with original maturities of less than one year) or **long-term** (usually called Government bonds or dated securities with an original maturity of one year or more).
- In India, the Central Government issues both, treasury bills and bonds or dated securities. While the **State Governments issue only bonds** or **dated securities** which are called the **State Development Loans** (SDLs).

📌 NDS(Negotiated Dealing System)

- The Negotiated Dealing System or NDS is an **electronic trading platform operated by the RBI** to facilitate the issuing and exchange of government securities and other types of money market instruments.

- The goal was to **reduce inefficiencies stemming** from telephone orders and manual paperwork while increasing transparency for all market participants.

15. BHIM-UPI

Why in News?

Bhutan has become the first country to adopt India's Unified Payment Interface (UPI) standards for its quick response (QR) code.

About

- Bharat Interface for Money (BHIM) is **India's digital payment application** (app) that works through UPI, a system that powers multiple bank accounts into a single mobile application.
- BHIM app, that was developed by the **National Payments Corporation of India (NPCI)**, was launched in **December, 2016**.
- It is a Unified Payment Interface (UPI) that **allows real time fund transfer**.

👉 Unified Payment Interface (UPI)

- Unified Payments Interface (UPI) is an **instant real-time payment system**, allowing users to transfer money on a real-time basis, across multiple bank accounts **without revealing details** of one's bank account to the other party.

👉 The BHIM app has three levels of authentication:

- For one, the app **binds with a device's ID** and mobile number.
- Second, a user **needs to sync whichever bank account** (UPI or non-UPI enabled) in order to conduct the transaction.
- Third, when a user sets up the app they are **asked to create a pin** which is needed to **log into the app**. The UPI pin, which a **user creates with their bank account is needed** to go through with the transaction.

👉 NPCI

- NPCI is an **umbrella organisation** for operating retail payments and settlement systems in India.
- It is a **"Not for Profit"** Company under the provisions of **Section 25 of Companies Act 1956** (now Section 8 of Companies Act 2013).
- It is an **initiative** of the Reserve Bank of India (RBI) and Indian Banks Association (IBA) **under the provisions of the Payment and Settlement Systems Act, 2007** for creating a robust Payment and Settlement Infrastructure in India.

16. Rebate of State and Central Taxes and Levies (RoSCTL) Scheme

Why in News?

Garment exporters will continue to get a rebate on central and state taxes on their outward shipments as the government approved extension of RoSCTL scheme till March 2024.

About

- The scheme will continue **till March 2024**.
- Notified by → **Ministry of Textiles in 2019**.
- Revised guidelines **prepared by the Ministry of Textiles** in consultation with the Department of Revenue.
- Duty Credit Scrip →
 - **Issued to exporters** for the **value of embedded taxes and levies** contained in the exported product.
 - Exporters can **use this scrip to pay basic customs duty** for the import of equipment, machinery or any other input.

- These scrips are **tradeable**.
- Benefits →
 - It will **enhance the competitiveness** of the labour-intensive textiles sector.
 - Garment exporters will continue to get a **rebate on Central and State taxes** on their **outward shipments**.
 - It will help **boost exports and job creation**.
- The sectors covered will **not get benefits under** the Remission of Duties and Taxes on Exported Products (**RoDTEP scheme**).

17. Expert Committee on Longevity Finance

Why in News?

IFSCA, in its endeavour to develop a Longevity Finance Hub in GIFT IFSC has constituted an Expert Committee to recommend approach towards development of Longevity Finance Hub and provide road map for the same.

About

- Chaired by → The expert committee is co-chaired by **Ms. Kaku Nakhate**, President and Country Head (India), Bank of America, and **Mr. Gopalan Srinivasan**, Ex-CMD, New India Assurance Company Limited.
- Purpose: The expert committee will recommend an approach towards the **development of Longevity Finance Hub and provide a road map for the same**.
- Longevity Finance Hub aims to **cater to the investment and wealth management needs** of the '**silver generation**', which consists of individuals aged 60 years and older.

📍 International Financial Services Centres(IFSC):

- An IFSC caters to customers outside the jurisdiction of the domestic economy. Such centers **deal with flows of finance, financial products, and services across borders**.
- **GIFT** (Gujarat International Finance Tec-City) **located in Gandhinagar** is India's **first International Financial Services Centre**.

18. National Ayush Mission

Why in News?

The Union Cabinet has approved the continuation of the National Ayush Mission as a 'Centrally-sponsored scheme for another five years till 2026.

About

- It is a **centrally sponsored scheme** for development and promotion of AYUSH system of medicine including Homoeopathy.
- It is a **flagship scheme** of **Ministry of AYUSH** approved and notified in 2014.
- The Mission **addresses the gaps in health services through supporting the efforts of State/UT Governments** for providing AYUSH health services/education in the country, particularly in vulnerable and far-flung areas.
- Components of the National AYUSH Mission →
- **Obligatory Components:**
 - AYUSH Services.
 - AYUSH Educational Institutions.
 - Quality Control of ASU&H (Ayurveda, Siddha and Unani & Homoeopathy) Drugs.
 - Medicinal Plants.
- **Flexible Component**
 - AYUSH Wellness Centres comprising Yoga and Naturopathy,

- Tele-medicine,
- Innovations in AYUSH including Public Private Partnership,
- IEC (Information, Education and Communication) activities,
- Voluntary certification scheme: Project based, etc.

19. Green Hydrogen Mobility project

Why in News?

NTPC Renewable Energy Ltd (NTPC REL) will set up the country's first green Hydrogen Mobility project in Ladakh. NTPC REL is a 100 per cent subsidiary of NTPC.

About Green Hydrogen

- Hydrogen when produced **by electrolysis using renewable energy** is known as Green Hydrogen which has no carbon footprint.
- The hydrogen that is in use today is produced **using fossil fuels**, which **is the primary source**.
- Organic materials such as **fossil fuels and biomass** are **used for releasing hydrogen** through chemical processes.
- Applications of green hydrogen →
 - Green Chemicals like **ammonia and methanol** can directly be **utilized in existing applications** like fertilizers, mobility, power, chemicals, shipping etc.
 - Green Hydrogen **blending up to 10%** may be adopted in CGD networks to gain widespread acceptance.
- Benefits →
 - It is a **clean-burning molecule**, which can **decarbonize a range of sectors** including iron and steel, chemicals, and transportation.
 - Renewable energy that **cannot be stored** or **used by the grid** can be channelled to produce hydrogen.

20. Dairy Investment Accelerator

Why in News?

Government sets up Dairy Investment Accelerator.

About

- Set up by → the **Department of Animal Husbandry & Dairying** (DAHD), Government of India under its Investment Facilitation Cell.
- Dairy Investment Accelerator is a **cross-functional team** constituted to serve as the interface with investors.
- It shall provide support across the investment cycle by →
 - **Offering specific inputs** for evaluation of investment opportunities
 - **Addressing queries** about the application to govt. schemes
 - **Connecting** with strategic partners
 - **Providing on-ground assistance** with state departments & relevant authorities.
- Other Functions of Dairy Investment Accelerator →
 - Dairy Investment Accelerator will also organize a **series of events with global & local industry participants** to facilitate direct interactions with government officials and connect with other players in the Dairy Industry.
 - Moreover, it would also **generate awareness** among investors about the Animal Husbandry Infrastructure Development fund (**AHIDF**).
- India's Dairy Sector → India is the **largest milk producer**, contributing 23% of global milk production.
 - Annual milk production in the country has **grown by 6.4%** (CAGR) in the past 5 years.

21. Indian Labour Conference

Why in News?

Recently, the Bharatiya Mazdoor Sangh (labour union) wrote to the Prime Minister asking him to convene the Indian Labour Conference (ILC).

About

- ILC also known as the '**labour parliament**' of the country formed on the **lines of International Labour Conference is the apex level tripartite** (Government, Employers and Workers) consultative committee in the Ministry of Labour & Employment.
- Purpose → To **advise the Government** on the issues concerning working class of the country.
- Members → All the **12 Central Trade Union Organisations, Central Organisations of employers, all State Governments and Union Territories** and **Central Ministries/Departments** concerned with the agenda items, are the members of the ILC.
- The first meeting of the Indian Labour Conference (then called Tripartite National Labour Conference) was **held in 1942** and **so far a total of 46 Sessions** have been held.
- Significance → Indian Labour Conference **discusses and deliberates on significant issues** aimed at **improving the welfare of the workers**. Notable contributions have been emanated by this forum including the Minimum wage fixing methodology and standing orders for employment.

International Labour Organisation

- It is the **only tripartite United Nation (UN) agency**.
- It brings **together governments, employers and workers** of 187 member States (India is a member), to set labour standards, develop policies and devise programmes promoting decent work for all women and men.
- Received the **Nobel Peace Prize** in **1969**.
- Established in → **1919** by the **Treaty of Versailles** as an affiliated agency of the League of Nations.
- Became the first affiliated **specialized agency of the UN** in **1946**.
- Headquarters → **Geneva, Switzerland**

22. Policy on Vintage Vehicles

Why in News?

The government is framing a new policy to regulate the vintage motor vehicles (2-wheeler or 4-wheeler).

About

- Definition → The term will cover any vehicle, 2-wheeler or 4-wheeler, which is **more than 50 years old** from the date of first registration after first sale, **including any vehicle imported into India**.
- Conditions → This will be subject to the condition that such vehicles should be **maintained in its original form**.
 - These vehicles should **not have undergone any substantial overhaul** that includes any modification in chassis or body shell, and/or engine.
 - The new policy seeks to mandate that such vehicles **cannot be used for commercial purposes** or **put to regular use**. Other than that, the owners can use their vintage cars in any way wish.
- Registration → Old vehicles already carry their **registration numbers**, which will continue.
 - For new ones, like imported vintage vehicles or old Indian cars over 50 years old seeking to enter the vintage category, a **new numbering system** will **come into effect**.

- These vehicles will carry a **registration plate** displaying the **state code in two letters** followed by VA for vintage, then a **2-letter series** and **finally a 4-digit series (0001 to 9999)** allotted by the state registering authority.
- Registration information will be on the **Parivahan portal** of the Ministry of Road Transport and Highways.
- New vintage vehicles can be **registered for Rs. 20,000; re-registration/ renewal will cost Rs 5,000**. The registration certificate will be **valid for 10 years**, renewable thereafter.
- Sale and purchase of vehicles registered as vintage is permissible; the buyer and seller have to inform their respective State Transport Authorities.
- Application of Scrapage Policy → The upcoming **vehicle scrappage policy** will **not apply** to these vehicles.
- If a vehicle is **more than 15 years old** but **within 50 years**, the owner can continue to **keep it by passing fitness tests** every 5 years.

23. Pradhan Mantri Gram Sadak Yojana

Why in News?

Recently, the Minister of State for Rural Development has informed that the allocation of funds to the States for implementation of PMGSY depends on works in hand, pace of expenditure and unspent balance available with the State.

About

- It is a **Central government scheme**.
- It was launched as a **one-time special intervention** to **provide rural connectivity**, by way of a single all- weather road, to the eligible unconnected habitations of designated population size.
- The **PMGSY- II** was launched in the **year 2013**, with a target to **upgrade 50,000 Kms** of the existing rural road network to improve its overall efficiency.
- The PMGSY shall **cover only the rural roads** and the **urban roads are excluded from** the purview of this programme.
- The main features of PMGSY are →
 - Decentralized and evidence based planning;
 - Standards and specifications as per Indian Road Congress (IRC) and Rural Roads Manual;
 - Dedicated implementation mechanism at central, state and district level;
 - Scrutiny of Detailed Project Reports (DPRs) at multiple levels;
 - Strong IT backbone for monitoring and implementation of the programme;
 - Three-tier quality management system;
 - Unbroken flow of funds;
 - Inbuilt mechanism for consultation with public representatives at planning; and
 - selection of roads and monitoring stages.
- It aims to **provide connectivity to unconnected Habitations** as part of a poverty reduction strategy.
- The scheme provides **all-weather rural road connectivity** to **all habitations** with a **population of 250** and above in 11 left-wing extremism-affected districts, known as 'Integrated Action Plan (IAP) districts.
- Eligibility and Funding for PMGSY →
 - **All States and Union Territories** would be eligible to participate under PMGSY-III.
 - The States/UTs would be able to join **only after sanction of 100% works of PMGSY-I and PMGSY-II**, and award of 90% of length.
 - The roads in the **initial five year guarantee period** (Defect Liability Period) and post five year guarantee period will be **maintained by the States**.

24. Stand Up India Scheme

Why in News?

The Ministry of Finance has informed Lok Sabha that the Stand Up India Scheme has been extended up to the year 2025.

About

- The Stand Up India Scheme was **launched in 2016** by the Department of Financial Services, Ministry of Finance.
- Objective → The scheme **facilitates bank loans** for **setting up a new enterprise** in manufacturing, services, agri-allied activities, or the trading sector **by SC/ST/Women entrepreneurs**.
- Bank Loan → It provides **bank loans between Rs 10 lakh and up to 1 crore**.
 - The government does not allocate funds for loans under the Scheme. They are **extended by Scheduled Commercial Banks**(SCBs).
- Repayable of Loan → The loan is **repayable in 7 years**, with a maximum moratorium period of 18 months.
- Eligibility Condition →
 - Beneficiaries should be **SC/ST** and/or **woman entrepreneurs** above **18 years of age**.
 - Loans under the scheme are **available only for greenfield projects**.
 - In the case of non-individual enterprises, **51%** of the shareholding and **controlling** stake should be **held by either SC/ST** and/or **Women** Entrepreneur.
 - Borrowers should **not be in default** to any bank/financial institution.

25. Production-linked Incentive (PLI) Scheme for Specialty Steel

Why in News?

Union Cabinet approved the Production Linked Incentive (PLI) Scheme for specialty steel.

About

- The PLI Scheme aims to **boost the production of high-grade specialty steel** in the country.
- Coverage → The five categories of specialty steel that have been chosen in the PLI Scheme are: **Coated/Plated Steel Products, High Strength/Wear-resistant Steel, Specialty Rails, Alloy Steel Products, and Steel wires, and Electrical Steel**.
- Incentives → There are **3 slabs of PLI incentives** under the scheme. The **lowest being 4%** and the **highest is 12%**, which has been provided for electrical steel (CRGO).
- Eligibility → Any company **registered in India** engaged in the **manufacturing of the identified Specialty Steel** are eligible to participate under the scheme.
- Duration → The duration of the scheme will be **five years from 2023-24 to 2027-28**.
- Expected Benefits of the scheme →
 - The scheme is expected to bring in an investment of approximately **₹40,000 crores** and **capacity addition of 25 MT** for **specialty steel**.
 - The scheme will give employment to **about 5 lakh people**, of which **68,000 will be direct employment**.

🏠 Specialty Steel

- Specialty steel is **value-added steel** wherein normal finished steel is worked upon by way of **coating, plating, heat treatment**, etc. to **convert it into high-value-added steel**.
- This steel can be used in **various strategic applications** like Defense, Space, Power, apart from the automobile sector, specialized capital goods among others.

26. Bhartiya Prakritik Krishi Padhati

Why in News?

Government is implementing Bhartiya Prakritik Krishi Padhati (BPKP) as a sub scheme of Paramparagat Krishi Vikas Yojana (PKVY) since 2020-21 for the promotion of traditional indigenous practices.

About

- It is a **sub scheme** of Paramparagat Krishi Vikas Yojana (**PKVY**).
- It was **launched in 2020-21** for the promotion of traditional indigenous practices.
- It emphasizes on **exclusion of all synthetic chemical inputs** and **promotes on-farm biomass recycling** with major stress on:
 - Biomass mulching;
 - Use of cow dung-urine formulations;
 - Plant-based preparations; and
 - Time to time working of soil for aeration.
- Under BPKP, financial assistance of **Rs 12200/ha for 3 years** is provided for cluster formation, capacity building and **continuous handholding by trained personnel, certification** and **residue analysis**.

Paramparagat Krishi Vikas Yojana (PKVY):

- Paramparagat Krishi Vikas Yojana is an elaborated **component of Soil Health Management** (SHM) of major project National Mission of Sustainable Agriculture (NMSA).
- Implementation:
- Under PKVY **Organic farming is promoted** through the adoption of the organic village **by cluster approach** and **PGS certification**.
- Fifty or more farmers will form a cluster **having 50-acre land** to take up the organic farming under the scheme.
- The produce will be **pesticide residue free** and will **contribute to improving the health of the consumer**.

27. EV100 Campaign

Why in News?

Recently, Maharashtra has become the first State in the country to join hands with Climate Group's EV100 campaign.

About

- The EV100 campaign is an **initiative of Climate Group**, an international non-profit organization.
- The campaign aims to **make electric transport the new normal by 2030**.
- For that, it will **encourage companies to switch** from vehicles running on fossil fuels **to EVs** and **install charging infrastructure**.
- It was launched in **September 2017**.
- Companies can choose to make the commitment in **one** or **more of four influence areas**:
 - Directly controlled fleets (owned/leased).
 - Service provider contracts.
 - Workplace charging.
 - Customer charging.
- It is a **broad coalition of major global companies** all making the public commitment as outlined above.
- Supported Activities: **Capacity building, knowledge development** and **policy-making** and **implementations**.
- Climate Group through its EV100 campaign will **act as a bridge** between private companies and the State government **to ease the process of shifting their fleets to Electric Vehicles(EVs)**.

28. World Economic Outlook

Why in News?

Recently, the IMF released a World Economic Outlook report that retained the global economic growth forecast of 6% for 2021.

About

- It is a report **by the International Monetary Fund (IMF)** that analyzes key parts of the IMF's surveillance of economic developments and policies in its member countries.
- It also **projects developments** in the global financial markets and economic systems.
- The WEO is usually prepared **twice a year** and is used in meetings of the International Monetary and Financial Committee.

📌 Key Finding

- Indian economy is expected to **grow by 9.5% in 2021** and **8.5% in 2022** (larger than the 6.9% it had projected in April).
- In 2020, India's economy witnessed an estimated **contraction of 8%**.
- The IMF has **cut its growth forecast** because of the Covid-19 Second Wave that hit the recovery momentum, damaging consumer confidence and rural demand.

📌 International Monetary Fund

- IMF is an **international financial institution**.
- Headquartered → **Washington, D.C.**
- Created in **1945**, the IMF is governed by and **accountable to the 189 countries** that make up its near-global membership. India joined on **27th December, 1945**.
- Purpose → The IMF's primary purpose is to **ensure the stability** of the international monetary system — the system of exchange rates and international payments that enables countries (and their citizens) to **transact with each other**.
- Reports by IMF →
 - Global Financial Stability Report.
 - World Economic Outlook.

29. Garib Nawaz Skill Development Centres

Why in News?

Recently, the Union Minister for Minority Affairs replied in the Parliament that a total number of 371 training centres under the Gharib Nawaz Employment Scheme were opened across the country.

About

- Launched by the **Ministry of Minority Affairs** in **2017**.
- It is a scheme to **provide short term job oriented skill development courses** to minorities' youth in order to enable them for skill-based employment.
- Implementing agency → **Maulana Azad Education Foundation**, an autonomous body under the aegis of the Ministry of Minority Affairs, implements the scheme.
- The scheme is implemented as per the common norms of the Ministry of Skill Development & Entrepreneurship (**MSD&E**) through the empanelled Program Implementation Agencies (**PIAs**).
- The PIA is mandated to place a **minimum of 70% of trainees out of total trained trainees**.
- The **monthly stipend** for **maximum of three months** and post placement support for maximum of two months after getting employment is also being paid to the beneficiaries directly into their account.

30. Direct Monetisation of deficit

Why in News?

The Minister of Heavy Industries and Public Enterprises has inaugurated NATRAX- the High Speed Track(HST) in Indore, Madhya Pradesh.

About Fiscal Deficit

- Fiscal Deficit is the **difference between the total income of the government** (total taxes and non-debt capital receipts) **and its total expenditure**. It occurs when the government’s expenditure exceeds its income.
- Fiscal Deficit = Total expenditure of the government (capital and revenue expenditure) – Total income of the government (Revenue receipts + recovery of loans + other receipts)
- Typically, governments have two basic choices for financing their fiscal deficits: **they can borrow (issue debt) or raise taxes**.
- Alternatively, the central bank can **print currency for the government** to bridge its fiscal deficit, which is known as monetisation of deficit.

About Direct Monetisation of deficit

- It refers to a scenario where a **central bank prints currency** to the tune of accommodating massive deficit spending by the government.
- It happens when the **government privately places its bonds with the Central bank** i.e., the central bank purchases government bonds in the primary market.
- Direct monetisation **may not necessarily involve actual printing** of currency as the central bank could simply credit the Government’s account with itself through an **electronic accounting entry**.
- The exercise leads to an increase in **total money supply** in the system.
- Direct monetisation of deficit is also referred to as **helicopter money** when large sums of new money are printed to stimulate an economy during a crisis — like a recession.

Direct Monetisation of Deficit in India	
Until 1997: Automatic monetisation of deficit	<ul style="list-style-type: none"> • India’s deficits were automatically monetised until 1997. <ul style="list-style-type: none"> ○ Ad-hoc treasury bills (non-marketable short term debt instruments issued by the Government of India), were automatically issued by the RBI on behalf of the Centre to itself at a fixed rate, to replenish the central government’s cash balances. • An agreement was signed between the RBI and the Government of India in 1997 completely phasing out funding through ad hoc treasury bills and the practice was replaced with a system of ways and means advances (WMA) from April 1, 1997.
1997-2006: RBI participating in primary issuance of Government securities	<ul style="list-style-type: none"> • Even after a cessation of automatic monetisation, monetisation continued in another form as the RBI continued to subscribe to the primary issuances of Government securities (G-secs).
2006-2018: Complete prohibition on direct monetisation	<ul style="list-style-type: none"> • Fiscal Responsibility and Budget Management Act (FRBM Act), 2003, was enacted which completely barred RBI from subscribing to the primary issuances of the government from April 1, 2006.
Since 2018: Direct monetisation allowed on certain grounds	<ul style="list-style-type: none"> • FRBM Act was amended in 2017 adding an escape clause which permits monetisation of the deficit under special circumstances. <ul style="list-style-type: none"> ○ RBI can subscribe to the primary issue of central government securities in case the government exceeds the fiscal deficit target on grounds such as national security, act of war, national calamity, collapse of agriculture severely affecting farm output and incomes etc.

31. New regulatory regime for microfinance

Why in News?

The Reserve Bank of India (RBI) has proposed a new regulatory regime for microfinance with uniform set of guidelines for all lenders.

About

- Microfinance is a **form of financial service** which provides **small loans and other financial services to poor and low-income households** to enable borrowers to work their way out of poverty by undertaking income generating activities.

Regulation of MFIs:

Parameters	Existing Regulatory framework for NBFC-MFIs	Proposed changes in regulatory framework
Definition of Microfinance borrower	A microfinance borrower is identified by annual household income not exceeding ₹1,25,000 for rural and ₹2,00,000 for urban and semi-urban areas.	<ul style="list-style-type: none"> Same criteria shall be extended to all REs for the purpose of the common definition. <ul style="list-style-type: none"> All REs shall have a Board approved policy enumerating factors considered for assessment of household income.
Limits on household indebtedness	Total indebtedness of the borrower does not exceed ₹1,25,000 (excluding loan for education and medical expenses);	<ul style="list-style-type: none"> Link the loan amount to household income in terms of debt-income ratio. <ul style="list-style-type: none"> Accordingly, all lending institutions has to ensure that the EMI a household has to pay does not exceed 50 per cent of its income.
Nature of loans	Collateral free loans without any prepayment penalty	The collateral free nature of microfinance loans shall be extended to all REs.
Limit on number of loans, loan amount and tenure	<ul style="list-style-type: none"> Loan amount limit of ₹1,25,000 (₹75,000 in first cycle and exclusion of loans for meeting education and medical expenses from loan limit); Minimum tenure of 24 months for loans above ₹30,000 No more than two NBFC-MFIs can lend to the same borrower. Minimum 50 per cent of loans to be given for income generation activities 	All limits shall be withdrawn
Repayment periodicity	Microfinance borrowers of NBFC-MFIs are permitted to repay weekly, fortnightly or monthly instalments as per their choice.	All REs shall have a Board approved policy to provide the flexibility of repayment periodicity to microfinance borrowers as per their requirement.
Pricing of micro loans	Maximum interest charged by an NBFC-MFI shall be the lower of – <ul style="list-style-type: none"> the cost of funds plus a margin cap of 10% for MFIs with loan portfolio of ₹100 crore or above and 12% for others; The average base rate of the five largest commercial banks by assets multiplied by 2.75. 	No ceiling prescribed for the interest rate of NBFC-MFIs. <ul style="list-style-type: none"> The Board of each NBFC-MFI shall adopt an interest rate model taking into account relevant factors such as cost of funds, margin and risk premium and determine the rate of interest to be charged for loans and advances. NBFC-MFIs, like any other NBFC, shall be guided by fair practices code and would ensure disclosure and transparency of interest rates.
Exemptions to not-for-profit	Exemption from registration requirements to those 'not for profit' microfinance	Exemption to those 'not for profit' microfinance companies which are-

companies	companies (registered under Section 25 of the Companies Act, 1956 (Section 8 of the Companies Act, 2013)) which are: <ul style="list-style-type: none"> • engaged in providing credit not exceeding ₹50,000 for a business enterprise and ₹1,25,000 for meeting the cost of a dwelling unit to any poor person and • not accepting public deposits. 	<ul style="list-style-type: none"> • engaged in providing collateral-free loans to households with annual household income of ₹1,25,000 and ₹2,00,000 for rural and urban/semi urban areas respectively, • EMIs of loans does not exceed 50 per cent of the household income and • having asset size of less than ₹100 crore.
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Environment

1. Guindy National Park

Why in News?

The Guindy National Park provides a number of ecosystem services to the people of Chennai, Tamil Nadu.

About

- It is India's **eighth-smallest** national park and one of the very few national parks located in **heart of Chennai's metropolitan area**.
- It was one of the last remnants of the **tropical dry evergreen forests** of the Coromandel Coast.
- It **purifies the air** but also **acts as a habitat** for a wide number of faunal species.
- Guindy National Park was originally a **game reserve**. During the **1670s**, a garden space (Guindy Lodge) was carved out of the Guindy forest and that was **built by William Langhorne** (1672-1678), the governor of colonial Madras as his residence.
- **Guindy Snake Park** is next to Guindy National Park. It **gained statutory recognition** as a medium zoo from the Central Zoo Authority (CZA) in **1995**.
- Flora & Fauna → It has a significant population of **blackbucks, spotted deers, jackals, varieties of snakes**, over 100 species of birds and over 60 species of butterflies.
- Other National Parks in Tamil Nadu →
 - Gulf of Mannar Marine National Park (21 Islands), Dhanushkodi.
 - Indira Gandhi National Park previously Known as Anamalai Wildlife Sanctuary, Tiruppur.
 - Mukurthi National Park, Ooty.
 - Mudumalai National Park, Madumalai.
- Ecosystem services → Ecosystem services are the **direct and indirect contributions of ecosystems to human well-being**.

2. Project BOLD

Why in News?

Recently, the Bamboo Oasis on Lands in Drought (BOLD) project has been initiated by Khadi and Village Industries Commission (KVIC).

About

- It was launched as **part of KVIC's Khadi Bamboo Festival** to celebrate 75 years of independence, "**Azadi ka Amrit Mahotsav**".
- Under it, **5000 saplings** of **special bamboo species** (Bambusa tulda and Bambusa polymorpha), specially brought from Assam, have been planted over approximately **16 acres of vacant arid Gram Panchayat land**.
- KVIC has thus created a **world record of planting** the highest number of bamboo saplings on a single day at one location.
- The unique scientific exercise is a first of its kind in India and has been launched from the **tribal village NichlaMandwa in Udaipur, Rajasthan**.
- KVIC is set to **replicate it at Dholera village, Ahmedabad (Gujarat) and Leh-Ladakh region**.
- Significance →
 - The project seeks to create **bamboo-based green patches** in arid and semi-arid land zones.
 - It serves the combined national objectives of **reducing land degradation and desertification** and providing livelihood and multi-disciplinary rural industry support.

📌 Khadi and Village Industries Commission:

- KVIC is a **statutory body** established under the Khadi and Village Industries Commission Act, 1956.
- The KVIC is **charged with the planning, promotion, organisation and implementation of programmes** for the development of Khadi and other village industries in the rural areas in coordination with other agencies engaged in rural development wherever necessary.
- It functions under the **Ministry of Micro, Small and Medium Enterprises**.

3. King Cobra in Tillari Reserve

Why in News?

The world's longest venomous snake, king cobra (*Ophiophagus hannah*), was sighted in the recently declared conservation reserve, Tillari, in Sindhudurg district.

About

- They are one of the **most venomous snakes** on the planet and **the longest** of all venomous snakes.
- Their venom is **not the most potent among venomous snakes**, but the amount of neurotoxin they can deliver in a single bite—up to two-tenths of a fluid ounce—is **enough to kill 20 people**, or even an elephant.
- Habitat →
 - They live mainly in the **rain forests** and **plains of India, southern China, and Southeast Asia**.
 - They are comfortable in a variety of habitats, including **forests, bamboo thickets, mangrove swamps, high-altitude grasslands, and in rivers**.
- Protection Status →
 - IUCN Red List: **Vulnerable**.
 - CITES: **Appendix II**.
 - Wildlife (Protection) Act, 1972: **Schedule II**.

📌 Tillari Conservation Reserve:

- Tillari is the **seventh wildlife corridor** in the state to be declared as a '**conservation reserve**'.
 - Tillari is a reserve in **western ghats**.
- The area **covering nine villages** in the forest range is known to **serve as a corridor** and even as a habitat for the population of tigers and elephants moving between the three states of Goa, Karnataka and Maharashtra.
- It **connects Mhadei sanctuary in Goa and Bhimgad in Karnataka**.
- It has **semi-evergreen forest, tropical moist deciduous forests**, and a **number of unique trees, butterflies, and flowers**.

4. Albino Palm Civet

Why in News?

Recently, an albino common palm civet has made a comeback in Odisha after 129 years in Satkosia Tiger Reserve (STR).

About

- Scientific Name → **Paradoxurus hermaphrodites**.
- It is a **small carnivore mammal** belonging to the family Viverridae.
- It is **both terrestrial and arboreal** and shows a nocturnal activity pattern.
- Habitat →
 - It can be found in **southern and southeastern Asia**.
 - These are most commonly found in **southern China, Sri Lanka and southern India**.

- Due to the **tropical environment**, they are able to **manage warm temperatures** and high humidity.

👉 Albinism

- It is a **hypo-pigmentary disorder** with a total **lack of melanin in hair, eyes and skin**.
- It happens due to the **heritable absence of functional tyrosinase enzymes** in pigment cells affecting skin and hair.
- This results in a **total white plumage/fur with red eyes**.
- It is **controlled via inheritance** by an **autosomal recessive gene** in all animal species.
- The extent and appearance of albinism **varies** and can be broadly described as **complete albinism and leucism** (partial albinism).

5. Black Panther

Why in News?

Recently, a camera trap installed at Navegaon Nagzira Tiger Reserve in Bhandara district has captured the image of a black panther.

About

- Melanistic leopards are commonly called **black panthers** or **black leopards**.
- The black color variants of cats like leopards, jaguars and ocelots are **known by experts as melanism**.
- The Black coat coloration is attributed to the expression of **recessive alleles in leopards** and **dominant alleles in jaguars**.
- Habitat →
 - They are mainly in **Southwestern China, Burma, Nepal, Southern India, Indonesia**, and the southern part of Malaysia.
 - In India they can be spotted in the states of **Karnataka, Tamil Nadu, Kerala, Maharashtra** etc.
- Protection Status →
 - IUCN Red List: **Vulnerable**.
 - CITES: **Appendix I**.
 - Wildlife (Protection) Act, 1972: **Schedule I**.

👉 Navegaon Nagzira Tiger Reserve

- It is situated in **Maharashtra**.
- It is comprised of notified area of **Nawegaon National Park, Nawegaon Wildlife Sanctuary, Nagzira Wildlife Sanctuary, New Nagzira Wildlife Sanctuary** and **Koka Wildlife Sanctuary**.
- It has connectivity with major tiger reserves in central India like **Kanha and Pench Tiger Reserve in Madhya Pradesh** and **Tadoba-Andhari Tiger Reserve** in Maharashtra and **Indravati Tiger Reserve** in Chhattisgarh.
- The major forest type found in NNTR is **Southern Tropical Dry Deciduous Forest**.

6. Gravellyia boro

Why in News?

Researchers have discovered two new species of spiders, namely Gravellyia boro and Dexippus kleini from Jharbari range of western Assam's Chirang Reserve Forest.

About

- The Gravellyia boro is a **burrow spider**. It belongs to the **Nemesiidae family** which **comprises 184 species worldwide**.
- Features: The burrow spider lives underground, about 10-15 cm below the sandy-loam surface.

- The name "**Gravelia boro**" has been **derived from the Bodo community**, one of the largest ethnolinguistic groups in Assam.

About Dexippus kleini

- Dexippus kleini is an **oriental jumping spider**. It belongs to the **Salticidae**, the largest family of all spiders on earth.
- This spider has been **recorded for the first time** since its original description 129 years ago by Swedish arachnologist in Sumatra, Indonesia.
- Features → The jumping spider is a **slow mover**, but capable of jumping up to 25 mm in length to hunt its prey.

Stoliczka vanhnuailianai snake

- A **non-venomous snake** has also been added to **India's herpetofauna**.
- About **50 cm long**, this dark brown and yellow found in a dried-up area of the Tuinghaleng riverbed near Mizoram capital Aizawl.
- It is the **third species of the Stoliczka genus** from India.
- The team named the snake Stoliczka vanhnuailianai, in honour of **Vanhnuailiana, a Mizo warrior**.
- Its common name is **Lushai Hills dragon snake**.

7. Himalayan yaks

Why in News?

National Research Centre on Yak (NRCY) in West Kameng district, Arunachal Pradesh has tied up with the National Insurance Company Ltd. for insuring Himalayan Yak.

About

- The Yak belong to the **Bovini tribe**, which also includes bison, buffaloes, and cattle. It can tolerate temperatures as **low as-40 degrees Celsius**.
- Yaks are **highly valued** by Himalayan peoples. According to Tibetan legend, the first yaks were **domesticated by Tibetan Buddhism** founder Guru Rinpoche.
- Habitat →
 - They are **endemic to the Tibetan Plateau** and the **adjacent high-altitude regions**.
 - Yaks are most comfortable **above 14,000 feet**. They climb to an elevation of 20,000 when foraging and usually don't descend any lower than 12,000 feet.
 - The yak-rearing states of India are **Arunachal Pradesh, Sikkim, Uttarakhand, Himachal Pradesh and Jammu & Kashmir**.
 - The total yak population in India is **about 58,000**.
- Protection Status of Wild Yak (Bos mutus) →
 - IUCN Red list status: **Vulnerable**
 - IUCN considers the **wild species of yak** under **Bos mutus**, while the domestic form is considered under Bos grunniens.
 - CITES: **Appendix I**
 - Indian WildLife (Protection) Act of 1972: **Schedule I**.

8. Lemru Elephant Reserve

Why in News?

Recently, the proposed Lemru Elephant Reserve in Chhattisgarh has become the subject of a controversy around its area.

About

- Location → The reserve is located in the **Cobra district of Chhattisgarh**.
- Aim → The reserve is aiming at **reducing human-animal conflict** and **destruction of property** in addition to providing a permanent habitat to the elephants.
- Earlier, the state government notified the reserve (Conservation Reserve) in October 2020 under **Section 36A of the Wild Life (Protection) Act, 1972** (WLPA).
- Section 36A has a **special provision** that gives the Union government a say in the process of notification in case the land to be notified as conservation reserve has areas belonging to the Centre.
- **Elephant reserves** are **not recognised** under the **WLPA**.

📍 Other Protected Areas in Chhattisgarh:

- Achanakmar Tiger Reserve.
- Indravati Tiger Reserve.
- Sitanadi-Udanti Tiger Reserve
- Kanger Valley National Park
- Badalkhol Tamor Pingla Elephant Reserve.

9. Bryum bharatiensis

Why in News?

A group of polar biologists from India stumbled upon a plant species, during an expedition to Antarctica, in 2017. However, it was only recently, that the scientists could confirm that the plant species had been discovered for the first time.

About

- The scientists from the Central University of Punjab discovered a **rare, dark green plant species**.
- The plant species was **found at the Larsemann Hills**, overlooking the Southern Ocean, near one of the **world's remotest research stations, Bharati**.
- The plant species was later **recognized as mosses**.
- The novel plant species, **discovered by Indian scientists in Antarctica** is hailed **Bryum Bharatiensis**, by the scientists. The newly found moss species is named after the Hindu goddess, **Bharati**, who also lends her name to India's research station in Antarctica.
- It is the **first time**, since the launch of the first research station in Antarctica, four decades ago, that India **discovered a new plant species**.

10. India's First Cryptogamic Garden

Why in News?

India's first cryptogamic garden housing nearly 50 species of lichens, ferns and fungi was inaugurated in Uttarakhand's Dehradun district.

About

- What is it? → A cryptogam is a **plant** that **reproduces with the help of spores**.
- Word Meaning → The word "Cryptogamae" implies '**hidden reproduction**', referring to the fact that they do not produce any reproductive structure, seed, or flower.
- Due to this, they are called "**flowerless**" or "**seedless plants**" or '**lower plants**'.
- Habitat → They need a **moist environment** to survive. These are present in **aquatic and terrestrial places**.
- **Algae, bryophytes, lichens, ferns** and **fungi** are the best-known groups of cryptogams.

- Classification of Cryptogams → Cryptogams are classified into **3 groups** based on the various structural and functional criteria of the plant.
 - Thallophyta → Thallophyta is a division of the plant kingdom including **primitive forms of plant life** showing a **simple plant body**. They **lack roots, stems, or leaves**.
 - It includes **algae-like Spirogyra, Sargassum**, etc.
 - They are predominantly aquatic and found **both in marine** as well as **freshwater habitats**.
 - Bryophyta → Bryophytes comprise a **limited variety of non-vascular land plants**. They prefer **moist habitats** but they can survive in dry environments too. Example- **hornworts, liverworts, mosses**, etc.
 - They occupy an intermediate position between algae and pteridophytes.
 - Since bryophytes can survive in both water and land, they are considered as the **'amphibians of the plant kingdom'**.
 - Pteridophyta → A pteridophyte is a **vascular plant** that **disperses spores**. It is the first plant to **have xylem and phloem**.
 - Ferns are the largest living group of primitive vascular plants.
- Other Types of Cryptogams →
 - Liches → Lichens are a **complex life form** that is a **symbiotic partnership** of two separate organisms, **a fungus and an algae**.
 - Fungi → It is a kingdom of usually **multicellular eukaryotic organisms** that are heterotrophs.

11. Tiger Corridor

Why in News?

The Rajasthan government will develop a tiger corridor connecting the newly proposed 'Ramgarh Tiger Reserve', Ranthambore Tiger Reserve, and Mukundra Hills Tiger Reserve.

About

- What is it? → A tiger corridor is a stretch of land which **links 2 or more tiger habitats**, allowing the movement of tigers, prey, and other wildlife.
- Without corridors, tiger habitat can **become fragmented**, and **tiger populations isolated**.

📍 Ramgarh Tiger Reserve

- Ramgarh Vishdhari wildlife sanctuary has **recently received a nod** from the National Tiger Conservation Authority's (NTCA) technical committee **to become the 4th Tiger reserve of Rajasthan**.

📍 Mukundra Hills Tiger Reserve (TR):

- It is located **near Kota, Rajasthan**. The Mukundra Hills was declared a **Wildlife Sanctuary in 1955** and a **National Park (Mukundra Hills (Darah) National Park) in 2004**.
- River → The reserve is located on the **eastern bank of the Chambal River** and is **drained by its tributaries**.
- Mountains → The park is situated in a **valley formed by two parallel mountains** viz. Mukundra and Gargola.
- The Tiger Reserve constitutes **3 Wildlife Sanctuaries** viz; **Darah, Jawahar Sagar**, and **Chambal**.

📍 Ranthambore Tiger Reserve:

- Ranthambore National Park and Tiger Reserve is **located in Rajasthan**.
- River → The park is bounded to the **north by the Banas River** and to the **south by the Chambal River**.
- Named after → The park is named after the **historic Ranthambore Fort**, which lies within the park.
- Comprises → Two protected areas namely **Kailadevi Wildlife Sanctuary** and **Sawai Mansingh Wildlife Sanctuary** are **linked by narrow corridors** to the core of Ranthambore NP and all these together comprise the Tiger Reserve.

12. Vaquita Porpoises

Why in News?

Mexico's decision to loosen its policy of keeping a fishing free zone around a protected area in the Gulf of California region was a "setback" to keeping alive a near-extinct vaquita porpoise species.

About

- Vaquita porpoise, the **world's rarest** and **the smallest marine mammal**, is on the edge of extinction.
- It is also known as "**the panda of the sea**" for the distinctive black circles around its eyes. This porpoise was **discovered in 1958**.
- It is unique among the porpoises as it is the only species of that family **found in warm waters**, and the **size of the dorsal fin** is believed to be an adaptation to that, allowing for **extra body heat to dissipate**.
- Habitats → Found only in the **northern Gulf of California** (Sea of Cortez) in Mexico. Most commonly seen in shallow waters **up to 50 metres deep**.
- IUCN Status → **Critically Endangered**.
- Threats → They are **caught** and **drowned in gillnets** set up by poachers to catch totoaba, an endangered species of marine fish sought by Chinese buyers on the black market for its prized swim bladders.
- This species **die more each year in fishing nets** than are being born.

13. Gecko Species

Why in News?

Recently, Odisha's forest officials have announced measures to preserve the newly discovered tiny gecko species of the genus Hemiphyllodactylus.

About

- This species was first spotted in the **Ganjam district of Odisha** in 2014, it is also called Ganjam Slender Gecko.
- It is the species of **Hemiphyllodactylus minimus** which is the smallest member of the genus.
- It is the **first non-island species** of the genus which is **distributed in lowland habitats**, the **second from the northeastern ghats** and 41st globally.

👉 Geckos

- Geckos are reptiles and are found on **all the continents except Antarctica**. These colourful lizards have adapted to habitats **from rainforests, to deserts, to cold mountain slopes**.
- Most geckos are **nocturnal**, which means they are **active at night**, but day geckos are active during the day and depend on insects, fruits, and flower nectar.
- Geckos are spread across six families: **Carphodactylidae**, **Diplodactylidae**, **Eublepharidae**, **Gekkonidae**, **Phyllodactylidae**, and **Sphaerodactylidae**.

👉 Other Species of Gecko in India:

- **Indian Golden Gecko** (family Gekkonidae) is **native to India** (Tamil Nadu, Orissa, Andhra Pradesh). It is listed in **Schedule 1 of WPA** (Wildlife Protection Act).
 - IUCN Red List: **Least Concern (LC)**.
- **Tokay Gecko** (family Gekkonidae) is widespread in the Indo-Malayan region Protection Status: **Schedule 4** of WPA.
 - IUCN Red List: **Least Concern (LC)**.

14. New Commission for Air Quality Management

Why in News?

The Ministry of Environment, Forests and Climate Change (MoEFCC) is set to table the Commission for Air Quality Management in the National Capital Region and Adjoining Areas Bill, 2021 in Parliament during the Monsoon Session.

About Changes

- The government has **decriminalised the act of stubble burning** and withdrawn the clause for possible jail time.
- However, **environmental compensation fees are levied** on those who are found to be engaged in stubble burning, including farmers.

📌 Commission for Air Quality Management (CAQM)

- The Commission was first formed by an **ordinance in October 2020**.
- The erstwhile **Environment Pollution (Prevention and Control) Authority**, or EPCA had been **dissolved** to make way for the Commission.
- The Commission will be a **statutory authority**.
- The Commission will **supersede bodies** such as the **central and state pollution control boards** of Delhi, Punjab, Haryana, UP and Rajasthan.
- Composition →
 - The Commission will be headed by a **full-time chairperson** who has been a Secretary to the Government of India, or a Chief Secretary to a State government.
 - The chairperson will hold the **post for three years** or **until s/he attains the age of 70 years**.
 - It will have **members from several Ministries** as well as **representatives** from the stakeholder States.
 - It will have **experts from** the Central Pollution Control Board (**CPCB**), Indian Space Research Organisation (**ISRO**) and **Civil Society**.
- Powers and functions →
 - It will have the **powers to issue directions** to these state governments on issues pertaining to air pollution.
 - It will **entertain complaints as it deems necessary** for the purpose of protecting and improving the quality of the air in the NCR and adjoining areas.
 - It will also **lay down parameters** for control of air pollution.
 - It will also be in **charge of identifying violators, monitoring factories** and **industries** and any other polluting unit in the region, and will have the powers to shut down such units.
 - It will also have the **powers to overrule directives issued by the state governments** in the region, that may be in violation of pollution norms.

15. Great Indian Bustards

Why in News?

The Central government informed the Rajya Sabha that there were no Great Indian Bustards (GIB) in Kutch Bustard Sanctuary (KBS) in Gujarat's Kutch district as on January 1 this year.

About

- Scientific Name → **Ardeotis nigriceps**.
- The Great Indian Bustard (GIB), the **State bird of Rajasthan**, is considered India's most critically endangered bird.
- It is considered the **flagship grassland species**, representing the health of the grassland ecology.
- It is **one of the heaviest flying birds** in the world.
- Habitat → Its population is confined mostly to **Rajasthan** and **Gujarat**. Small populations occur in **Maharashtra**, **Karnataka** and **Andhra Pradesh**.
- Protection Status →

- International Union for Conservation of Nature Red List: **Critically Endangered**
- Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES): **Appendix 1**
- Convention on Migratory Species (CMS): **Appendix I**
- Wildlife (Protection) Act, 1972: **Schedule 1**.
- Threats → The bird is under constant threats **due to collision/electrocution with power transmission lines, hunting** (still prevalent in Pakistan), **habitat loss** and **alteration** as a result of widespread agricultural expansion, etc.

Government Initiatives for Conservation:

- The Great Indian Bustard Project: Launched **by the Rajasthan government** for **identifying and fencing off bustard breeding grounds** in existing protected areas as well as providing secure breeding enclosures in areas outside protected areas.
- It is kept under the species recovery programme under the **Integrated Development of Wildlife Habitats** of the Ministry of Environment, Forests and Climate Change (MoEFCC).
- The MoEFCC has also launched a program called '**Habitat Improvement and Conservation Breeding of Great Indian Bustard-An Integrated Approach**'.

16. Maguri-Motapung Wetland

Why in News?

Recently, casualties have been reported after clashes on the issue of compensation for damages to Maguri-Motapung wetland (or beel).

About

- The wetland derives its name from '**Magur**', local word for the catfish **Clarius batrachus**, once **found here in abundance**. The second half of the name **comes from a village** nearby and Beel is the Assamese word for wetland.
- It is located **close to the Dibru Saikhowa National Park** in Upper Assam's Tinsukia district.
- The wetland regime is a **critical part of the Dibru-Saikhowa Biosphere Reserve**, an ecological corridor to Namdapha National Park and sustains the ecological integrity of the Indo-Burma Biodiversity Hotspot.
- This landscape is mostly **water** and **comprises wetlands, swamp forests** and **grasslands**.
- It is home to **37 species of mammals, 503 species of birds, 42 species of reptiles, 17 species of amphibia, 104 species of fish** and 105 species of butterflies, according to one 2016 survey.
- It was declared an **Important Bird and Biodiversity Area (IBA)** in **1996** by the Bombay Natural History Society.

17. Gross Environment Product

Why in News?

The Uttarakhand government recently announced it will initiate valuation of its natural resources in the form of 'Gross Environment Product' (GEP), said to be along the lines of Gross Domestic Product (GDP).

About

- It was established back in **1997** by ecological economists like **Robert Costanza at the global level**.
- It is an **assessment system** to measure ecological status.
- It is considered as the **product and service value** that the **ecosystem provides for human welfare and economic and social sustainable development**, including provisioning, regulating and cultural ecosystem services.
- Overall, GEP accounts for the **economic value of the ecosystem** in providing products and services, and it is one of the components of **green GDP**.
- Green GDP is an indicator of **economic growth with environmental factors** taken into consideration along with the standard GDP of a country. It factors biodiversity losses and costs attributed to climate change.

- The term “**ecosystem services**” was **coined in 1981** to **attract academics towards this aspect**, its definition is still in the process of evolution.
- Ecosystems that can be **measured include natural ecosystems** such as forests, grassland, wetland, desert, freshwater and ocean, and artificial systems that are based on natural processes like farmland, pastures, aquaculture farms and urban green land, etc.

18. Agar Wood

Why in News?

Recently, the Tripura government has taken all-out initiatives to encourage farmers for commercial cultivation of agar.

About

- Scientific Name → **Aquilaria malaccensis**.
- It is **native to North East India** and the distribution ranges from the foothills of the Himalayas to Papua New Guinea.
- It is a natural incense and a product of religious and cultural significance and is also known as the ‘**Wood of the Gods**’.
- It is an **economically important** and **fast-growing** evergreen tree species.
- It is listed as **critically endangered** on the IUCN Red List and is listed on **Appendix II of CITES**.
 - It is the most expensive raw material in the world.
 - The **fragrant Agarwood** is formed due to **complex biotic, abiotic** and **stress-induced** resin on the Aquilaria trees.
 - In the **formation of oils**, the wood of the tree must first become infected with mold named **Phialophora Parasitica**.
 - Prior to the infection, the healthy wood was **pale, odourless** and **relatively light in colour**.
 - However, as the **infection progresses**, the tree starts **producing a dark aromatic resin** which is called **aloes** in response to the attack of the external forces, which results in a very dense, dark, resin-embedded wood.
 - This fragrant dark resinous wood, Agarwood is **used in incense, perfume** and **small carvings**.
- It is said that the state capital of Tripura, **Agartala** has **derived its name from Agarwood**.

19. Green Sohra Afforestation Campaign

Why in News?

Recently, the Union Home Minister has launched the Green Sohra Afforestation Campaign and Greater Sohra Water Supply Scheme at Sohra.

About

- It will be run **by the Meghalaya Government** with the help of Assam Rifles.
- It will greatly **benefit eco-tourism** and will also **boost tourism** in the state.
- The campaign gave the slogan “**Evergreen Northeast**”, underlining the importance of afforestation and tree plantation.
- It is an ambitious project to **make Cherrapunji green again** and the entire area of Cherrapunji is going to be adopted by Assam Rifles for the purpose of plantation.

Greater Sohra Water Supply Scheme

- It is a **part of** the Prime Minister's ambitious project **Jal Jeevan Mission**.
- It will be **implemented by** the **Ministry of DoNER** and the **Government of Meghalaya**, under the North-East Special Infrastructure Scheme.
- It will provide **pure drinking water** through taps to every household.

- It has set the target of providing **pure drinking water to every household** in the state of Meghalaya and the country before the completion of 75 years of Independence and 50 years of Meghalaya.
- It is an **ambitious programme** to provide **drinking water to 280,000 families** in the state of Meghalaya, which is clubbed into 1874 small projects.

Cherrapunji

- Cherrapunji or Sohra is a **subdivisional town** in the **East Khasi Hills district in Meghalaya**. It is the traditional capital of ka hima Sohra (Khasi tribal kingdom).
- Sohra has often been credited as being the **wettest place on Earth**, but for now nearby Mawsynram currently holds that distinction.
- However, Cherrapunji still holds **the all-time record** for the **most rainfall** in a calendar month and in a year.

20. Earth Overshoot Day

Why in News?

Humanity has again used up all biological resources that the Earth regenerates during the entire year by 29th July 2021, according to the World Wide Fund for Nature (WWF).

About

- It marks the date when **humanity's demand for ecological resources in a given year exceeds what Earth can regenerate in that year**.
- Humanity currently **uses 74 per cent more** than what the planet's ecosystems can regenerate (or equal to 1.7 Earths).
- From this Day until the end of the year, **humanity operates on ecological deficit spending**.
- This spending was currently some of the largest since the world entered into ecological overshoot in the early 1970s.
- This is worryingly the same date that the **world reached in 2019**.
- This means that the **modest gains accrued from the Covid-19** as far as humanity's ecological footprint is concerned have been lost.
- Causes →
 - The prime driver was the **6.6 per cent increase** in the **global carbon footprint in 2020**.
 - There was also a **0.5 per cent decrease** in '**global forest biocapacity**' due to a rise in deforestation of the Amazon's rainforests.

World Wide Fund for Nature (WWF)

- It is an **international non-governmental organization**
- Founded in → **1961**.
- Headquarter — **Gland (Switzerland)**.
- Aim → **wilderness preservation** & the **reduction of human impact** on the environment
- It is the **world's largest conservation organization**
- Reports & programmes → **Living Planet Report**, **Earth hour**, **Debt-for-nature swaps**, **Marine Stewardship Council(MSC)**, **Healthy GrownPotato**.

21. Global Assessment Report (GAR) on Drought 2021

Why in News?

The United Nations Office for Disaster Risk Reduction (UNDRR) recently released a report titled Global Assessment Report (GAR) on Drought 2021.

About Drought

- The Intergovernmental Panel on Climate Change (IPCC) defines **drought as a period of abnormally dry weather long enough to cause a serious hydrological (water) imbalance.**
- It results from a **shortfall of precipitation (rainfall) over a certain period,** from the inadequate timing or the ineffectiveness of the precipitation.
- It also results from a **negative water balance** due to an increased atmospheric water demand following high temperatures or strong winds.
- Human activities resulting in water scarcity and changes in the climate system play a key role in drought intensification and propagation.

Global Assessment Report (GAR) on Drought 2021

- The report explores the **current understanding of drought risk,** its drivers and the ways in which people, economies and ecosystems are exposed and are vulnerable.
- It looks into **rising water stress across the globe and resulting migration and desertification.**
- The report also **provides recommendations** for reducing drought risks and mitigating the impacts on communities and economies.

Highlights of the report

- Drought impacts are **intensifying as the world moves towards being 2°C warmer.** Climate change has already led to more intense and longer droughts in some regions of the world.
- Projections indicate more **frequent and more severe droughts over wide parts of the world,** in particular most of Africa, central and South America, central Asia, southern Australia, southern Europe, Mexico and US.
- The extent and severity of these projected droughts **largely depend on the magnitude of the temperature rise.**

United Nations Office for Disaster Risk Reduction

- Headquartered in Geneva, the United Nations Office for Disaster Risk Reduction (UNDRR) was **created in 1999** to ensure the **implementation of the International Strategy for Disaster Reduction.**
- It coordinates international efforts in disaster risk reduction and oversees the implementation of the **Sendai Framework for Disaster Risk Reduction 2015-2030.**
- The Sendai Framework is a **15-year voluntary people-centred approach to disaster risk reduction.**
- UNDRR brings governments, partners and communities together to reduce disaster risk and losses to ensure a safer, more sustainable future.

Science and Technology

1. Fund for Industrial Research Engagement(FIRE) Program

Why in News?

The first-of-its-kind research initiative called 'Fund for Industrial Research Engagement (FIRE)' is launched by the Science and Engineering Research Board (SERB).

About

- Collaboration → **Department of Science and Technology (DST), Govt and Intel India.**
- Aim → aim to **promote innovative technology solutions and strengthen academic research** through collaboration with key research and development(R&D) organizations in India.
- Key Features of the FIRE Program →
- The program intends to **select highly impactful research projects** in every cycle (typically once or twice a year) which have breakthrough potential at a national or global level.
- These projects will be in the **space of Artificial Intelligence (AI)/Machine Learning (ML), platform systems**, circuits & architecture, Internet of Things (IoT), security, and so on from edge to cloud.
- Moreover, the selected projects will **get support with funding, mentoring and industry connect.**

Science and Engineering Board(SERB):

- SERB is a **statutory body** established in **2009**. It functions under the Department of Science and Technology, **Ministry of Science and Technology.**
- Functions → It was set up for **promoting basic research** in science and engineering. It also **provides financial assistance** to scientists, academic institutions, Research and Development laboratories, industrial concerns, and other agencies for such research.
- Chaired by → It is **chaired by** the **Secretary to the Government of India** in the Department of Science and Technology. Further, it has other senior government officials and eminent scientists as members.

2. Discrete auroras on Mars

Why in News?

The UAE's Hope spacecraft, which is orbiting Mars since February this year, has captured images of glowing atmospheric lights known as discrete auroras.

About aurora on Earth

- Auroras are caused when **charged particles ejected** from the Sun's surface — called the solar wind — **enter the Earth's atmosphere.**
- These particles are **harmful**, and our planet is **protected by the geomagnetic field**, which preserves life by shielding us from the solar wind.
- However, at the north and south poles, some of these solar wind particles are able to **continuously stream down**, and **interact with different gases** in the atmosphere to cause a **display of light in the night sky.**
- This display, known as an **aurora**, is seen from the **Earth's high latitude regions** (called the auroral oval), and is **active all year round.**
- Aurora borealis and australis →
 - In the **northern part** of our globe, the polar lights are called **aurora borealis** or **Northern Lights.**
 - In the **south**, they are called **aurora australis** or **southern lights**, and are visible from high latitudes in Antarctica, Chile, Argentina, New Zealand and Australia.

How are Martian auroras different?

- Unlike auroras on Earth, which are seen only near the north and south poles, discrete auroras on Mars are **seen all around the planet at night time**.
- Unlike Earth, which has a strong magnetic field, the **Martian magnetic field has largely died out**. This is because the molten iron at the interior of the planet– which produces magnetism– has cooled.

Other Mars Missions

- NASA's Mars 2020 Mission (**Perseverance Rover**)
- **Tianwen-1**: China's Mars Mission
- India's **Mars Orbiter Mission** (MOM) or Mangalyaan

3. dbGENVOC

Why in News?

DBT-National Institute of Biomedical Genomics (NIBMG), Kalyani has created world's first database of genomic variants of oral cancer. NIBMG has made this database publicly-accessible.

About

- It is the **world's first of its kind database** of genomic variations in oral cancer created by National Institute of Biomedical Genomics (**NIBMG**).
- dbGENVOC has a **built-in powerful search engine**. So, it is a **browsable free resource**.
- It contains **somatic and germline variants** derived from whole exome sequences of oral cancer patients and also whole genome sequences of patients from India, the USA and analyzed by TCGA-HNSCC project.
- It allows a reasonable extent of **statistical and bioinformatic analysis** to be carried out online.
- The repository will be **updated annually** with **variation data** from new oral cancer patients from different regions of India and Southeast Asia.

📍 National Institute of Biomedical Genomics

- The NIBMG has been established as an **autonomous institution** under the **Department of Biotechnology**.
- This is the first institution in India explicitly **devoted to research, training, translation & service**, and **capacity-building** in Biomedical Genomics.
- Location: It is located in **Kalyani, West Bengal**.

📍 Oral Cancer

- Oral cancer is the **most prevalent form of cancer** among men in India, largely fuelled by tobacco-chewing.
- **Tobacco-chewing causes changes** in the genetic material of cells in the oral cavity. These **changes** (mutations) **precipitate oral cancer**.
- Researches to **identify those genetic mutations** that **drive oral cancer** are ongoing. Such driver mutations may be variable across populations.

📍 Also Remember

- Somatic Cell → A Somatic Cell is **any cell of the body** except sperm and egg cells. Somatic cells are diploid, meaning that they **contain two sets of chromosomes**, one inherited from each parent. **Mutations in somatic cells** can **affect the individual**, but they are not passed onto offspring.

- Germline Cells → A Germline Cells **are the sex cells** (eggs and sperm) that are **used by sexually reproducing organisms** to **pass on genes from generation to generation**. Egg and sperm cells are called germ cells, in contrast to the other cells of the body that are called somatic cells.

4. Concentrated Solar Thermal(CST) Testing Facility

Why in News?

The Ministry of Science and Technology has announced the setting up of a Concentrated Solar Thermal(CST) Testing Facility at Hyderabad.

About

- Set up by → the **International Advanced Research Centre for Powder Metallurgy and New Materials**(ARCI).
- Purpose → The facility will help the solar industry to **test the capability** and **performance of solar thermal components** like solar receiver tubes, heat transfer fluids, and concentrating mirrors.
- The facility will **validate the components** by **parallelly comparing the performance** (heat gain and heat loss properties) of them with varying operating parameters (e.g. flow rates of Heat Transfer Fluids(HTFs), operating temperature, pressures, etc.).

📁 About ARCI

- International Advanced Research Centre for Powder Metallurgy and New Materials(ARCI) was **established in 1997**.
- Ministry → It is an **Autonomous Research and Development Centre** of the Department of Science and Technology(DST).
- Mandate → ARCI's **mandate is**
 - Development of High-Performance Materials and Processes for Niche Markets
 - Demonstration of Technologies at Prototype/pilot scale
 - Transfer of Technology to Indian Industry.

5. Enceladus

Why in News?

A recently published paper has concluded that there may be unknown methane-producing processes on Enceladus (6th largest moon of Saturn).

About

- NASA's Cassini spacecraft detected an unusually **high concentration of methane, along with carbon dioxide** and **dihydrogen**, in Saturn's moons by flying through their plumes.
- New statistical methods are being used to understand if **methanogenesis** (methane production by microbes) **could explain the molecular hydrogen** and **methane on Enceladus**.
 - The models **combined geochemistry and microbial ecology** to decode what possible processes could explain these observations.
 - Microorganisms called **methanogens** are **capable of generating methane** as a metabolic byproduct and do not require oxygen to live.
 - They are known to **survive in high temperatures** (even on Mars too).
 - They have been widely studied to understand if they can be a **contributor to global warming**.
- Other Methane Producing Processes on Enceladus
 - It could be formed by the **chemical breakdown** of **organic matter present in Enceladus' core**.
 - **Hydrothermal processes** could help the formation of carbon dioxide and methane.

About Cassini Mission

- Launched in → **1997**.
- Involved agency → The mission is a cooperation between **NASA**, **the European Space Agency** and the **Italian Space Agency**.
- This was the **first landing** ever accomplished in the outer Solar System.
- Cassini is the **fourth space probe to visit Saturn** and the first to enter orbit.
- Its design includes a **Saturn orbiter** and a **lander** for the moon Titan. The lander, called **Huygens**, landed on Titan in 2005.

6. Zika Virus Disease

Why in News?

Recently, Kerala's Thiruvananthapuram has reported Zika virus cases and the collected samples have been sent to the National Institute of Virology, Pune.

About

- Zika virus is a **mosquito-borne flavivirus** that was first identified in **Uganda in 1947** in monkeys. It was later identified in **humans in 1952** in Uganda and the United Republic of Tanzania.
- Transmission → ZVD is caused by a virus transmitted primarily **by Aedes mosquitoes (AM)**, **mainly Aedes aegypti**.
 - This is the **same mosquito** that **transmits dengue, chikungunya** and **yellow fever**.
 - Zika virus is also transmitted **from mother to fetus** during pregnancy, through sexual contact, transfusion of blood and blood products, and organ transplantation.
- Symptoms →
 - Mild symptoms with **fever, rash, conjunctivitis, muscle** and **joint pain, malaise** or **headache**.
 - The incubation period of Zika virus disease is estimated to be **3–14 days** and the symptoms typically **last for 2–7 days**.
 - Most people with Zika virus infection do **not develop symptoms**, according to the World Health Organization (WHO).
- Treatment → There is **no specific medicine** or **vaccine** for it.

7. Lymphatic Filariasis

Why in News?

Recently, the Maharashtra government has started a drug administration drive for the elimination of Lymphatic Filariasis (LF) and become the first State in the country to resume giving rounds of the drug after the second wave of Covid-19.

About

- Globally considered as a **neglected tropical disease (NTD)**.
- It is a **parasitic disease** caused by microscopic, thread-like worms. **Wuchereria bancrofti**, is responsible for 90% of the cases.
- The adult worms only **live in the human lymph system**.
- The lymph system **maintains the body's fluid balance** and **fights infections**.
- Transmission → It is spread from **person to person by mosquitoes**.
- It is a leading cause of **permanent disability** worldwide.

🏠 National Programme for Elimination of Lymphatic Filariasis

- Goal: **Elimination of Lymphatic Filariasis in India by 2015. Later extended to 2021**.
- Twin pillar strategies of Mass Drug Administration (MDA) for interruption of transmission.

- Under it, **anti-filaria drugs** are administered to the eligible population once a year.
- A combination of two drugs, **diethylcarbamazine** (DEC) and **albendazole**, or three — **Ivermectin**, **DEC**, and **Albendazole** is being administered.

8. VIPER Mission

Why in News?

NASA has announced the launch of the Volatiles Investigating Polar Exploration Rover(VIPER) Mission in 2023.

About

- What is it? → VIPER is a **mobile robot**.
- It is the **first resource mapping mission** on any other celestial body.
- NASA's Commercial Lunar Payload Services (CLPS) will be providing the **launch vehicle** and **lander** for **what's going to be a 100-day mission**.
- Objectives of the mission →
 - To **explore** the **Moon's South Pole region**.
 - Help create **lunar resource maps**.
 - **Evaluate the concentration of water** as well as other potential resources on its surface.
- Significance of the mission →
 - VIPER's findings **will inform** "future landing sites under the Artemis program by helping to determine locations where water and other resources can be harvested" to sustain humans over extended stays.
- Celestial Body is any natural body **outside the Earth's atmosphere**. Easy examples are the **Moon**, **Sun**, and the **other planets** of our solar system.

9. Guillain-Barré Syndrome

Why in News?

Recently, the US regulators have added that Johnson & Johnson's COVID-19 vaccine may be associated with a small increased risk of Guillain-Barré syndrome.

About

- It is a rare condition in which the body's **immune system attacks nerve cells**.
- GBS is **neither contagious nor hereditary**. It is most common in adults over 50.
- Cause → According to the CDC, the causes of GBS are **not yet fully known** but in most cases, GBS is **preceded by an infection**. This could be a bacterial or viral infection.
- GBS may also be triggered by vaccine administration or surgery.
- Symptoms →
 - The syndrome can **affect the peripheral nerves** that control muscle strength as well as those transmitting feelings of pain, temperature, and touch, which can result in **muscle weakness** and **loss of sensation** in the legs and/or arms.
 - In the past, patients of Middle East Respiratory Syndrome showed GBS symptoms, as did those infected with Zika, HIV, Herpes virus and Campylobacter Jejuni.
- Treatment → **Intravenous immunoglobulin** (IVIG) and **Plasma Therapy**.
- Types of Guillain-Barré Syndrome →
 - Acute inflammatory demyelinating polyradiculoneuropathy (**AIDP**)
 - Miller Fisher syndrome (**MFS**)
 - Acute motor axonal neuropathy (**AMAN**) and acute motor-sensory axonal neuropathy (**AMSAN**).

10. Suborbital Flight

Why in News?

Recently, a six person crew on Virgin Galactic's VSS Unity spaceship undertook a brief trip to the "edge of space" which is known as Suborbital Flight.

About

- When an object travels at a **horizontal speed of about 28,000 km/hr** or more, it **goes into orbit**. Satellites need to reach that threshold speed in order to orbit Earth.
- Such a **satellite** would be accelerating towards the Earth due to gravity, but its **horizontal movement is fast enough to offset the downward motion** so that it moves along a circular path.
- This is because any object traveling **slower than 28,000 km/hr must eventually return to Earth**.
- However, Unity spacecraft traveled far enough to reach the "**edge of space**". These are suborbital flights because they will **not be traveling fast enough to orbit Earth once they reach there**.
- Such a trip allows space travelers to **experience a few minutes of "weightlessness"**.

📍 Edge of Space/Karman Line:

- The most widely accepted **boundary of space** is known as the **Karman line**. The Fédération Aéronautique Internationale (FAI) defines Karman Line as the **altitude of 100 kilometres** above Earth's mean sea level.
- However, other organizations do **not use this definition**. There is no international law defining the edge of space, and therefore the limit of national airspace.

11. Few Electron Bubbles

Why in News?

Recently, scientists of the Indian Institute of Science (IISc) have experimentally shown the existence of two species of Few Electron Bubbles (FEBs) in superfluid helium for the first time.

About

- FEBs are **nanometre-sized cavities in liquid helium** containing just a handful of free electrons.
- An electron injected into a superfluid helium creates a **Single Electron Bubble (SEB)**, a cavity that is **free of helium atoms** and **contains only the electron**.
- There are also **Multiple Electron Bubbles (MEBs)** that contain thousands of electrons.
- The number, state and interactions between free electrons **dictate the physical and chemical properties** of materials.
- Creation Methodology
 - The researchers first **applied a voltage pulse to a tungsten tip** on the surface of liquid helium and then **generated a pressure wave** on the charged surface using an ultrasonic transducer.
 - This allowed them to **create 8EBs and 6EBs**, two species of FEBs containing eight and six electrons respectively.
 - These were found to be **stable** for **at least 15 milliseconds** (quantum changes typically happen at much shorter time scales) which would enable researchers to trap and study them.
- Significance → FEBs can **help scientists decipher phenomena** like turbulent flows in superfluids and viscous fluids, or the flow of heat in superfluid helium.
 - FEBs can serve as a **useful model to study how the energy states of electrons and interactions** between them in a material influence its properties.

- Understanding the **formation of FEBs** can provide insights into the self-assembly of soft materials, which can be important for developing next-generation quantum materials.

12. Beresheet 2

Why in News?

SpaceIL, the non-profit Israeli initiative has secured \$70 million fund to make a second attempt at a lunar landing through Beresheet Project.

About

- Beresheet 1 or “**Genesis spacecraft**” **built by SpaceIL** suffered technical malfunctions and crashed on the moon in 2019.
- Beresheet 2 was announced in **2020**, aiming at **landing an unmanned craft on the moon in 2024**.
- It plans to **set new global space records** through a **double landing on the moon** and the instalment of the lightest ever moon landers, each weighing 60 kg without fuel.
- The objective of this mission is to **conduct experiments** and **collect data** on behalf of school students.
- It will be composed of three spacecraft - **an orbiter named Mothership’** and **two landers** - that would circle the moon for years.
- Significance - The mission hopes to **follow China** in **becoming only the second to successfully land** on the far side of the moon.
- **Israel** would become the **fourth nation to land a spacecraft** on the moon, only after the former Soviet Union, the US and China.

13. Ultraviolet-C Technology

Why in News?

Recently, it has been decided that Ultraviolet-C (UV-C) air duct disinfection systems would be installed in Parliament for mitigation of Covid-19.

About

- Developed by → **CSIR-CSIO** (Central Scientific Instruments Organisation).
- It is designed to **fit into any existing air-ducts** and **the virucidal dosages** using UV-C intensity and residence time can be optimised according to the existing space.
- The virus is **deactivated in any aerosol particles** by the calibrated levels of UV-C light.
- It can be used in **auditoriums, malls, educational Institutions, AC buses, and in railways**.

👉 UV radiation

- UV radiation is the **portion of the Electromagnetic spectrum** between **X-rays and visible light**.
- The most common form of UV radiation is **sunlight**, which produces **three main types of UV rays: UVA, UVB, UVC**.
- **UVA rays** have the **longest wavelengths**, followed by UVB, and UVC rays which have the shortest wavelengths.
- While **UVA and UVB rays** are **transmitted through the atmosphere**, all UVC and some UVB rays are absorbed by tUVGI is used in a **variety of applications**, such as **food**, air, and **water disinfection**.
- Is it safe for humans? → Researchers noted that the device was specifically developed to **disinfect non-living things**. Therefore, UV-C radiation used in this device **could be harmful to the skin** and **eyes of the living beings**.
- he Earth’s ozone layer. So, most of the UV rays you come in contact with are UVA with a small amount of UVB.
- Usage →
 - UV radiations are normally **used to kill microorganisms**.

- Particularly, **UV-C**, also known as Ultraviolet germicidal irradiation (**UVGI**) is a **disinfection method** that uses short-wavelength ultraviolet light **to kill or inactivate microorganisms by destroying their nucleic acids** and disrupting their DNA, leaving them unable to perform vital cellular functions and stops their replication.
- UVGI is used in a **variety of applications**, such as **food**, air, and **water disinfection**.
- Is it safe for humans? → Researchers noted that the device was specifically developed to **disinfect non-living things**. Therefore, UV-C radiation used in this device **could be harmful to the skin** and **eyes of the living beings**.

14. Cytomegalovirus

Why in News?

Sporadic cases of cytomegalovirus (CMV) are being reported from Delhi, Pune, Bengaluru, making it the latest post-covid complication.

About

- Cytomegalovirus(CMV) is also known as **Human Herpesvirus 5** (HHV-5).
- It is a **common herpes virus** that often causes natural infections in childhood and remains asymptomatic in patients with normal immunity.
- Once infected, the virus is **retained in the body for life**.
- Most people don't realise that they have been infected by CMV because it **rarely causes problems** in **healthy people**.
- The symptoms usually surface only when carriers become **immuno-compromised**, such as those suffering from cancer, AIDS, or those who have recently had transplants.
- Symptoms of CMV →
 - The symptoms of CMV range from **fever and fatigue to severe symptoms** involving the eyes, brain or other internal organs.
 - These symptoms include **gastrointestinal bleeding** (blood in stools), **diarrhea**, **swollen glands**, **mouth ulcers**, **inflamed liver**, and **inflammation of the brain** (encephalitis).
- How is CMV transmitted? →
 - CMV spreads between humans via contact with someone who has the disease. Transmission happens **through sexual contact** and **bodily fluids** such as urine, blood, saliva, tears, and feces.
 - **Expecting mothers** who develop an active CMV infection during pregnancy **can pass on the virus to their babies**, which is known as **congenital CMV**. Children born with it may or may not show symptoms.
- Treatment → There is **no specific cure** for CMV, but there are medicines that can help **treat the symptoms**. However, medication can suppress the virus, it cannot remove it completely from the body as it stays lifelong in your system.

15. Hubble Telescope

Why in News?

Recently, the National Aeronautics and Space Administration (NASA) has planned to fix a glitch in the Hubble space telescope, which is currently running in "safe mode".

About

- Built by → the United States space agency **NASA**, **with contributions from the European Space Agency**.
- The Hubble Space Telescope is a **large telescope** in space. NASA launched Hubble in **1990**.
- Hubble is the only telescope designed to be **serviced in space by astronauts**.
- Expanding the frontiers of the visible Universe, the Hubble Space Telescope **looks deep into space with cameras that can see across the entire optical spectrum from infrared to ultraviolet**.
- The Hubble Space Telescope makes **one orbit around Earth every 95 minutes**.
- Major Discoveries →

- It has helped in discovering the **moons around Pluto**.
- Evidence regarding the **existence of black holes** has emerged based on the observations through Hubble.
- The **birth of stars** through turbulent clouds of gas and dust have also been observed.
- The Hubble telescope made observations of **six galaxies merging together**.
- On February 11, 2021, the Hubble made observations of **small concentrations of black holes**.

16. Pegasus Spyware

Why in News?

Recently, it has been reported that Pegasus, the malicious software, has allegedly been used to secretly monitor and spy on an extensive host of public figures in India.

About

- What is it? → It is a **spyware** created **by NSO Group**, an Israeli cybersecurity firm **founded in 2010**.
- Pegasus spyware can **hack any iOS** or **Android device** and **steal a variety of data** from the infected device.
- It works by **sending an exploit link** and if the **target user clicks** on the link, the **malware** or **the code that allows** the surveillance is installed on the user's phone.
- Once Pegasus is **installed**, the attacker has **complete access to the target user's phone**.
- Worrying Aspect of Pegasus Spyware → One of the worrying aspects of the Pegasus spyware is **how it has evolved** from its earlier **spear-phishing methods** using text links or messages **to 'zero-click attacks**.

What is a Zero Click Attack?

- A zero-click attack helps spyware like Pegasus **gain control over a device without human interaction** or **human error**.
- So all awareness about **how to avoid a phishing attack** or which **links not to click is pointless** if the target is the system itself.
- Most of these attacks **exploit software** that receives data even before it can determine whether what is coming in is trustworthy or not, like an email client.

17. Moon Wobble

Why in News?

US coastlines will face increasing flooding in the mid-2030s due to a regular lunar cycle called the wobble effect that will magnify rising sea levels caused by climate change.

About

- When the Moon makes its elliptical orbit, its **velocity varies** and **alters causing our perspective of the "light side"** to appear at slightly different angles.
- This is what it calls the **Moon's wobble** or that is how it appears to our eyes.
- It is a **cyclical shift in the moon's orbit**, it is a **regular swaying** (Oscillation) in the moon's orbit.
- It was **first documented way back in 1728**. This wobble takes over an **18.6-year period** to complete. It acts as a background of sea level rise.
- Impact of Wobble on Earth →
 - The moon wobble **impacts the gravitational pull of the moon**, and therefore, indirectly influences the ebb and flow of tides on the Earth.
 - Each wobble cycle has the **power to amplify** and **suppress the tides on Earth**.
 - During half of the Moon's orbit of 18.6 years, the **Earth's regular tides are suppressed** i.e. high tides are lower than normal and low tides higher than normal (Current situation).
 - In the other half, the effect is reversed, which is called the tide-amplifying phase of the Moon.

18. NEA Scout

Why in News?

NASA announced that its new spacecraft, named NEA Scout, has completed all required tests and has been safely tucked inside the Space Launch System (SLS) rocket.

About

- NEA Scout is one of several payloads that will **hitch a ride on Artemis I**, which is expected to be **launched in November**.
- Artemis I will be an **uncrewed test flight** of the Orion spacecraft and SLS rocket.
- Under the Artemis programme, NASA has aimed to **land the first woman on the Moon in 2024** and also establish **sustainable lunar exploration programs by 2030**.

NEA Scout

- Near-Earth Asteroid Scout, or NEA Scout, is a **small spacecraft**, about the size of a big shoebox.
- Its main mission is to fly by and **collect data from a near-Earth asteroid**.
- It will also be **America's first interplanetary mission** using a special solar sail propulsion.

19. Monkey B virus

Why in News?

A Beijing-based veterinary surgeon was infected with the Monkey B virus after he dissected two dead monkeys in early March this year.

About

- Earlier cases → **Since 1932**, only around **60-80 cases of Monkey B virus** have been reported in the world.
- It is an **alphaherpesvirus enzootic** in **macaques of the genus Macaca**.
- B virus is the only identified **old-world-monkey herpesvirus** that displays severe pathogenicity in humans.
- Transmission → The infection can be **transmitted via direct contact** and **exchange of bodily secretions of monkeys**.
- Symptoms →
- Initial symptoms of the virus include — **fever, chills, muscle aches, fatigue**, and **rash-itchy wounds**, among others.
- In the later stage, the virus can lead to the **loss of muscle coordination** and **neurological damage**.
- In humans, it tends to **attack** the **central nervous system** and cause inflammation to the brain, leading to a loss of consciousness.
- Treatment → There are currently **no vaccines** that can protect you against B virus infection.
- Only precautions could be taken to **stay away from macaques**, chimpanzees and capuchin.

20. PDS 70

Why in News?

Scientists for the first time have spotted a moon-forming region around a planet beyond our solar system - a Jupiter-like world surrounded by a disc of gas and dust massive enough that it could spawn three moons the size of the one orbiting Earth.

About

- The researchers used the **ALMA observatory in Chile's Atacama desert** to detect the disc of swirling material accumulating around one of two newborn planets seen orbiting a young star called **PDS 70**, located 370 light years from Earth.

- A light year is the distance light travels in a year, about **9.5 trillion km**.
- More than 4,400 planets have been discovered outside our solar system, called **exoplanets**. **No circumplanetary discs** had been found until now because all the known **exoplanets resided in “mature” – fully developed – solar systems**, except the two infant gas planets orbiting PDS 70.
- The orange-coloured star **PDS 70**, roughly the **same mass as our Sun**, is about **5 million years old**. The two planets are even younger. Both planets are similar (although larger) to Jupiter, a gas giant. It was around one of the two planets, called **PDS 70c**, that a **moon-forming disc was observed**.

21. I-STEM

Why in News?

The Indian Science Technology and Engineering facilities Map (I-STEM) project has been accorded an extension for five years, until 2026 and enters its second phase with added features.

About

- Launched in **2020**, I-STEM is the **national web portal for sharing R&D facilities**.
- I-STEM is an **initiative of** Office of the Principal Scientific Adviser to the Govt. of India (**PSA, GOI**) under the aegis of Prime Minister Science, Technology and Innovation Advisory Council (**PM-STIAC**) **mission**.
- The portal was **created by** the **Centre for Nano Science and Engineering (CeNSE)** at the Indian Institute of Science, Bengaluru.
- The goal of I-STEM is to **strengthen the R&D ecosystem** of the country by connecting researchers with resources, in part by
 - Promoting technologies and scientific equipment development indigenously, and
 - Providing necessary supplies and supports to researchers by enabling them an access to existing publicly funded R&D facilities in the country through the I-STEM web portal.
- I-STEM portal **facilitates researchers to access slots for the use of equipment**, as well as to share the details of the outcomes.
- Phase II →
 - I-STEM portal will be designed as a **dynamic digital platform** that will provide **boost to research and innovation** especially **for 2 tier and 3 tier cities** and also for the emerging start-up ecosystem.
 - It will **host indigenous technology products** listed through a digital catalogue.
 - It will be a **platform** for **various City Knowledge and Innovation Clusters supported** by PSA Office to enhance effective use of R&D infrastructure through leveraging collaboration and partnership built on a shared STI ecosystem.
 - It will also host and provide **access to selected R&D software required** to undertake research projects by students and scientists.

22. Monkeypox

Why in News?

The US Centers for Disease Control and Prevention are investigating a case of an unusual virus called monkeypox in a traveller coming from Nigeria.

About

- History → It was **first reported in 1958**, in monkeys in the Democratic Republic of Congo (DRC) and in humans in 1970, also in the DRC.
- It is a **viral zoonotic disease** (transmission from animals to humans) and is identified as a pox-like disease among monkeys hence it is named Monkeypox. It is **endemic to Nigeria**.

- Caused by → **monkeypox virus**, a member of the Orthopoxvirus genus in the **family Poxviridae**.
- The **natural host** of the virus **remains undefined**. But the disease has been reported in many animals.
 - Animals known to be sources of Monkeypox virus include **monkeys** and **apes, a variety of rodents** (including rats, mice, squirrels and prairie dogs) and **rabbits**.
- Symptoms →
 - In humans, the symptoms of monkeypox are **similar** to **but milder than the symptoms of smallpox**.
 - Monkeypox begins with **fever, headache, muscle aches**, and **exhaustion**.
 - The main difference between symptoms of smallpox and monkeypox is that **monkeypox causes lymph nodes to swell** (lymphadenopathy) while **smallpox does not**.
- Transmission →
 - Transmission of monkeypox virus occurs when a **person comes into contact with the virus from an animal, human**, or materials contaminated with the virus.
 - The virus enters the body **through broken skin** (even if not visible), **respiratory tract**, or **mucous membranes** (eyes, nose, or mouth).
- Vulnerability → It **spreads rapidly** and can cause **one out of ten deaths** if infected.
- Treatment and Vaccine → There is **no specific treatment** or **vaccine** available for Monkeypox infection.
 - In the past, the anti-smallpox vaccine was shown to be **85% effective** in **preventing Monkeypox**.
 - But the world was declared **free of smallpox in 1980** so the vaccine isn't widely available anymore.
 - Currently, there is **no global system** in place to manage the **spread of Monkeypox**, with each country struggling to contain any outbreak whenever it occurs.

23. Nauka

Why in News?

Recently, Russia's space agency Roscosmos has detached Pirs from the International Space Station (ISS) and will attach a larger module called Nauka in its place.

About

- Nauka, meaning "**science**" in Russian, is the **biggest space laboratory Russia** has launched to date.
- It will primarily serve as the **country's main research facility** on the space station.
- It was launched from the **Baikonur Cosmodrome in Kazakhstan** on 21st July using a Proton rocket.
- It is **42 feet long** and **weighs 20 tonnes** and was supposed to be launched as early as 2007.
 - However, due to a range of technical issues, the launch kept getting postponed.
- It is carrying an **oxygen generator, a spare bed, another toilet** and a **robotic cargo** crane built by the European Space Agency (ESA).
- On the ISS, Nauka will be attached to the **critical Zvezda module**.
 - This module provides all of the space station's life support systems and serves as the structural and functional centre of the Russian Orbital Segment (ROS).

👉 Pirs

- The module that **exited the Zvezda** was called Pirs, meaning "**pier**" in Russian.
- It is a considerably **smaller structure** that was only **used as a docking port for Russian spacecraft** and as a door for cosmonauts to go out on spacewalks.
- It was **pulled away from the ISS** using a **Progress MS-16/77P cargo ship**, which had remained docked to the module since February.
- Both Pirs and its cargo ship will get **burned up** as they **enter the Earth's atmosphere** and are expected to **fall harmlessly** into the Pacific Ocean.

24. Pneumonia

Why in News?

Recently, the Ministry of Health and Family Welfare reported that Pneumonia contributes 16.9% of infant deaths and it is the 2nd highest cause of infant mortality (after prematurity & low birth weight).

About

- What is it? → It is an **acute respiratory infection of the lungs**. It is also a Pneumococcal disease caused by bacteria called **Streptococcus pneumoniae** or **pneumococcus**.
- Cause → It **doesn't have one single cause** – it can develop from either bacteria, viruses or fungi in the air.
- Spread → Pneumonia is **contagious** and can be **spread through coughing** or **sneezing**. It can also be spread through fluids, like blood during childbirth, or from contaminated surfaces.
- Symptoms → **Cough with phlegm** or **pus, fever, chills** and **difficulty breathing**.
- Vaccine →
 - Pneumonia caused by bacteria is **easily preventable with vaccines**. 3 doses of the primary vaccine (Pneumococcal **Conjugate Vaccine (PCV)**) are recommended to prevent it.
 - Recently, the Serum Institute of India announced the launch of India's **first indigenously developed** pneumococcal vaccine – **Pneumosil**.
 - A new vaccine for one of the **main viral causes** of pneumonia is under development.

👉 Initiatives Related to Pneumonia

- Social Awareness and Action to Neutralise Pneumonia Successfully (SAANS) → The aim is **to reduce child mortality** due to pneumonia, which contributes to around 15% of deaths of children under the age of five annually.
 - The government aims to achieve a target of reducing pneumonia deaths among children to **less than three per 1,000 live births by 2025**.
- In 2014, India launched '**Integrated Action Plan for Prevention and Control of Pneumonia and Diarrhoea (IAPPD)**' to undertake **collaborative efforts** towards prevention of diarrhoea and Pneumonia related under-five deaths.

25. James Webb Space Telescope

Why in News?

NASA is set to launch James Webb Space Telescope(JWST). But before it launches, NASA has to decide whether to rename the telescope.

About

- James Webb Telescope is an **international collaboration** between NASA, European Space Agency(ESA), and the Canadian Space Agency.
- The telescope will **complement** and is considered the **successor of the Hubble Space Telescope**.
- The telescope will **use infrared light**, which cannot be perceived by the human eye, to study every phase in cosmic history.
- Mission objectives →
 - **observe** farther into the universe than ever before
 - **Search** for the first stars and galaxies created after the big bang
 - **better understand** how planets, stars, and galaxies are born and evolve over time
 - **explore** distant worlds and study our solar system
 - **determine** the potential for life on planets around other stars.

26. Geo-imaging Satellite EOS-03

Why in News?

This satellite is scheduled for launch in third quarter of 2021. ISRO realized EOS-03 is capable of imaging the whole country 4-5 times daily.

About

- What is it? → It is an **earth observation satellite**.
- Last year, ISRO launched **EOS-01** which is nothing but another Radar Imaging Satellite (RISAT) that will work **together with RISAT-2B** and **RISAT-2BR1**.
- Applications →
 - It would enable near **real-time monitoring of natural disasters** like floods and cyclones.
 - It is capable of **imaging the whole country** four-five times daily.
 - It would also enable **monitoring of water bodies, crops, vegetation condition, forest cover changes**.
- Advantages of radar imaging over optical instruments → Radar imaging is **unaffected by weather, cloud or fog**, or **the lack of sunlight**. It can produce high-quality images in all conditions and at all times.

📌 Earth Observation Satellites

- Earth Observation Satellites (EOS) is a **remote sensing satellite** designed for Earth observation (EO) from orbit, including **spy satellites** and **those used for non-military uses**.
- Other earth observation satellites launched by ISRO include → **RESOURCESAT- 2, 2A, CARTOSAT-1, 2, 2A, 2B, RISAT-1 and 2, OCEANSAT-2, Megha-Tropiques, SARAL and SCATSAT-1, INSAT-3DR, 3D, etc.**

📌 Small Satellite Launch Vehicle(SSLV)

- SSLV is a small-lift launch vehicle being developed by the **Indian Space Research Organisation (ISRO)**.
- Features → They are **cost-effective, three-stage, all-solid launch vehicles** with a payload capability of 500 kg to 500 km planar orbit or 300 kg to Sun-Synchronous Polar Orbit.
- Benefits → SSLV is ideal for the **on-demand, quick turn-around launch of small satellites**.
- Launch Date → The first developmental flight of SSLV is **scheduled for the fourth quarter of 2021 from Satish Dhawan Space Centre, Sriharikota**.

27. Near-Surface Shear Layer

Why in News?

Indian astronomers have found a theoretical explanation for an intriguing layer named Near-Surface Shear Layer(NSSL).

About

- It has long been known that the **sun's equator spins faster than the poles**.
- However, a peek into the internal rotation of the sun using sound waves **revealed the existence of an intriguing layer** where its **rotation profile changes sharply**.
- This layer is called the **near-surface shear layer(NSSL)** and **exists very close to the solar surface**, within which the **angular velocity decreases** rapidly with radius.
- Angular velocity is the time rate at which an object rotates or revolves, about an axis, or at which the angular displacement between two bodies changes.
- Significance → Understanding NSSL is **crucial for the study of several solar phenomena** like sunspot formation and solar cycle.

📌 Explanation for the existence of Near-Surface Shear Layer(NSSL)

- Astronomers have provided an explanation of NSSL **based on the thermal wind balance equation**. It explains how the slight difference in temperature between solar poles and equator called **thermal wind term** is balanced by the centrifugal force appearing due to solar differential rotation.
- Most scientists believe that this condition is true **only in the interior of the Sun**, and it does **not hold near the solar surface**.
- But in this study, astronomers have shown that this belief **actually holds near the solar surface as well**. Hence, this is the reason for the existence of the Near-Surface Shear Layer(**NSSL**).

Geography

1. Atlas of glacial lakes

Why in News?

The Ministry of Jal Shakti has released the Glacial Lake Atlas of Ganga Basin.

About

- About **4,707 glacial lakes** have been mapped in the Ganga basin.
- Glacial lakes with **water spread area greater than 0.25 ha were mapped** using Resourcesat-2 Linear Imaging Self Scanning Sensor-IV satellite data.
- This Atlas is **available on Bhuvan portal** of National Remote Sensing Centre (NRSC), **India WRIS Portal** and **National Hydrology Project (NHP) website**.

📍 NHP-Bhuvan Portal

- The National Hydrology Project or NHP-Bhuvan Portal is a **repository of information** on the **initiatives undertaken by NRSC** under NHP (National Hydrology Project).
- The portal also has a facility to **download the reports** and **knowledge products** being developed by NRSC.

📍 National Hydrology Project (NHP)

- National Hydrology Project (NHP) is a **Central Sector scheme**. It was launched by the Department of Water Resources, River Development, and Ganga Rejuvenation, **Ministry of Jal Shakti** with the **financial aid of the World Bank**.
- Objective → To **improve the extent and accessibility of water resources information** and strengthen institutional capacity to enable improved water resources planning and management across India.
- Components → The project comprises **four broad components**:
 - Improving In Situ Monitoring System (IMS).
 - Improving Spatial Information System (SIS).
 - Promoting Water Resources Operation and Management Applications (WROMA).
 - Strengthening Water Resources Institutions and Capacity Building.
- Implementing Agency → **National Remote Sensing Centre (NRSC)**.

2. Taal Volcano

Why in News?

Recently, the Philippines increased the alert level on Taal Volcano to level 3 on a five-level scale after a Phreatomagmatic Eruption (PE) occurred that generated a dark grayish plume, one kilometer high.

About

- Location → Situated on the **island of Luzon, 50 km from Manila, Philippines**.
- The Philippines is situated at the boundaries of two tectonic plates - **the Philippines Sea Plate** and **the Eurasian plate** - thus susceptible to earthquakes and volcanism.
- Taal is one of the most active volcanoes in the Philippines due to its **location on the Pacific "Ring of Fire"** - a zone of intense seismic activity.

Philippine volcano rumbles



- Complex Volcano → It is classified as a “**complex**” volcano by the Philippine Institute of Volcanology and Seismology (PHIVOLCS).
- A complex volcano, also called a **compound volcano**, is defined as one that doesn't have just one main vent or cone but several eruption points. Another such example is **Mount Vesuvius** on the **west coast of Italy**.
- Unpredictable → Taal has erupted more than 30 times in the last few centuries, the most recent was in 2020.

3. Heat Dome

Why in News?

Recently, the Pacific Northwest and some parts of Canada recorded temperatures around 47 degrees, causing a "historic" heat wave.

About

- A heat dome occurs when the **atmosphere traps hot ocean air** like a lid or cap.
- The **scorching heat** is ensnared in what is called a heat dome.
- **High-pressure circulation** in the atmosphere **acts like a dome** or **cap**, trapping heat at the surface and favoring the formation of a heat wave.
- Causes →
 - This happens when **strong, high-pressure atmospheric conditions combine with influences from La Niña**.
 - This creates **vast areas of sweltering heat** that gets trapped under the high-pressure “dome”.
 - The main cause is a **strong change** (or gradient) **in ocean temperatures** from west to east in the tropical Pacific Ocean.
- How is it created? →
 - In a process known as **convection**, the gradient causes more warm air, heated by the ocean surface.
 - This **rises over the western Pacific**, and **decreases convection** over the central and eastern Pacific.
 - As prevailing winds **move the hot air east, the northern shifts of the jet stream trap the air**.
 - Thus winds **move it toward land**, where it sinks, resulting in heat waves.
- Impact of a heat dome →
 - Lead to a **sudden rise in fatalities** due to extreme heat like conditions.
 - Trapping of heat can also **damage crops, dry out vegetation** and **result in droughts**.
 - The heat wave will also lead to **rise in energy demand**, especially electricity, leading to pushing up rates.
 - Heat domes can also act as **fuel to wildfires**, which destroys a lot of land area in the US every year.

4. Last Ice Area

Why in News?

The ‘Last Ice Area’ (LIA), located in the Arctic’s Ice north of Greenland, has started melting earlier than what the scientists had expected.

About

- This region is located **north of Greenland** and **Ellesmere Island** in the Canadian territory of Nunavut.
- This area was believed to be **strong enough to withstand global warming**.
- The total disappearance of summer ice in the Arctic was **estimated by the year 2040**, however the 'Last Ice Area' was the exception.



- World Wildlife Fund (**WWF**)-**Canada** was believed to be the **first to call this area the 'Last Ice Area'**.
- Importance →
 - It was thought to be able to **help ice-dependent species** as ice in the surrounding areas melted away.
 - It is **used by polar bears to hunt for seals** who use ice to build dens for their offspring. Walrus too, use the surface of the ice for foraging (to search for food).
 - Sea ice is a **highway for inuit**, who use it to travel and hunt.

5. Mishri Cherries

Why in News?

The first commercial shipment of Mishri variety of cherries from Kashmir valley has been exported to Dubai from Srinagar.

About

- Mishri varieties of Cherries not only taste delicious but also **contain vitamins, minerals, and plant compounds** with health benefits.
- The Union Territory of **Jammu and Kashmir** produces **more than 95% of India's production** of commercial varieties of cherries. It produces four varieties of cherry — **Double, Makhmali, Mishri, and Italy**.
- APEDA- **National Referral Laboratory at National Research Centre** for Grapes, Pune provided **support for ensuring food safety** and quality in the shipment, which would help create brand for cherries especially in the middle east countries.
- APEDA has also initiated an awareness program on **National Programme on Organic Production**.

🏠 National Program for Organic Production

- Launched by → the **Ministry of Commerce** in **2001**.
- Purpose → NPOP grants **organic farming certification** to products through a process of third-party certification.
- The program also involves the **accreditation program for Certification Bodies**, standards for organic production, promotion of organic farming and marketing, etc.
- Implementation → It is **implemented by** the Agricultural and Processed Food Products Export Development Authority (**APEDA**), **Ministry of Commerce and Industry**.

6. Haiti

Why in News?

Haiti's President Jovenel Moïse has been killed in an attack on his home in the nation's capital, Port-au-Prince.

About

- Location → Haiti is a country located **on the island of Hispaniola** in the Greater Antilles archipelago of the Caribbean Sea, to the **east of Cuba and Jamaica** and **south of The Bahamas and the Turks and Caicos Islands**.
- It occupies the western three-eighths of the Hispaniola island which it **shares with the Dominican Republic**.
- To its south-west lies the **small island of Navassa Island**, which is **claimed by Haiti** but is disputed as a United States territory under federal administration.
- At 27,750 sq km Haiti is the **third largest country in the Caribbean** behind Cuba and the Dominican Republic.



- Capital → **Port-au-Prince**.

7. Bhalia wheat

Why in News?

The first shipment of Geographical Indication (GI) certified Bhalia variety of wheat was exported to Kenya and Sri Lanka from Gujarat.

About

- Bhalia Wheat is also known as **Daudkhani Wheat**.
- It is a type of **long grain wheat** cultivated in **Bhal region** in the north of **Gulf of Khambhat, Gujarat, India**.
- This wheat variety has **high protein** content and is **sweet in taste**.
- Bhalia Wheat is **rich in Gluten**, a **type of amino acid**.
- Characteristics → The unique characteristic of the Bhalia wheat is that it is **grown in the rainfed condition without irrigation** and cultivated in around two lakh hectares of agricultural land in Gujarat.
- GI Tag → The Bhalia variety of wheat received GI certification **in 2011**. The registered proprietor of GI certification is **Anand Agricultural University, Gujarat**.

8. Cabo Delgado

Why in News?

The European Union has approved a Military Training Mission in Mozambique (Cabo Delgado) to support armed forces there to protect the civilian population.

About

- It is the **northernmost province of Mozambique**.
- As well as **bordering the neighbouring country of Tanzania**, it borders the provinces of Nampula and Niassa.
- The region is an **ethnic stronghold of the Makonde tribe**, with the Makua and Mwani as leading ethnic minorities.



9. Monk Fruit

Why in News?

For the first time, the 'monk fruit' from China was introduced for field trials in Himachal Pradesh, Kullu by the Palampur-based Council of Scientific Research and Industrial Technology Institute of Himalayan Bioresource Technology (CSIR-IHBT).

About

- Monk fruit is known for its properties as a **non-caloric natural sweetener**. The sweet taste of monk fruit is because of the content of a group of **cucurbitane-type triterpene glycosides** called **mogrosides**.
- It is about **300 times sweeter** than sucrose or cane sugar.
- Benefits →
 - It can help in **preventing life-threatening diseases** such as insulin resistance, Type 2 diabetes, liver problems, metabolic syndrome, heart disease, etc.
 - This can **help in exports** as the **demand for monk fruit is gradually increasing** in the international market.

- Naming → Monk Fruit gets its name from the **Buddhist monks** who first used it. During the 20th century, Professor GW Groff had also made an unsuccessful attempt to grow the Monk plant because flowers did not appear.
- Environmental Conditions →
 - It is a perennial crop having a **life span** ranging between **four to five years** and its fruiting starts eight to nine months after germination.
 - The plant **prefers mountainous areas** with an annual mean temperature of about 16–20 °C and humid conditions.
 - Seed germination rate of monk fruit is **slow and low**
 - **Flowering pattern, pollination behaviour** and **fruit setting time were also documented** in order to draw the complete life-cycle of monk fruit in agro-climatic conditions of the region.

10. Mekedatu dam project

Why in News?

The Centre has given its assurance that Karnataka will not be allowed to carry out any construction on the Mekedatu dam project on the Cauvery river until its Detailed Project Report (DPR) is approved by the Cauvery Water Management Authority.

About

- Location → Mekedatu, meaning **goat's leap**, is a deep gorge situated at the **confluence of the rivers Cauvery and its tributary Arkavathi**.
- Purpose → The Rs. 9,000 crore project aims to **store and supply water for drinking** purposes for the Bengaluru city.
- Around **400 megawatts (MW) of power** is also proposed to be generated through the project.

📍 Cauvery River

- Source → River rises on **Brahmagiri Hill of the Western Ghats** in south-western Karnataka state.
- The river basin covers three states and a Union Territory → **Tamil Nadu**, 43,868 square kilometres, **Karnataka**, 34,273 square kilometres I, **Kerala**, 2,866 square kilometres and **Puducherry**.
- Tributaries → **Hemavati**, **Lakshmantirtha**, **Kabini**, **Amaravati**, **Noyil**, and **Bhavani rivers**.
- Falls along the way → Upon entering Tamil Nadu, the Kaveri continues through a **series of twisted wild gorges** until it **reaches Hogenakal Falls**.
- Dams → There the **Mettur Dam** was constructed for irrigation and hydel power in Tamil Nadu.



11. Alps

A recent study by the ETH technical university in Zurich, Switzerland shows that climate change has dramatically altered the Swiss Alp landscape.

About

- The Alps emerged during the Alpine orogeny (mountain-building event), an event that began about **65 million years ago as the Mesozoic Era** was drawing to a close.

- Alps are young fold mountains with **rugged relief** and **high conical peaks**.
- The Alps **extend north from the subtropical Mediterranean coast near Nice, France, to Lake Geneva** before trending east-northeast to Vienna, Austria. There they **touch the Danube River** and meld with the adjacent plain.
- Because of their **arc-like shape**, the Alps **separate the marine west-coast climates** of Europe from the Mediterranean areas of France, Italy, and the Balkan region.
- Countries Covered →
 - The Alps form part of **France, Italy, Switzerland, Germany, Austria, Slovenia, Croatia, Bosnia and Herzegovina, Montenegro, Serbia, and Albania**.
 - Only **Switzerland and Austria** can be considered **true Alpine countries**.
- Important Peaks → **Mont Blanc, Monte Rosa, Dom, Liskamm, Weisshorn, Matterhorn, Dent Blanche, Grand Combin** etc.



👉 Key Finding

- Melting glaciers in Swiss Alps have created **more than 1,000 new lakes** across the mountains.
- This is because of **rapid climate change**.
- Almost **1,200 new lakes** have formed in **formerly glaciated regions** of the Swiss Alps since the end of the Little Ice Age around 1850. Around 1,000 of them still exist today.

12. Liverpool

Why in News?

Liverpool has been stripped of its World Heritage status after a UN committee found developments threatened the value of the city's waterfront.

About

- Liverpool is a city on the **banks of the River Mersey** in England.
- The decision was made following a **secret ballot by the UNESCO Committee** at a meeting in China.
- UNESCO had previously warned that the **developments**, including the new Everton FC stadium, had resulted in a "**serious deterioration**" of the historic site.
- The city was awarded the **much-coveted title in 2004** in **recognition of its historical and architectural impact**, joining places including the Taj Mahal, Egypt's Pyramids and Canterbury Cathedral.



13. Nord Stream 2 Pipeline Project

Why in News?

Recently, the US has approved the completion of the Nord Stream 2 pipeline project between Russia and Germany.

About

- In **2015**, the Russian energy major Gazprom and five other European firms decided to build Nord Stream 2 which is valued at **around \$11 billion**.
- The Approx **1,200-km pipeline** will run from **Ust-Luga in Russia to Greifswald in Germany** through the Baltic Sea and will carry 55 billion cubic metres of gas per year.
- The **under-construction pipeline** will run along with the already completed Nord Stream 1 system, and the two together will **supply an aggregate of 110 billion cubic metres of gas** to Germany per year.
- The pipeline falls in the territory of EU members **Germany** and **Denmark** and is about **98% complete**.

Nord Stream pipelines from Russia



14. Phosphorus rocks

Why in News?

Union Minister of Chemicals and Fertilizers informed Parliament that India will explore indigenous deposits of phosphatic rock, a step towards becoming AatmaNirbhar in fertilizer production.

About

- Phosphorus rocks or phosphate rocks are **unprocessed ores**.
- Phosphate rock deposits can be **sedimentary** (formed from sediment deposited by water or air) or **igneous** (having solidified from lava or magma).
- However, the easiest way to obtain phosphorus is by **way of mining** and **concentrating phosphate rock from the phosphate deposits**.
- Used in fertilizers →
 - Worldwide, **more than 85%** of the phosphate rock mined is **used to manufacture phosphate fertilizers**.
 - All common fertilizers have an **“N-P-K” rating**. Phosphorus is the “P” in fertilizers, which is essential for plants.
- Where is it found? →
 - Phosphate rock deposits can be sedimentary or igneous and are mined from sedimentary deposits formed by the **deposition of phosphate-rich materials in marine environments**.
 - Large sedimentary deposits are located in **China, Middle East, Northern Africa**, and **the United States**.
 - Meanwhile, the igneous deposits are **mined in Brazil, Canada, Finland, Russia, South Africa**, and **Zimbabwe**.

15. Sutlej River

Why in News?

The pollution in river Sutlej has posed serious health threats to the people living around the Indira Gandhi Canal.

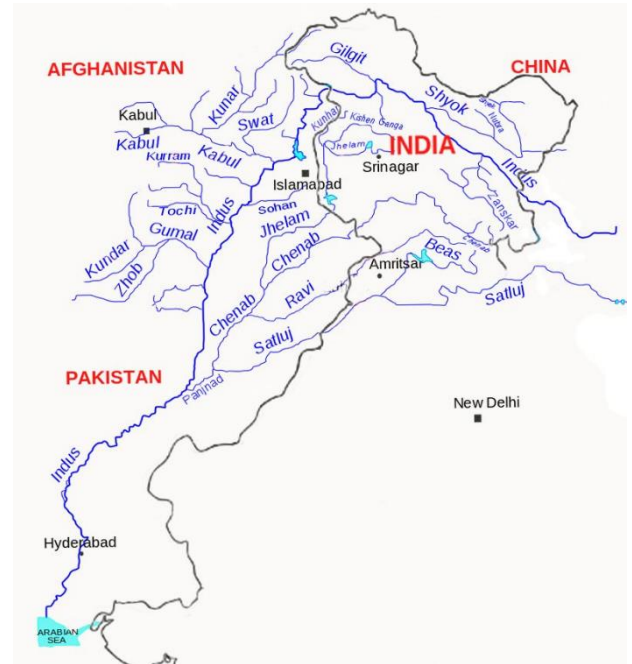
About

- Ancient name → **Zaradros** (Ancient Greek) **Shutudri** or **Shatadru** (Sanskrit).
- It is the **longest of the five tributaries of the Indus River** that give the Punjab (meaning “Five Rivers”) its name.
 - Jhelum, Chenab, Ravi, Beas and Satluj are main tributaries of Indus.
- It rises on the **north slope of the Himalayas** in **Lake La’nga in southwestern Tibet**.
 - Flowing northwestward and then west-southwestward through Himalayan gorges, it **enters and crosses Himachal Pradesh** before beginning its **flow through the Punjab plain near Nangal**.

- Continuing southwestward in a broad channel, it **receives the Beas River** (and forms 65 miles (105 km) of the India-Pakistan border **before entering Pakistan** and **flowing another 220 miles** (350 km) to join the Chenab River west of Bahawalpur.
- Sutlej River **meets the Beas River in Harike** in the Ferozpur district before entering Pakistan.
- The combined rivers then **form the Panjnad**, the link between the Five Rivers and the Indus.
- **Luhri Stage-I Hydro Electric Project** is located on River Satluj in Shimla and Kullu districts of Himachal Pradesh.

👉 **Indira Gandhi Canal:**

- The Indira Gandhi Canal is the **longest canal** in the country.
 - It starts from **Harike Barrage**, a few kilometres below the confluence of the Satluj and Beas rivers in Punjab, flows through Ludhiana and terminates in the Thar Desert in northwest Rajasthan.
- The canal is a source of **drinking and irrigation in the north and western Rajasthan.**



Polity

1. President's Rule

Why in News?

The Supreme Court has agreed to hear a plea seeking directions to the Centre to impose President's Rule in West Bengal over alleged incidents of post-poll violence in the state.

About

- President's Rule implies the **suspension of a state government** and the imposition of direct rule of the Centre.
- It is also known as '**State Emergency**' or '**Constitutional Emergency**'
- Constitutional Provisions →
 - The President's Rule is imposed through the invocation of **Article 356** of the Constitution **by the President** on the **advice of the Union Council of Ministers**.
 - Under Article 356, President's Rule is imposed if the President, upon receipt of the **report from the Governor** of the State or otherwise, is satisfied that a situation has arisen in which the **government of the State cannot be carried on in accordance with the provisions of the Constitution**.
- Parliamentary Approval and Duration →
 - A proclamation imposing President's Rule must be **approved by both the Houses of Parliament** within **two months** from the date of its issue.
 - The approval takes place through **simple majority** in either House, that is, a majority of the members of the House present and voting.
 - Initially valid for six months, the President's Rule can be **extended for a maximum period of three years** with the approval of the Parliament, every six months.
- Consequences of President's Rule →
 - The state governor, on behalf of the President, carries on the state administration with the **help of the chief secretary** of the state or the **advisors appointed by the President**.
 - The President can declare that the powers of the state legislature are to be **exercised by the Parliament**.
 - The President either **suspends** or **dissolves the state legislative assembly**.
- Revocation →
 - A proclamation of President's Rule may be **revoked by the President** at **any time** by a subsequent proclamation. Such a proclamation does not require parliamentary approval.
 - This happens, in case, the **leader of a party** produces **letters of support** from a majority of members of the Assembly, and stakes his claim to form a government.

2. Ministry of Co-operation

Why in News?

In a historic move, a separate 'Ministry of Co-operation' has been created by the NDA Government for realizing the vision of 'Sahkar se Samridhi'.

About

- Purpose → The Ministry of Cooperation has been created for **strengthening the cooperative movement** in the country.
- Key Objectives →
 - This ministry will provide a **separate administrative, legal** and **policy framework** for strengthening the cooperative movement in the country.
 - It will help **deepen Co-operatives** as a **true people based movement** reaching upto the grassroots.

- The Ministry will work to **streamline processes** for '**Ease of doing business**' for co-operatives and enable development of **Multi-State Co-operatives** (MSCS).

3. Governor

Why in News?

The Rashtrapati Bhavan announced a slew of gubernatorial appointments, including that of Union Minister for Social Justice and Empowerment Thawarchand Gehlot as the Governor of Karnataka, replacing Vajubhai Vala.

About

- Governor is a **nominal executive head** of the state.
- He forms an important part of the state executive where he **acts as the chief executive head**.
- He/she is appointed **by President of India**.
- Qualifications and conditions for appointment →
 - Should be a **citizen of India**.
 - Should have **completed 35 years of age**.
 - Should **not hold any office of profit** under the union govt. or state govt. or any local Authority or any other public authority.
 - Should **not be a member of either house** of parliament or a house of the state legislature.
- Tenure →
 - Governor holds office for a **term of 5 years** from the date on which he assumes office. This term of 5 years is **subject to the pleasure of president**.
 - He/she can **resign anytime** by addressing a resignation letter to the president.
- Oath → The oath of office to the governor is **administered by the chief justice of concerned HC** and in his absence by the senior-most judge of the HC available.
- By 7th Constitution Amendment Act of 1956, **same person** can be **appointed as governor of 2 or more states**.

4. Central Information Commission

Why in News?

The Supreme Court has directed the Central government to place on record the latest information on the appointment of Information Commissioners, vacancies and pendency of cases in CIC.

About

- Established by the Central Government in **2005**, under the provisions of the Right to Information Act (2005). It is **not a constitutional body**.
- Members → It consists of a **Chief Information Commissioner** and **not more than ten Information Commissioners**.
- Appointment → They are **appointed by the President on the recommendation of a committee** consisting of the Prime Minister as Chairperson, the Leader of Opposition in the Lok Sabha and a Union Cabinet Minister nominated by the Prime Minister.
- Jurisdiction → The jurisdiction of the Commission **extends over all Central Public Authorities**.
- Tenure → The Chief Information Commissioner and an Information Commissioner shall hold office for such term as **prescribed by the Central Government** or **until they attain the age of 65 years, whichever is earlier**.
- They are not eligible for reappointment.
- Power and Functions of CIC →
 - It is the duty of the Commission to **receive and inquire into a complaint** from any person regarding information requested under RTI, 2005.
 - The Commission can **order an inquiry into any matter** if there are reasonable grounds (suo-moto power).

- While inquiring, the Commission has the **powers of a civil court** in respect of summoning, requiring documents etc.

5. Speaker and Deputy Speaker

Why in News?

Maharashtra has been without a Speaker since February, while Lok Sabha and several state Assemblies are without a Deputy Speaker.

About

- Constitution → **Article 93 for Lok Sabha** and **Article 178 for state Assemblies** state that these Houses “shall, as soon as may be”, choose two of its members to be Speaker and Deputy Speaker.
- Election → In Lok Sabha and state legislatures, the **President/Governor sets a date for the election of the Speaker**, and it is the **Speaker** who **decides the date for the election of the Deputy Speaker**.
- The **legislators** of the respective Houses **vote to elect** one among themselves to these offices.
- Their roles and functions →
 - The Speaker is “**the principal spokesman of the House**, he **represents its collective voice** and is its sole representative to the outside world”.
 - The Speaker **presides over the House proceedings** and **joint sittings** of the two Houses of Parliament.
 - It is the Speaker’s decision that **determines whether a Bill is a Money Bill** and therefore outside of the purview of the other House.
 - Usually, the Speaker **comes from the ruling party**. In the case of the Deputy Speaker of Lok Sabha, the position has varied over the years.
- The constitution has tried to ensure the **independence of Speaker** by charging his **salary on the consolidated Fund of India** and the same is not subject to vote of Parliament.
- While debating or during general discussion on a bill, the members of the parliament have to **address only to the Speaker**.

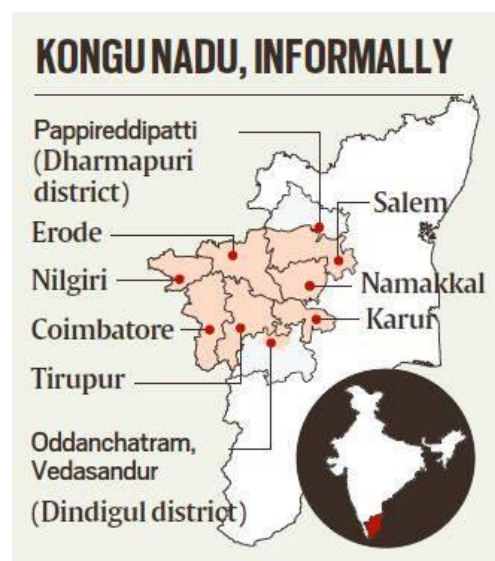
6. Kongu Nadu

Why in News?

Recently, a list of new Union Cabinet ministers issued by the BJP has triggered a debate in political circles in Tamil Nadu by referring to ‘Kongu Nadu’.

About Kongu Nadu

- It is **neither a place with a PIN code nor a name** given formally to any region.
- It is a commonly used name for **part of western Tamil Nadu**.
- In Tamil literature, it was referred to as **one of the five regions of ancient Tamil Nadu**.
- There were mentions of ‘**Kongu Nadu**’ in **Sangam literature** as a separate territory.
- The name **derives from Kongu Vellala Gounder**, an OBC community with a significant presence in these districts.
- It is considered to be a **stronghold of the Gounder community**.
- The region includes **prominent businesses** and **industrial hubs at Namakkal**, Salem, Tirupur and Coimbatore.



Constitutional Provisions for Creation of New States

- **Article 3** assigns to **Parliament the power** to **enact legislation** for the formation of new States.
- The Parliament **may create new States** in a number of ways, namely by:
 - Separating territory from any State,
 - Uniting two or more States,
 - Uniting parts of States and
 - Uniting any territory to a part of any State.
- The Parliament's power under Article 3 extends to **increasing or diminishing the area** of any State and **altering the boundaries** or name **of any State**.
- A bill calling for formation of new States may be **introduced in either House of Parliament** only on the recommendation of the President.
- A bill must be **referred by the President** to the **concerned State Legislature for expressing its views** to Parliament if it contains provisions which affect the areas, boundaries or name of that State.

7. Anti-defection law

Why in News?

The Goa Leader of Opposition is going to move a resolution for changes to anti-defection law.

About

- Constitutional basis → The **Tenth Schedule** was inserted in the Constitution in by **52nd Amendment Act, 1985**.
- Purpose → The purpose of the Amendment was to **bring stability to governments** by deterring MPs and MLAs from changing their political parties on whose ticket they were elected.
- The **penalty for shifting political loyalties** is the **loss of parliamentary membership** and a bar on becoming a minister.
- When can a member be disqualified? →
 - If a member of a house belonging to a political party:
 - **Voluntarily gives up** the membership of his political party, or
 - **Votes, or does not vote in the legislature, contrary to the directions** of his political party. However, if the member has taken **prior permission**, or is condoned by the party **within 15 days** from such voting or abstention, the member shall not be disqualified.
 - If an **independent candidate joins** a **political party** after the election.
 - If a **nominated member** joins a party **six months after** he becomes a member of the legislature.
- Exceptions →
 - The law allows a party to merge with or into another party provided that **at least two-thirds of its legislators** are in **favour of the merger**.
 - On being elected as the **presiding officer** of the House, if a **member, voluntarily gives up** the membership of his party or rejoins it after he ceases to hold that office, he won't be disqualified.
- Decision of the Presiding Officer is subject to judicial review →
 - The law **initially** stated that the decision of the Presiding Officer is **not subject to judicial review**. This condition was **struck down by the Supreme Court later**, thereby allowing appeals against the Presiding Officer's decision in the High Court and Supreme Court.
 - However, it held that there may not be any judicial intervention **until the Presiding Officer gives his order**.
- Is there a time limit within which the Presiding Officer should decide? → There is **no time limit** as per the law within which the Presiding Officers should decide on a plea for disqualification.

8. Adjournment motion

Why in News?

Recently, the Shiromani Akali Dal (SAD) has decided to move an adjournment motion in the Lok Sabha against the government on the three controversial farm laws.

About

- Adjournment motion is introduced **only in the Lok Sabha** to draw the attention of the House to a **definite matter of urgent public importance**.
- It involves an **element of censure** against the government, therefore Rajya Sabha is not permitted to make use of this device.
- It is regarded as an extraordinary device as it **interrupts the normal business of the House**. It needs the **support of 50 members** to be admitted.
- The discussion on this motion should **last for not less than two hours** and **thirty minutes**.
- However, right to move a motion for an adjournment of the business of the House is subject to the **following restrictions**. i.e. It should:
 - Raise a matter which is definite, factual, urgent and of public importance.
 - Not cover more than one matter.
 - Be restricted to a specific matter of recent occurrence.
 - Not raise a question of privilege.
 - Not revive discussion on a matter that has been discussed in the same session.
 - Not deal with any matter that is under adjudication of court.
 - Not raise any question that can be raised on a distinct motion.

9. Conjugal Rights

Why in News?

The Supreme Court (SC) is going to hear a fresh challenge to the provision allowing restitution (recovery) of conjugal rights under Hindu personal laws (Hindu Marriage act 1955).

About

- Conjugal rights are **rights created by marriage**, i.e. right of the husband or the wife to the society of the other spouse.
- The law recognises these rights— **both in personal laws** dealing with marriage, divorce etc, and **in criminal law** requiring payment of maintenance and alimony to a spouse.
- **Section 9 of the Hindu Marriage Act, 1955** deals with restitution of conjugal rights.
- Section 9 of the Hindu Marriage Act recognises one aspect of conjugal rights — **the right to consortium and protects it by allowing a spouse to move court to enforce the right**.
- How can these rights be enforced? →
 - When either the husband or the wife has, without reasonable excuse, withdrawn from the society of the other, the **aggrieved party may apply, by petition to the district court**.
 - And the court, on being **satisfied of the truth** of the statements made in such petition and that there is **no legal ground why the application should not be granted**, may decree restitution of conjugal rights accordingly.
 - Also, if a **spouse refuses cohabitation**, the other spouse can move the family court seeking a decree for cohabitation. If the order of the court is not complied with, the **court can attach property**. However, the **decision can be appealed** before a High Court and the Supreme Court.
- Reason for Challenging the Law →
 - Main ground is that it is **violative** of the **fundamental right to privacy**.

- It amounted to a “coercive act” on the part of the state, which **violates one’s sexual and decisional autonomy**, and **right to privacy and dignity**.
- The provision **disproportionately affects women**. Women are often called back to marital homes under the provision, and given that marital rape is not a crime, leaves them susceptible to such coerced cohabitation.

10. 97th constitutional amendment

Why in News?

Recently, the Supreme Court (SC) upheld a 2013 judgment of the Gujarat High Court and struck down certain provisions of the Constitution (97th Amendment) Act, 2011.

About

- It dealt with issues related to **effective management of co-operative societies in the country**.
- It was passed by Parliament in December 2011 and had come into **effect from February 15, 2012**.
- It **amended Article 19(1)(c)** to give protection to the cooperatives and inserted **Article 43 B** and **Part IX B**, relating to them.
- Why a part of it has been struck down by the Court?
 - Upholding the Gujarat High Court’s 2013 decision striking down certain provisions of the 97th constitutional amendment, the Supreme Court held that the **Parliament cannot enact laws with regard to cooperative societies as it is a State subject**.
 - Several intervenors have contended that the amendment made a **direct in-road into the exclusive domain of states to enact laws** with regard to cooperatives.
 - However, the Centre has contended that the provision **does not denude states of their power** to enact laws with regard to cooperatives.

11. Director of Inquiry for Lokpal

Why in News?

More than two years after the Lokpal came into being, the Centre is yet to appoint a director of inquiry.

About

- As per the Lokpal and Lokayuktas Act, 2013, there shall be a Director of Inquiry, **not below the rank of Joint Secretary** to the Central Government.
- As per the provisions contained under Section 20 (1) (b) of the Lokpal and Lokayuktas Act, 2013, complaints in respect of public servants are **referred by the Lokpal to the Central Vigilance Commission (CVC) for a preliminary inquiry**.
- The non-appointment of director of inquiry again reflects the **lack of political will** for strengthened Lokpal in India.

Lokpal Act of 2013

- The Act allows setting up of **anti-corruption ombudsman** called **Lokpal at the Centre** and **Lokayukta at the State-level**.
- The Lokpal will consist of a **chairperson** and a **maximum of eight members**.
- The Lokpal will cover all **categories of public servants**, including the Prime Minister. But the **armed forces do not come under** the ambit of Lokpal.
- The Act also incorporates provisions for **attachment and confiscation of property** acquired by corrupt means, even while the prosecution is pending.
- The **States** will have to institute **Lokayukta within one year** of the commencement of the Act.
- The Act also ensures that public servants who **act as whistleblowers are protected**.
- Powers →

- The Lokpal will have the **power of superintendence** and **direction over any investigation agency** including CBI for cases referred to them by the ombudsman.
- As per the Act, the Lokpal can **summon** or **question any public servant** if there exists a prima facie case against the person, even before an investigation agency (such as vigilance or CBI) has **begun the probe**. Any officer of the CBI investigating a case referred to it by the Lokpal, shall not be transferred without the approval of the Lokpal.
- An investigation must be **completed within six months**. However, the Lokpal or Lokayukta may allow **extensions of six months at a time** provided the reasons for the need of such extensions are given in writing.
- **Special courts** will be **instituted** to conduct trials on cases referred by Lokpal.

12. Essential Defence Services Bill

Why in News?

Recently, the government introduced the Essential Defence Services Bill, 2021 in Lok Sabha. It is aimed at preventing the staff of the government-owned ordnance factories from going on a strike.

About Bill

- It is **meant to** “provide for the maintenance of essential defence services so as to secure the security of nation and the life and property of public at large and for matters connected therewith or incidental thereto”.
- The Bill empowers the government to **declare services mentioned in it as essential defence services**.
- It also **prohibits strike and lockouts** in “any industrial establishment or unit engaged in essential defence services”.

👉 Right to Strikes

- Right to strike is **recognized globally**. **Article 19(1) the Constitution** of India guarantees the protection of certain freedoms as fundamental rights such as →
 - Freedom of speech and expression.
 - Assemble peaceably and without arms.
 - Form associations or unions.
 - Move freely throughout the territory of India.
 - Reside and settle in any part of the territory of India.
 - Practise any profession, or to carry on any occupation, trade or business.
- However, **strike is not expressly recognized** in the Constitution of India. The Supreme Court settled the case of **Kameshwar Prasad v. The State of Bihar 1958** by stating that **strike is not a fundamental right**. Government employees have no legal or moral rights to go on strikes.
- India recognized strike as a **statutory right under the Industrial Disputes Act, 1947**.

13. Right to be Forgotten

Why in News?

Recently, a plea has been filed in Delhi High Court to exercise the Right of Being Forgotten.

About

- It **falls under** the purview of an **individual’s right to privacy**, which is governed by the Personal Data Protection Bill that is yet to be passed by Parliament.
- It goes in sync with the **“Right to Privacy”**, which is an **integral part of Article 21** of the Constitution, which concerns the right to life.
- In **2017**, the court said that the **right to privacy** is protected as an intrinsic part of the **right to life and personal liberty under Article 21** and as a part of the freedoms guaranteed by Part III of the Constitution.

What does the Personal Data Protection Bill say about this?

- The bill exclusively talks about the “**Right to be Forgotten.**”
- Broadly, under the Right to be forgotten, users can **de-link, limit, delete** or **correct the disclosure of their personal information held by data fiduciaries.**

14. Dying Declaration

Why in News?

Recently, a special CBI court awarded two policemen life sentences for the custodial death of a murder accused on the basis of the ‘Dying Declaration’ made by the victim prior to his death.

About

- The Dying Declaration is the **statement of a person who had died explaining the circumstances of his death.**
- A dying declaration is **considered credible and trustworthy evidence**, based upon the general belief that most people who know that they are about to die, do not lie.
- **Section 32 of the Indian Evidence Act deals** with the cases related to that person who is dead or who cannot be found.

Who can record dying declarations?

- Anyone can record the dying declaration of the deceased as per law. The law does **not compulsorily** require the **presence of a Judicial** or **Executive Magistrate** to record a dying declaration.

Do dying declarations always need corroboration?

- A dying declaration can **form the sole basis of conviction.** The rule requiring **corroboration** is **merely a rule of prudence.**
- Several judgments have noted that it is **neither rule of law nor prudence** that a dying declaration **cannot be acted upon without corroboration.**
- If the court is **satisfied** that the dying declaration is **true and voluntary**, it can **base conviction on it, without corroboration.**
- But the court has to **scrutinise the dying declaration carefully** and **must ensure** that the declaration is **not the result of tutoring, prompting, or imagination.**

15. Juvenile Justice (Care and Protection of Children) Amendment Bill 2021

Why in News?

Parliament has passed the Juvenile Justice (Care and Protection of Children) Amendment Bill, 2021.

About

- The Juvenile Justice Amendment Bill, 2021 seeks to **amend** the **Juvenile Justice Act, 2015.**
- Empowerment of District Magistrate → Presently, the adoption order issued by the court establishes that the child belongs to the adoptive parents. The Bill provides that instead of the court, **the District Magistrate (including Additional District Magistrate)** will issue such adoption orders.
- Serious Offences → Serious offences will also include offences for which maximum punishment is **imprisonment of more than seven years**, and **minimum punishment is not prescribed** or is of less than seven years.
 - Serious offences are those for which the punishment under the Indian Penal Code or any other law for the time being is imprisonment between three and seven years.

- Non-cognizable Offences → The **present Act** provides that an offence which is punishable with imprisonment between three to seven years to be **cognizable** (where arrest is allowed without warrant) and **non-bailable**.
 - The **Bill amends** this to provide that such offences will be **non-cognizable**.
- Appeals → The Bill provides that any person aggrieved by an adoption order passed by the District Magistrate may file an **appeal before the Divisional Commissioner, within 30 days from the date of passage of such order**.
- Additional Functions of the District Magistrate → These include: **supervising the District Child Protection Unit**, and **conducting a quarterly review** of the functioning of the Child Welfare Committee.
- Designated Court → The Bill proposes that **all offences under the earlier Act be tried in children's court**.
- Child Welfare Committees (CWCs) → It provides that a person will **not eligible** to be a member of the CWC if he/she
 - has any record of violation of human rights or child rights,
 - has been convicted of an offence involving moral turpitude,
 - has been removed or dismissed from service of the central government, or any state government, or a government undertaking,
 - is part of the management of a child care institution in a district.
- Removal of Members → The appointment of any member of the committee shall be **terminated by the state government** after an inquiry if they fail to attend the proceedings of the CWCs consecutively for three months without any valid reason or if they fail to attend less than three-fourths of the sittings in a year.

16. Coconut Development Board (Amendment) Bill, 2021

Why in News?

Rajya Sabha passes Coconut Development Board (Amendment) Bill, 2021.

About Provisions

- The bill seeks to make the **post of Chairman**, Coconut Development Board **as Non-Executive one**.
- The bill will pave the way to **appoint a professional persons** as a non- Executive Chairman instead of a government official.
- The **number of members** of the board has been **raised from four to six** as after the amendment, Andhra Pradesh and Gujarat will be able to nominate their representatives in the Board.
- Background →
 - The **Coconut Development Board Act, 1979** was enacted to provide for the **development of the coconut industry** under the **control of the Union** and for matters connected therewith.
 - The **Coconut Development Board** was established on 28th January, 1981 under the said Act.
 - At present, the Board has an **executive Chairman** who is a **Joint Secretary level officer** in the Government of India, appointed by that Government on deputation basis.

17. General Insurance Business (Nationalisation) Amendment Bill 2021

Why in News?

The General Insurance Business (Nationalisation) Amendment Bill 2021 was introduced in Lok Sabha by Finance Minister Nirmala Sitharaman.

About Provisions

- The Bill will **amend** the **General Insurance Business (Nationalisation) Act, 1972**. The Bill proposes **three amendments**.
- The first aims to omit the proviso to Section 10B of the Act so as to **remove the requirement** that the **Central government holds not less than 51 per cent** of the equity capital in a specified insurer.

- The second amendment is to insert a new Section 24B, providing for **cessation of application of the Act to such a specified insurer** from the date on which the Centre ceases to have control over it.
- And, the third amendment is also to insert a new Section 31A, **making a director**, who is **not a whole-time director**, liable only for acts of omission or commission committed with his knowledge and connivance by the insurer.
- Although the Bill has a provision that will allow the government to **bring down its shareholding below 51 per cent**, Sitharaman clarified that this is **not a Bill for privatisation**.

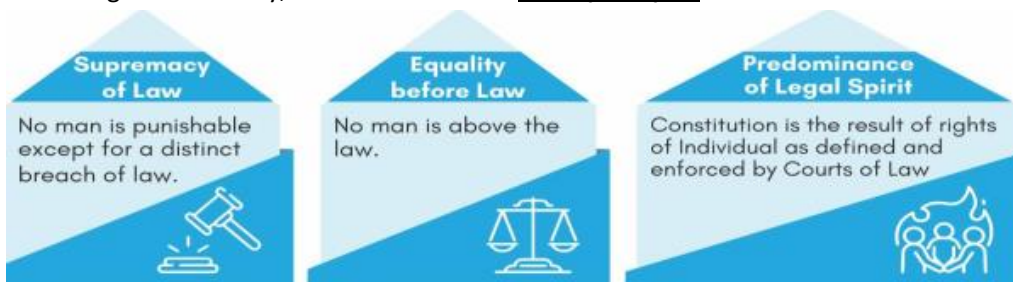
18. Rule of law

Why in News?

Recently, Chief Justice of India delivered a lecture on Rule of Law and he advocated that, “the story of ‘Rule of Law’ is nothing but the story of civilization of humans.”.

About

- According to **A.V. Dicey**, the rule of law means the **absolute supremacy** or predominance of the regular law as opposed to the influence of arbitrary power and excludes the existence of arbitrariness or even of wide discretionary.
- Only a State that is governed by law imbining ideals of justice and equity can be said to have the ‘Rule of Law’.
- The expression '**Rule of Law**' has been derived from the French phrase '**la principle de legalite**', i.e., a government based on the principles of law.
- According to Prof. Dicey, Rule of law contain **three principles**:



Rule of Law Vs Rule by Law:

- In essence, the Rule of Law is **to control the unlimited exercise of the power** by the supreme lawmaking authority of the land while the
- Rule by Law is **laid down by the supreme lawmaking authority** of the land.
- Simply, Rule of law is upheld when the laws are guided by the ideals like Justice and Equity. For example, as per **Article 14** of the Indian Constitution, the State shall not deny to any person **equality before the law or the equal protection of the laws** within the territory of India and discrimination on grounds of religion, race, caste, sex, or place of birth is prohibited. On the other hand,
- Rule by law can embody **ethical as well as unethical laws**. For example, the **apartheid regime** in South Africa was justified based on enacted laws.

International Relations

1. OECD/G20 Inclusive Framework tax deal

Why in News?

India has joined the Organisation for Economic Co-operation and Development (OECD) and G20 Inclusive Framework tax deal of global corporate tax.

About

- The deal seeks to **reform international tax rules** and ensure that multinational enterprises pay their fair share wherever they operate.
- Around **130 countries**, representing more than **90 percent of global GDP**, adopted the global corporate tax rate of **at least 15 percent**.
- Two pillars of framework →
 1. **Dealing with transnational and digital companies**. This pillar ensures that large multinational enterprises, including digital companies, pay tax where they operate and earn profits.
 2. **Dealing with low-tax jurisdictions** to address cross-border profit shifting and treaty shopping. This pillar seeks to put a floor under competition among countries through a global minimum corporate tax rate, currently proposed at 15%.
- Expected outcomes →
 - If implemented, countries such as the Netherlands and Luxembourg that **offer lower tax rates**, and so-called **tax havens** such as Bahamas or British Virgin Islands, **could lose their sheen**.
- Impact/implications on India → India will have to **roll back the equalisation levy** that it imposes on companies such as Google, Amazon and Facebook when the global tax regime is implemented.

Equalisation levy

- In 2016, India imposed an **equalisation levy of 6%** on **online advertisement** services provided by non-residents. This was applicable to Google and other foreign online advertising service providers.
- From **April 1, 2020**, the government started **imposing a 2%** equalisation levy on digital transactions by foreign entities operating in India or having access to the local market.

2. Istanbul Convention

Why in News?

Turkey quits Istanbul Convention on Violence Against Women.

About

- Istanbul Convention is also called the **Council of Europe Convention**. It aims towards preventing and combating violence against women and domestic violence.
- Adoption → The Council of Europe Committee of Ministers adopted the convention **in 2011**. It **came into force in 2014**.
- Purpose → The convention **sets minimum standards** for governments to **meet when tackling violence against women**. Once ratified the Convention is legally binding on the country.
- Significance → It is the **first legally-binding instrument** that creates a comprehensive legal framework and approach to combat violence against women.

- Members of the Istanbul Convention → As of March 2019, **45 countries** and **the European Union** have signed the convention.

Council of Europe

- Council of Europe is an **international organisation**. It aims to **uphold human rights, democracy, and the rule of law in Europe**.
- The council was founded in **1949**. It has **47 member states**. In that, 27 members are the members of the European Union(EU).
- Relation with EU → The organisation is **distinct** from the European Union (EU). Although it is sometimes confused with it.
- Significance →
 - No country has ever joined the EU without **first belonging to the Council of Europe**.
 - The Council of Europe is the **United Nations Observer**.
- Headquarters → **Strasbourg, France**.

3. Organisation of Islamic Cooperation

Why in News?

Recently, India had called on the Organisation of Islamic Cooperation (OIC) to not allow “vested interests” such as Pakistan to “subvert” the grouping’s platform for anti-India propoganda through biased and one-sided resolutions.

About

- It is the **second largest inter-governmental organisation** after the United Nations.
- Members → It has a membership of **57 states**, covering four continents.
- Its 57 members include **Pakistan, Turkey, the UAE, Afghanistan** and **Bangladesh**.
- Purpose → It is the **collective voice of the Muslim world** to ensure and safeguard their interest on economic socio and political areas.
- Headquarters → **Jeddah, Kingdom of Saudi Arabia**.
- Functions → It was established upon a decision of the historical summit which took place in **Rabat, Kingdom of Morocco in 1969** following the **criminal arson of Al-Aqsa Mosque** in occupied Jerusalem.
- **India is not a member** of the OIC, but was invited as a ‘**Guest of Honour**’ at its plenary in 2019.

4. Honorary Consul generals

Why in News?

As a part of Vietnam’s efforts to deepen cooperation with various States, industrialist N.S. Srinivasa Murthy has been appointed Honorary Consul-General of Vietnam for Karnataka.

About

- Purpose → Together with diplomatic missions, an honorary consul **promotes economic and cultural relations**.
- They are **private individuals** who take care of their tasks on a **part-time basis** without remuneration.
- Ministry of External Affairs (**MEA**)’s **approval is essential** before the formal appointment.
- Honorary consuls do **not accept passport applications nor do they handle matters pertaining to visas or residence permits**.
- Honorary consuls **cannot serve as attorneys** in judicial proceedings or as legal advisers.

Society

1. UDISE+ 2019-20

Why in News?

The Union Education Minister has released the report on United Information System for Education Plus(UDISE+) 2019-20 for School Education in India.

About UDISE

- What is it? → It is **one of the largest Management Information Systems** on school education.
- Background → UDISE was **initiated in 2012-13** by the **Ministry of Education** by integrating DISE for elementary education and SEMIS for secondary education.
- Purpose → It helps **measure the education parameters** from classes 1 to 12 in government and private schools across India.
- UDISE+ is an **updated and improved version** of UDISE. It was developed in the year 2018-19 to speed up data entry, reduce errors, improve data quality and ease its verification.
- The present publication relates to the **data for the reference year 2019-20**.

👉 Key Findings

- Gross Enrolment Ratio at all levels of school education has **improved** in 2019-20 compared to 2018-19.
- **More than 80%** of schools in India in 2019-20 had **functional electricity**. This is an improvement of more than 6% over the previous year 2018-19.

2. Trafficking in Persons (Prevention, Care and Rehabilitation) Bill, 2021

Why in News?

The Ministry of Women and Child Welfare has invited suggestions and comments for its Trafficking in Persons (Prevention, Care and Rehabilitation) Bill, 2021.

About Highlights of the Bill

- Defines 'Exploitation' → The bill defines exploitation to include the **exploitation of the person for prostitution or other forms**.
- Which includes **pornography, forced labour, forced removal of organs or illegal clinical drug trials**.
- Includes Transgender → The bill extends beyond the protection of women and children as victims. It now **includes transgenders** as well as **any person who may be a victim of trafficking**.
- Victim Definition → The bill **does away** with the provision that a victim necessarily needs to be **transported from one place to another** to be **defined as a victim** of trafficking.
- Punishment → The Punishment will be for a **minimum of seven years period**, which can go up to an **imprisonment of 10 years** and a **fine of Rs 5 lakh**.
 - However, in cases of the trafficking of more than one child, the penalty is **life imprisonment**. In certain cases, even the **death penalty** can be sought.
- Nodal Investigative Agency → National Investigation Agency(**NIA**) shall **act as the national investigating and coordinating agency** responsible for prevention and combating of trafficking in persons.
- Jurisdiction → The bill will **extend to all citizens** inside as well as outside India. It will also be **applied to every offence** of trafficking in persons with cross-border implications.

- Seizing of Property → Property bought via trafficking as well as used for trafficking can **now be forfeited**, similar to that of the money laundering Act.
- Coverage → The scope of the Bill vis a vis offenders will now also include **defence personnel** and **government servants, doctors** and **paramedical staff** or **anyone in a position of authority**.

3. School Innovation Ambassador Training Program

Why in News?

Union Education Minister and Tribal Affairs Minister will jointly launch the 'School Innovation Ambassador Training Program' for 50,000 School Teachers.

About

- It is **innovative and one of its kind training program** for School Teachers.
- Aim → Training **50,000 school teachers** on Innovation, Entrepreneurship, IPR, Design Thinking, Product development, Idea generation etc.
- The training will be delivered in **online mode only**.
- Designed by → **Innovation Cell** of the Ministry of Education and AICTE for School Teachers.

Innovation Cell

- Innovation cell is an **initiative of the Ministry of Education** to **foster the culture of Innovation** in all Higher Education Institutions (HEIs) across the country.
- It has been established at All India Council for Technical Education (**AICTE**) **premises**.
- Mandate → To **encourage and nurture young students** by exposing them to new ideas resulting in innovative activities in their formative years, fostered through Network of Innovation Clubs (NIC) in Higher Educational Institutions.

4. SMILE Scheme

Why in News?

Ministry of Social Justice and Empowerment has framed the SMILE scheme (Support for Marginalized Individuals for Livelihood and Enterprise scheme).

About

- Two Central Sector Schemes namely **Comprehensive Rehabilitation of persons engaged in the Act of begging** and **Comprehensive Rehabilitation for Welfare of Transgender Persons** have been **merged** in a single scheme named SMILE.
- Focus areas → **Rehabilitation, provision of medical facilities**, counselling, basic documentation, education, skill development, economic linkages and so on.
- Implementation → The scheme would be implemented with the **support of State/UT Governments/Local Urban Bodies, Voluntary Organizations**, Community Based Organizations (**CBOs**) and **others**.
- Shelter Homes → Scheme provides for the use of the existing **shelter homes** available with the State/UT Governments and Urban local bodies **for rehabilitation** of the persons engaged in the act of Begging.
 - In case of non-availability of existing shelter homes, **new dedicated shelter homes** are to be **set up** by the implementing agencies.
- Pilot projects → Pilot projects are initiated on Comprehensive Rehabilitation of Persons engaged in the act of Begging **in ten cities**.
 - The ten cities are **Delhi, Bangalore, Chennai, Hyderabad, Indore, Lucknow, Mumbai, Nagpur, Patna** and **Ahmadabad**.

5. PM CARES for Children Scheme

Why in News?

Ministry of Women and Child Development has launched the web based portal 'PM CARES for Children' scheme. The portal's aim is to facilitate submission of applications, identification of children eligible to receive support, etc..

About

- PM CARES for Children Scheme, announced by the Prime Minister, aims to **ensure comprehensive care and protection of children** who have lost their parents to COVID pandemic, in a sustained manner.
- Eligibility → All children **who have lost**
 - Both parents or
 - Surviving parent or
 - Legal guardian/adoptive parents due to COVID 19 pandemic, starting from 11.02.2020 till the end of pandemic, shall be entitled to benefits under this scheme.
- Financial Assistance of Rs.10 Lakh →
 - A corpus of **Rs. 10 lakh** will be allocated to **each of these children** from the PM CARES fund.
 - This corpus will be used to give a **monthly stipend from 18 years of their age for the next five years**.
 - On reaching the age of **23 years**, he or she will get the **corpus amount** as one lump-sum for personal and professional use.
- Education Expenses of Children →
 - The **education expenses** of younger children will be supported by way of admission to Kendriya Vidyalayas and private schools **up to higher secondary level**.
 - These children will also be **supported during their higher education** through **either a scholarship** equivalent to the **tuition fees** or **educational loans** where the interest on the loan will be paid by the PM-CARES fund.
- Health Insurance →
 - All children will be enrolled as a **beneficiary under Ayushman Bharat Scheme** with a health insurance cover of Rs. 5 lakh.
 - The premium amount will be **paid by PM-CARES till a child turns 18**.

6. Academic Bank of Credit

Why in News?

On the first anniversary of the National Education Policy (NEP), the Centre plans to officially roll out some initiatives promised in the policy.

About

- Set-up by → **the University Grants Commission**.
- Features →
 - Under the ABC, students will be **given multiple entry** and **exit options**.
 - This enables students to **leave a degree** or **course** and **get a corresponding certification** and **rejoin studies** after a certain time and be able to start from where they had left.
 - It will also provide students with the **flexibility to move between institutes** while pursuing one degree or leave a course.
- How does it work? → ABC will **keep records** of the academic credits of a student. It will **not accept any credit course document directly** from the students for any course they might be pursuing, but only from higher education institutes, who will have to make deposits in students' accounts.

- Advantages → ABC will help in credit verification, credit accumulation, credit transfer and redemption of students, and promotion of the students.

Security

1. Cyber Security Index (GCI) 2020

Why in News?

Recently, India has ranked tenth (10th) in Global Cybersecurity Index (GCI) 2020 by ITU (International Telecommunication Union) by moving up 37 places.

About

- What is it? → The index is a trusted reference that **measures the commitment of countries to cybersecurity** at a global level.
- Countries are measured along **five pillars**, namely, legal measures, technical measures, organisational measures, capacity development, and cooperation to generate an overall score.
- The countries were **asked 82 questions** where 20 indicators were measured.

📌 Key Points

- Top Ranking → The **US topped** (1st), followed by the **UK** (United Kingdom) and **Saudi Arabia tied** on the second position together.
- Performance of India →
 - **India** is placed on the **10th spot**. In 2018, it was ranked on the 47th spot. It was ranked rank 47 in 2019.
 - In the **Asia-Pacific region** India **secured the 4th spot**.

📌 International Telecommunication Union:

- It is the **United Nations specialized agency** for information and communication technologies – ICTs.
- Establish → Founded in **1865** to **facilitate international connectivity** in communications networks.
- Headquartered → **Geneva, Switzerland**.
- Functions → It **allocates global radio spectrum** and **satellite orbits**, **develops the technical standards** that ensure networks and technologies seamlessly interconnect, and strives to improve access to ICTs to underserved communities worldwide.
- Recently, **India got elected as a member** of ITU Council for another 4-year term - from 2019 to 2022. India has remained a regular member since 1952.

2. Indrajaal

Why in News?

Hyderabad-based technology R&D firm Grene Robotics has designed and developed India's first indigenous drone defence dome called "Indrajaal".

About

- The drone defence dome has the capability to autonomously protect an **area of 1000-2000 sq km** against the aerial threats by assessing and acting on aerial threats such as Unmanned Aerial Vehicles (**UAVs**), **loitering munitions**, and **Low- Radar Cross Section (RCS) targets**.
- The ANTI-UAV systems will **not only provide protection to defence bases** but it will be **beneficial for linear infrastructures** like international borders against advanced weaponry.
- Salient features of Indrajaal →
 - Real-time situational awareness

- Integrated and Intelligent meshed network
- Integrated all current weapons suite and infrastructure
- Honeycombed cell structure for seamlessly built
- Synergic combination of 9-10 technologies
- 24x7 persistent and autonomous monitoring, action and tracking.

3. Indian Ocean Naval Symposium

Why in News?

Recently, the 7th edition of Indian Ocean Naval Symposium (IONS) was hosted by the French Navy at Réunion island.

About

- What is it? → IONS is a significant international maritime security initiative launched in **February 2008**.
- Purpose → It provides a **forum for discussion of regional maritime issues** and promotes friendly relationships among member nations.
- It is a **voluntary initiative** that seeks to **increase maritime co-operation** among navies of the littoral states of the Indian Ocean Region by providing an open and inclusive forum for discussion of regionally relevant maritime issues.
- Members → IONS includes **24 nations** that permanently hold territory that abuts or lies within the Indian Ocean, and 8 observer nations.
- Chairmanship → The chairmanship of IONS has been held by **India (2008-10)**, **UAE (2010-12)**, **South Africa (2012-14)**, **Australia (2014-16)**, **Bangladesh (2016-18)** and **Islamic Republic of Iran (2018-21)**.
- France assumed the Chairmanship in June 2021 for a two-year tenure.
- Significance For India → IONS fits into **India's three-fold ambitions** in the region:
 - Strengthening and deepening the relations with the Indian Ocean littoral states;
 - Establishing its leadership potential and aspirations of being a net-security provider; and
 - Fulfilling India's vision of a rules-based and stable maritime order in the IOR.
- It will help India to **consolidate its sphere** of influence from the **Straits of Malacca to Hormuz**.

4. Short Span Bridging System

Why in News?

The 7th Short Span Bridging System-10 m (SSBS-10 m) inducted into Indian Army.

About

- It is designed and developed **by Defence Research and Development Organisation (DRDO)**.
- It plays a crucial role of **bridging the gaps up to 9.5 m** as a single span **providing a 4 m wide**, fully decked roadway, ensuring faster movement of the troops.
- It involved the development of **two prototypes of 5 m SSBS on Tatra 6x6 chassis** and another two prototypes of **10 m SSBS on Tatra 8x8 re-engineered chassis**.
- This bridging system is **compatible with Sarvatra Bridging System**, where last span requires covering gaps less than 9.5 m.
- The deployed bridge is of the **load classification of MLC 70**.
- Significance of this development →
 - The system will help in **quick movement of troops** and **enhance the mobilization of resources**.
 - It will give a **boost to the fast-growing Indian defence industrial ecosystem** and help the industry to contribute towards 'Atmanirbhar Bharat'.

5. Draft Drone Rules 2021

Why in News?

The Ministry of Civil Aviation has unveiled the Draft Drone Rules, 2021 based on “trust, self-certification and non-intrusive monitoring”.

About

- **Digital sky platform** shall be developed as a business-friendly single-window online system.
- **No flight permission** required **upto 400 feet in green zones** and upto 200 feet in the area between 8 and 12 km from the airport perimeter.
- **No pilot licence required** for **micro drones** (for non-commercial use), nano drone and for R&D organisations.
- Purpose → The centre has been developed with the objective to **dedicate an ideal platform for social and cultural interactions** between people and strengthen the city’s competitiveness by developing the tourism sector.
- Moreover, the centre is also **ideal for holding international conferences**, exhibitions and music concerts and other events.
- Further, at the centre as many as **108 Rudraksha** have been **installed at this convention centre** and its **roof is shaped like a Shiva Linga**.

6. MH-60r Multi Role Helicopters

Why in News?

Indian Navy accepted the first two of its MH-60R Multi-Role Helicopters (MRH) from the US Navy in a ceremony held at Naval Air Station North Island, San Diego.

About

- MH-60R helicopters are **all-weather helicopters** designed to **support multiple missions** with state of the art avionics/sensors.
- The helicopters would also be **modified with several unique equipment** and **weapons**.
- Significance: The induction of the **all-weather multi-role helicopters** is an important milestone in India-US bilateral defence ties.
- It will provide India with the **capability to perform anti-surface** and **anti-submarine warfare missions** along with the ability to perform secondary missions including vertical replenishment, search and rescue, and communications relay.
- Other Defence Deals →
 - C-17 Globemaster III for military transport
 - Boeing’s Chinook CH-47 as heavy-lift helicopters
 - Boeing’s Apache as tank-killers
 - P-8I Poseidon for overland reconnaissance
 - Lockheed Martin’s C-130J for airlifting troops.

7. Akash-NG & MPATGM

Why in News?

Recently, the Defence Research & Development Organisation (DRDO) successfully flight-tested the New Generation Akash Missile (Akash-NG) and the Man Portable Anti Tank Guided Missile (MPATGM).

About Akash-NG

- Akash-NG is a **New Generation Surface-to-Air Missile**.
- Developed by → Defence Research & Development Laboratory (**DRDL**), **Hyderabad** in collaboration with other DRDO laboratories.

- Purpose → The Missile is capable of **intercepting high manoeuvring low radar cross-section aerial targets**.
- It is a new variant of the Akash missile that can strike targets at a distance of **around 60 km** and fly at a **speed of up to Mach 2.5**.
- Rocket Motor → Akash-NG uses a **two-pulse solid rocket motor** that replaces the old ramjet on the legacy Akash missile.
- Lighter Weight → The weight of the rocket has been brought **down from 700 kg to 350 kg**.
- New Seeker Head → Akash-NG has a **new seeker head**. The seeker **locks onto the enemy aircraft** and continuously guides the missile to impact the target.

👉 Man Portable Anti Tank Guided Missile

- It is an **indigenously-developed anti-tank guided missile**.
- Purpose → Anti Tank guided missile is a **medium** or **long-range missile** whose primary purpose is to destroy tanks and other armoured vehicles.
- Features →
 - It is a **low weight, fire and forget missile**. It is incorporated with **state-of-the-art Miniaturized Infrared Imaging Seeker** along with advanced avionics.
 - It is launched **using a tripod** designed for a maximum **range of 2.5 km** with a launch weight of **less than 15 Kg**.

8. Passage Exercise

Why in News?

The Indian Navy took part in a bilateral Passage Exercise(PASSEX) with the UK Royal Navy Carrier Strike Group(CSG)-21 in the Bay of Bengal.

About

- Passage Exercise will take place **between the two navies** to ensure that the navies are **able to communicate and cooperate** in times of war or humanitarian relief.
- The Indian Navy had **conducted similar passing exercises with** the Japan Maritime Self-Defence Force, French Navy, and US Navy among others.

👉 India-UK PASSEX Exercise:

- This is the **maiden PASSEX exercise** between the Indian Navy and the UK Royal Navy.
- The exercise was designed to hone the two navies' ability **to operate together in the maritime domain**.

👉 Other Exercises between India and UK:

- Exercise Indradhanush → It is a **joint bilateral air exercise** between India and the UK started in 2006.
- Exercise Konkan → It is an **annual maritime bilateral exercise** between the Indian Navy and the Royal Navy of Britain.
- Exercise Ajeya Warrior → It is a **joint military exercise** between India and the UK. It was held for the first time in 2013.

9. ARMEX-21

Why in News?

Union Defence Minister has flagged-in the Indian Army Skiing Expedition (ARMEX-21) in New Delhi.

About

- It is the **Indian Army Skiing Expedition**.
- It was conducted in the mountain ranges of the Himalayan region to **promote the adventure activity** in the country and the Indian Army.
- The expedition was **flagged off at Karakoram Pass in Ladakh** on 10th March and culminated at Malari in Uttarakhand on 6th of July.

Karakoram Pass

- Karakoram Pass is a mountain pass **between India and China** in the Karakoram Range.
- The mountain pass is located **on the boundary between the Indian Union Territory of Ladakh and the Xinjiang Autonomous Region of China**, and connects Leh with Yarkand.
- The pass has **no vegetation nor snow** because of the high-speed wind, which constantly blows in the region. Animal life is also non-existent in the area. However, temperatures are low and blizzards are common.
- The pass also plays a **major geographic role in the dispute** between Pakistan and India over control of the Siachen Glacier area immediately to the southwest of the pass.

10. Exercise INDRA

Why in News?

12th Edition of Indo-Russia joint military Exercise INDRA 2021 will be held at Volgograd, Russia from 01 to 13 August 2021.

About

- Purpose → The exercise will entail **conduct of counter terror operations** under the United Nations mandate by a joint force against international terror groups.
- History → The INDRA series of exercises **began in 2003** and was conducted as a bilateral naval exercise alternately between the two countries. However, the **first joint Tri-Services Exercise** was conducted in **2017**.
- The last joint, **tri-services exercise between India and Russia** was conducted in India in **December 2019**. It was held simultaneously at **Babina** (near Jhansi), **Pune**, and **Goa**.

History and Culture

1. Kalbeliya Dance

Why in News?

Recently, due to Covid-19-Pandemic an app called chendavia is gaining popularity among the students of kalbeliya dance.

About

- It is associated with a **Rajasthani tribe** of the same name.
- Kalbeliya dances are an **expression of the Kalbelia community's traditional way of life**.
- It was included in the United Nations Educational, Scientific and Cultural Organizations (**UNESCO**) **list of Intangible Cultural Heritage** (ICH) in **2010**.
- The dance form consists of **swirling; graceful movements** that make this dance a treat to behold.
- It is generally performed **for any joyous celebration** and is considered to be an **integral part of the Kalbeliya culture**.
- Another unique aspect of the Kalbelia dance is that it is **only performed by women** while the **men play the instruments** and provide the music.
- Instruments & Dress → Women in flowing **black skirts dance** and **swirl**, replicating the movements of a serpent, while men accompany them on the "**khanjari**" instrument and the "**poongi**", a woodwind instrument traditionally played to capture snakes.

📍 Kalbeliya Tribe:

- Kalbeliya tribe people were **once professional snake handlers**, today they evoke their former occupation in **music and dance** that is evolving in new and creative ways.
- They live a **nomadic life** and belong to the **scheduled tribes**.
- The largest number of the population of Kalbeliyas is in **Pali district**, then **Ajmer**, **Chittorgarh** and **Udaipur district** (Rajasthan).

2. Kuvempu Award 2020

Why in News?

Recently, Odia poet Dr. Rajendra Kishore Panda has been selected for the Kuvempu Rashtriya Puraskar (award) 2020.

About

- It is a **national award** instituted in memory of the late poet laureate Kuvempu.
- Given to → The award is **given annually** to a writer who has **contributed in any of the languages recognised by the Constitution of India**.
- Prize → The award carries a **cash award of Rs. 5 lakh**, a **silver medal** and a **citation**.

📍 Kuvempu

- Kuppali Venkatappa Puttappa, popularly known by his pen name **Kuvempu**, was an **Indian poet, playwright, novelist** and **critic**.
- He is widely regarded as the **greatest Kannada poet** of the **20th century**.
- He was the first Kannada writer to be decorated with the **Jnanpith Award** for his version of the Ramayana titled '**Sri Ramayana Darshanam**.'

📍 Jnanpith Award

- The Jnanpith award is the **highest literary award** in India and can only be **conferred annually** upon an Indian citizen.

- **English along with other languages** mentioned in Indian Constitution (8th Schedule) is considered for the Award.
- The prize carries a cash **award of Rs. 11 lakhs**, a **citation**, and a **bronze replica of Vagdevi** (Saraswati), the goddess of learning.
- It is sponsored **by the cultural organization Bharatiya Jnanpith**.

3. 4,000-year-old settlement found in Durgadevi

Why in News?

The President of India appointed Justice Arun Kumar Mishra as the Chairman of the National Human Rights Commission (NHRC).

About

- Location → The site is located in **between the river Sona on the south** and **the Burahabalang** on its north-eastern margin.
- Name → Durgadevi village named after the **presiding deity of the locality**, is located 20 kms from Balasore town in Odisha.
- The site has **circular mud fortification** of about **4.9 kms** in circumference.
- The site has **two small nullas Gangahara** and **Prassana** which join the site on its north and south, forming a natural moat. This was an **ancient water management system** developed at least 4000 years ago.
- Archaeologists have come across distinct traces of three cultural phases at the excavation site →
- Chalcolithic Period(2000 to 1000 BC) →
 - There were **human settlements** and **artifacts** belonging to the Chalcolithic period.
 - The major discovery was the base of a **circular hut, black on red painted pottery, black slipped ware, red slipped ware, and copper objects**.
 - The people were **mostly leading settled life and had started agriculture, domestication of animals, and fishing**.
- Iron Age (1000 to 400 BC) →
 - The discovered material that belongs to the Iron Age Period includes, pottery remains of **black burnished ware, black and red ware, iron objects like nails, arrow head, crucible** and **slag of various kinds**.
- Early Historic Period →
 - Early Historic Period cultural materials that were discovered include **pottery specimens of redware, terracotta ear-studs, bangles, beads, and some conical objects**.

4. Dr Bidhan Chandra Roy

Why in News?

July 1 is observed as National Doctors' Day in the memory of Dr Bidhan Chandra Roy, who had his birth and death anniversary on the same day.

About

- Born **on 1 July 1882** in **Bihar's Patna**.
- He **joined Mahatma Gandhi's Civil Disobedience movement**, soon becoming his friend and personal physician.
- He entered **politics in 1925**. He ran for elections from the Barrackpore Constituency as an independent candidate.
- He was credited for the creation of two prestigious medical institutions in the country, **the Indian Medical Association in 1928** and **the Medical Council of India**.
- After Independence →
 - After independence, Roy became **Governor of Uttar Pradesh** and a year later, in **1948**, the second **Chief Minister of West Bengal**.

- The Government of India honoured him with the **Bharat Ratna**, India's highest civilian award, on **February 4, 1961**
- The **B.C. Roy National Award** was **instituted in 1976** for work in the area of medicine, politics, science, philosophy, literature and arts.
- He was the **founder** and **chairman of the United Press of India**.

5. Swami Vivekananda

Why in News?

Death Anniversary- 4th July.

About

- Vivekananda was born in Kolkata on January 12, 1863, as **Narendra Nath Datta**.
- From an early age, he nurtured an **interest in Western philosophy, history, and theology**.
- He was a **chief disciple** of **Ramakrishna Paramhansa**.
- He pushed for **national integration in colonial India**, and his **famous speech** remains as the one that he gave in **Chicago in 1893** (Parliament of the World Religions).
- He is known to have introduced the **Hindu philosophies of Yoga and Vedanta to the West**.
- Netaji Subhas Chandra Bose had called Vivekananda the “**maker of modern India**.”
- In 1893, he took the **name ‘Vivekananda’ after Maharaja Ajit Singh** of the Khetri State requested him to do so.
- He formed the **Ramakrishna Mission in 1897** “to set in motion a machinery which will bring noblest ideas to the doorstep of even the poorest and the meanest.”
- In 1899, he established the **Belur Math**, which became his permanent abode.
- He preached ‘**neo-Vedanta**’, an **interpretation of Hinduism through a Western lens**, and believed in combining spirituality with material progress.
- Books written by him → ‘**Raja Yoga**’, ‘**Jnana Yoga**’, ‘**Karma Yoga**’ are some of the books he wrote.

6. Silambam

Why in News?

Recently, an Indian named Ganesan Sandhirakasan has won the top prize in a government-initiated competition for migrant workers in Singapore for his performance of Silambam.

About

- It is a kind of Staff Fencing **originated in Tamil Nadu**, a modern and scientific martial art.
- It is one of the **oldest martial arts** in the world.
- The term Silambam contains a meaning which itself reveals about the sport, **silam stands for a ‘mountain’** and bam **stands for bamboo** which is the main weapon used in this form of martial arts.
- Weapons Used → **Bamboo staff**, **Maru**, **Aruva** (sickle), **Savuku** (a whip), **Vaal** (curved sword), **Kuttu Katai** (spiked knuckle duster), **Katti** (knife), **Sedikuchi** (cudgel or short stick).
- Origin →
 - It is believed to have originated somewhere around **1000 BC** and it was brought by the **sage Agastya Munivar**.
 - Sillappadikkaram and many other works of Sangam literature mentions about the practice and it dates back to **2nd century BC** whereas **oral folk tales traces** it back even further **around 7000 years**.

7. Bonalu Festival

Why in News?

Minister who reviewed arrangements at the temples, in view of Bonalu festival, which kicked off in Telangana from July 11.

About

- Bonalu is a popular religious festival of the **Jagadambika Temple** on **Golconda Fort, Telangana**.
- It is the **state festival of Telangana**. It is celebrated in parts of Telangana and Andhra Pradesh.
- The Word Bonalu came from “**Bhojanalu**” **meaning food**, which is offered to the goddess during festival time.
- According to the Hindu calendar month of Aashadam, Bonalu festival starts with the religious procession **starting from Langar Houz to the temple near Bala Hissar** on top of the Golconda Fort.
- It is believed that during **Ashada Maasam**, the **Goddess comes back to her maternal home**.
- So people come to **see her** and **bring offerings of food** (Bonalu) to show their love and affection, just as they would prepare a special meal when their own daughters visit them.

8. Bhumi Panduga

Why in News?

Koyas celebrate last ‘Bhumi Panduga’ in their ancestral villages.

About

- Significance → These are celebrations marking the **beginning of farm operations every year**.
- Celebrated by → **Koya tribes** in **Andhra Pradesh**.
- For men, **hunting is mandatory** as part of the festival. The catch is distributed among all the families in the hamlet equally during a feast every evening.
- Usually celebrated in the **month of June**.

9. Jagannath Rath Yatra

Why in News?

Recently, the Prime Minister of India has greeted the people on the occasion of Jagannath Rath Yatra.

About

- Ratha Jatra, also called as **Chariot Festival**, is a **Hindu festival** associated with Lord Jagannath held **at Puri, Odisha**.
- The festival is celebrated on the **2nd day of Shukla Paksha of Ashadh**, the third month, according to the traditional Oriya calendar.
- It is a **9 day-long event** and marks the **return of Lord Krishna to Vrindavan** with his brother Balabhadra and sister Subhadra to Gundicha Temple via Mausī Maa Temple (maternal aunt's home) near Saradha Bali, Puri.
- During the festival, the **three holy chariots** carrying **idols of Lord Jagannath**, his brother Balaram (Balabhadra) and sister Subhadra are **pulled by thousands of devotees** from India and abroad.

Jagannath Temple

- The temple is believed to have been constructed in the **12th century by King Anantavarman Chodaganga Deva** of the Eastern Ganga Dynasty.
- Jagannath Puri temple is called ‘**Yamanika Tirtha**’ where, according to the Hindu beliefs, the power of ‘Yama’, **the god of death has been nullified in Puri** due to the presence of Lord Jagannath.
- This temple was called the “**White Pagoda**” and is a **part of Char Dham pilgrimages** (Badrinath, Dwaraka, Puri, Rameswaram).

- There are four gates to the temple- Eastern '**Singhdwara**' which is the main gate with two crouching lions, Southern '**Ashwadwara**', Western '**Vyaghra Dwara**' and Northern '**Hastidwara**'.
- There is a **carving** of each form at each gate.
- In front of the entrance stands the **Aruna stambha** or **sun pillar**, which was originally **at the Sun Temple in Konark**.

Other Important Monuments of Odisha:

- Konark Sun Temple (UNESCO World Heritage Site)
- Lingaraj Temple
- Tara Tarini Temple
- Udaygiri and Khandagiri Caves.

10. Kanwar Yatra

Why in News?

Recently, the Supreme Court (SC) has allowed Kanwar Yatra with certain restrictions.

About

- It is a **pilgrimage** organised in the **Hindu calendar month of Shravana** (Saavan).
- Saffron-clad Shiva devotees generally **walk barefoot with pitchers of holy water** from the Ganga or other holy rivers. The water is used by the pilgrims **to worship Shiva lingas at shrines** of importance.
- Devotees carry the **pitchers of holy water on their shoulders**, balanced on decorated slings known as
- In the Gangetic plains, the **water is taken from pilgrimage sites** such as Haridwar, Gaumukh and Gangotri in Uttarakhand, Sultanganj in Bihar, and Prayagraj, Ayodhya or Varanasi from Uttar Pradesh.
- An important festival with similarities to the Kanwar yatra in North India, called the **Kavadi festival**, is **celebrated in Tamil Nadu**, in which **Lord Muruga is worshipped**.

11. PRASHAD Scheme

Why in News?

The Prime Minister has inaugurated the Tourism Facilitation Centre and operation of Cruise Boat in Varanasi. These projects have been developed under the PRASHAD Scheme.

About

- The National Mission on Pilgrimage Rejuvenation and Spiritual Heritage Augmentation Drive (PRASHAD) was launched **by the Ministry of Tourism in the year 2014-15**.
- Purpose → **Integrated development of identified pilgrimage and heritage destinations**.
- It is a **Central Sector Scheme** fully financed by the Government of India.
- Objectives of the Scheme →
 - To **enhance tourism attractiveness** in a sustainable manner.
 - To **harness pilgrimage tourism** so that it directly affects and multiplies employment generation and economic development.
 - Furthermore, to **promote local art and culture**, handicraft and cuisines, etc.
 - To **develop world-class infrastructure** in religious destinations.

12. Tipu Sultan

Why in News?

Mysore King Tipu Sultan is at the centre of controversy in the Brihanmumbai Municipal Corporation over attempts to name a garden after him in Govandi, a suburb in Eastern Mumbai.

About

- Born in **November 1750**, Tipu Sultan was **Haidar Ali's son** and a **great warrior** also known as the Tiger of Mysore.
- He was a well educated man **fluent in Arabic, Persian, Kanarese** and **Urdu**.
- In the wider national narrative, Tipu has so far been seen as a **man of imagination and courage, a brilliant military strategist** who, in a short reign of 17 years, mounted the most serious challenge the Company faced in India.
- Contributions of Tipu Sultan →
 - Fought the **first Anglo-Mysore War (1767-69)** at the **age of 17** and subsequently, **against the Marathas** and in the Second Anglo-Mysore War (1780-84).
 - He fought Company forces four times during 1767-99 and was **killed defending his capital Srirangapatnam** in the Fourth Anglo Mysore War.
 - Tipu reorganised his army along **European lines, using new technology**, including what is considered the **first war rocket**.
 - Devised a **land revenue system** based on **detailed surveys and classification**, in which the tax was imposed directly on the peasant, and collected through salaried agents in cash, widening the state's resource base.
 - **Modernised agriculture, gave tax breaks for developing wasteland, built irrigation infrastructure** and repaired old dams, and promoted agricultural manufacturing and sericulture. Built a navy to support trade.
 - Commissioned a "**state commercial corporation**" to set up factories.
- Tipu was a great **lover of democracy** and a **great diplomat** who gave his support to the French soldiers at Seringapatam in setting up a Jacobin Club in 1797.
 - Tipu himself became a **member of the Jacobin Club** and allowed himself to be called **Citizen Tipu**.
 - He planted the **Tree of Liberty at Seringapatam**.

13. Kadambini Ganguly

Why in News?

On 18 July 2021, Google celebrated Kadambini Ganguly's 160th birthday with a doodle on its homepage in India.

About

- She was the **very first Indian female doctor** who practiced with a degree in western medicine.
- She was also the **first female speaker** at the Indian National Congress.
- She was always **pushing against the glass ceiling set on women's freedom** at a time when ill practices such as child marriage and sati were strife.
- Annie Besant also hailed Kadambini as a "**symbol that India's freedom would uplift India's womanhood**" in her book **'How India Wrought For Freedom'**.
- After the Bengal Partition, Kadambini organized the **Women's Conference in Calcutta in 1906**. In 1908, she **formed an association** to help the Satyagraha workers in Transvaal, South Africa. Moreover, when a meeting was arranged at the Sadharan Brahma Samaj in 1914, in honour of Gandhi during his **visit to Calcutta, she presided over it**.

14. Historic Urban Landscape Project

Why in News?

Madhya Pradesh has launched UNESCO's 'Historic Urban Landscape' project for Gwalior and Orchha cities of State.

About

- Gwalior and Orchha in Madhya Pradesh were **included in the list of UNESCOs world heritage cities** under its urban landscape city programme in **December 2020**.
- The development and management plan of these cities will be **prepared by UNESCO**.
- All aspects including **history, culture, food, lifestyle, economic development, community development** will be included in it.

Gwalior

- It was established in the **9th century** and **ruled by Gurjar Pratihara Rajvansh, Tomar, Baghel Kachvaho** and **Scindias**.
- The city is known for its **palaces and temples**, including the intricately carved Sas Bahu Ka Mandir temple.
- The **Gwalior Fort** occupies a sandstone plateau overlooking the city and is accessed via a winding road lined with **sacred Jain statues**. Within the fort's **high walls** is the **15th-century Gujar Mahal Palace**, now an archaeological museum.

Orchha

- It is popular for its **temples and palaces** and was the capital of the **Bundela kingdom in the 16th century**.
- The famous spots in the town are **Raj Mahal, Jehangir Mahal, Ram Raja Temple, Rai Praveen Mahal**, and **Laxminarayan Mandir**.

'Historic Urban Landscape' Approach:

- It was adopted in **2011** at **UNESCO's General Conference**.
- UNESCO defines HUL approach as an **integrated approach** towards managing heritage resources found within dynamic and evolving environments.

15. Adarsh Smarak Scheme

Why in News?

Minister for Culture informed Rajya Sabha that 3 monuments of Andhra Pradesh have been Identified as "Adarsh Smarak" for providing additional facilities like Wi-Fi, Cafeteria, Interpretation centre, Brail signages, Illumination, etc.

About

- These **Three monuments** of Andhra Pradesh are
 - **Monuments at Nagarjunakonda**, District Guntur,
 - **Buddhist Remains at Salihundam**, District Srikakulam, and
 - **Veerabhadra Temple** at Lepakshi.
- Further, **Fort at Gandikota** has been included in the Adopt-a-Heritage scheme of Ministry of Tourism, which is PPP mode.

Adarsh Smarak scheme

- Launched in → **2014**.
- Purpose → For providing **improved visitor amenities**, especially for the physically challenged.
- Implemented by → the **Ministry of Culture**.
- The **civic amenities** are being **augmented at the protected sites** under the scheme.
- Archaeological Survey of India had identified **100 monuments** as "Adarsh Smarak" **for upgradation**.
- Objectives of the Scheme →
 - To make the monument visitor friendly.
 - To provide interpretation and audio-video centers.
 - To make the monument accessible to differently-abled people.

- To implement Swachh Bharat Abhiyan.

16. Chandra Shekahr Azad

Why in News?

On 23rd July, India paid tribute to the freedom fighter Chandra Shekahr Azad on his birth anniversary.

About

- Born on July 23, 1906, at **Bhavra, Alirajpur District** in present-day Madhya Pradesh.
- He took **part in non-cooperation movement** when he was 15.
- After the suspension of the non-cooperation movement in 1922 by Gandhi, Azad **joined Hindustan Republican Association (HRA)**.
- HRA was later **reorganised as** the Hindustan Socialist Republican Army (**HSRA**) **in 1928**.
- Azad was involved in the **1925 Kakori Conspiracy**.
- He **died at Azad Park** in Allahabad on 27th February 1931.
- Other cases Azad was involved in include the **1926 attempt to blow up the viceroy's train**, and the **shooting of J P Saunders in 1928**. Saunders was assassinated to avenge the death of Lala Lajpat Rai.
- Why he is called "Azad"? → He was arrested because of his **participation in the non-cooperation movement**. When produced by the magistrate, he proudly announced his name as '**Azad**', his father's name as '**Swatantrata**' and his place of dwelling as '**Jail**'. It was from then on that the name 'Azad' stuck to him.

17. Rudreswara (Ramappa) Temple

Why in News?

The United Nations Educational, Scientific and Cultural Organization (UNESCO) has inscribed the Ramappa Temple as a UNESCO 'World Heritage Site'.

About

- Ramappa (Rudreswara) Temple is also known as **the Ramalingeswara (Lord Siva) temple**.
- Location → The temple is located in the **Palampet village** of Venkatapur Mandal in Telangana's Mulugu (old Warangal) district.
- Built by → The temple was constructed in **1213 AD** during the reign of the **Kakatiya Empire by Recherla Rudra**, a general of Kakatiya king Ganapati Deva.
- Presiding Deity → The presiding deity of the temple is **Ramalingeswara Swamy**. The temple is known as the **Ramappa temple** after the sculptor who executed the work in the temple for 40 years.
- Key Features of the Ramappa Temple →
 - The temple is a **masterpiece** of **Kakatiya-era architecture**. The temple stands on a **6 feet high star-shaped platform** with **walls, pillars**, and **ceilings** adorned with **intricate carvings** that attest to the unique skill of the Kakatiya sculptors.
 - The foundation of the temple is built with the "**sandbox technique**". The flooring of the temple is **granite** and the **pillars are of basalt**.
 - Sandbox technique involved **filling the pit — dug up for laying the foundation** — with a **mixture of sand-lime, jaggery** (for binding), and **karakkaya** (black myrobalan fruit) before the buildings were constructed on these 'sandboxes'. This technique acts as a **cushion in case of earthquakes**.
 - The lower part of the temple is built with **red sandstone**, while the white **gopuram** is **built with light bricks** that reportedly float on water.
 - Moreover, the main temple is flanked by the **collapsed structures of Kateshwarayya** and **Kameshwaraya temples** in Palampet about 220 km from Hyderabad.

- Further, the European merchants and travelers were mesmerized by the beauty of the temple, and one such traveler had remarked that the temple was the “**brightest star in the galaxy of medieval temples of the Deccan**”.

International Council on Monuments and Sites(ICOMOS)

- ICOMOS is a **non-governmental international organisation** associated with UNESCO. It was founded in **1965** in Warsaw as a result of the Venice Charter of 1964.
- Mission → Its mission is to **promote the conservation, protection, use, and enhancement of monuments, building complexes, and sites.**
- ICOMOS is also an **Advisory Body** of the World Heritage Committee for the implementation of the World Heritage Convention of UNESCO.
- Partner Organization → ICOMOS is a **partner and founding member of the Blue Shield**, which works to protect the world’s cultural heritage threatened by wars and natural disasters.
- Headquarters → **Paris, France.**

18. Dholavira

Why in News?

Dholavira in Gujarat has got the tag of a UNESCO World Heritage Site.

About

- Dholavira is an archaeological site of a Harappan-era city. It is located in the **Kutch district, Gujarat.**
- The site is one of the very few **well-preserved urban settlements** in South Asia, dating from the **3rd to mid-2nd millennium BCE.**
- The site is the **6th largest** of more than 1,000 Harappan sites discovered so far.
- The site was discovered in **1968** by archaeologist **Jagat Pati Joshi.**
- It has two seasonal streams, **Mansar** and **Manhar.**
- Key Features →
 - The site has a **fortified citadel, a middle town and a lower town with walls** made of sandstone or limestone instead of mud bricks in many other Harappan sites.
 - It is known for its unique characteristics, such as its **water management system, multi-layered defensive mechanisms, extensive use of stone** in construction and **special burial structures.**
 - During the excavations, **artefacts made of copper, stone, jewellery of terracotta, gold** and **ivory** have been found.
 - Unlike graves at other IVC sites, **no mortal remains of humans** have been discovered at Dholavira.
 - Remains of a **copper smelter** indicate Harappans, who lived in Dholavira, knew metallurgy.
 - It was also a **hub of manufacturing jewellery** made of shells and semi-precious stones, like agate and used to export timber.
- Decline →
 - Its decline also **coincided with the collapse of Mesopotamia,** indicating the integration of economies.
 - Harappans, who were **maritime people, lost a huge market, affecting the local mining,** manufacturing, marketing and export businesses once Mesopotamia fell.
 - From 2000 BC, Dholavira entered a phase of **severe aridity** due to climate change and rivers like Saraswati drying up. Because of a drought-like situation, **people started migrating** toward the Ganges valley or towards south Gujarat and further beyond in Maharashtra.

19. Kanjeevaram Silk Sari

Why in News?

Award-winning artisan weaver, B Krishnamoorthy, is creating a repository with samples of all the designs, patterns and motifs traditional to Kanjeevaram silk sari weaving, preserving fine pieces for posterity.

About

- Kanchipuram silk sarees are **woven from pure mulberry silk**. While the silk belongs to South India, the pure gold and silver zari comes from Gujarat.
- These are considered to be **special** and **are worn on occasions and festivities**.
- Its name came from the **Kanchipuram region in Tamil Nadu**.
- On this, the **rich woven mundhi showing paintings of Raja Ravi Varma** and epics of Mahabharata and Ramayana.
- Tracing its long and rich history from the **Chola Dynasty**, Kanchipuram sarees today are considered as one of the **oldest and rich legacies of the Indian textile industry**.
- It has been recognized as a **Geographical indication product** in **2005–2006**.

📌 Silk Production in India

- India is the **second-largest producer** of silk in the world.
- India has the unique distinction of being the only country producing all the five kinds of silk namely, **Mulberry, Eri, Muga, Tropical Tasar** and **Temperate Tasar**.

📌 Initiatives

- Central Silk Board → It is a **statutory body** under the administrative control of the Ministry of Textiles for the development of the silk sector in India.
- Silk Samagra Scheme → Launched in **2017** for the **development of sericulture in the country**.

📌 Other GI tagged Sarees

- **Tamil Nadu** → Kandangi Saree, Thirubuvanam silk sarees, Kovai Kora Cotton Sarees
- **Uttar Pradesh** → Banaras Brocade
- **Karnataka** → Ilkal Saree, Molakalmuru Saree
- **Andhra Pradesh** → Uppada Jamdani Sarees, Venkatagiri Sarees, Mangalagiri Saree
- **Kerala** → Balaramapuram Sarees, Kasaragod Sarees, Kuthampully Sarees
- **Telangana** → Gadwal Saree, Pochampally Ikat (logo)
- **Madhya Pradesh** → Chanderi Saree, Maheshwar Sarees
- **Odisha** → Orissa Ikat, Bomkai Saree, Habaspuri Saree
- **West Bengal** → Santipore Saree, Baluchari Saree, Dhaniakhali Saree
- **Maharashtra** → Paithani Sarees and Fabrics, Karvath Kati Sarees and Fabrics
- **Chhattisgarh** → Champa Silk Saree
- **Gujarat** → Surat Zari Craft, Patola Saree.

20. Sambandar

Why in News?

The National Gallery of Australia (NGA) announced that it would return 14 works of art from its Asian art collection to India.

About

- The works being returned are →
 - dancing child-saint **Sambandar** of 12th century belonging to Chola dynasty,
 - **processional standard** [alam], from Hyderabad,
 - **arch for a Jain shrine** (11th-12th century), seated Jina, 1163 from Mount Abu region, Rajasthan,
 - the **divine couple Lakshmi and Vishnu** [Lakshmi Narayana] (11-12th century), and
 - **Durga Mahisasuramardini**, from Gujarat.

📌 Sambandar

- Sambandar, also referred to as **Thirugnana Sambandar** was a **Saiva poet-saint of Tamil Nadu** who lived sometime in the 7th century CE. He was a contemporary of Appar, another Saiva poet-saint.

- He was a **child prodigy** who **lived just 16 years**. According to the Tamil Shaiva tradition, he composed an oeuvre of 16,000 hymns in complex meters, of which 383 (384) hymns with 4,181 stanzas have survived.
- These narrate an **intense loving devotion** (bhakti) **to the Hindu god Shiva**.
- The surviving compositions of Sambandar are preserved in the **first three volumes of the Tirumurai**, and provide a part **of the philosophical foundation of Shaiva Siddhanta**.

Chola Dynasty

- The Chola Dynasty is a **Tamil dynasty**. It ruled primarily in **southern India until the thirteenth century**.
- Founder → The Chola Empire was **founded by Vijayalaya**. He took over the Tanjore kingdom in the **8th century by defeating Pallavas**. Tanjore was hence made the first capital of the Chola Empire.
- Important Ruler → **Rajendra Chola** was the important ruler of Chola Empire. He succeeded Rajaraja Chola. He was the **first to venture to the banks of the Ganges**.
- Furthermore, he was popularly called the **Victor of the Ganges**. His new empire capital was called the **Gangaikondacholapuram** where he received the title of '**Gangaikonda**'.

Great Living Chola Temples

- The Great Living Chola Temples is a **UNESCO World Heritage Site designation** for a group of Chola dynasty-era Hindu temples in Tamil Nadu. The temples were completed between the **early 11th and the 12th century CE**. The monuments include →
 - Brihadisvara Temple at Thanjavur
 - Brihadisvara Temple at Gangaikonda Cholapuram
 - Airavatesvara Temple at Darasuram.

Miscellaneous

1. Méndez Principles

Why in News?

Mendez anti-torture principles can be used to reduce the use of torture in obtaining evidence.

About

- The '**Principles on Effective Interviewing for Investigations and Information Gathering**', are also called the 'Méndez Principles'.
- It proposes practical measures to **replace torture and coercive interrogation** with rapport-based interviews, reinforced through legal and procedural safeguards at every step.
- The Méndez Principles thus represent a **new standard for effective interviewing** by police and others, while respecting human rights.
- It was **initiated by Mr. Méndez**, a former UN Special Rapporteur on Torture.
- It **applies to all authorities** who have the power to detain and question people, including the police, military, and intelligence.

2. Kadaknath

Why in News?

COVID-19 pandemic has led to a huge demand for the Kadaknath chicken. People are consuming it to boost their immune system.

About

- Kadaknath or Kali Masi is a **breed of chicken** originating from the **Jhabua and Dhar districts of western Madhya Pradesh**.
- It received **GI tag in 2017**.
- It is popular for its **black meat** which is famous for its **meat quality, texture, taste**, and excellent medicinal values.
- Benefits → It is also famous for its **low cholesterol** and **high protein content**.

3. Enforcing Contracts Portal

Why in News?

Justice Department launched the "Enforcing Contracts Portal".

About

- Aim → The portal aims to **promote ease of doing business** and **improve the 'Contract Enforcement Regime'** in the country.
- The portal will be a **comprehensive source of information** related to the legislative and policy reforms, that are undertaken on the Enforcing Contracts parameters.
- Secondly, the portal will provide **easy access to the information on commercial cases** in the Dedicated Commercial Courts of Delhi, Mumbai, Bengaluru, and Kolkata.
- These **Dedicated Commercial Courts** have been established for the speedy resolution of commercial disputes
- Lastly, the portal will also provide **access to a repository of commercial laws**.

4. Saral Sanchar Portal

Why in News?

COVID-19 pandemic has led to a huge demand for the Kadaknath chicken. People are consuming it to boost their immune system.

About

- Saral Sanchar (Simplified Application For Registration and Licenses) is a web-based portal for **Issuing various types of licenses** and **registration certificates**.
- The following types of licenses/authorizations shall be issued from this portal →
 - **Unified License**.
 - **Unified License-Virtual Network Operator**.
 - **WPC Licenses** (Wireless Planning and Coordination).

5. First Movable Freshwater Tunnel Aquarium

Why in News?

Recently, Indian Railway (IR) has opened the first movable freshwater tunnel aquarium at Bengaluru Railway Station.

About

- Opened by → the Indian Railway Stations Development Corporation Limited (**IRSDC**) in **collaboration with the HNI Aquatic Kingdom**.
- Open at → **The Krantivira Sangolli Rayanna Railway Station** also known as Bengaluru City Railway Station.
- Features →
 - The aquarium is a one-of-its-kind aquatic park **based on the Amazon River (of South America) concept**.
 - This is a **12-foot long aquatic kingdom, first paludarium** (vivarium that incorporates both terrestrial and aquatic elements) **with myriad flora and fauna**.
 - It is home to **various aquatic animals** such as alligator gar ranging, stingrays, sharks, lobsters, snails and shrimps. The aquarium is **adorned with natural rocks** and **splashes of driftwood**, artificial coral rocks.
- This has been built at a **cost of Rs 1.2 crore** with the aim of **enhancing the passenger experience at the station**.
- It is also aimed at **improving revenue** earning for IR.

6. OxyJani

Why in News?

Indian researchers have designed an oxygen concentrator named OxyJani.

About

- Developed by → **Jawaharlal Nehru Centre for Advanced Scientific Research**, an autonomous institute under the Department of Science & Technology.
- OxyJani is a **mobile group oxygen concentrator** that can be used in rural settings and also be rapidly deployed in emergencies in any location.
- Technology → It is based on the **principles of Pressure Swing Adsorption (PSA) technology**.
- Significance → The team **replaced lithium zeolites** (LiX) which is usually used in oxygen concentrators **with sodium zeolites** which do **not generate toxic solid waste** and can be manufactured in India.
- Advantages of OxyJani →
 - It is modular and capable of **delivering a range of solutions** such as conversion of medical air to medical oxygen.
 - It is an **entirely off-grid solution** including all modules that can facilitate deployment in rural areas.
 - it is **portable** just like personal oxygen concentrators and **affordable too**.

7. Child Soldier Recruiter List

Why in News?

The US has added Pakistan and 14 other countries to a Child Soldier Recruiter List that identifies foreign governments having government-supported armed groups that recruit or use child soldiers.

About

- The US Child Soldiers Prevention Act -2008 (CSPA) requires the publication in the annual Trafficking in Persons (TIP) report **a list of foreign governments that have recruited or used child soldiers.**
- Some of the countries which have been added to the list are **Pakistan, Turkey, Afghanistan, Myanmar, Iran, Iraq, Nigeria, Yemen** etc.
- Impact → Child Soldier Recruiter designation could result in **restrictions on certain security assistance** and **commercial licensing of military equipment.**
- Role of UN → The UN verified that **over 7,000 children** had been recruited and used as soldiers in 2019 alone.

8. White Flag Campaign

Why in News?

In Malaysia, some residents of low-income families have started waving white flags as part of the so-called “White Flag Campaign”, or the #benderaputi (white flag) movement.

About

- They are doing this to **convey distress about the financial crunch** they have had to deal with amid the **lockdowns due to Covid-19.**
- Malaysia enforced **another lockdown** on **June 1** in order to control another surge of Covid infections.
- As part of the movement that was initiated last week, **families that are facing hunger** or **need any other kind of assistance** are encouraged to wave a white flag or put a piece of white cloth outside their homes to signal that they need help.
- The idea is that by spotting the white flag, neighbours and good samaritans **can reach them.**

👉 Black flag movement

- Alongside the white flag movement, there is the black flag movement as well, in order to **express dissatisfaction with the Malaysian government.**
- Specifically, this movement is **demanding** that **Prime Minister Muhyiddin Yassin resign.**

9. Lambda Variant

Why in News?

After the cases of Delta Variant of Covid-19 continuously rising, a new variant called Lambda Variant (LV) is emerging as a new threat.

About

- The strain was **first identified in Peru** in December 2020. Lambda is the **dominant variant in the South American country** with 81% samples found to be carrying it.
- On June 14, the World Health Organization designated the Lambda variant, previously known by its formal scientific name **C.37**, as the seventh and newest “**variant of interest**”, meaning it was something to watch out for.
- Like the Delta variant, the Lambda variant, which has now been detected in more than 25 countries, is **feared to be more transmissible than the original virus.**
- Variant of Interest

- This means that the genetic changes involved are predicted or known to affect transmissibility, disease severity, or immune escape.
- It is also an acknowledgement of the fact that the variant has caused significant community transmission in multiple countries and population groups.

10. Revenge Tourism

Why in News?

Government warns against 'revenge travel' as tourists throng hills.

About

- The term 'revenge travel' is a riff on the 1980s Chinese concept of 'revenge spending', when the country saw an explosion in consumer spending after it emerged from restrictions.
- Now, it is used to describe the angsty, bottled-up demand for travel after several months of lockdown.
- Revenge travel or revenge tourism, stems from a feeling of wanting to break free from the monotonous life of lockdowns. It is a product of another phenomenon called 'lockdown-fatigue'.

11. Matsya Setu App

Why in News?

Union Minister for Fisheries, Animal Husbandry and Dairying recently launched the Online Course Mobile App "Matsya Setu" for Fish Farmers.

About

- Developed by → ICAR-Central Institute of Freshwater Aquaculture (ICAR-CIFA), Bhubaneswar, with the funding support of the National Fisheries Development Board (NFDB), Hyderabad.
- Aim → To disseminate the latest freshwater aquaculture technologies to the aqua farmers that will enhance their productivity and in turn, their incomes.
- Species-wise/ subject-wise self-learning online course modules will be provided through the app
- e-Certificate will be issued upon completion of the course

12. Emvolio

Why in News?

DBT-BIRAC supported startup Blackfrog Technologies has developed Emvolio.

About

- Emvolio is a portable, battery-powered medical-grade refrigeration device.
- It has a 2-litre capacity, enabling it to carry 30-50 vials.
- Features: Continuous temperature monitoring, location tracking, state-of-charge indication, communication with headquarters via live-tracking and vital statistics for improved coverage.
- Significance →
 - Can store vials sufficient for a daylong immunisation campaign.
 - Improves the efficiency of the immunization by strictly maintaining preset temperature for up to 12 hours.
 - Enables the safe and efficient transportation of vaccines to the last mile.

 **Blackfrog Technologies Startup**

- Blackfrog is an **ISO-13485 certified manufacturer** of medical devices, and Envólio has been designed in accordance with **WHO-PQS E003 standards**.

About BIRAC

- Set up by the **Department of Biotechnology** (DBT).
- Biotechnology Industry Research Assistance Council (BIRAC) is a **not-for-profit Section 8, Schedule B, Public Sector Enterprise**.
- Functions → It acts as an Interface Agency to **improve and encourage the evolving biotechnology industry** to execute strategic research and development activities in context to Nation's product development needs.

13. SPARSH Portal

Why in News?

The Ministry of Defence has launched SPARSH (System for Pension Administration Raksha) Portal.

About

- SPARSH is an **integrated system for automation of sanction** and **disbursement of defence pension**.
- The portal **processes pension claims** and **credits pension directly** into the bank accounts of defence pensioners without relying on any external intermediary.
- A Pensioner Portal is available for pensioners to **view their pension related information, access services** and **register complaints**, if any.
- SPARSH envisages establishment of **Service Centres** to **provide last mile connectivity to pensioners** who may be unable to directly access the SPARSH portal.
- The **two largest banks dealing with defence pensioners** – State Bank of India (**SBI**) and Punjab National Bank (**PNB**) – have been **co-opted as Service Centres**.

14. Madurai Malli

Why in News?

Recently, the consignments of Geographical Indications (GI) certified Madurai Malli and other traditional flowers were exported to USA and Dubai from Tamil Nadu.

About

- It is a **jasmine flower** which is known for its **powerful, mysteriously attractive** and **seductive fragrance**.
- It is called as **Madurai Malli** because of its place of origin namely Madurai which is a **province of Tamil Nadu**.
- It is a **very old traditional flower** and has a botanical name of Jasminium.
- The Jasmine City or Madurai is also known as **Malligai Managar**.
- The ideal season for growth of Madurai Malli is **warm summer** and **bright sunny days**.
- The soil requirement for Madurai Malli **varies from sandy loamy soil to even clayey soil**.
- It was granted the **status of Geographical Indications** (GI) under GI Act 1999 in **2013**.

15. Right to Repair Movement

Why in News?

In recent years, countries around the world have been attempting to pass effective 'right to repair' laws. But the movement is facing tremendous resistance from tech giants such as Apple and Microsoft over the years.

About

- The movement traces its roots back to the very dawn of the **computer era** in the **1950s**.
- The goal of the movement is to **get companies to make spare parts, tools** and **information** on how to repair devices available to customers and repair shops,
 - To **increase the lifespan** of products and
 - To **keep them from ending up in landfills** i.e., electrical waste (e-waste) generation.
- It will **contribute to circular economy objectives** by improving the life span, maintenance, re-use, upgrade, recyclability and waste handling of appliances.
- ‘Right to repair’ laws by various countries →
 - US - The US President called on the Federal Trade Commission to force tech companies to **allow consumers to fix their own electronic devices - either themselves or using a technician** of their choice.
 - As of 2021, almost **all of the 50 US states** have proposed a **right to repair bill**.
 - UK - The UK government introduced **right-to-repair rules** with the aim of **extending the lifespan of products** by up to 10 years.

16. Ashadhi Bij

Why in News?

The Prime Minister Narendra Modi has greeted the people on the auspicious occasion of Ashadhi Bij, the Kutchi New Year.

About

- Date → Ashadi Beej or Ashadhi Bij is observed on the **second day of the Shukla Paksha** or waxing phase of moon in Ashada month.
- Region → It is the **Kutchi New Year**. This Hindu New Year is observed in the Kutch region in Gujarat.
- Celebrations → Ashadi Beej is mostly a **traditional affair** and is a **celebration of rains**. During Ashadhi-beej, farmers check the moisture in the atmosphere to help predict which crop would do best in coming monsoon.

17. Fit for 55 Package

Why in News?

Recently, the European Commission has announced a plan called ‘Fit for 55 Package’ for all its members against climate change.

About

- It calls for 27 member states of European Commission to **cut their output of greenhouse gases by 55% by 2030, compared with 1990 levels**.
- Its target is **more aggressive than that of the United States**, which committed to reduce emissions by 40% to 43% over the same period, but behind Britain, which pledged a 68% reduction.
- It includes a contentious plan called “**Carbon Border Adjustment Mechanism**” which would **impose tariffs** on imported products based on the greenhouse gas emissions associated with them.

18. Rudraksh

Why in News?

Prime Minister inaugurated the JICA-assisted International Cooperation and Convention Centre, also known as 'Rudraksh' in Varanasi.

About

- Rudraksh is an **international cooperation and convention centre** that will offer a glimpse of the cultural richness of Varanasi.
- The centre has been **built with** the assistance from **Japan International Cooperation Agency**.
- Purpose → The centre has been developed with the objective to **dedicate an ideal platform for social and cultural interactions** between people and strengthen the city's competitiveness by developing the tourism sector.
- Moreover, the centre is also **ideal for holding international conferences**, exhibitions and music concerts and other events.
- Further, at the centre as many as **108 Rudraksha** have been **installed at this convention centre** and its **roof is shaped like a Shiva Linga**.

19. Kisan Sarathi App

Why in News?

The Union Agriculture Minister along with the Union Minister for Electronics and Information Technology has launched Kisan Sarathi App.

About

- It has been **jointly launched by** the Ministry of Agriculture and Farmers Welfare and Ministry of Electronics and Information Technology.
- It aims to facilitate farmers to get the **right information at the right time** in their **desired language**.
- It will **empower farmers** with the **technological interventions** to reach farmers in remote areas.
- With the digital platform, the farmers can **interact and avail personalised advisories on agriculture and allied areas** directly from the respective scientists of Krishi Vigyan Kendra (**KVKs**).
 - t first KVK was established in **1974 at Puducherry**.
- The initiative will be **highly valuable** not only in addressing the location specific information needs of the farmers but also in Agricultural Extension, Education and Research activities of ICAR.

About ICAR

- ICAR is an **autonomous organisation** under the Department of Agricultural Research and Education (**DARE**), **Ministry of Agriculture and Farmers Welfare**.
- Mandate → The Council is the **apex body for coordinating, guiding and managing research and education** in agriculture including horticulture, fisheries and animal sciences in the entire country.
- President → **Union Minister of Agriculture** serves as its president.

20. NBDriver

Why in News?

Researchers at IIT Madras have developed an AI tool called NBDriver (neighbourhood driver) for use in analysing cancer-causing mutations in cells.

About

- By looking at the neighbourhood, or context, of a mutation in the genome, it can **look at harmful “driver” mutations and distinguish them from neutral “passenger” mutations**.
- This technique of looking at the genomic neighbourhood to make out the nature of the mutation is a **novel and largely unexplored one**.
- The nature of the mutation **depends on the neighbourhood**, and how this tool may be used to draw the **line between driver and passenger mutations**.

- The method of distinguishing between driver and passenger mutations solely by looking at the neighbourhood is novel.

21. Digital land use data

Why in News?

Africa becomes first continent to complete collection of digital land use data.

About

- Africa has become the first continent in the world to complete the collection of accurate, comprehensive and harmonised digital land use and land use change data under the Africa Open DEAL initiative.
- DEAL stands for → Data for the Environment, Agriculture and Land Initiative.
- The data collection and analysis initiative is led by → the Food and Agriculture Organization (FAO) and the African Union Commission (AUC).
- Significance → The data was analysed to highlight land use change over the past 20 years and the potential for restoration at the national level for every country in the African continent.

22. Space rice

Why in News?

China harvests 1st batch of seeds that travelled around moon.

About

- It is the rice harvested from seeds that went on a 23-day lunar voyage with China's Chang'e-5 in November.
- After being exposed to cosmic radiation and zero gravity, these seeds weighing around 40 gram returned and were harvested at the space breeding research centre of the South China Agricultural University in Guangdong province.
- It is believed that rice seeds exposed to the environment in Space may mutate and produce higher yields once planted on Earth.
- China has been taking seeds of rice and other crops to Space since 1987.
- In 2018, the total plantation area for space crops approved in China reached more than 2.4 million hectares.

23. High Strength Metastable Beta Titanium Alloy

Why in News?

DRDO develops high strength titanium alloy for aerospace forgings.

About

- Developed by → the Defence Metallurgical Research Laboratory (DMRL), a premier Hyderabad based laboratory of DRDO.
- It contains Vanadium, Iron and Aluminium (Ti-10V-2Fe-3Al) on industrial scale for applications in aerospace structural forgings.
- It is already being used by many developed nations as beneficial substitute for the relatively heavier traditional Ni-Cr-Mo structural steels to achieve weight savings.
- It is unique due to their higher strength, ductility, fatigue, and fracture toughness - making them attractive for aircraft structural applications.
- Their relatively lower lifetime cost, owing to superior corrosion resistance in comparison to steels, is an effective trade-off to justify the use of this expensive material in India too.

- Aeronautical Development Agency (**ADA**) has **identified over 15 steel components** which may be replaced by high strength-to-weight ratio Ti-10V-2Fe-3Al alloy forgings in the near future.
- The excellent forgeability of the alloy facilitates manufacture of intricately configured components for aerospace applications with **potential for 40% weight savings**.

24. AMLEX Device

Why in News?

To increase the life of medical oxygen cylinders three fold, the Indian Institute of Technology, Ropar has developed a first-of-its-kind Oxygen Rationing Device – AMLEX.

About

- AMLEX is an **Oxygen Rationing Device** that increases the life of medical oxygen cylinders threefold.
- The device can be **easily connected** between the oxygen supply line and the mask worn by the patient.
- It **uses a sensor** that senses and successfully supplies a required volume of oxygen to the patients (while inhaling) and trips when the patient is exhaling Carbon dioxide(CO₂).
- This process would **help save oxygen**, which gets unnecessarily wasted otherwise.
- Significance →
 - So far, during exhalation, the oxygen in the oxygen cylinder/pipe is pushed out along with the exhaled CO₂ by the user. This **leads to wastage** of a large volume of oxygen in long run.
 - In addition to this, a **large volume of oxygen escapes from the openings of the mask** to the environment in the resting period (between inhalation and exhalation) due to continuous flow of life saving gas in the mask.

25. Kaman Aman Setu

Why in News?

India and Pakistan Armies recently held a Flag meeting and exchanged sweets at Kaman Aman Setu.

About

- Location → Kaman Aman Setu is located **at Uri in North Kashmir**.
- Significance → Kaman Aman Setu - **Friendship Bridge** between India and Pakistan, is also the last point of the India-Pak border in the Uri district.

26. Gaon Buras

Why in News?

Recently, the Assam Cabinet announced that Gaon Buras will henceforth be called 'Gaon Pradhans'.

About

- Gaon Buras are the **village headmen**. They are the **eyes, nose, ear of the district administration** at the village level.
- The institution of Gaon Bura in Assam dates **back to the colonial era**, when the British appointed the **oldest person in the village as the head**, who would oversee matters relating to land and revenue in a particular area.
- The position would usually **go to the oldest, most knowledgeable man** who had **good personal ties with everyone** in a village, or a cluster of small villages.
- In Arunachal Pradesh, too, the Gaon Buras (and Buris) are the **most important village-level functionaries**.
- Post-independence, the government **continued with the institution** and made the **Gaon Bura a formal part** of the Assam Revenue and Disaster Management department, **increasing his responsibilities**, and eventually introducing a small honorarium for the role.

27. National Centre of Excellence for Animation, Visual Effects, Gaming and Comics

Why in News?

The Union Government has decided to set up a National Centre of Excellence for Animation, Visual Effects, Gaming and Comics.

About

- Purpose → for creating a **world-class talent pool in India** to cater to the Indian as well as global industry.
- It will be set up in collaboration with **Indian Institute of Technology, Bombay**.
- The Ministry of Information & Broadcasting (I&B) has **identified** the animation, visual effects, gaming and comics (AVGC) **sector as a sunrise industry**.

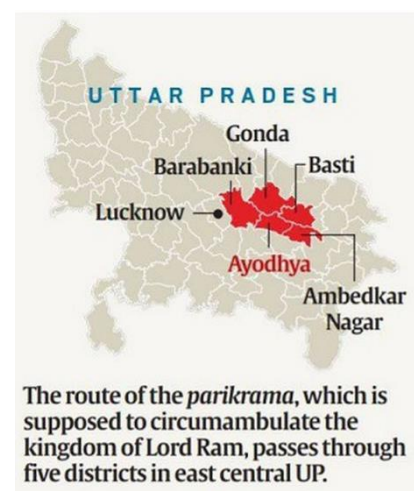
28. 84 kos parikrama marg

Why in News?

The central government last week decided to declare the “84 kos parikrama marg” around Ayodhya a national highway.

About

- All three parikramas in Ayodhya — **the 5 kos** (around 15 km), **14 kos** (42 km), and **84 kos** (about 275 km) parikramas — are linked to Lord Ram.
- The Baal Kand of the Valmiki Ramayana mentions that **Ayodhya was earlier known as Koshaldesh**, initially spread over 48 kos, and was later expanded to 84 kos.
- The 84 kos parikrama is a **circumambulation of Koshaldesh, touching all important places** associated with the kingdom of Ram.
- The 14 kos parikrama is for the **main Ayodhya city** of that time, and the 5 kos parikrama circumambulates the inner circle within which the **heart of Ram’s kingdom was located**.



Parikrama and its route

- It is believed that **King Dasharath performed a Putrayeshthi Yajna** on the bank of the Manorama river some 20 km from Ayodhya, to seek sons from the gods.
- Subsequently, he was blessed with **four sons from his three wives**.
- The 84 kos parikrama starts and ends — after about 22 days — from the place where the yajna was performed, now identified as **Makhaura in Basti**.

29. SLDE and GHG Calculator

Why in News?

Government of India has launched the Secured Logistics Document Exchange Initiative along with a Calculator for GreenHouse Gas Emissions Initiative.

About

- SLDE platform is a solution that aims to **replace the present manual process of generation, exchange and compliance of logistics documents** with a digitized, secure and seamless document exchange system.
- The platform will **enable generation, storage and interchange of logistics-related documents digitally** using Aadhaar and blockchain based technology.

- Developed by → The platform has been developed and executed with **banks** (ICICI, Axis Bank, State Bank of India and HDFC Bank) and **stakeholders including freight forwarders, exporters, importers and vessel operators**.
- Benefits of the Platform → The platform will **provide** a
 - complete audit trail of document transfer
 - faster execution of transaction
 - lower cost of shipping and overall carbon footprint
 - easy verification of authenticity of documents
 - lowered risk of fraud, etc.

Greenhouse Gas(GHG) Emission calculator Initiative:

- The GHG Calculator is an **efficient, user-friendly tool** that provides for calculating and comparing GHG emissions across different modes.
- The calculator allows for **commodity-wise comparison of GHG emissions** and **total cost of transportation**, including their environmental cost, between movement by road and rail.
- The tool is intended to **facilitate appropriate modal choice for all concerned**.

30. Raja Mircha

Why in News?

The consignment of 'Raja Mircha' also referred as king chilli from Nagaland was exported to London via Guwahati by air for the first time.

About

- Raja Mircha is a **chilli from Nagaland**. It is also referred to as **king chilli** or **Bhoot Jolokia** and **Ghost pepper**.
- Genus → This chilli belongs to the **genus Capsicum of the family Solanaceae**.
- GI Tag: It got **the Geographical Indication(GI)** certification in **2008**.
- Significance → It has been considered as the **world's hottest chilli** and is constantly on the **top five in the list** of the world's hottest chillies based on the Scoville Heat Units (SHUs).

Agricultural and Processed Food Products Export Development Authority (APEDA)

- It is an apex body **under** the **Union Ministry of Commerce and Industry** responsible for the export promotion of agricultural products.
- It was established under the **APEDA Act of 1985**.
- Functions →
 - Promotion of exports of agricultural and processed food products.
 - Promotion of export oriented production and development of the Scheduled products.
 - To make Improvement in areas such as packaging
 - Setting standards and specifications for the scheduled products
 - Financial assistance, reliefs and subsidies to the related industries.
 - Provide training in the related areas
- APEDA has facilitated exports of **Jackfruits from Tripura** to London and Germany, **Assam Lemon** to London, **Red rice of Assam** to the USA and **Leteku 'Burmese Grape'** to Dubai.

31. First city in country to have 'drink from tap' facility

Why in News?

Recently, Puri in Odisha has become the first Indian city to get 24×7 safe drinking water on tap.

About

- Under Drink From Tap-Sujal Mission, people of Puri will be able to **fetch water directly from the tap to drink**. There is **no need for storage** or **a filter**. Tap water will be **available 24x7**.
- Benefits → The move will now **eliminate the usage of 3 crore plastic water bottles**. This would mean the city will now be free from nearly 400 tonnes of plastic waste.

Sujal Mission

- The Sujal Mission was launched on **October 13 last year** to **ensure quality tapped drinking water** for more than 1.5 million people in more than 15 urban areas.
- It includes a **24/7 helpline centre** with IVRS for **grievance redressal**, a mobile water testing laboratory and a quick response team for rapid redressal of water supply complaints.

32. ITAT-E-DWAR

About

- It is an **e-filing portal of Income Tax Appellate Tribunal** (ITAT) launched by **Ministry of Law**.
- Enhance the **accessibility, accountability and transparency** in the day to day working of the ITAT.
- Result in economization of the use of paper, savings in costs, and rationalization of the fixation of cases leading to **quicker disposal of cases**.

33. Mission Innovation (MI) - CleanTech Exchange

Why in News?

Recently, India launched Mission Innovation (MI) - CleanTech Exchange under the Innovation Platform of Mission Innovation.

About

- It was launched virtually at the Innovating to **Net Zero Summit** hosted by **Chile** this year.
- CleanTech Exchange is a global initiative to **create a network of incubators** across member countries to **accelerate clean energy** innovation.
- The network will provide access to the expertise and market insights needed to support new technologies to access new markets globally.

About Mission Innovation (MI):

- MI is an action-oriented global initiative to pioneer **clean energy** solutions through **domestic innovation** and **international cooperation**.
- It consists of **24 countries and EU**. **India is a founding member**. The first phase of Mission Innovation was launched along the Paris Climate Change Agreement at the 2015 UN Climate Conference.
- It has an Innovation Platform through which member countries can track innovation progress, exchange knowledge and work with investors, innovators and end-users to accelerate technologies to market.
- Mission Innovation 2.0, the second phase of MI, was also launched in the above summit.
- It aims to catalyze **increased investment in clean energy research**, development and demonstrations to deliver affordable clean energy solutions by 2030.
- This will accelerate progress towards the Paris Agreement goals.

34. Forest carbon credit stamps

Why in News?

China has issued its first batch of forest carbon credit stamps to use market mechanisms to reduce carbon emissions.

About

- Forest carbon credits stamps are permits for companies to emit a certain amount of **carbon dioxide**. They are converted from added forest areas and the amount of carbon they can capture.
- These credits can also serve as **collateral for bank credit and loans**.
- The forest carbon credit system harbors great potential amid China's pursuit of peaking carbon emissions by 2030 and achieving carbon neutrality by 2060.

Quick revision (True/False)



1	Pradhan Mantri Formalisation of Micro food processing Enterprises Scheme -> Under Ministry of Commerce and Industry.	
2	NATRAX -> an 11.3 kms long High-Speed Track (HST) facility.	
3	National Hydrology Project -> Launched by Ministry of Earth Science.	
4	Méndez Principles -> anti-conversion principles.	
5	Cyber Security Index (GCI) 2020 -> released by International Telecommunication Union.	
6	International Telecommunication Union -> not a United Nations specialized agency.	
7	Science and Engineering Board -> is a non-statutory body established in 2009.	
8	Kalbeliya Dance -> Uttar Pradesh.	
9	Indrajaal -> India's first indigenous drone defence dome.	
10	Indian Ocean Naval Symposium -> launched in February 2015. provides a forum for discussion of regional maritime issues.	
11	Taal Volcano -> Indonesia.	
12	Revamped Distribution Sector Scheme -> scheme involves a voluntary smart metering ecosystem across the distribution sector.	
13	First Movable Freshwater Tunnel Aquarium -> Open at The Krantivira Sangolli Rayanna Railway Station.	
14	Freight Smart Cities Initiative -> improve the efficiency of urban freight and create an opportunity for reduction in the logistics costs.	
15	Heat Dome -> when the atmosphere traps hot ocean air like a lid or cap.	
16	The Durgadevi village is located in -> Andhra Pradesh.	
17	President's Rule -> approval takes place through special majority in either House.	

18	Swami Vivekananda -> formed the Dharma Sabha in 1897.	
19	Istanbul Convention -> aims towards preventing and combating violence against women and domestic violence.	
20	Financial Stability Report -> an annual report jointly released by NITI Aayog.	
21	Tillari Conservation Reserve -> reserve in western ghats.	
22	Harit Dhara -> used to Prevent microbial diseases in cattle.	
23	Auroras -> In the northern part of our globe, the polar lights are called aurora australis and in the south, they are called aurora borealis.	
24	Common Palm Civets -> listed as Critically Endangered under IUCN Red list.	
25	White Flag Campaign -> to convey distress about the financial crunch they have had to deal with amid the lockdowns due to Covid-19.	
26	Governors -> oath of office to the governor is administered by the president.	
27	Agricultural and Processed Food Products Export Development Authority (APEDA) -> under Ministry of Food Processing Industries.	
28	Peru shared boundary with -> Ecuador, Colombia, Brazil, Bolivia, and Chile.	
29	Black Panther -> IUCN Red List: Endangered.	
30	Bhalia wheat -> grown in the rainfed condition without irrigation.	
31	Haiti -> country located on the island of Hispaniola in the Greater Antilles archipelago of the Caribbean Sea.	
32	Somatic Cell -> Mutations in somatic cells can affect the individual, but they are not passed onto offspring.	
33	Silambam -> Andhra Pradesh.	
34	Agriculture Infrastructure Fund -> Centrally Sponsored Scheme.	
35	Enceladus -> A non-venomous snake has also been added to India's herpetofauna.	
36	Cassini Mission -> fourth space probe to visit Mars and the first to enter orbit.	

37	Zika Virus Disease -> caused by a virus transmitted primarily by Aedes mosquitoes (AM), mainly Aedes aegypti.	
38	Himalayan yaks -> IUCN Red list status: Critically Endangered.	
39	Lymphatic Filariasis -> spread from person to person by mosquitoes.	
40	Bhumi Panduga -> Celebrated by Koya tribes in Andhra Pradesh.	
41	Right to Repair Movement -> is to get companies to make spare parts, tools and information on how to repair devices available to customers and repair shops.	
42	Speaker -> Election commission of India sets a date for the election of the Speaker.	
43	Lemru Elephant Reserve -> Chhattisgarh.	
44	VIPER Mission -> It is the first resource mapping mission of ISRO on any other celestial body.	
45	India's First Cryptogamic Garden -> in Uttarakhand's Dehradun district.	
46	RBI Retail Direct Scheme -> is a one-stop solution to facilitate investment in government securities (G-secs) by individual investors.	
47	Guillain-Barré Syndrome -> is a rare condition in which the body's immune system attacks nerve cells.	
48	Cabo Delgado -> Island in Pacific Ocean.	
49	Honorary Consul generals -> serve as attorneys in judicial proceedings or as legal advisers.	
50	National Payments Corporation of India -> an umbrella organisation for operating retail payments and settlement systems in India.	
51	Suborbital Flight -> because they will not be traveling fast enough to orbit Earth once they reach there.	
52	Ultraviolet-C Technology -> developed by DRDO. for mitigation of Covid-19.	
53	Kavadi festival -> celebrated in Tamil Nadu.	
54	Rebate of State and Central Taxes and Levies (RoSCTL) Scheme -> by Ministry of Commerce and Industry.	

55	Fit for 55 Package -> ASEAN initiative to cut their output of greenhouse gases by 55% by 2030, compared with 1990 levels.	
56	Mukundra Hills Tiger Reserve -> Rajasthan.	
57	Anti-defection law -> decision of the Presiding Officer is not subject to judicial review.	
58	PRASHAD Scheme -> launched by the Ministry of Tourism in the year 2014-15.	
59	Cytomegalovirus -> Once infected, the virus is retained in the body for life.	
60	Rudraksh -> An anti-ballistic missile (ABM).	
61	Vaquita Porpoises -> Found only in the Indian Oceans.	
62	Adjournment motion -> introduced only in the Rajya Sabha.	
66	Indian Golden Gecko -> IUCN Red List: Least Concern.	
67	MH-60r Multi Role Helicopters -> from the Russia Navy.	
68	Tipu Sultan -> He planted the Tree of Liberty at Seringapatam.	
69	Cauvery River -> rises in northwestern Maharashtra state in the Western Ghats range.	
70	Conjugal Rights -> the aggrieved party may apply, by petition to the High court only.	
71	Pegasus -> is a Cryptocurrency.	
72	SMILE Scheme -> This scheme covers several comprehensive measures including welfare measures for rehabilitation of persons who are engaged in the act of begging.	
73	AMLEX Device -> 2nd largest milk producer after China.	
74	International Labour Organisation -> Established in 1945 by the Treaty of Versailles.	
75	Digital land use data -> Africa becomes first continent to complete collection of digital land use data.	
76	Adarsh Smarak Scheme -> Implemented by the Ministry of Culture.	

77	New Generation Akash Missile (Akash-NG) -> It is an air-to-air Missile.	
78	Man Portable Antitank Guided Missile (MPATGM) -> It is a low weight man portable missile which follows fire and forgets principle.	
79	Stand Up India Scheme -> under Ministry of Commerce and Industry.	
80	Liverpool -> is a city on the banks of the River Nile in Egypt.	
81	Bhartiya Prakritik Krishi Padhati (BPKP) is a sub scheme of -> Pradhan Mantri Kisan Samman Nidhi.	
82	Exercise Indradhanush -> is a joint military exercise between India and Thailand.	
83	Chandra Shekahr Azad -> involved in the 1912 Delhi Conspiracy case.	
84	ARMEX-21 -> joint exercise between Indian Air Force and French Air.	
85	Right to be Forgotten -> goes in sync with the "Right to Privacy", which is an integral part of Article 21.	
86	Rudreswara (Ramappa) Temple -> Odisha.	
87	International Council on Monuments and Sites(ICOMOS) -> founded in 1965. HQ: Rome, Italy.	
88	Gross Environment Product -> established back in 1997 by ecological economists like Robert Costanza at the global level.	
89	India is the largest producer of litchi (Litchi chin) in the world.	
90	Maguri-Motapung Wetland -> Himachal Pradesh.	
91	Monkeypox -> viral zoonotic disease. endemic to Nigeria.	
92	Nauka -> Anti-tank guided missile.	
93	World Economic Outlook -> released by World Economic Forum.	
94	Phosphorus rocks -> more than 85% of the phosphate rock mined is used to manufacture phosphate fertilizers.	
95	Exercise INDRA -> Indo-France joint military Exercise.	
96	India is the largest producer of silk in the world.	

97	Geo-imaging Satellite EOS-03 -> an earth observation satellite.	
98	Earth Overshoot Day -> Initiative of (United Nations Environment Programme) UNEP.	
99	Sambandar -> dancing child-saint Sambandar of 12th century belonging to Chola dynasty.	
100	Chola Dynasty -> was founded by Rajendra Chola.	