



2021 **January** **MAGZINE**

**special
features**

**SPECIAL QUICK
REVISION
(TRUE / FALSE)**



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Economy

1. Light House Projects

Why in News?

- Prime Minister will lay the foundation stone of Light House Projects (LHPs) under Global Housing Technology Challenge-India (GHTC-India) at six sites across six States.

About

- Light House Projects (LHPs) showcase the new-age best of **alternate global technologies, materials and processes** in the construction sector at a large scale for the first time in India.
- They are being constructed under **Global Housing Technology Challenge-India** (GHTC-India).
- They will be constructed at **six sites** across **six states** such as **Madhya Pradesh, Gujarat, Tamil Nadu, Jharkhand, Tripura** and **Uttar Pradesh**.
- They comprise about **1000 houses** at each location along with **allied infrastructure facilities**.
- They will **demonstrate and deliver ready to live houses** within **twelve months**, as compared to conventional brick and mortar construction.
- They will serve as **live laboratories** for **facilitating transfer of technology** to the field and its further replication.

👉 Global Housing Technology Challenge-India

- Launched by → **Ministry of Housing & Urban Affairs**.
- Purpose → GHTC envisages to provide an **ecosystem for adoption of innovative technologies** in the housing construction sector in a holistic manner.
- Components of GHTC-India include →
 - **Construction Technology India** Biennial Expo-cum-Conference
 - **Identifying and Mainstreaming** Proven Demonstrable Technologies for Construction of Light House Projects
 - **Identifying Potential Future Technologies** for Incubation and Acceleration Support through Affordable Sustainable Housing Accelerators - India (ASHA - India).

👉 Affordable Sustainable Housing Accelerators – India (ASHA-India)

- Aim → It aims to **promote domestic research and entrepreneurship** by providing **incubation and acceleration support** to potential future technologies.
- Features → Under ASHA-India initiative, **five ASHA-India Centers** have been **set up** for providing incubation and acceleration support.
 - The potential technology winners under **acceleration support** will be announced by the Prime Minister.
 - The technologies, processes and materials identified through this initiative will provide a **major fillip to young creative minds, start-ups, innovators** and **entrepreneurs**.

2. Current Account

Why in News?

- The current account surplus moderated to \$15.5 billion (2.4% of GDP) in the quarter ended September of 2020-21 from \$19.2 billion (3.8% of GDP) in the first quarter this fiscal. The current account saw a deficit of \$7.6 billion (1.1%) in the year-ago quarter.

About

- Current account maintains a **record of the country's transactions with other nations**, in **terms of trade of goods and services**, **net earnings** on overseas investments and net transfer of payments over a period of time, such as remittances.
- This account goes into a **deficit** when **money sent outward exceeds** that coming inward.
- What does Current account constitute? → The current account constitutes **net income**, **interest and dividends** and **transfers** such as foreign aid, remittances, donations among others.
- It is measured as a **percentage of GDP**.
- The formulae for calculating CAD is →
 - Current Account = Trade gap + Net current transfers + Net income abroad
 - Trade gap = Exports – Imports.
- Why does Current account matter? → Current account balance measures the external strength or weakness of an economy.
 - A current account **surplus** implies the country is a **net lender to the rest of the world**, while a **deficit indicates** it is a **net borrower**.
- A country with **rising** Current Account Deficit(CAD) shows that it has become **uncompetitive**, and **investors are not willing to invest** there. They may **withdraw their investments**.

3. Digital Payments Index

Why in News?

- The RBI has constructed a composite Digital Payments Index (DPI) with March 2018 as the base period to capture the extent of digitization of payments across the country.

About

- RBI-DPI will be published on the **central bank's website** on a **semi-annual basis** from March 2021 onwards with a lag of four months.
- It comprises of **five broad parameters** that enable measurement of deepening and penetration of digital payments in the country over different time periods.
- The parameters are →
 1. **Payment enablers** (weight 25 per cent)
 2. **Payment infrastructure–demand-side factors** (10 per cent)
 3. **Payment infrastructure – supply-side factors** (15 per cent)
 4. **Payment performance** (45 per cent) and
 5. **Consumer centricity** (5 per cent).
- Significance → Digital payments in India have been **growing rapidly**. The DPI reflects accurately the **penetration and deepening of various digital payment modes**.

4. Lithium Refinery

Why in News?

- India's first Lithium refinery will be set up in Gujarat.

About

- It will process Lithium ore to **produce battery-grade material**.
- Lithium is a rare element not usually found in India, which would be **imported from Australia** and **processed in this refinery**.
- The proposed Lithium refinery will help **make Gujarat a domestic hub for Li-ion batteries manufacturing**.
- TDS Lithium-Ion Battery Gujarat Private Ltd is **India's first Lithium-ion battery manufacturing plant in Gujarat**.
- This Lithium ion battery manufacturing plant is **expected to become operational by January or February 2021**.

5. International Financial Services Centres Authority (IFSCA)

Why in News?

- Recently, the International Financial Services Centres Authority (IFSCA) has become an Associate Member of the International Organization of Securities Commissions (IOSCO).

About

- Formation → It has been **established in 2020** under the International Financial Services Centres Authority Act, 2019.
- Headquartered → **GIFT City, Gandhinagar in Gujarat**.
- It is a **unified authority** for the **development and regulation of financial products, financial services and financial institutions**.
- The GIFT IFSC is the **maiden international financial services centre** in India.
- Objective → The main objective of the IFSCA is to **develop a strong global connect** and **focus on the needs of the Indian economy** as well as to serve as an international financial platform for the entire region and the global economy as a whole.

Significance for IFSCA's membership of IOSCO

- The IOSCO membership will provide the IFSCA a platform to **exchange information** at the **global level on areas of common interests**.
- IOSCO platform will enable the IFSCA to **learn from the experiences** and **best practices** of the regulators of other well established financial centres.

👉 IOSCO

- It is the international body established in **1983** that **brings together the world's securities regulators**.
- It develops, implements and promotes adherence to **internationally recognized standards for securities regulation**.

- It works intensively **with the G20** and the **Financial Stability Board** (FSB) on the global regulatory reform agenda.
- It works closely with the G20 nations and the FSB, in **setting up the standards** for strengthening the securities markets.
- The **IOSCO Objectives and Principles** of Securities Regulation have been **endorsed by FSB** as one of the **key standards for sound financial systems**.

6. RoDTEP Scheme

Why in News?

- Union Cabinet has approved a public Wi-Fi access network called PM-WANI (Wi-Fi Access Network Interface).

About

- What is it? → RoDTEP is a scheme for the Exporters to make **Indian products cost-competitive** and create a **level playing field for them in the Global Market**.
- It has **replaced** the current **Merchandise Exports from India Scheme**, which is not in compliance with WTO norms and rules.
- The new RoDTEP Scheme is **fully WTO compliant scheme**.
- Features →
 - The scheme will **refund to exporters the embedded Central, State and local taxes** that were so far not being given rebate or refunded.
 - The refund will be **credited in the exporter's ledger account** with Customs and used to pay Basic Customs duty on imported goods. The credits can also be transferred to other importers.
- Background → The RoDTEP rates will be notified shortly by the Department of Commerce, based on the **recommendation of a Committee** chaired by former Commerce and Home Secretary **Dr. G.K. Pillai**. The final Report of the Committee is expected shortly.

7. Sagarmala Seaplane Services (SSPS)

Why in News?

- Recently, the Ministry of Ports, Shipping and Waterways is kicking off its ambitious Project of Sagarmala Seaplane Services (SSPS).

About

- Aim → The project aims at **initiating the process of commencing operations of the Seaplane services**, on the select routes, under a Special Purpose Vehicle (SPV) framework through prospective airline operators.
- SPV is a **legal object formed** for a **specifically-defined singular purpose**.
- Project Implementation →
 - The project execution and implementation would be through **Sagarmala Development Company Ltd (SDCL)**, which is under the administrative control of the **Ministry of Ports, Shipping and Waterways**.
 - **Airline operators** will be **invited** to form a SPV with SDCL.

- The routes may be operated under the government's subsidised **ude desh ka aam nagrik (UDAN) scheme**.
- The **proposed Origin-Destination pairs** under Hub and Spoke model include →
 - Islands of Andaman & Nicobar and Lakshadweep,
 - Guwahati Riverfront & Umranso Reservoir in Assam,
 - Yamuna Riverfront / Delhi (as Hub) to Ayodhya, Tehri, Srinagar (Uttarakhand), Chandigarh and many other tourist places of Punjab & HP;
 - Mumbai (as Hub) to Shirdi, Lonavala, Ganpatipule;
 - Surat (as Hub) to Dwarka, Mandvi & Kandla, Khindsi Dam, Nagpur & Erai Dam and Chandrapur (in Maharashtra)
 - The joint development and operation of "Sagarmala Seaplane Services (SSPS)" will be undertaken by forming a Special Purpose Vehicle (SPV) with Sagarmala Development Company Limited (SDCL).

8. TRIFOOD Parks

Why in News?

- The TRIFED operating under Ministry of Tribal Affairs signed a memorandum of understanding with Akhil Bhartiya vanvasi Kalyan Ashram to setup TRIFOOD parks in Madhya Pradesh.

About

- Involved Agency → It is a joint initiative of **TRIFED** (under the Ministry of Tribal Affairs) and the **Ministry of Food Processing**.
- Aim → TRIFOOD Parks are **food processing centres** aiming at **promoting value addition** to minor forest produce.
- It was launched under the **Van Dhan Yojana in 2020**.
- The parks **procure raw materials** from the Van Dhan Kendras and **process them** to be **sold across the country** through **Tribes India outlets**.
- The **minimum support price** for minor forest produce is **fixed by the Tribal Affairs Ministry** and it is **revised every three years** by a pricing cell constituted under the Ministry.

👉 Tribal Cooperative Marketing Development Federation of India (TRIFED)

- Formation → It is a **statutory body** and was established in **August 1987**
 - It has been **registered** as a **National level Cooperative body** by the Government of the country
- Purpose → Focus is on **institutionalising** the **trade of Minor Forest Produce** (MFP) & Surplus Agricultural Produce (SAP) collected/ cultivated by them
- TRIFED helps tribal people manufacture products for **national and international markets** on a **sustainable basis**
- It also supports the **formation of Self Help Groups** and imparting training to them

👉 Recent initiatives by TRIFED

- **Tech for Tribals**, an initiative of TRIFED supported by Ministry of MSME, aims at **capacity building and imparting entrepreneurship skills** to tribal forest produce gatherers enrolled under the Pradhan Mantri VanDhan Yojana (**PMVDY**).
- Launched **Van Dhan Samajik Doori Jagrookta Abhiyaan**, which is **aimed at educating Tribals** engaged in **gathering NTFPs in forest areas**, on covid-19 response, key preventive behaviour like social distancing, home quarantine, hygiene tips.
- Initiated steps to provide the **Van Dhan Self Help Groups (SHGs)** with **protective masks and hygiene products** (Soaps, Disinfectants, etc.) that are necessary for carrying out their operations in a safe manner.

9. Payments Infrastructure Development Fund (PIDF)

Why in News?

- RBI operationalises PIDF scheme to boost digital payments.

About

- Objective → **Develop payment acceptance infrastructure** in **tier-3 to tier-6 cities** (centres), with a special focus on the north-eastern states of the country.
- Duration → The fund will be operational for **three years** effective from **1st January, 2021** and may be **extended for two more years**.
- Management → An Advisory Council (AC) under the chairmanship of RBI deputy governor BP Kanungo has been constituted for managing the PIDF.
- Implementation → The **types of acceptance devices** to be covered under the scheme are **physical PoS, mPoS, GPRS, PSTN, and QR code-based payments**.
 - [mPoS - mobile PoS, GPRS - General Packet Radio Service, PSTN - Public Switched Telephone Network]
- However, payment methods that are **not inter-operable** would not be considered under the PIDF.
- PIDF scheme is on a **reimbursement basis** and accordingly, the claim has to be submitted only after making payment to the vendor.
- The **maximum cost** of the **physical acceptance device eligible** for subsidy is **Rs 10,000** (including one-time operating cost up to Rs 500).
- The **maximum cost** of the **digital acceptance device eligible** for subsidy is **Rs 300** (including onetime operating cost up to Rs 200).
- Fixing Accountability → Acquirers of the subsidy shall **submit quarterly reports** on the achievement of targets to the RBI.

10. SEBI moots entry norms to set up stock exchanges

Why in News?

- Recently, the Securities and Exchange Board of India (SEBI) has proposed a new framework for ownership of market infrastructure institutions (MIIs) to facilitate new entrants to set up stock exchanges and depositories.

About Key Proposal

- A **resident promoter** setting up an MII may hold up to **100% shareholding**, which will be **brought down to not more than (either 51% or 26%) in 10 years**.

- A **foreign promoter** from Financial Action Task Force FATF member jurisdictions setting up an MII may hold up to **49% shareholding**, which shall be **brought down to not more than** (either 26% or 15%) **in 10 years**.
- **Foreign individuals** or **entities** from other than FATF member jurisdictions **may acquire** or **hold up to 10%** in an MII.
- Any **person** other than the promoter **may acquire** or **hold less than 25% shareholding**.
- What is Market Infrastructure? →
 - It is a **system administered by a public organisation** or **other public instrumentality**, or a private and regulated association or entity, that **provides services to the financial industry** for trading, clearing and settlement, matching of financial transactions and depository functions.
 - Examples: Examples of MIIs include **stock exchanges, depositories and clearing corporations**. These are **systemically important institutions** whose failure could lead to bigger cataclysmic collapses bringing down the economy.

11. New Industrial Development Scheme for Jammu & Kashmir

Why in News?

- Government of India has formulated New Industrial Development Scheme for Jammu & Kashmir (J&K IDS, 2021) for the development of Industries in the UT of Jammu & Kashmir.

About

- It is a **Central Sector Scheme** (100% funded by the Central government).
- Aim → The scheme aims to take **industrial development** to the **block level in UT of J&K**, which is first time in any Industrial Incentive Scheme of the Government of India.
- Expenditure → The financial outlay of the proposed scheme is **Rs.28400 crore** for the **scheme period 2020-21 to 2036-37**.
- Main purpose of the scheme is to **generate employment** which directly leads to the socio economic development of the region.
- The following incentives would be available under the scheme →
 - Capital Investment Incentive at the rate of **30% in Zone A** and **50% in Zone B** on investment made **in Plant & Machinery** (in manufacturing) or **construction of building and other durable physical assets** (in service sector) is available.
 - Capital Interest subvention: At the annual rate of **6% for maximum 7 years** on **loan amount up to Rs. 500 crore** for investment in plant and machinery (in manufacturing) or construction of building and all other durable physical assets (in service sector).
 - GST Linked Incentive: **300% of the eligible value** of **actual investment** made in plant and machinery (in manufacturing) or construction in building and all other durable physical assets (in service sector) for 10 years. The amount of incentive in a financial year will **not exceed one-tenth of the total eligible amount of incentive**.
 - Working Capital Interest Incentive: All existing units at the annual rate of **5% for maximum 5 years**. **Maximum limit of incentive is Rs 1 crore**.
- Beneficiaries → Scheme is made attractive for **both smaller and larger industrial units**.

12. Bureau of Indian Standards

Why in News?

- Bureau of Indian Standards celebrates its foundation day on 6th January 2021.

About

- What is it? → Bureau of Indian Standards (BIS) is the **National Standard Body** of India working under the aegis of **Ministry of Consumer Affairs, Food & Public Distribution**, Government of India.
- Founded → **23 December 1986**.
- BIS was established by the **Bureau of Indian Standards Act, 1986**.
- The **Bureau of Indian Standards Act, 2016** made the BIS a **National Standards Body**. The BIS Act has been implemented since 12 October 2017.
- Headquartered → **New Delhi**.
- Functioning → BIS is responsible for the **harmonious development of the activities of standardization, marking and quality certification** of goods and for matters connected therewith or incidental thereto.

13. World Food Price Index: FAO

Why in News?

- The Food and Agriculture Organization's (FAO) food price index averaged 107.5 points in December 2020, up 2.3 points from November 2020.

About

- What is it? → It was introduced in **1996** as a public good to help in **monitoring developments in the global agricultural commodity markets**.
- The FAO Food Price Index (FFPI) is a measure of the **monthly change** in **international prices of a basket of food commodities**.
- It measures **changes for a basket of cereals, oilseeds, dairy products, meat and sugar**.
- Base Period → **2014-16**.

👉 Food and Agriculture Organization:

- FAO is a **specialized agency of the United Nations** that leads international efforts to defeat hunger.
- Headquarters → **Rome, Italy**.
- Founded → **16 October 1945**.
- It conducts **research, provides technical assistance to projects, operates educational and training programs**, and collects data on agricultural output, production, and development.
- Composed of **197 member states**, the FAO is governed by a **biennial conference** representing each member country and the European Union, which elects a **49-member executive council**.
- The **Director-General serves** as the **chief administrative officer**.

👉 Initiatives Taken:

- Globally Important Agricultural Heritage Systems (**GIAHS**).
- Monitors the **Desert Locust situation** throughout the world.

- The **Codex Alimentarius Commission** or CAC is the body responsible for all matters regarding the implementation of the Joint FAO/WHO Food Standards Programme.
- The **International Treaty on Plant Genetic Resources for Food and Agriculture** was adopted by the Thirty-First Session of the Conference of the Food and Agriculture Organization in 2001.

14. Trade Policy Review Mechanism (TPRM)

Why in News?

- The second and final Session of India's seventh Trade Policy Review (TPR) concluded recently at the World Trade Organization in Geneva.

About

- It is an **important mechanism** under the **WTO's monitoring function**.
- The Trade Policy Review Mechanism (TPRM) was an early **result of the Uruguay Round**.
- It is the main **transparency instrument** of the WTO, affording opportunities for a **process of collective evaluation of the trade policies and practices** of individual members.
- Objectives → The objectives of the TPRM, as expressed in **Annex 3** of the **Marrakesh Agreement**, include facilitating the **smooth functioning of the multilateral trading system** by **enhancing the transparency of Members' trade policies**.
- **All WTO Members** are **subject to review** under the TPRM.
- Mechanism →
 - The Annex mandates that the **four Members** with the **largest shares of world trade** (currently the European Union, the United States, Japan and China) be **reviewed each three years**, the next 16 be reviewed each five years, and others be reviewed each seven years.
 - A **longer period** may be fixed for **least-developed country** Members.
 - Reviews are conducted by the **Trade Policy Review Body** (TPRB) on the basis of a **policy statement** by the Member under review and a report prepared by economists in the Secretariat's Trade Policy Review Division.

15. K-shaped Economic Recovery

Why in News?

- The prospects of a K-shaped recovery from COVID are increasing both in India and across the world.

About

- A K-shaped recovery occurs when, **following a recession, different parts of the economy recover at different rates, times, or magnitudes**.
- It describes the **path of different disaggregated economic variables**, such as income across different segments of society or employment in different industries, relative to one another.
- In India, **households at the top of the pyramid** are likely to have seen their **incomes largely protected**, and **savings rates forced up** during the lockdown.
- Meanwhile, **households at the bottom** are likely to have **witnessed permanent hits** to jobs and incomes.

- COVID has triggered an **effective income transfer** from the **poor to the rich**, this will be **demand-impeding** because the poor have a **higher marginal propensity to consume** (i.e) they tend to spend (instead of saving) a much higher proportion of their income.

16. Golden Quadrilateral & Golden Diagonal sections

Why in News?

- Recently, Indian Railways enhanced the maximum speed to 130 kmph for 1,280 km length out of 1,612 Km in Golden Quadrilateral – Golden Diagonal (GQ-GD) route.

About Golden Quadrilateral Project

- It is a highway network which **links Delhi, Mumbai, Kolkata and Chennai** thus connecting the major industrial, agricultural and cultural centres of India
- The project was **started in 2001** by Atal Bihari Vajpayee under the NDA government and was **completed in January 2012**.
- It was the **Phase-1** of the **bigger National Highway Development Project** that was **launched in 1998** by the same government.
- It is managed by the **National Highways Authority of India (NHAI)** under the Ministry of Road, Transport and Highways.
- Benefits of the project →
 - It has **brought opportunities for farmers**, through **improved transportation of produce** from the agricultural hinterland to major cities and ports for export, through lesser wastage and spoils.
 - It is **driving economic growth directly**, through construction as well as through indirect demand for cement, steel and other construction materials.

17. Freight Business Development Portal

Why in News?

- Freight Business Development Portal was recently launched as one stop solution for all the needs of freight customers.

About

- Launched by **Ministry of Railways**.
- The portal is designed to **replace physical processes with online ones** to minimise the need of human-to-human interaction.
- it will help them **use rail mode seamlessly**.
- The **personalised dashboard of freight business portal** provides customers a view with their business in railways, outstanding indents, on-run consignments, status of various interactions and facility to apply for various services and raising concerns.
- Customers also get to know about **discount schemes, diversion, rebooking, demurrage and wharfage waivers, stacking permissions**.

18. Saguna Rice Technique

Why in News?

- The Saguna Rice Technique (SRT) technique will help stop the stubble burning in Punjab and Haryana.

About

- This zerotill technique is a **unique Conservation Agriculture (CA) type** of cultivation method.
- This method is used to **cultivate rice and related rotation crops without ploughing**, puddling and transplanting rice on permanent raised beds.
- The **SRT iron forma tool facilitates** planting of crop in predetermined distances enabling precise plant population per unit area.
- The important principles are →
 - SRT insists that **all roots and small portion of stem** should be **left in the beds for slow rotting**.
 - No ploughing, puddling** and **hoeing** to be done to control weeds.
 - SRT will get the crop ready for **harvesting 8 to 10 days earlier**.
 - Take this into consideration while choosing a variety to **avoid getting harvesting caught in receding rain**.

19. Legal Entity Identifier (LEI) system

Why in News?

- The Reserve Bank of India introduced the Legal Entity Identifier system for all payment transactions of fifty crores and above through NEFT (National Electronic Funds Transfer) and RTGS (Real Time Gross Settlement)

About

- The LEI is a **20-digit number** used to **uniquely identify parties** to **financial transactions worldwide**.
- Developed by → **International Organization for Standardization**.
- Objective → To **improve the quality and accuracy of financial data systems** for better risk management post the Global Financial Crisis.
- The LEI has been **introduced by the RBI** in a **phased manner** for participants in the **over the counter (OTC) derivative** and **non-derivative markets** as also for large corporate borrowers.
- In India, LEI can be obtained from **Legal Entity Identifier India Ltd. (LEIL)**, which is also **recognised as an issuer of LEI** by the Reserve Bank under the Payment and Settlement Systems Act, 2007.
- Need →
 - During the **financial crisis of 2008**, the international regulators realized that there was **no single code to each financial institution** with which it can be identified in all countries universally.
 - Every country had their **own set of identity numbers**. This made it **difficult to assess the risk exposures**, analyzing and **resolving risks across the market**.
- Code structure of LEI →
 - It is an **alpha-numeric string**. The **first four** characters identify the **local operating unit**. The characters **five to eighteen** are **assigned by the Local Operating Unit**. The last two characters are **Checksum digits**. The Checksum digits are used to **identified the errors** that **occur during the process of transaction**.

20. Jayant Kumar Dash committee

Why in News?

- Reserve Bank of India (RBI) has constituted a working group on digital lending — including online platforms and mobile apps.

About

- The working group consists of both internal and external members and is **chaired by Jayant Kumar Dash**, Executive Director, RBI
- The working group will →
 - evaluate digital lending activities and assess the penetration** and standards of outsourced digital lending activities in RBI regulated entities;
 - identify the risks** posed by **unregulated digital lending** to financial stability, regulated entities and consumers; and
 - suggest regulatory changes** to promote orderly growth of digital lending.
- It will also recommend measures for **expansion of specific regulatory** or **statutory perimeter** and **suggest the role of various regulatory** and government agencies. It will also recommend a robust fair practices code for digital lending players.
- The group will submit its report **within three months**.

21. PMKVY 3.0

Why in News?

- The third phase of Pradhan Mantri Kaushal Vikas Yojana (PMKVY 3.0) will be launched on January 15 in 600 districts across all states of India.

About

- It is the **flagship scheme** of the Ministry of Skill Development & Entrepreneurship (**MSDE**).
- Implemented by → **National Skill Development Corporation** (NSDC).
- Objective → Its objective is to **enable a large number of Indian youth** to take up industry-relevant skill training that will help them in securing a better livelihood.
- Key Components of PMKVY
 - Short-term Training → Under PMKVY there are various **Training Centers** (TCs) that **provide training in areas**, such as entrepreneurship, soft skills, and financial and digital literacy.
 - Recognition of Prior Learning (RPL) → It refers to an **assessment process** used to **evaluate an individual's existing skill set, knowledge** and **experience gained** either by formal or informal learning.
 - Special Projects → Under special projects component, **training is provided in special areas** or **premises of Government bodies**, industry bodies and corporate offices.
- Kaushal and Rozgaar Mela → It is conducted by **Training Partners every 6 months** with media coverage.
- Placement Assistance → PMKVY's training partners provide **placement opportunities** to individuals certified under this scheme.

- The training partners should also provide support for the development of entrepreneurs.

📁 About PMKVY 3.0

- Skill India Mission PMKVY 3.0 envisages **training of eight lakh candidates** over a scheme **period of 2020-2021**.
- The 729 Pradhan Mantri Kaushal Kendras (PMKKs), **empaneled non-PMKK training centres** and **more than 200 ITIs** under Skill India will be rolling out PMKVY 3.0 training to build a robust pool of skilled professionals.
- On the basis of the learning gained from **PMKVY 1.0** and **PMKVY 2.0**, the Ministry has **improved the newer version of the scheme** to match the current policy doctrine and energize the skilling ecosystem affected due to the COVID-19 pandemic.

📁 National Skill Development Corporation (NSDC)

- It is a **not-for-profit public limited company** incorporated in **2008** under section 25 of the Companies Act, 1956.
- It was set up by Ministry of Finance as Public Private Partnership (PPP) model.
- The **Government of India** through Ministry of Skill Development & Entrepreneurship (MSDE) **holds 49%** of the share capital of NSDC, while the **private sector** has the **balance 51% of the share capital**.
- It aims to promote skill development by **catalyzing creation of large, quality** and **for-profit vocational institutions**.

22. Prarambh – Startup India International Summit

Why in News?

- Prime Minister Narendra Modi will interact with startups and address 'Prarambh: Startup India International Summit' on 15-16th January 2021.

About

- Organized by → **Department for Promotion of Industry and Internal Trade**, Ministry of Commerce and Industry.
- The two-day Summit is being organised as a follow up of the announcement made by the Prime Minister at the **fourth BIMSTEC Summit held in Kathmandu** in August 2018 wherein **India committed to host the BIMSTEC Startup Conclave**.
- The Summit marks the **5th anniversary** of the **Startup India initiative**, launched by the Prime Minister on 16 January, 2016.
- Over **25 countries** and **more than 200 global speakers shall participate**.
- The Summit will be the **largest startup confluence organised in India** since the launch of the Startup India initiative.
- Objectives → The sessions of the Summit are designed to **showcase the spread and depth of entrepreneurship** based on innovation in India.
 - **Provide opportunities to startups** for entering domestic (private and public) and international markets
 - Enable **ease of doing business** for startups and investors.

📌 Start-Ups In India

- A startup is an entity, **incorporated** or **registered in India for less than 7 years**.
- Its **annual turnover** should be **less than 25 crores** in any preceding financial year.
- It should be **working towards innovation, development, deployment** or **commercialization of new products**, processes or services driven by technology or intellectual property.

23. Startup India Seed Fund

Why in News?

- Recently, the Prime Minister has announced that the government will launch the Startup India Seed Fund Scheme.

About

- Objective → Fund has been set up to **provide initial capital to the startups**. After that start-ups will be provided with the **Govt. Guarantees**, to **help them raise debt capital**.
- Coverage → The fund would **offer financial assistance** to startups for proofs of concept, prototype development, product trials, market-entry, and commercialization of products or ideas.
- Funding → The Scheme will **offer startups up to Rs. 20 Lakhs** as a **grant for Proof of Concept**. Upto **Rs. 50 Lakhs** can also be availed through **convertible debentures** or **debt** or **debt-linked instruments** for commercialization.
- Need → It is the need of the hour that the **technologies of the future come out of the lab of Asia** and the entrepreneurs of the future should be prepared from here.

📌 Fund of Funds for Start-ups(FFS) Scheme

- It was launched by the Prime Minister in **2016** in **line with the Start-up India Action Plan**.
- Purpose: The fund has a **corpus of INR 10,000 crore** and is **managed by Small Industries Bank of India(SIDBI)** for contribution to the corpus of **Alternative Investment funds(AIFs)** which in **turn invest in equity** and **equity-linked instruments** of various Startups.

24. National Startup Advisory Council

Why in News?

- The Central Government has decided to nominate the non-official members on the National Startup Advisory Council.

About

- Department for Promotion of Industry and Internal Trade (**DPIIT**) **had constituted** the 'National Startup Advisory Council' **in 2020**.
- It would **advise the Government** on measures needed to **build a strong ecosystem for nurturing innovation** and startups in the country.
- Composition of the Council →
 - **Chairman**: Minister for Commerce & Industry.
 - **Convener of the Council**: Joint Secretary, Department for Promotion of Industry and Internal Trade.

- **Ex-officio Members:** Nominees of the concerned Ministries/Departments/Organisations not below the rank of Joint Secretary.
- **Non-official members**, to be **nominated by the Central Government**, from various categories like founders of successful startups, veterans who have grown and scaled companies in India, persons capable of representing the interests of investors into startups, etc. The **term of the non-official members** will be for a **period of two years**.
- Functions → The council will **facilitate public organizations to assimilate innovation** to improve public service delivery, promote creation, protection and commercialization of intellectual property rights.
 - It will suggest measures to **make it easier to start, operate, grow** and **exit businesses** by **reducing regulatory compliances** and costs.
 - It will also suggest measures to **promote ease of access to capital for startups, incentivize domestic capital** for investments into startups, and mobilize global capital for investments in Indian startups.

25. India Innovation Index

Why in News?

- Recently, India Innovation Index Report 2020 was released by NITI Aayog in which Karnataka retained its top position in the major States category.

About

- Institutions Involved → **NITI (National Institution for Transforming India) Ayog** with the Institute for Competitiveness.
- The **first edition** of the index was launched in **October 2019**.
- The Index is aimed at **providing an effective tool to track** the **state of innovation** at both the national and the state level.
- Objectives → The index intends to accomplish the following three functions:
 - **Rank all States and Union Territories** based on their index score.
 - **Identify innovation** related opportunities and challenges for the states.
 - Assist in **modifying governmental policies** to foster innovation.
- Parameters → The index measures innovation inputs through '**Enablers**' and innovation output as '**Performance**.'
 - **Enablers:** There are **Five Enabler pillars** that capture elements of the state economy. They act as inputs for the innovation environment. They are: **Human Capital, Investment, Knowledge Workers, Business Environment, Safety and Legal Environment**.
 - **Performance:** The two Performance pillars that depict the performance are: **Knowledge Output** and **Knowledge Diffusion**.
- Ranking → The index has **classified the States and Union Territories** into three categories:
 - **Major States;**
 - **NE and Hill States;**
 - and **UT and City–States**.
- These regions are categorized **based on the area**, as **spatial homogeneity** across states makes for a fair comparison for innovative capacity.

Performance of various states

- Major States → **Karnataka** has continued to occupy the **top position** followed by Maharashtra, Tamil Nadu, Telangana, Kerala, Haryana, Andhra Pradesh, Gujarat, Uttar Pradesh and Punjab.
- UT and City–States → **Delhi** has retained its **first rank** in this category followed by Chandigarh.
- North-Eastern/Hill States category → **Himachal Pradesh** has **topped** the index in this category followed by Uttarakhand.

26. Iron Ore Policy 2021

Why in News?

- The Ministry of Railways has approved a new iron-ore policy governing the allocation of rakes and transportation of iron-ore.

About Key takeaways

- This new policy has been named as **Iron-ore Policy 2021** and shall come into **effect from February 10, 2021**.
- The provisions of the new policy will be **updated** in the **rake allotment system module** by the Centre for Railway Information Systems (**CRIS**).
- **Scrutiny of documentation** by Railways has been **removed**.
- Executive Director Rake Movement of Railway Board (**EDRM**) **office, Kolkata** which has been **sanctioning programmes for movement** of **iron-ore traffic** will have **no regulatory role** in the new policy.
- Customers now desirous of moving their traffic under any priority will have to **give (an) undertaking** that they have **procured, transported** and **utilized materials as per rules** and regulations of Central and State Governments.
- Higher **priority** will be given to the **movement of iron-ore traffic** for **domestic manufacturing activity**.
- Old and new plants will be **treated similarly** as far as **allotment and loading of rakes** is **concerned**.
- Iron ore is the **second most important stream** of **traffic of Railways** and along with steel accounts for nearly **17% of total 1210 million tonne freight loading** of Indian Railways in 2019-2020.

27. Central Empowered Committee

Why in News?

- SC has appointed a Central Empowered Committee(CEC) to look into sand mining in Rajasthan. The panel has submitted its report.

About

- Background → In February 2020, **Central Empowered Committee(CEC)** was appointed by SC.
- Its mandate was to look into **illegal sand mining in Rajasthan** and submit a report suggesting measures to deal with it.

Sand Mining

- It is an activity referring to the process of the **actual removal of sand from the foreshore including rivers, streams and lakes**.
- Regulation of Sand Mining →

- Sand is a **minor mineral**, as defined under **section 3** of the Mines and Minerals (Development and Regulation) Act, 1957 (**MMDR Act**).
- **Section 15 of the MMDR Act** empowers state governments to make rules for **regulating the grant of mineral concessions in respect of minor minerals** and for purposes connected therewith.
- **Section 23C of the Act** empowers state governments to frame rules to prevent illegal mining, transportation and storage of minerals and for purposes connected therewith.
- The Ministry of Environment, Forest and Climate Change has issued **Sustainable Sand Mining Management Guidelines, 2016** which **inter-alia, addresses the issues** relating to the **regulation of sand mining**.

Recommendations given by the committee

- It has recommended **imposing a fine of Rs 10 lakh per vehicle** and **Rs 5 lakh per cubic meter** of sand seized.
- It has been said that **no unregistered tractor** should be used as a **commercial vehicle to transport sand** from the mining site to the transit depot.
- It has also recommended
- **Termination of all the khatedari leases** located **within 5 km** from the riverbank, where violations are detected.
- The **scrapping** of the **excess royalty** collection contract system.

28. Secured Overnight Financing Rate (SOFR)

Why in News?

- State Bank of India (SBI) has executed two inter-bank short term money market deals with pricing linked to SOFR (Secured Overnight Financing Rate).

About

- Secured Overnight Financing Rate (SOFR) is a **secured interbank overnight interest rate**.
- It is a **replacement for USD LIBOR** (London Inter-bank Offered Rate) that may be **phased out end-2021**.
- The overnight rate is generally the interest rate that **large banks use to borrow and lend from one another in the overnight market**.

Why SOFR?

- Global regulators decided to **move away from the Libor**, a **vital part of the financial system** after it was revealed in 2012 that banks around the world manipulated it.
- It **also didn't help** that **volume underlying** the benchmark dried up.
- K. regulators set the **deadline at 2021** for financial firms and investors to transition away from the Libor.

29. Section 32A of IBC

Why in News?

- The Supreme Court has held that the bidders for a corporate debtor under the Insolvency and Bankruptcy Code (IBC) would be immune from any investigations being conducted either by any investigating agencies.

About Supreme Court say in its judgment

- In its judgment, the apex court, while upholding the validity of Section 32 A of IBC, said
- It was important for the IBC to attract bidders who would **offer reasonable and fair value for the corporate debtor** to ensure the timely completion of corporate insolvency resolution process (CIRP).
- Such bidders, however, must also be **granted protection from any misdeeds of the past since** they had nothing to do with it.
- Such protection, the court said, must also **extend to the assets of a corporate debtor**, which form a crucial attraction for potential bidders and helps them in assessing and placing a fair bid for the company, which, in turn, will **help banks clean up their books of bad loans**.

📌 Section 32A

- Section 32A provides that **Corporate Debtor** shall **not be prosecuted for an offence committed prior to commencement of Corporate Insolvency Resolution Process** (CIRP) once Resolution Plan has been approved by Adjudicating Authority (AA).
- The section further provides that **no action** shall be taken **against property of Corporate Debtor** covered under such a Resolution Plan.
- What's the issue then? →
 - 32A continues to **hold liable every person** who was a '**designated partner**' or an '**officer who is in default**' or was in any manner in-charge of, or responsible to Corporate Debtor for conduct of its business or associated in any manner and who was directly or indirectly involved in commission of such offence.
- Why is the SC upholding Section 32A important? →
 - With the Supreme Court **upholding the validity of Section 32 A**, the cases such as that of **Bhushan Power** are **expected to be completed soon**.
 - Experts also said that this will **give confidence to other bidders** to proceed with confidence while bidding on such disputed companies and their assets.

30. Shramshakti Portal

Why in News?

- The Union Minister of Tribal Affairs has launched "ShramShakti" Portal.

About

- It is a **National Migration Support Portal**.
- It will **record various data** including demographic profile, livelihood options, skill mapping and migration pattern.
- It would effectively help in the **smooth formulation of state and national level programs** for migrant workers.
- The tribal migration repository, ShramShakti would be able to successfully **address the data gap** and **empower migrant workers** who generally migrate in search of employment and income generation.

31. Regulation of NBFCs

Why in News?

- Recently, RBI has proposed a tighter regulatory framework for Non-Banking Financial Companies (NBFCs) by creating a four-tier structure with a progressive increase in intensity of regulation.

About

- Aim → The proposed framework is aimed at **protecting financial stability** while ensuring that smaller NBFCs continue to enjoy light regulations and grow with ease.
- It has become **important** after the failure of extremely large NBFC like IL&FS.

Proposed Classification of NBFC (The Four-Tier Structure)

- The regulatory and supervisory framework of NBFCs should be based on a four-layered structure:
- Base layer → This layer will include the **large number of small NBFCs** in the country and will **subject to the least regulation**. It is because they have a **limited impact** on systemic stability. The proposals for this set of NBFCs include:
 - Entry-level net owned funds required to be **raised to Rs 20 crore from Rs 2 crore**.
 - NPA classification norm of **180 days** will be **harmonized to 90 days**.
 - Disclosure requirements will be **widened** by including **disclosures on types of exposure, related party transactions, customer complaints**.
- Middle Layer → It will consist of **NBFCs** that currently fall in the '**systemically important**' category along with deposit-taking non-bank lenders. Housing Finance Companies, Infrastructure Finance Companies, Infrastructure Debt Funds, Core Investment Companies. The proposals for this set of NBFCs include:
 - It will be subjected to **tighter corporate governance norms**.
 - No changes proposed in the **capital-to-risk-assets ratio** (CRAR) of **15%** with a minimum Tier-I ratio of 10%.
 - These **NBFCs cannot** provide loans to companies for **buy-back of securities**.
 - NBFCs with **10 or more branches** will be required to **adopt core banking solutions**.
- Upper Layer → It will include about **25-30 NBFCs** and will be subjected to bank-like regulation.
 - It will have to implement **differential standard asset provisioning** and also the large exposure framework as applicable to banks.
 - The concept of **Core Equity Tier-1** will be introduced for this category and is proposed to be set at 9%.
 - They will also be subject to a **mandatory listing requirement**.
- Top Layer → This layer will be **empty for now** and will be populated with NBFCs, where the RBI may see an elevated systemic risk.

32. Green Tax

Why in News?

- Recently, the Centre announced its plans to impose a "green tax" on older vehicles in a move to disincentive the use of polluting vehicles and to curb pollution in the country.

About

- The **Ministry of Road Transport and Highways** will levy a green tax on transport vehicles **older than eight years** at the time of renewal of fitness certificate at the rate of **10% to 25% of road tax**.

- The revenue collected through the green tax **will be kept in a different account and will only be utilised for tackling pollution.**
- Exemptions → The following vehicles will be exempted from the Green Tax proposal:
 - **Strong hybrids, EVs, and vehicles that run on alternative fuels** such as CNG, LPG, and ethanol.
 - Vehicles **used in farming** such as tractors, harvesters, and tillers.
- Differential Taxation →
 - Personal vehicles are proposed to be charged green tax at the **time of renewal of registration certification after 15 years.**
 - **Public transport vehicles,** such as city buses, will be charged lower green tax.
 - **Higher green tax (50% of road tax)** will be levied on vehicles being registered in **highly polluted cities.**
 - Differential tax will also be charged **depending on fuel** (petrol/ diesel) and the **type of vehicle.**
- How will the Green Tax be used? →
 - Revenue collected from the green tax will be kept in a **separate account.** The amount will be used for **tackling the problem of pollution.**
 - The tax will also be **used by states** to set up **state-of-art facilities to monitor the emission.**

33. Off Budget Borrowings

Why in News?

- One of the most sought-after details in any Union Budget is the level of fiscal deficit. As such, it is keenly watched by rating agencies — both inside and outside the country. One of the ways to do this is by resorting to “off-budget borrowings”.

About

- These are loans that are taken **not by the Centre directly** and are **not calculated under the budget.**
- These loans are taken **by PSUs or other public institutions** on the directions of the central government. Such borrowings are used to **fulfill the expenditure** needs of these institutions.
- Are these borrowings included in the fiscal deficit? →
 - The liability to repay these loans is **not formally on the Centre.** Thus, they are **not included** in the **national fiscal deficit.**
 - This helps keep the **country's fiscal deficit** within **acceptable limits.**
- How are off-budget borrowings raised? →
 - The government can ask a PSU to raise the required funds **from the market through loans** or **by issuing bonds.**
 - Example: In the Budget 2020-21, the government **paid only half** the amount **budgeted for the food subsidy bill** to the Food Corporation of India. The **shortfall was met** through a **loan from the National Small Savings Fund.** This allowed the Centre to **halve its food subsidy bill.**
- CAG Report → In 2019, Comptroller and Auditor General report has pointed out that this route of financing puts **major sources of funds outside** the **control of Parliament.**
- What will be the fiscal deficit if we include off-budget borrowings? →
 - Due to various sources of off-budget borrowing, the **true fiscal deficit** is **difficult to calculate.**

- However, in July 2019, the CAG had pegged the **actual fiscal deficit** for **2017-18** at **5.85% of GDP** instead of the government version of 3.46%.

👉 What is the fiscal deficit?

- It is **essentially the gap** between what the **central government spends and what it earns**.
- In other words, it is the **level of borrowings** by the Union government.
- This fiscal deficit is the most important metric to **understand the financial health of any government's finances**.

Environment

1. Dibru-Saikhowa National Park

Why in News?

- Assam CM sets Jan. 31 deadline to rehabilitate Dibru-Saikhowa National Park dwellers.

About

- Location → Dibru-Saikhowa is a **National Park** as well as a **Biosphere Reserve** situated in the south bank of the river Brahmaputra in **Assam**.
- It is the **largest swamp forest** in **north-eastern India**.
- Flora → The forest type of Dibru-Saikhowa comprises **semi-evergreen forests, deciduous forests, littoral and swamp forests** and **patches of wet evergreen forests**.
- It is an identified **Important Bird Area** (IBA), notified by the Birdlife International. It is most famous for the **rare white-winged wood ducks** as well as **feral horses**.
- Fauna → Mammals found in the Park include **Tiger, Elephant, Leopard, Jungle Cat, Bears, Small Indian Civet, Squirrels, Gangetic Dolphin, Hoolock Gibbon**, etc.
- Maguri Motapung wetland** is a part of the Reserve.

2. Indian Pangolin

Why in News?

- Recently, the Odisha Forest department has stressed the need for stricter monitoring of social media platforms to check pangolin poaching and trading.

About

- Pangolins are **scaly anteater mammals** and they have **large, protective keratin scales covering their skin**. They are the only known mammals with this feature.
- Diet → **Insectivore**- Pangolins are **nocturnal**, and their diet consists of **mainly ants and termites**, which they capture using their long tongues.
- Types → Out of the eight species of pangolin, **the Indian Pangolin** (*Manis crassicaudata*) and **the Chinese Pangolin** (*Manis pentadactyla*) are **found in India**.
- Habitat →
 - Indian Pangolin: It is **widely distributed in India**, except the arid region, high Himalayas and the North-East.
 - The species is also found in Bangladesh, Pakistan, Nepal and Sri Lanka.
 - Chinese Pangolin: It is **found in the Himalayan foothills** in Eastern Nepal, Bhutan, Northern India, North-East Bangladesh and through Southern China.
- Conservation Status →
 - Wildlife Protection Act, 1972: **Schedule I**
 - IUCN Red List: **Endangered**
 - CITES: **Appendix I**.

- Threats to Pangolins in India → **Hunting and poaching** for local consumptive use (e.g. as a protein source and traditional medicine) and international trade for its meat and scales in East and South East Asian countries, particularly China and Vietnam.

3. Umed Paoni Karhandla Wildlife Sanctuary

Why in News?

- A tigress and her two cubs were found dead in the Umed Paoni Karhandla Wildlife Sanctuary, Nagpur, Maharashtra.

About

- Umed Paoni Karhandla Wildlife Sanctuary has a connection with **Tadoba Andhari Tiger Reserve through forest along Wainganga river** (a tributary of Godavari).
- The sanctuary is home to **resident breeding tigers, herds of Gaur, wild dogs** and **also rare animals** like flying squirrels, pangolins and honey badgers.
- Location → **Nagpur, Maharashtra.**
- Other Protected Sites of Maharashtra →
 - Tadoba National Park
 - Gugamal National Park
 - Pench National Park
 - Navegaon National Park
 - Sanjay Gandhi National Park
 - Melghat Tiger Reserve
 - Sahyadri Tiger Reserve
 - Bor Tiger Reserve.

4. Deepor Beel

Why in News

- Assam has prohibited community fishing at Deepor Beel, a wetland on the south-western edge of Guwahati and it's the only Ramsar site.

About

- Deepor Beel is located to the **south-west of Guwahati city, in Kamrup district of Assam**, India.
- It is a **permanent freshwater lake**, in a former channel of the Brahmaputra River, to the south of the main river.
- It is a **wetland** under the **Ramsar Convention** which has **listed since November 2002**, for undertaking conservation measures on the basis of its biological and environmental importance.
- Considered as one of the largest beels in the **Brahmaputra valley of Lower Assam**, it is categorised as a **representative of the wetland type** under the Burma monsoon forest biogeographic region.
- It is also an **important bird sanctuary** habituating many migrant species.
- Fauna: **Siberian Crane** (CR), **Lesser Adjutant Stork**, **Asian elephants**, etc.

- **Freshwater fish** is a **vital protein and source of income** for these communities; the health of these people is stated to be directly dependent on the health of this wetland ecosystem.

5. Asian Waterbird Census

Why in News?

- The two-day Asian Waterbird Census-2020 has commenced in Andhra Pradesh under the aegis of experts from the Bombay Natural History Society (BNHS).

About

- What is it? → It is an integral part of the global waterbird monitoring programme known as the International Waterbird Census (IWC) coordinated by Wetlands International.
- It runs in parallel with other regional programmes of the International Waterbird Census in Africa, Europe, West Asia, the Neotropics and the Caribbean.
- It was initiated in **1987** in the Indian subcontinent and has grown rapidly to cover major regions of Asia.
- In India, the AWC is annually coordinated by the Bombay Natural history Society (BNHS) and Wetlands International.
- Objectives →
 - To obtain **information on an annual basis** of **waterbird populations** at wetlands in the region during the non-breeding period of most species.
 - To **monitor** on an annual basis the **status and condition of wetlands**
 - To **encourage greater interest** in waterbirds and wetlands amongst citizens

👉 Outcomes brought by recent Census

- There is a need for **more birdwatchers in the State**, as **their critical inputs on the wetlands** and **waterbirds will help** in designing the conservation plans of the respective sites in future
- On the **Indian Skimmer**, more study was **still required to establish** that the **species breeds** on the Kakinada coast, which supports a great number of Indian Skimmer.

👉 What are waterbirds?

- According to Wetlands International (WI), waterbirds are defined as species of birds that are **ecologically dependent on wetlands**. These birds are considered to be an **important health indicator** of **wetlands of a region**.

6. Caracal

Why in News?

- The Standing Committee of National Board of Wildlife (SC-NBWL) in its 60th meeting has approved the inclusion of Caracal into the list of critically endangered species.

About

- Scientific name of caracal → **Caracal caracal**.

- Caracal is a **medium-sized wild cat** that roams the savannas, deserts, and forests of much of Africa and parts of the Middle East. They are also **found in Central Asia and India**.
- Its coat is typically a **tawny** or **reddish gold with a white chin**, throat, and underside.
- Its **large, pointy ears, tipped with black and tufted**, are a trademark of the species.
- They are great hunters, being **very fast**, and **chiefly preys on birds, rodents, mongoose**, hyraxes, and even small monkeys.
- Caracals in India →
 - In India, caracal **hunting is prohibited**.
 - It is a **rare species** in India.
 - The sub-species Caracal caracal schmitzi is found in India and this sub-species are presumed to be distributed from Arabia to Central India.
 - In India, caracals are mostly found in the **tropical dry deciduous** and **tropical thorn** and **shrub forests of Central and Western India**.
 - These cats are seen **occasionally in Rajasthan and Gujarat states** though not common in either of the states.

7. NCAVES India Forum 2021

Why in News?

- Natural Capital Accounting and Valuation of the Ecosystem Services (NCAVES) India Forum-2021 is being organised by the Ministry of Statistics and Programme Implementation (MoSPI).

About

- NCAVES project seeks to **advance the theory and practice of environmental and ecosystem accounting** in Brazil, China, India, Mexico and South Africa.
- Implementation → **Jointly implemented** by the United Nations Statistics Division (**UNSD**), the United Nations Environment Programme (**UNEP**) and the Secretariat of the Convention of Biological Diversity (**CBD**).
- Aim → It aims to **assist the five participating partner countries**, to advance the knowledge agenda on environmental-economic accounting, in particular ecosystem accounting.
- Duration → The project will have a duration **until the end of 2021**.
- Funding → The project is funded by the **European Union through its Partnership Instrument** (PI).
- The objectives of the National Forum would be →
 - To **present India's achievements** in the domain of Natural Capital Accounting (NCA);
 - To **prioritize** the emerging opportunities for NCA in India;
 - To **familiarize stakeholders** with the work undertaken by the different international agencies in the area of NCA.

About NCAVES India Forum 2021

- In India, the NCAVES project is being **implemented by the MoSPI with collaboration** of Ministry of Environment, Forest and Climate Change (**MoEF&CC**) and the National Remote Sensing Centre (**NRSC**).
- NCAVES India Forum 2021 is being organised in a **virtual format**.
- Key Focus area →

- The Forum aims to build a **stronger awareness** about the **different perspective to Environment** and to show a way forward towards realizing the contribution of the natural capital to achieve a “better environment, better tomorrow”.
- Significance → The participation in the project has helped MOSPI **commence the compilation of the Environment Accounts** as per the UN-SEEA System of Environmental-Economic Accounting (**SEEA**) **framework**.
- The MOSPI has also released **environmental accounts** in its publication “**EnviStats India**” on an annual basis since 2018.
- Several of these accounts are closely related to the **social and economic attributes**, making them a useful tool for the Policy.

8. Antarctic Ozone Hole

Why in News?

- Antarctic ozone hole has closed, according to the World Meteorological Organization (WMO).

About Antarctic Ozone Hole

- The Antarctic “ozone hole” (an annual occurrence) was discovered by British Antarctic Survey scientists **Farman, Gardiner and Shanklin in 1985**.
- It was the **longest-lasting** and **one of the largest and deepest holes** since the ozone layer monitoring began 40 years ago.
- Depletion of the ozone layer **occurs globally**, however, the severe **depletion of the ozone layer over the Antarctic** is **often referred** to as the ‘**ozone hole**’.
- What are the reasons for expansion?
- Chemicals containing **chlorine and bromine atoms** are released to the atmosphere **through human activities**.
- These chemicals combine with certain weather conditions to cause reactions in the ozone layer, leading to ozone molecules being destroyed.
- The **same meteorological factors** also contributed to the **record 2020 Arctic ozone hole**.

👉 About the Ozone layer

- The Ozone (chemically, a molecule of three oxygen atoms) is found mainly in the **upper atmosphere**, an area called the **stratosphere, between 10 and 50 km** from the earth’s surface.

Vienna Convention

- The **scientific confirmation** of the depletion of the ozone layer prompted the international community to **establish a mechanism for cooperation** to take action to protect the ozone layer.
- This was formalized in the **Vienna Convention for the Protection of the Ozone Layer**, which was adopted and signed by 28 countries in 1985.

Montreal Protocol

- In **1987**, the United Nations and 45 other countries signed the **Montreal Protocol**, on substances that deplete the Ozone layer.
- It is a global agreement to protect the Earth’s ozone layer by phasing out the chemicals that deplete it.
- This phase-out plan includes both the production and consumption of ozone-depleting substances.
- It has been **amended six times** since its creation.
- The most recent amendment is **the Kigali Amendment**.

Kigali Amendment

- It was amended in **2016** to reduce the production and consumption of **hydrofluorocarbons (HFCs)** -(greenhouse gases with powerful climate-warming potential)- by more than 80 per cent over the next 30 years.

- Though it is **talked of as a layer**, ozone is present in the atmosphere in rather low concentrations.
- Even at places **where this layer is thickest**, there are not more than a few molecules of ozone for every million air molecules.
- Significance of the Ozone layer → They perform a crucial function by **absorbing the harmful ultraviolet radiations from the sun**.
 - UV rays can **cause skin cancer** and **other diseases** and deformities in plants and animals.
- Ozone Depleting Substances → **Chlorofluorocarbons, Hydrochlorofluorocarbons, Carbon tetrachloride, Methyl chloroform, Methyl chloroform, Halons, Methyl bromide.**

👉 What is Polar vortex?

- The term Vortex means a **whirling mass of fluid or air**, especially a **whirlpool or whirlwind**.
- It can define as **“the counter clockwise flow of air that helps keep the colder air near the Poles.”**
- It is an **upper-level low-pressure area** lying near one of the Earth’s poles.
- The Earth’s atmosphere has **two polar vortices** which are overlying the North and South Poles.
- Each polar vortex is a **persistent, large-scale, low-pressure zone less than 1,000 kilometres** (620 miles) in diameter, that rotates counter-clockwise at the North Pole (called a cyclone) and clockwise at the South Pole, i.e., both polar vortices rotate eastward around the poles.

9. Sultanpur National Park

Why in News?

- After confirmed cases of bird flu reported from Delhi, the forest department has also stepped up vigilance at Sultanpur national park in Gurgaon district of Haryana.

About

- Location → **Gurgaon district of Haryana.**
- Sultanpur National Park is a **bird paradise** for bird watchers. It is famous for its **migratory as well as resident birds.**
- Migratory birds start **arriving in the park in September.** Birds use the park as a resting place till the **following March-April.**
- History → It was declared as a **National park** in the **year of 1991.**
- Fauna at the Park →
 - Mammals: **Blackbuck, Nilgai, Hog deer, Sambar, Leopard** etc.
 - Birds: **Siberian Cranes, Greater Flamingo, Demoiselle Crane** etc.
- Other National Park in Haryana → **Kalesar National Park, District Yamunanagar.**

10. Virunga National Park

Why in News?

- Six rangers have been killed in the Virunga National Park in the Democratic Republic of the Congo (DRC).

About

- Location → Virunga National Park is a national park in the **Albertine Rift Valley** in the **eastern part** of the **Democratic Republic of the Congo**.
- Established in **1925**, it is **Africa's first national park**, which is famous for its **mountain gorillas**
- Virunga National Park stretches from the **Virunga mountains in the south**, to the Rwenzori mountains in the north.
- It borders **Volcanoes National Park in Rwanda** and **Rwenzori Mountains National Park** and **Queen Elizabeth National Park in Uganda**.
- Significance → It is a United Nations Educational, Scientific and Cultural Organization (**UNESCO**)-designated **World Heritage Site** since 1979.



11. Euphranta siruvani

Why in News?

- A new species of fruit fly discovered from Coimbatore district in Tamil Nadu is named after Siruvani, an ecological hotspot in the Western Ghats.

About

- The fruit fly 'Euphranta siruvani' belonging to **family Tephritidae**.
- **104 known species** from genus Euphranta are distributed across the world, of which **14 are found in India**.
- The discovery of Euphranta siruvani is the **new addition to the list**.
- Features →
 - This fruit fly is differentiated from the other species of Euphranta by the presence of a **'V' shaped black band on the wing** and **prominent subapical band** connected to the apical black patch.
 - It **lays eggs in fruits** and the **larvae feed on the pulp**.



12. Management Effectiveness Evaluation of Protected Areas

Why in News?

- Recently, the Ministry for Environment, Forest and Climate Change (MoEF&CC) has released Management Effectiveness Evaluation (MEE) of 146 national parks and wildlife sanctuaries (NP&WLS) in the country.

About

- What is it? → It is defined as the **assessment of how well NP&WLS are being managed** and if they are protecting their values and achieving the goals and objectives agreed upon.
- Rating → The ratings are assigned in **four categories**, as **Poor – upto 40%; Fair - 41 to 59%; Good - 60 to 74%; Very Good – 75% and above.**
- The term ‘management effectiveness’ reflects three main themes of Protected Areas (PAs) management →
 1. **Design and planning issues** relating to both individual sites and PA systems.
 2. **Adequacy and appropriateness** of management systems and processes.
 3. **Delivery** of the objectives of NP&WLS, including conservation of values.
- A **uniform theme** has been provided to the assessments by the International Union for Conservation of Nature (IUCN) World Commission on Protected Areas (**WCPA Framework**) which aims both to give overall **guidance** in the development of assessment systems and to **encourage** basic standards for assessment and reporting.
- The WCPA Framework for Assessing Management Effectiveness is a system with six elements: **Context, Planning, Inputs, Processes, Outputs and Outcomes.**
- What was the need of this tool? → At present, India has a network of **903 protected areas covering about five per cent of the total geographic area** of the country. India also has 70% of the global tiger population, 70% of Asiatic lions and more than 60% of leopards global population. Hence, in **order to assess the efficacy of protected areas**, evaluation of management effectiveness is required.

📁 Findings

- Overall Performance → The results of the present assessment are encouraging with an **overall mean MEE score of 62.01%** which is **higher than the global mean of 56%.**
- Regional Performance → The **eastern region** of India presents the **highest overall** mean MEE Score of 66.12% and the **Northern region** represents the **lowest mean** MEE Score of 56%.
- Best NP&WLS → **Tirthan Wildlife Sanctuary** and **Great Himalayan National Park** (GNHP) in Himachal Pradesh have performed the best among the surveyed protected areas (Total -146).
- Worst NP&WLS → The **Turtle Wildlife Sanctuary in Uttar Pradesh** was the worst performer in the survey.

13. Houbara Bustard

Why in News?

- Eleven members of the United Arab Emirates (UAE) royal family arrived in Pakistan to hunt the Houbara Bustard under a license issued by Pakistan’s foreign ministry.

About

- The Asian Houbara bustard is also known as **MacQueen’s bustard** (*Chlamydotis macqueenii*).
- It is a large **terrestrial bird** found in **parts of Asia, the Middle East and Africa.**
- Type → It is **one of the multiple bustard species** and **similar to the Great Indian Bustard**, which is native to India.
- Habitat →
 - The species lives in **Arid Climate.**
 - The population of the Asian Houbara bustards **extends from northeast Asia, across central Asia, the Middle East, and the Arabian Peninsula to reach the Sinai desert** (Egypt).

- After breeding in the spring, the Asian bustards **migrate south to spend the winter in Pakistan**, the Arabian Peninsula and nearby Southwest Asia.
- Conservation Status →
 - IUCN Status: **Vulnerable**.
 - CITES: **Appendix I**.
 - Convention on the Conservation of Migratory Species of Wild Animals (CMS)- **Appendix II**.
- Threats → **Poaching for meat** as it is believed to be an aphrodisiac and degrading of habitat.
- Hunting in Pakistan → While Pakistanis are not allowed to hunt the bird, the government **invites Arab royals to hunt it every year**.

14. One Planet Summit

Why in News?

- Recently, the President of France has inaugurated One Planet Summit 2021 for Biodiversity.

About

- Organized by → **France** in cooperation with the **United Nations** and **the World Bank**.
- Objective → The summit focuses on four major topics
 - **protecting terrestrial** and marine ecosystems; promoting agroecology
 - **more sustainable** way to grow food
 - **increasing funding** to protect biodiversity
 - **identifying links** between deforestation and the health of humans and animals.
- Theme → **“Let’s act together for nature!”**.

👉 Key Highlights

- At least 50 countries committed to **protecting 30% of the planet, including land and sea**, to halt species extinction and address climate change issues.
- France has announced the **High Ambition Coalition for Nature and People**, which was launched in 2019 by **Costa Rica, France** and **Britain** to set a target of **protecting at least 30% of the planet by 2030**, has now been joined by 50 countries.
- The summit also launched a program called **PREZODE** which French President presented as an unprecedented international initiative to **prevent the emergence of zoonotic diseases and pandemics**.

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15. Adaptation Gap Report 2020

Why in News?

- Recently, the United Nations Environment Programme (UNEP) Adaptation Gap Report 2020 estimated the annual cost of adaptation to the effects of climate change for developing countries to at least quadruple by 2050.

About

- Adaptation is **adjustment in natural or human systems** in response to actual or **expected climatic stimuli or their effects**, which moderates harm or exploits beneficial opportunities.
- Adaptation is a **key pillar** of the **Paris Agreement on Climate Change**.
- It aims to **reduce countries' and communities' vulnerability to climate change** by increasing their ability to absorb impacts.
- It provided a preliminary framework for **assessing adaptation gaps** and proposed **three dimensions: the funding gap, the technology gap and the knowledge gap**.

Overall Findings of the Report

- Though countries have made **progress in planning** for climate change adaptation, there are **significant financing shortfalls** in getting them to the stage where they provide real protection against droughts, floods and rising sea levels.

👉 United Nations Environment Programme

- The UNEP is a leading global environmental authority established on **5th June 1972**.
- Functions → It **sets the global environmental agenda**, promotes the sustainable development within the United Nations system, and serves as an authoritative advocate for global environment protection.
- Major Reports → **Emission Gap Report, Global Environment Outlook, Frontiers, Invest into Healthy Planet**.
- Major Campaigns → **Beat Pollution, UN75, World Environment Day, Wild for Life**.
- Headquarters → **Nairobi, Kenya**.

👉 Some of the Indian Initiatives to Fight Climate Change

- National Clean Air Programme (NCAP) →**
 - It was launched in **January 2019**.
 - It is a five-year action plan with a tentative target of **20-30% reduction in concentrations of PM10 and PM2.5 by 2024**, with 2017 as the base year.
- The Jawaharlal Nehru National Solar Mission →**
 - It was launched in **2009** with the primary aim of **achieving grid parity by 2022** and with **coal-based thermal power by 2030**.
 - Aims to increase the share of solar energy in India's energy mix.
 - India has shifted from Bharat Stage-IV (BS-IV) to Bharat Stage-VI (BS-VI) emission norms **from 1st April 2020** which was earlier to be adopted by 2024.
- National Action Plan on Climate Change (NAPCC) →**
 - It was launched in **2008**.

- It aims at **creating awareness** among the representatives of the public, different agencies of the government, scientists, industry and the communities on the **threat posed by climate change** and **the steps to counter it**.
- It has **distributed more than 360 million LED bulbs** under the **UJALA scheme**, which has led to energy saving of about 47 billion units of electricity per year and reduction of 38 million tonnes of CO₂ per year.

16. Harike Wetland

Why in News?

- Recently, the winter migratory water birds using the Central Asian Flyway have started making a beeline to Punjab's Harike wetland.

About

- The Harike wetland, one of the **largest in northern India**, is situated in **Tarn Taran district of Punjab**.
- It came into **existence in 1952** after the construction of barrage near the confluence of rivers Sutlej and Beas.
- It stands on the **confluence of the Beas and the Sutlej**.
- Migratory Birds →
 - The wetland is a significant abode for the migratory birds as every winter, the birds make their way to India through the **central Asian flyway** which **covers a large continental area** of **Europe-Asia between the Arctic and Indian Oceans**.
 - Birds such as the **Eurasian coot**, **Greylag goose**, **Bar-headed goose**, **Gadwall** and the northern shoveler are the prominent ones that could be sighted at Harike Wetland.
- Fauna → The wetland also harbors endangered aquatic mammalian as well as reptilian fauna like the **Indus river dolphin**, **smooth-coated otter** and **seven species of rare freshwater turtles**.
- It was accorded the **wetland status** in 1990 by the **Ramsar Convention**.

17. SAKSHAM Awareness Campaign

Why in News?

- Recently, the Ministry of Petroleum and Natural Gas has launched an awareness campaign called SAKSHAM.

About

- Launched by → **Petroleum Conservation Research Association** (PCRA), Ministry of Petroleum and Natural Gas
- It is a **people-centric fuel conservation mega campaign** that aims to highlight the adverse health and environmental impacts of increasing carbon footprints.
- The idea is to convince consumers to **switch to cleaner fuels** and bring in **behavioral change** to use fossil fuel intelligently.
- Campaign → The campaign through various **pan-India activities** such as cyclothon, farmer workshops, seminars, painting competition, CNG vehicle driving contest will **spread awareness among masses** about the **advantages of using clean fuels**.
- Seven Key Drivers → The campaign will also spread awareness about **7 key drivers** mentioned by the Prime Minister:

- Moving towards a gas-based economy,
- Cleaner use of fossil fuels,
- Greater reliance on domestic sources to drive bio-fuels,
- Achieving renewable targets with the set deadlines,
- Increased use of electric vehicles to decarbonize mobility,
- Increased use of cleaner fuels like Hydrogen, and
- Digital innovation across all energy systems

Petroleum Conservation Research Association (PCRA)

- It is a registered society set up under the aegis of the **Ministry of Petroleum & Natural Gas**.
- Objective → As a **non-profit organization**, PCRA is a national government agency engaged in **promoting energy efficiency in various sectors of the economy**.
- Functions → It helps the government in **proposing policies and strategies for petroleum conservation** aimed at reducing excessive dependence of the country on oil requirements.

18. Indian Star Tortoise

Why in News?

- Recently, Indian star tortoises were seized while being smuggled from Andhra Pradesh to Odisha.

About

- Scientific name → **Geochelone elegans**.
- Habitat → Inhabit a **variety of dry vegetation types**, including scrublands, grasslands, desert edges and agricultural landscapes of fields.
- Distribution → Indian star tortoise is found across the **Indian sub-continent**, more specifically, in the **Central and Southern parts of India**, in **West Pakistan** and **in Sri Lanka**.
- Conservation Status →
 - Wild Life Protection Act 1972: **Schedule IV**.
 - Schedule IV: This list is for species that are not endangered. It includes protected species but the penalty for any violation is less compared to the Schedules I and II.
 - Convention on International Trade in Species (CITES): **Appendix I**.
 - IUCN Status: **Vulnerable**.
- Threat → **Illegal smuggling** for use as exotic pets in Asian countries (Thailand, China, and Malaysia) is the major concern.
- Conservation Efforts → Recently India's proposal to **upgrade the protection status** of Star Tortoise **from Appendix II to Appendix I** was approved by the Convention on International Trade in Endangered Species of Wild Fauna and Flora (**CITES**).

19. Greater Adjutant Stork

Why in News?

- In Bihar, community participation in conservation has increased Greater Adjutant Stork population from 78 in 2007 to nearly 600 in 2020.

About

- The **Endangered** Greater Adjutant stork (*Leptoptilos dubius*) is one of the **rarest species** of **Storks out of twenty species** of Storks in the world.
- In **India**, **eight species** of residential storks are found, out of which Greater Adjutant is one of them.
- Once abundantly distributed in **Southeast Asia**, this stork is **now restricted** to a few isolated pockets in **Assam and Bihar in India** and **PrekToal in Cambodia**.
- This **colonial bird breeds** in traditional nesting colonies within **thickly populated villages** in **Assam** and **breeds in tall trees species**.

👉 Also Remember

- Biologist **Dr. Purnima Devi Barman**, who leads the Greater Adjutant Conservation Project of Aaranyak, won the Whitley Award or the '**Green Oscars**' **in 2017**, for this remarkable community-led conservation work.

20. Gucchi, or Morel

Why in News?

- A geographical indication (GI) tag has been sought for one of the costliest mushrooms in the world that grows in Jammu and Kashmir's Doda district.

About

- Locally called **Gucchi, or Morel**, the mushroom, **priced at over ₹20,000 a kg**, is a forest produce collected by local farmers and tribals.
- It is said to have **medicinal and anti-inflammatory properties**.
- It is found in the **temperate forests**.



👉 Geographical Indication (GI)

- A GI is primarily an **agricultural, natural** or **a manufactured product** (handicrafts and industrial goods) originating from a **definite geographical territory**.
- Typically, such a name conveys an **assurance of quality and distinctiveness**, which is essentially attributable to the place of its origin.
- GI tag in India is governed by **Geographical Indications of Goods (Registration & Protection) Act, 1999**. It is issued by the **Geographical Indications Registry (Chennai)**.
- The registration of a geographical indication is **valid for a period of 10 years**.
- It can be **renewed from time to time** for further period of 10 years each.
- Benefits of GI Tag →
 - It provides **legal protection** to Indian Geographical Indications thus preventing unauthorized use of the registered GIs by others.
 - It **promotes economic prosperity** of producers of goods produced in a geographical territory.
 - The GI protection in India leads to **recognition of the product** in other countries thus boosting exports.

21. Bandipur Tiger Reserve

Why in News?

- A stranded wild elephant was rescued in Nugu reservoir, close to Bandipur Tiger Reserve in Karnataka.

About

- Location → Tiger Reserve is situated in **two contiguous districts** (Mysore and Chamarajanagar) of **Karnataka**. It is located at the **tri-junction area** of the **States of Karnataka, Tamil Nadu** and **Kerala**.
- Status → In **1974**, Bandipur Tiger reserve was established as one of the **first 9 Tiger Reserves** under **Project Tiger**.
- In **1985**, by including **adjacent areas**, it was enlarged and named as Bandipur National Park.
- Rivers → The park is situated between **Kabini river** in the north and the **Moyar river** in the south. The **Nugu river runs** through the park.
- Bandipur Tiger Reserve is surrounded by →
 - **Nagarahole Tiger Reserve** (Karnataka) in the North West (Kabini Reservoir separates the two)
 - **Mudumalai Tiger Reserve** (Tamil Nadu) in the South and
 - **Wayanad Wildlife Sanctuary** (Kerala) in the South West.
- Biodiversity → It is endowed with **rich floral and faunal diversity** and is recognized as one of the **Mega Biodiversity Areas** in the country.
- The Bandipur along with Nagarahole, Mudumalai, Sathyamangalam & Wayanad constitutes the **single largest Wild population of Tigers** in the world.
- This Landscape is also home to the **single largest Asian Elephant population** in the world and is part of the **Mysore Elephant Reserve** (MER).
- Other Tiger Reserves in Karnataka →
 - Bhadra Tiger Reserve
 - Nagarahole Tiger Reserve
 - Dandeli-Anshi Tiger Reserve
 - Biligiriranganatha Swamy Temple(BRT) Tiger Reserve
 - Besides, Malai Mahadeshwara Wildlife Sanctuary has been proposed to be made a tiger reserve.

👉 Asian Elephants

- Subspecies → There are three **subspecies of Asian elephant** which are the Indian, Sumatran and Sri Lankan.
- Protection Status →
 - IUCN Red List Status: **Endangered**.
 - Wildlife (Protection) Act, 1972: **Schedule I**.
- Conservation Efforts →
 - **Gaj Yatra**.
 - The Monitoring the Illegal Killing of Elephants (**MIKE**) **programme**.
 - **Project Elephant**.

22. Dragon fruit

Why in News?

- The Gujarat government has decided to rename the dragon fruit as 'kamalam'.

About

- Dragon fruit is the fruit of a **species of wild cactus indigenous to South and Central America**, where it is called **pitaya** or **pitahaya**.
- The fruit's flesh is usually **white** or **red** — although there is a **less common yellow pitaya too** — and is **studded with tiny seeds** rather like the kiwifruit.
- The **world's largest producer** and **exporter of dragon fruit** is **Vietnam**, where the plant was **brought by the French** in the 19th century. The Vietnamese call it **thanh long**, which translates to "**dragon's eyes**", believed to be the origin of its **common English name**.
- Dragon fruit is also cultivated in — apart from its **native Latin America** — **Thailand, Taiwan, China, Australia, Israel**, and **Sri Lanka**.
- It was **brought to India in the 1990s**, and is **grown in Karnataka, Kerala, Tamil Nadu, Maharashtra, Gujarat, Odisha, West Bengal, Andhra Pradesh**, and Andaman and Nicobar Islands. It grows in **all kinds of soil**, and does **not require much water**.

23. First wildlife sanctuary exclusively for wolves

Why in News?

- Karnataka's first wolf sanctuary may come up in Koppal.

About

- Location → It is proposed in the **drylands of Bankapur** in **Koppal district of the Kalyana Karnataka region**.
- The proposed sanctuary is **good for the conservation** of **not only wolves** but also **striped hyena, Indian fox, gold fox** and **other animals**.

10. Commission for Air Quality Management

Why in News?

- The Commission for Air Quality Management (CAQM) in NCR and adjoining areas has begun the process of setting up a Decision Support System (DSS) having a web, GIS and multi-model based operational and planning decision support tool.

About

- Formation → The Commission for Air Quality Management was **formed by an ordinance** in **October 2020**, the "Commission for Air Quality Management (CAQM) in National Capital Region and Adjoining Areas Ordinance 2020".
- Composition →
 - Chairperson: To be **chaired by a government official** of the rank of Secretary or Chief Secretary.
 - It will be a permanent body and will have **over 20 members**.
- 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.
- It will have the **powers to issue directions** to these state governments on issues pertaining to air pollution.

- Jurisdiction → **Exclusive jurisdiction over the NCR**, including areas in Haryana, Punjab, Uttar Pradesh and Rajasthan, in **matters of air pollution**, and will be working along with CPCB and ISRO, apart from the respective state governments.
- Penal powers → If its directions are contravened, through say, the **setting up of an industrial unit in a restricted area**, the Commission will have the power to impose a fine of up to **Rs 1 crore** and **imprisonment of up to 5 years**.

24. Ooceraea joshii

Why in News?

- Two new species of a rare ant genus have been discovered in India. The species of the ant genus Ooceraea found in Kerala, and Tamil Nadu add to the diversity of this rare genus.

About

- One of them found in the **Periyar Tiger Reserve of Kerala**, has been named Ooceraea joshii, in honour of **Prof. Amitabh Joshi**, a distinguished **evolutionary biologist** from Jawaharlal Nehru Centre for Advanced Scientific Research (**JNCASR**) an autonomous institute of the Department of Science & Technology (DST), Government of India.
- The newly discovered ant species with **ten segmented antennae discovered**, establish an old world lineage that contains a species emerging as the **only model organism among the ant subfamily**.

25. Climate Adaptation Summit 2021

Why in News?

- Recently, the Indian Prime Minister has welcomed the Climate Adaptation Summit 2021.

About

- The International Climate Adaptation Summit (CAS) 2021 was **hosted by the Netherlands**, convenes global leaders and local stakeholders.
- It will have a focus on **securing new investments** to ensure that millions of smallholder farmers can adapt to the **stresses of climate on food production**.
- It launched an **Adaptation Action Agenda** that sets out **clear commitments** to **deliver concrete new endeavours** and **partnerships** to make our world more resilient to the effects of climate change.
- The summit was built on the advances of the **UN Climate Action Summit**.
- The summit also showcased the **pioneering solutions** of the **climate emergency** and **sustaining momentum** through UNFCCC's COP26.
- CAS will help in **delivering the action** and **inspire the change** to help the societies build back better.
- The summit was organized with the aim of **realizing the transitions** which is **required for a climate-resilient world**.

26. Wildlife Crime Control Bureau

Why in News?

- Wildlife Crime Control Bureau (WCCB) and Barasat Forest Range have rescued a live pangolin in Kolkata.

About WCCB

- It is a **statutory multi-disciplinary body**, established by the Government of India under the Ministry of Environment and Forests, to **combat organized wildlife crime** in the country.
- Headquarters → **New Delhi**.
- Functions → Under **Section 38 (Z)** of the **Wild Life (Protection) Act, 1972**, it is mandated to:
 - **Collect intelligence** related to organized wildlife crime activities. And to circulate it to the States and other enforcement agencies for immediate actions, to catch the criminals.
 - Establish a **centralized wildlife crime data bank**.
 - **Coordinates** with foreign authorities and international organization to facilitate universal action on wildlife crimes.
 - **Build capacity** of the wildlife crime enforcement agencies for scientific and professional investigation into wildlife crimes.
 - **Assist State Governments** to ensure success in prosecutions related to wildlife crimes.
 - **Advise the Government of India** on issues relating to wildlife crimes having national and international ramifications, relevant policy, and laws.
- It also **assists and advises the Customs authorities in inspection** of the consignments of flora & fauna as per the provisions of Wild Life Protection Act, CITES, and EXIM Policy governing such an item.

27. Kanha Tiger Reserve

Why in News?

- A tigress was found dead in the buffer zone of Kanha tiger reserve in Madhya Pradesh.

About

- Location → It is located in the Mandla and Balaghat districts of **Madhya Pradesh**. It is the **largest national park in Madhya Pradesh** with 940 sq. km under it.
- Kanha National Park is a **national park** and a **Tiger Reserve**.
- History → The present-day Kanha area was divided into **two sanctuaries, Hallon and Banjar**. Kanha National Park was **created in 1955** and in **1973** was made the **Kanha Tiger Reserve**.
- Fauna →
 - The State animal of Madhya Pradesh - **Hard Ground Barasingha** (Swamp deer or Rucervus duvaucelii) is found exclusively in Kanha Tiger Reserve.
 - Other Species found include **Tiger, Leopard, Dhole, Bear, Gaur** and **Indian Python** etc.
- Flora →
 - It is best known for its **evergreen Sal forests** (Shorea Robusta).
 - It is the first tiger reserve in India to officially introduce a **mascot**, "**Bhoorsingh the Barasingha**".
- Tribes in the vicinity → The forest of the Kanha Tiger Reserve was originally inhabited by two indigenous tribes of Central India, **the Gonds** and **the Baigas**. The vicinity of the reserve is **still occupied with the villagers** of these tribes.
- Other Tiger Reserves in Madhya Pradesh →
 - Sanjay-Dubri.
 - Panna.
 - Satpura.

- Bandhavgarh.
- Pench.

👉 Barasingha

- Subspecies → There are **three subspecies** of swamp deer found in the Indian Subcontinent.
- The **western swamp deer** (*Rucervus duvaucelii*) found in Nepal,
- **Southern swamp deer**/Hard Ground Barasingha (*Rucervus duvaucelii branderi*) found in central and north India and
- **Eastern swamp deer** (*Rucervus duvaucelii ranjitsinhi*) found in the Kaziranga (Assam) and Dudhwa National Parks (Uttar Pradesh).
- Protection Status of Swamp Deer →
 - IUCN Red List: **Vulnerable**
 - CITES: **Appendix I**
 - Wildlife Protection Act, 1972: **Schedule I**

28. Cypress tree

Why in News?

- The new US President has promised to make climate change and the environment priorities for his administration including the saving of ancient cypress forest of Alabama.

About Cypress Forest off the coast of Alabama

- Cypress Forest of Alabama is **unique as entire forest is underwater**. [60 feet deep]
- It is made up of the **remains of cypress trees** that **grew in the ice age** (60,000 years ago), when prehistoric humans were just starting to move out of Africa.
- It was **submerged** in the **waters of the Gulf of Mexico** as sea levels rose, and remained entombed in **thick layers of sediment, mud, and sand for millennia**.
- The **sediments prevented oxygen** from decomposing the stumps, barks, and other remnants of the forest.
- In **2004**, It was discovered after **Hurricane Ivan hit the Gulf Coast** and unleashed giant waves that removed the sediments.

👉 About Cypress tree

- Cypress is the common name of any **evergreen conifers**.
- They are distributed throughout **warm-temperate and subtropical regions** of **Asia, Europe, and North America**.
- They mainly grow in the region where they have easy access to **swampy, wet soil** and **full sunlight**.
- Most cypresses **do not withstand severe frost**.
- Appearance →
 - Young cypress trees are often **25 metres (80 feet) tall** and are **pyramidal in shape**.
 - Some species develop **flattened, spreading heads at maturity**, and others are shrubs less than 6 metres tall.
- Utility →

- They are of **limited importance** as **timber trees**.
- Some Cypress trees are cultivated as **ornamentals** for their **foliage and graceful habit** including in Kashmir.

29. Elephant Corridors

Why in News?

- The Supreme Court has appointed a new member to Technical Committee on Nilgiri Elephant Corridor.

About

- Elephant corridors are **narrow strips of land** that **connect two large habitats of elephants**.
- Elephant corridors are crucial to **reduce animal fatalities** due to accidents and other reasons.
- The corridor is situated in the **ecologically fragile Sigur plateau**, which connects the Western and the Eastern Ghats and sustains elephant populations and their genetic diversity.
- It has the Nilgiri Hills on its **southwestern side** and **the Moyar River Valley** on its north-eastern side. The elephants cross the plateau in **search of food and water**.

👉 Nilgiri Biosphere Reserve

- The Nilgiri Biosphere Reserve is the **largest protected forest area** in India. The Biosphere Reserve spread across three states. Namely, **Tamil Nadu, Karnataka, and Kerala**.
- The Nilgiri **Sub-Cluster is a part of the Western Ghats** which was declared a **World Heritage Site** by UNESCO in 2012.
- The reserve includes the **Aralam, Mudumalai, Mukurthi, Nagarhole, Bandipur, and Silent Valley national parks**. Similarly, the reserve also includes the Wayanad, Karimpuzha, and Sathyamangalam wildlife sanctuaries.
- It has the **largest population** of two endangered species, the **lion-tailed macaque** and **Nilgiri tahr**. The reserve hosts more than 400 tigers.

👉 Also Remember

- **Asian Elephant Alliance**, an **umbrella initiative by five NGOs**, had come together to secure 96 out of the 101 existing corridors used by elephants across 12 States in India.
- **NGOs Elephant Family, International Fund for Animal Welfare, IUCN Netherlands** and **World Land Trust** have teamed up with **Wildlife Trust of India's (WTI) in the alliance**.

30. Global Climate Risk Index 2021

Why in News?

- India was ranked the seventh worst-hit country in 2019 in the Global Climate Risk Index 2021.

About

- The GCRI is released **annually** by the environmental think tank and sustainable development lobbyist **Germanwatch**.

- It analyses to what extent countries have been **affected by the impacts of weather-related loss events** (storms, floods, heat waves etc.).
- The index is based on data from **Munich Re's NatCatSERVICE**.
- It pushes for the need to **support developing countries** in **coping with the effects of climate change**.

👉 Data about India

- According to the Index floods caused by **heavy rain in 2019 took 1,800 lives across 14 states** in India and **displaced 1.8 million people**.
- Overall, the intense monsoon season **affected 11.8 million people**, with the **economic damage** estimated to be **\$10 billion** (Rs.72,900 crore at \$1=INR 72.9).
- A total of **eight tropical cyclones** meant that 2019 was **one of the most active Northern Indian Ocean cyclone seasons** on record. Six of them intensified to become "**very severe**".

31. Zero liquid discharge

Why in News?

- The Centre is examining various options of moving forward on the country's ZLD policy trying to make a balance between the environmental protection and industrial development.

About

- ZLD is a **water treatment process** to recirculate all the water back to the process with zero liquid waste.
- A ZLD system involves a range of advanced wastewater treatment technologies for treating water up to the level that can be reused inside the same Company.

A typical ZLD system comprises of the following components:

- **Pre-treatment (Physio-chemical & Biological):** Wastewater is filtered using membrane technologies such as ultra-filtration. Separated water is reused and a concentrate (polluted stream) is further treated.
- **Reverse Osmosis (Membrane Processes):** It removes contaminants from unfiltered water, or feed water, when **pressure forces it through a semipermeable membrane**. Water flows from the more concentrated side (more contaminants) of the RO membrane to the less concentrated side (fewer contaminants) to provide clean drinking water.
- **Evaporator & Crystallizer (Thermal Process):** Concentrate enters a **brine concentrator** which is a mechanical evaporator using a combination of heat and vapor compression, resulting in a wet sludge.
- **Crystallization converts** the sludge to solid waste using high pressure steam. Any remaining water is clean enough for reuse.

Science and Technology

1. Ruthenium 106

Why in News?

- Bhabha Atomic Research Centre (BARC), Mumbai has developed Eye Cancer therapy in the form of the first indigenous Ruthenium 106 Plaque for treatment of Ocular Tumours.

About Ocular tumours

- Ocular tumours are **tumours inside the eye**.
- They are **collections of cells** that **grow and multiply abnormally and form masses**.
- Radiation** and **chemotherapy** are two common types of treatment for ocular tumours.
- Radiation can be in the form of **proton beam radiation** or **placement of radiation plaque on the eye**.

👉 Ruthenium 106

- Ruthenium-106 is a **radioactive form** of the **rare heavy metal ruthenium**, which is a “**platinum group**” metal similar to platinum.
- Ruthenium-106 is produced from the **fission** or **splitting of uranium-235**, the type of uranium used in nuclear fission reactors, so it's found in spent nuclear fuel.
- It's used in medicine for **cancer radiation therapy**, especially **for eye and skin tumours**.
- It's also used in **radioisotope thermoelectric generators** that power satellites.

👉 Bhabha Atomic Research Centre (BARC)

- BARC is India's **chief nuclear research facility** founded in **1954**.
- Headquartered in **Mumbai**, it is a **multi-disciplinary research centre** with extensive infrastructure for advanced research and development covering the entire spectrum of nuclear **science**, engineering and related areas.
- It comes under the **Department of Atomic Energy**.
- BARC's core mandate is to **sustain peaceful applications** of **nuclear energy**, **primarily for power generation**.
- It manages all facets of nuclear power generation, from the theoretical design of reactors to, **computerized modeling and simulation, risk analysis, development and testing of new reactor fuel materials**, etc.
- It also researches **spent fuel processing** and **safe disposal of nuclear waste**.
- Its other research focus areas are **applications for isotopes in industries, medicine, agriculture**, etc.
- BARC operates a **number of research reactors** across the country.

2. Indian SARS-CoV-2 Genomic Consortia (INSACOG)

Why in News?

- The Union government has recently launched the Indian SARS-CoV-2 Genomic Consortia (INSACOG).

About

- Aim → It aims to **monitor the genomic variations** in the SARS-CoV-2 on a **regular basis** through a **multi-laboratory network**.
- Composition → It comprises **10 labs** (NIBMG Kolkata, ILS Bhubaneswar, NIV Pune, CCS Pune, CCMB Hyderabad, CDFD Hyderabad, InSTEM Bengaluru, NIMHANS Bengaluru, IGIB Delhi and NCDC Delhi).
- Coordinated by → The group is **coordinated by the Department of Biotechnology** (DBT) along with the Ministry of Health and Family Welfare (MoH&FW), ICMR and CSIR.
- Nodal Unit for Maintaining Database → **National Centre for Disease Control** (NCDC) will be the **nodal unit for maintaining a database** of all samples of the new variants of public health significance. The data will be epidemiologically analysed, interpreted and shared with states for investigation, contact tracing and planning response strategies.
- Other key Functions of the INSACOG →
 - It will establish **sentinel surveillance** for **early detection of genomic variants** with public health implications and to determine genomic variants in unusual events or trends such as **super-spreader events**.
 - Knowledge generated through this **vital research consortium** will also assist in **developing diagnostics** and **potential therapeutics** and vaccines in the future.
 - The group will also **closely work with NCDC** on **activities like SOPs, data annotation, data analysis, data release** among others.

3. Covishield and Covaxin

Why in News?

- In a significant development, the Drug Controller General of India (DCGI) has formally approved Serum Institute and Bharat Biotech vaccines for restricted emergency use against COVID-19 in India.

About Covishield

- Developed by → **Oxford University** in **collaboration with Astrazeneca**.
- Pune-based **Serum Institute of India** is their **manufacturing and trial partner**.
- Features → It uses a **replication-deficient chimpanzee viral vector** based on a weakened version of a common cold virus.
- This virus **causes infections in chimpanzees** and **contains the genetic material** of the SARS-CoV-2 virus spike protein.

About Covaxin

- Developed by → **Bharat Biotech** and it is **India's first indigenous vaccine** against Covid-19.
- Involved Agency → Bharat Biotech has developed this vaccine in **collaboration with the Indian Council of Medical Research** and **National Institute of Virology**.
- Features → It is an **inactivated vaccine** which is developed by inactivating (killing) the live microorganisms that cause the disease.
- This **destroys** the **ability of the pathogen to replicate**, but keeps it intact so that the immune system can still recognise it and produce an immune response.

4. Bird Flu

Why in News?

- An outbreak of bird flu was confirmed in Kerala, Rajasthan and Himachal.

About Bird Flu

- Bird flu, also known as **Avian influenza** (AI), is a **highly contagious viral disease** affecting several species of food-producing birds (chickens, turkeys, quails, guinea fowl, etc.) as well as pet birds and wild birds.
- Occasionally mammals, **including humans**, may **contract avian influenza**.
- Types →
 - Bird flu is an infection caused by avian influenza viruses, which are of different **types A, B and C**.
 - Only **type A** is known to **infect animals and is zoonotic**, meaning it can infect animals and also humans. **Type B and C mostly infect humans** and typically cause mild disease.
- History → The first outbreak of human infection by avian influenza viruses (**H5N1**) was **observed in 1997** in **Hong Kong**. Since then a large number of outbreaks have been reported in different parts of the world.
- Classification → Influenza A viruses are classified into **subtypes** based on two surface proteins, **Hemagglutinin** (HA) and **Neuraminidase** (NA).

The H5N8 strain

- The presence of the **H5N8 subtype** of the **Influenza A virus** was reported in ducks in parts of Kerala.
- While it can prove **lethal for birds**, the H5N8 strain of avian influenza has a **lower likelihood** of **spreading to humans compared to H5N1**.
- While the **source** of infection is **yet to be pinpointed**, the role of migratory birds in passing on the virus is suspected.
- Control measures → **Culling** is usually undertaken to control the infection when it is detected in animals. Besides culling, **safe disposal** of all such culled animals and animal products is **also important**.

5. National Internet Exchange of India

Why in News?

- Recently, the National Internet Exchange of India (NIXI) announced that it will offer a free IDN (Internationalized Domain Name) in any of their preferred 22 official Indian language.

About NIXI

- What is it? → NIXI is a **not for profit Organization** under Section 8 of the **Companies Act, 2013** and was **registered in 2003**.
- Purpose → It was set up for **peering of Internet Service Providers** (ISPs) among themselves to route the domestic traffic within the country, instead of taking it all the way to US/Abroad.
- NIXI is working for **spreading the internet technology** to **Indian citizens** through the following activities: -
 - **Internet Exchanges** through which the internet data is exchanged amongst ISPs and between ISPs and the Content Delivery Networks (CDNs).

- **IN Registry**, managing and operation of IN country code domain and IDN domain for India.
- **Indian Registry for Internet Names and Numbers (IRINN)**, managing and operating Internet protocol (IPv4/IPv6).

📌 Indian Registry for Internet Names and Numbers

- What is it? → IRINN, a **non-profit organization**, is a division **functioning under NIXI**.
- It was previously known as National Internet Registry (**NIR**).
- Functions → It provides **allocation and registration services of IP addresses** and **Autonomous System (AS) numbers**, and internet-related information to its Affiliates at national level.
- NIR is an **entity under the Regional Internet Registry (RIR)** which is Asia Pacific Network Information centre (**APNIC**).
- NIXI was **recognized by APNIC in 2012** to become the NIR for India.

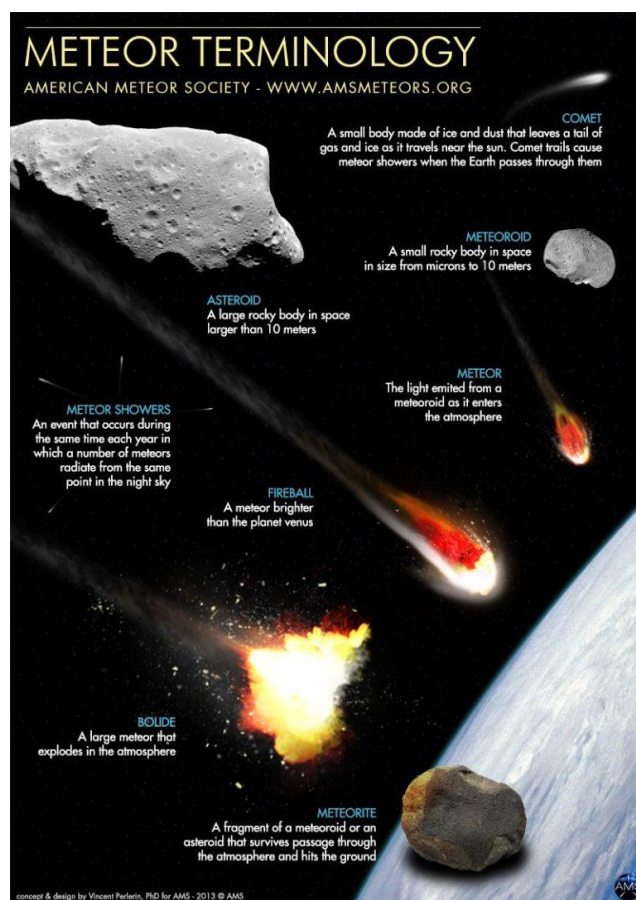
6. MukundPura Meteorite

Why in News?

- An asteroid which made its landfall in Mukundpura village near Jaipur has been named after the same village and is under the study of Geological Survey of India, Kolkata.

About

- The meteorite named Mukundpura CM2 was classified to be a **carbonaceous chondrite**. The composition of carbonaceous chondrites are also **similar to the Sun**.
- Chondrites are **silicate droplet bearing meteorites**, and this **Mukundpura chondrite** is the **5th carbonaceous meteorite** known to **fall in India**.
- Classification Of Meteorite →
 - Meteorites are classified into three groups: **Stony** (silicate-rich), **Iron** (Fe–Ni alloy), and **Stony Iron** (mixed silicate iron alloy).
 - Mukundpura CM2 is a **type of stony meteorite**, considered the **most primitive meteorite** and a remnant of the **first solid bodies** to accrete in the solar system.
- Components of Meteorite →
 - Detailed spectroscopic studies revealed that the meteorite had **very high (about 90%) phyllosilicate minerals** comprising both magnesium and iron.
 - Forsterite and **FeO olivine, calcium aluminium rich inclusion (CAI)** minerals.
 - Few **magnetites, sulphides, aluminium complexes** and **calcites were also found**.



- Importance of studying Asteroid →
 - Understanding of **Solar system's history**.
 - How the solar **system evolved into the Sun and planets of today**.
 - The effects of **impact of meteorites**.
 - They are often **rich in volatiles** and **other minerals** and can be **exploited for future planetary exploration**.

7. Recoiling Black Hole

Why in News?

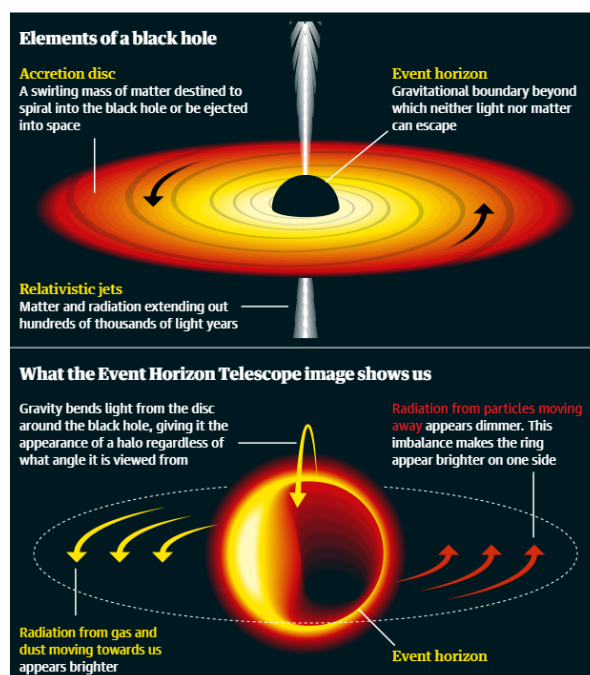
- The black hole which is supposed to be located at the centre of Abell 2261, an enormous galaxy cluster that is about 2.7 billion light-years away from our planet has till now evaded detection.

About

- Every large galaxy in the universe has a supermassive **black hole at its centre**, whose mass is millions or billions of times that of the Sun.
- The black hole at the **centre of our galaxy– the Milky Way–** is called **Sagittarius A***, and is 26,000 light-years away from Earth.
- Scientists have been using **data gathered in 1999 and 2004** to look for the centre of the **Abell galaxy**, but have so far been **unable to find its black hole**.
- Possible Reasons → A reason for this could be that Abell's black hole has been **ejected from the centre of the galaxy** due to the **merging of two smaller galaxies** to form Abell– a process in which both of their black holes merged to form an even **bigger black hole**.

What are recoiling black holes?

- When two black holes merge, they release what are known as **gravitational waves– invisible ripples travelling** at the **speed of light**, which squeeze and stretch anything in their path.
- Differences in mass, spin, and orientation of the two merging black holes cause **asymmetry in the gravitational waves produced**, which at the final moment of merging can give the object that results a **massive kick in one preferred direction**. This is **called recoil**, and it results in a **single supermassive black hole moving in a distinct direction away from the center** of its galaxy.
- This sort of **speed will eject merging binary black holes** from **globular clusters**, thus preventing the formation of massive black holes in globular cluster cores. In turn this **reduces the chances of subsequent mergers**, and thus the chance of detecting gravitational waves.



- Stars interacting with this supermassive black hole binary can even end up being **flung out of the center**, taking **some energy from the binary** with it and **causing the binary's orbit to shrink**.

👉 Black Hole

- It is a region in space where the **pulling force of gravity is so strong** that **neither matter nor light can escape**. This phenomenon occurs when a **star is dying**.
- For anything approaching a black hole, the point of no return is called the "**event horizon**" and anything that comes within the event horizon will be **consumed forever**.
- Since **no light can escape** from it, a **black hole is invisible**.
- However, **advanced space telescopes** can **identify black holes** by observing the behaviour of material and stars that are very close to black holes.
- In 2019, **NASA** released the **first-ever photograph** of a black hole and its shadow, which was captured by an international network of radio telescopes called the **Event Horizon Telescope** (EHT).

8. Heliophysics Missions

Why in News?

- NASA has approved two heliophysics missions to explore the Sun and the system that drives space weather near Earth.

About

- Together, NASA's contribution to the following will help in **understanding the Sun and Earth as an interconnected system**,
 - Extreme Ultraviolet High-Throughput Spectroscopic Telescope Epsilon Mission (**EUVST**) and
 - Electrojet Zeeman Imaging Explorer (**EZIE**)
- Understanding the physics that **drive the solar wind and solar explosions** could help in **predicting these events**.
- Funding comes from the **Heliophysics Explorers Program**, managed by the **Explorers Program Office** at NASA's Goddard Space Flight Center.

👉 EUVST

- The Japan Aerospace Exploration Agency (**JAXA**) **leads the EUVST Epsilon Mission** (Solar-C EUVST Mission), along with other partners.
- Targeted for **launch in 2026**, EUVST is a **solar telescope**.
- It will study **how the solar atmosphere releases solar wind** and **drives eruptions of solar material**.
- These phenomena propagate out from the Sun and influence the space radiation environment throughout the solar system.
- EUVST will take **comprehensive UV spectroscopy measurements** of the solar atmosphere at the highest level of detail to date.
- This will allow scientists to tease out **how different magnetic and plasma processes drive coronal heating and energy release**.

👉 EZIE

- To be launched in **2024**, EZIE will **study electric currents in Earth's atmosphere linking aurora to Earth's magnetosphere** that responds to solar activity and other factors.
- EZIE is an investigation comprising a trio of CubeSats that will **study the source of and changes in the auroral electrojet (AE)**.
- The interaction of the magnetosphere and the solar wind **compresses the Sun-facing side** of the **magnetosphere**.
- This drags out the night-time side of the magnetosphere into what is called a **magnetotail**.
- The same space weather phenomena that power the aurora can **cause interference with radio and communication signals** and **utility grids** on Earth's surface, and damage to spacecraft in orbit.

9. Atal Tinkering Labs

Why in News?

- Atal Innovation Mission, NITI Aayog and ISRO has announced that ISRO will be adopting 100 Atal Tinkering Labs across the country to promote education in the field of STEM, Space education and space technology related Innovations for school students

About

- It is an initiative by the **Atal Innovation Mission, Niti Aayog** with the aim of establishing **Atal Tinkering Laboratories(ATLs)** in schools across India.
- Objective → To **foster curiosity, creativity and imagination in young minds**; and **inculcate skills such as design mindset, computational thinking**, adaptive learning, physical computing etc.
- Key Features of ATL →
 - ATL is a **work space** where **young minds can give shape** to their ideas through hands on do-it-yourself mode and learn innovation skills.
 - Young children will get a **chance to work with tools and equipment** to understand the concepts of STEM (Science, Technology, Engineering and Math).
 - ATL would **contain educational and learning 'do it yourself' kits** and equipment on – science, electronics, robotics, open source microcontroller boards, sensors and 3D printers and computers.
 - ATL can **conduct different activities** ranging from regional and national level competitions, exhibitions, workshops on problem solving, designing and fabrication of products, lecture series etc. at **periodic intervals**.
- Financial Support → AIM will provide **grant-in-aid of Rs. 20 Lakh to each school** that includes a one-time establishment cost of Rs. 10 lakh and operational expenses of Rs. 10 lakh for a maximum period of 5 years to each ATL.
- Eligibility → Schools (minimum Grade VI – X) **managed by Government, local body or private trusts/society to set up ATL**.

10.Lumpy Skin Disease

Why in News?

- Recently, a Lumpy Skin Disease (LSD) has been infecting India's bovines.

About

- Lumpy Skin Disease (LSD) is an **infectious viral disease** of the cattle and bovine animals.
- Caused by → a **poxvirus Lumpy skin disease virus** (LSDV).
- The virus is one of three closely related species within the **genus capripoxvirus**, the other two species being **Sheeppox virus** and **Goatpox virus**.
- Symptoms →
 - It appears as **nodules of two to five centimetre diameter all over the body**, particularly around the head, neck, limbs, udder (mammary gland of female cattle) and genitals.
 - The **lumps** gradually **open up like large and deep wounds**.
 - Other clinical signs include **general malaise**, **ocular** and **nasal discharge**, **fever**, and **sudden decrease in milk production**.
- Vectors → It **spreads through mosquitoes, flies** and **ticks** and also through saliva and contaminated water and food.
- Prevention → Control and prevention of lumpy skin disease relies on **four tactics** - **movement control** (quarantine), **vaccination**, **slaughter campaigns** and **management strategies**.
- Effect → According to the Food and Agriculture Organization (FAO) the **mortality rate is less than 10%**.
- Treatment →
 - There is **no treatment** for the virus, so **prevention by vaccination** is the most effective means of control.
 - Secondary infections in the skin may be **treated with Non-Steroidal Anti-Inflammatories** (NSAIDs) and also antibiotics when appropriate.
- The virus is **not zoonotic** and **doesn't infect humans** through consumption of milk or meat.

11. CollabCAD Software

Why in News?

- National Informatics Centre(NIC), MeitY along with Central Board of Secondary Education(CBSE), Ministry of Education is jointly launching CollabCAD Software.

About

- What is it? → It is a **collaborative network, computer-enabled software system** providing a total **engineering solution** from 2D drafting & detailing to 3D product design for students and faculty of the Engineering Graphics Curriculum.
- Developed by → the **National Informatics Centre** (NIC).
- Importance of CollabCAD Software →
 - It aims to **provide a great platform** to students across the country to **create and modify 3D digital designs** with a **free flow of creativity and imagination**.
 - It would enable students to **collaborate over designs** across the network and concurrently access the **same design data for storage and visualization**.
 - The software will be used for **practical assignments** as part of the subject curriculum for making different types of 3D designs and 2D Drawings.

👉 Other Initiatives

CollabCAD 3D modeling

- National Informatics Centre (NIC), CBSE, and Atal Innovation Mission (AIM), NITI Aayog will jointly release a **comprehensive e-book** on CollabCAD 3D modeling.
- This book is **ready for public release** through the **CollabCAD portal** and will guide CAD students, beginners, and professionals in understanding and using CollabCAD Software.

12.5G technology

Why in News?

- Recently, the Department of Telecommunications (DoT) has sought inputs from telcos and other industry experts on the sale and use of radio frequency spectrum over the next 10 years, including the 5G bands.

About

- 5G or fifth generation is the **latest upgrade** in the long-term evolution (**LTE**) **mobile broadband networks**.
- 5G offers exponentially **faster download** and **upload speeds**.
- 5G will deliver **multi-Gbps peak rates**, **ultra-low latency**, **massive capacity**, and a **more uniform user experience**.
- Bands in 5G → 5G mainly work in **3 bands**, namely low, mid and high frequency spectrum — all of which have their own uses as well as limitations.
 - Low band spectrum: It has shown **great promise in terms of coverage** and **speed of internet** and **data exchange** however the maximum speed is limited to 100 Mbps (Megabits per second).
 - Mid-band spectrum: It **offers higher speeds** compared to the low band, but has **limitations in terms of coverage area** and **penetration of signals**.
 - High-band spectrum: It has the **highest speed** of all the three bands, but has **extremely limited coverage** and **signal penetration strength**.

How is 5G different to 4G?

5G	4G
5G uses much higher radio frequencies of 28 ghz.	4G uses lower radio frequencies of 700 mhz to 2500 mhz.
5G transfer more data over the air at faster speeds.	4G speed is lesser with less data transfer.
5G has lower latency i.e the delay before a transfer of data begins following an instruction. Latency for 5G is predicted to be below 10 milliseconds, and in best cases around 1 millisecond.	4G has higher latency as compared to 5G. Latency for 4G is around 20-30 milliseconds.
5G uses millimetre wave spectrum which enables more devices to be used within the same geographic area supporting around one million per square kilometre.	4G support lesser number of devices of about 4,000 devices per square kilometre.
5G uses a new digital technology that improve coverage, speed and capacity.	4G has led to more congestion and lesser coverage as compared to 5G.

13.Active Matter Systems

Why in News?

- Scientists have found a clue to the dynamic origin of fluctuations in systems like fish schools, swarms of insects, flocking birds and bacterial colonies. These are called active matter system.

About

- It is composed of **large numbers of self-driven components** that extract energy from their surroundings to generate mechanical work.
- Due to **continuous energy input**, such systems are **driven far from equilibrium** and **exhibit fascinating collective behaviors** like clustering, giant mass fluctuations and anomalous transport.
- Example → The anomalous behavior of active matter systems can be understood by considering a **cup of coffee stirred with a spoon**. If **one stops stirring**, the coffee will eventually come to rest due to the **internal viscous forces** which **resist the fluid motion**.
 - In contrast, **imagine stirring a bacterial solution** which under **suitable conditions** (bacterial concentration), can exhibit perpetual or unceasing collective directed motion. This is called **Active matter**. In cases like this, the viscosity would vanish.
- Importance → This understanding can be **useful in nanotechnology applications** like building small-scale energy-efficient bio-devices as well as **biomedical applications** like characterising infection spread in organs, antibiotic resistance and so on.

14. India Science

Why in News?

- India Science, Nation's Science & Technology OTT (Over-the-top) channel has completed its second year of existence.

About

- What is it? → It is an **Internet-based science Over-The-Top** (OTT) TV channel.
- It is an initiative of the **Department of Science and Technology** (DST), Govt of India.
- Implementation → It has been implemented and managed by **Vigyan Prasara** (VP), an **autonomous organisation** of the Department of Science and Technology.
- Features → This **24x7 video platform** is dedicated to **science and technology knowledge dissemination**, with a strong commitment to **spreading scientific awareness** especially with Indian perspectives, ethos and cultural milieu.
- The initiative is supported by the **National Council of Science and Technology Communication** (NCSTC), **DST**.

15. NGC 2808

Why in News?

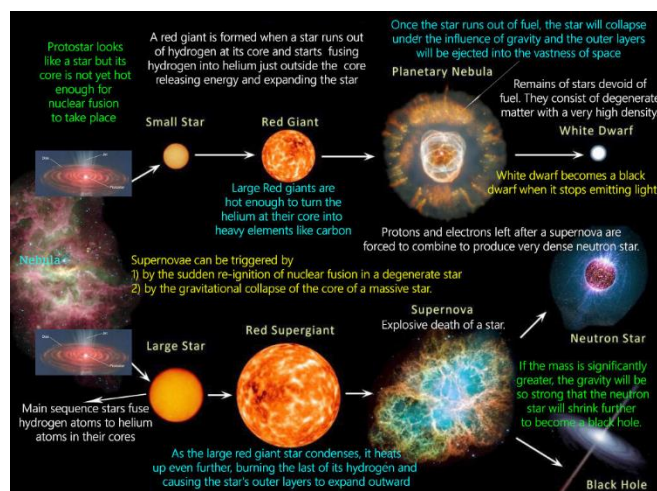
- Recently, astronomers have spotted rare hot Ultra Violet (UV)-bright stars in the massive intriguing globular cluster in the Milky Way Galaxy called NGC 2808.

About

- The NGC 2808 is said to have **at least five generations of stars** in which the Ultraviolet Imaging Telescope (UIT) have **spotted rare hot UV-bright stars** in it.
- The **UV-bright stars** whose **inner core is almost exposed**, making them very hot, exist in the late stages of evolution of a Sun-like star.
- Old globular clusters, referred to as **dinosaurs of the Universe**, **help to understand** how stars evolve through various phases between their birth and death.
- UV-bright stars have been distinguished from the relatively **cooler main-sequence stars** using images from **Ultraviolet Imaging Telescope** (UVIT) onboard **satellite AstroSat**.

AstroSat

- It is a **multi-wavelength astronomy mission** on an IRS-class (Indian Remote Sensing-Class) satellite in a **650-km, near-equatorial orbit**.
- Launch: It was launched by the Indian launch vehicle **PSLV** from **Satish Dhawan Space Centre**, Sriharikota in 2015 by ISRO.
- It is the first dedicated Indian astronomy mission aimed at **studying celestial sources in X-ray, optical and UV spectral bands** simultaneously with its five unique X-ray and ultraviolet telescopes working in tandem.
- One of the **unique features** of AstroSat mission is that it enables the **simultaneous multi-wavelength observations** of various astronomical objects with a single satellite.
- The Ground Command and Control Centre for **ASTROSAT** is located at **ISRO Telemetry, Tracking and Command Network (ISTRAC)**, **Bangalore**, India.
- This has put India in an **exclusive club of countries** which have multi wavelength space observatories.
- The **minimum life** of the AstroSat mission was expected to **be 5 years**.



Geography

1. Estonia, Paraguay and Dominican Republic

Why in News?

- Government of India to open three missions in Estonia, Paraguay and the Dominican Republic in 2021.

About

- Significance → Opening of Indian Missions in these countries will help **expand India's diplomatic footprint**, **deepen political relations**, **enable growth of bilateral trade**, **investment and economic engagements**, facilitate stronger people-to-people contacts, bolster political outreach in multilateral fora and help garner support for India's foreign policy objectives.

Estonia, Paraguay and Dominican Republic Map



2. Argentina

Why in News?

- Argentina's has legalised abortions up to the 14th week of pregnancy.

About

- Argentina, country of **South America**, covering most of the **southern portion of the continent**.
- The country is **bounded by Chile** to the south and west, **Bolivia** and **Paraguay** to the north, and **Brazil**, **Uruguay**, and the **Atlantic Ocean** to the east.



3. Paradip Port

Why in News?

- Cabinet approves Deepening and Optimization of Inner Harbour Facilities at Paradip Port.

About

- On commissioning of the project, it shall **cater to the requirement of coal & limestone imports** besides export of granulated slag & finished steel products.
- The project shall also facilitate (i) **de-congestion of the Port**, (ii) **reduce Sea freight making coal imports cheaper**, and (iii) **boost the industrial economy** in the hinterland of the port leading to creation of job opportunities.

📌 Paradip Port

- Paradip Port is a **natural, deep-water port** on the East coast of India in **Jagatsinghpur district of Odisha**.
- It is situated at confluence of the **Mahanadi river** and **the Bay of Bengal**.
- The port is administered by the **Paradip Port Trust** (PPT), an autonomous corporation under the **Major Port Trusts Act, 1963** functioning under **Ministry of Shipping**.

📌 Build-Operate-Transfer (BOT) Contract

- A **build-operate-transfer** (BOT) contract is a model used to **finance large projects**, typically **infrastructure projects** developed through **public-private partnerships**.
- The BOT scheme refers to the **initial concession by a public entity** such as a local government to a private firm to both build and operate the project in question.
- After a set time frame, typically two or three decades, control over the project is returned to the public entity.

4. Kochi-Mangaluru natural gas pipeline

Why in News?

- The Prime Minister Narendra Modi will dedicate the Kochi-Mangaluru Natural Gas Pipeline to the nation on January 5 at 11 am via video conferencing.

About

- The 450-km pipeline has been built by GAIL (India) Ltd
- Transportation capacity → It has transportation capacity of 12 million standard cubic metres per day
- Location → It will carry natural gas from the liquefied natural gas (LNG) regassification terminal at Kochi to Mangaluru.
- Laying of the pipeline was an engineering challenge as the route of the pipeline necessitated it to cross water bodies at more than 100 locations. This was done through a special technique called horizontal directional drilling method.
- Benefits → The pipeline will supply environment friendly and affordable fuel to households, transportation sector and to commercial and industrial units across the districts along the pipeline.

5. Pong Dam

Why in News?

- Nepal and China have announced the revised height of Mount Everest as 8,848.86 metres. The new height is 86 cm more than the previous measurement.

About Mount Everest

- The Pong Dam is also known as the Beas Dam.
- It is an earth-fill embankment dam on the Beas River in Himachal Pradesh.
- The lake created by the dam, Maharana Pratap Sagar, is a renowned bird sanctuary.
- The purpose of the dam is water storage for irrigation and hydroelectric power generation.

6. Gibraltar

Why in News?

- Hours before the Brexit transition period ended on New Year's Eve, Spain announced it had struck a deal with the UK to maintain free movement to and from Gibraltar.

About

- Location → It is located at the southern tip of the Iberian Peninsula, it is bordered to the north by Spain.
- Governance → Gibraltar is a British Overseas Territory. Under the Gibraltar constitution of 2006, Gibraltar is self-governing, with some responsibilities, such as defence and foreign relations, remaining with the British government.
- History → In 1704, Anglo-Dutch forces captured Gibraltar from Spain during the War of the Spanish Succession. The territory was ceded to Great Britain in perpetuity under the Treaty of Utrecht in 1713.



- Strait of Gibraltar → It is a **narrow strait** that **connects the Atlantic Ocean to the Mediterranean Sea** and separates Gibraltar and Peninsular Spain in Europe from Morocco and Ceuta (Spain) in Africa.
- Significance → It remains **strategically important**, with half the world's seaborne trade passing through the strait. It is also an **important Tourist** and **cargo ship refuelling centre**.

7. Banana Grit

Why in News?

- Scientists at the CSIR-National Institute for Interdisciplinary Science and Technology (NIIST) at Pappanamcode here in Kerala have come up with a new product, banana grit or granules, developed from raw Nendran bananas.

About

- The product resembles to '**rava**' and **broken wheat**. **Billed** as an **ideal ingredient for a healthy diet**, **banana grit** can be used for making a wide range of dishes, according to the NIIST.
- The granules can be used for **making upma**, or it can be **mixed with banana powder** for porridge, with milk or coconut milk for use as a **health drink**.
- The concept was introduced to **utilise the presence of resistant starch** in **bananas**, which is reported to **improve gut health**.
- Hence, the dishes prepared with banana grit and its by-product, banana powder, incline to the **new focus on gut health**, which the **scientific community is widely discussing** now to **maintain health and well-being**.

👉 Nendran Banana

- Changalikodan Nendran Banana or famously known as **Changalikodan** is a **banana variety** originated and cultivated in **Chengazhikodu village** of **Thrissur District in Kerala**.
- Changalikodan, now are cultivated on the **banks of the Bharathapuzha river**.
- Changalikodan got **Geographical indication registration** from the Geographical Indications Registry, Chennai.

8. Dzukou Forest Fire

Why in News?

- A huge wildfire in Dzukou valley located on the Manipur-Nagaland border caused severe damage to the environment.

About

- Location → This valley is located at the **border of states of Nagaland and Manipur**.
- It is a sanctuary for the **endangered Blyth's tragopan** - **Nagaland's State Bird**.
- It is famous for its wide range of flowers in every season. **Rare Dzükou Lily** is found only in this valley.
- This valley is '**Valley of flowers**' of the **Nagaland State**.



9. Grand Ethiopian Renaissance Dam

Why in News?

- Ethiopia, Sudan and Egypt have recently agreed to resume negotiations to resolve their decade-long complex dispute over the Grand Renaissance Dam hydropower project in the Horn of Africa.

About

- What is it? → Spearheaded by **Ethiopia**, the **145-meter-tall** (475-foot-tall) Grand Renaissance Dam hydropower project, **when completed**, will be **Africa's largest**.
- Its construction was initiated in 2011 on the **Blue Nile tributary** of the river that runs across one part of Ethiopia.
- The Nile is a necessary **water source in the region** and **Egypt has consistently objected** to the dam's construction, saying it will impact water flow.
- The **long-standing dispute** has been a cause of concern for international observers who fear that it may increase conflict between the two nations and spill out into other countries in the Horn of Africa.

👉 Nile River

- The River **Nile is in Africa**. It originates in **Burundi**, **south of the equator**, and flows northward through **northeastern Africa**, eventually flowing through Egypt and finally **draining into the Mediterranean Sea**.
- Source → The source of the Nile is sometimes considered to be **Lake Victoria**, but the lake itself has **feeder rivers of considerable size** like the **Kagera River**.
- The Nile River is considered as **one of the longest rivers in the world**.
- The Nile River forms an **arcuate delta** as it empties into the Mediterranean Sea.
 - Deltas with **triangular** or **fan-shape** are called arcuate (arc-like) deltas.
- The Nile is formed by three principal streams: **the Blue Nile**, **the Atbara**, and **the White Nile**.
- Drainage countries - Parts of **Tanzania**, **Burundi**, **Rwanda**, the **Democratic Republic of the Congo**, **Kenya**, **Uganda**, **South Sudan**, **Ethiopia**, **Sudan**, and the **cultivated part of Egypt**.



10. Magnetotelluric-MT survey

Why in News?

- The National Centre for Seismology (NCS) is conducting a unique geophysical (magnetotelluric-MT) survey in Delhi- NCR region to accurately assess potential seismic hazards.

About

- Magneto-telluric (MT) is a **geophysical method** which **uses natural time variation of the Earth's magnetic and electric fields** to understand geological (underground) structure and processes.
- It uses measurements of **natural geomagnetic** and **geoelectric field variation** at the Earth's surface.
- MT measurements are conducted across **three major seismic sources**, namely →
 - Mahendragarh-Dehradun Fault (**MDF**),
 - Sohna Fault (**SF**),
 - Mathura Fault (**MF**),
- These measurements will ascertain the **presence of fluid**, which generally enhances the **possibility of triggering of earthquakes**.
- The results of MT survey will be useful in **accurate assessment of seismic hazard**.

11. Thousand Islands

Why in News?

- On 9 January 2021, a Boeing 737-500 (PK-CLC) operating Sriwijaya Air Flight 182 went missing after taking off from Jakarta Soekarno–Hatta Airport on route to Pontianak Supadio Airport. The aircraft crashed near the Thousand Islands.

About

- Thousand Islands (Kepulauan Seribu) are **chain of islands north of Jakarta's coast, Indonesia**.
- There are **exactly 110 islands** that together form a District, encompassing the **Pulau Seribu National Marine Park**.
- These islands are initially **caused by the volcanoes**.
- Later, the **shifting of tectonic plates** results in their consolidation as a grouping of small islands in a relatively small area.

Indonesia missing plane



12. Vanadium

Why in News?

- The Geological Survey of India (GSI) has placed Arunachal Pradesh on the vanadium map after recent explorations and geologists are confident of identifying a deposit soon.

About Vanadium

- Vanadium is a chemical element with the **symbol V** and **atomic number 23**. It is a **hard, silvery-grey, malleable transition metal**.
- The elemental metal is **rarely found in nature**. It is recovered as a **by-product from the slag** collected from the **processing of vanadiferous magnetite ores** (iron ore).
- Significance →

- Vanadium alloys are **durable in extreme temperature** and **environments**, and are **corrosion-resistant**.
- Vanadium is a **high-value metal** used in **strengthening steel and titanium**.
- It **increases the fuel-efficiency** in automotive and aviation industries due to its high strength-to-weight ratio.
- It forms the **integral part of vanadium redox batteries** that have the least ecological impact in energy storage.

👉 Key takeaways

- The **largest deposits** of vanadium in the world are in **China**, followed by **Russia and South Africa**.
- **India** is a **significant consumer** of vanadium, but is **not a primary producer** of the strategic metal.
- According to data provided by the GSI, **India consumed 4%** of about **84,000 tonnes** of vanadium produced across the globe in 2017.
- The Geological Survey of India (**GSI**) found promising **concentrations of vanadium** in the **palaeo-proterozoic carbonaceous phyllite rocks** in the Depo and Tamang areas of Papum Pare district in Arunachal Pradesh.

13. Lake Chad

Why in News?

- India has expressed serious concern over the security situation in the Sahel and Lake Chad region in West Africa. India also condemned terrorist attacks by Boko Haram in Nigeria and Lake Chad region and by Islamic State in West Africa.

About

- Lake Chad is a **historically large, shallow, endorheic lake in central Africa**, which has varied in size over the centuries.
- The **freshwater lake** is located in the **Sahelian zone of West-central Africa**. Lake Chad is mainly in the **far west of Chad, bordering on northeastern Nigeria**.
- Lake Chad **provides water to more than 30 million people** living in the four countries surrounding it (Chad, Cameroon, Niger, and Nigeria) on the central part of the Sahel.
- It is the **largest lake** in the **Chad Basin**.
- The **Chari River**, fed by its tributary the **Logone**, provides over **90% of the lake's water**, with a small amount coming from the Yobe River in Nigeria/Niger.
- Despite **high levels of evaporation**, the **lake** is **fresh water**.



14. Doppler Weather Radars

Why in News?

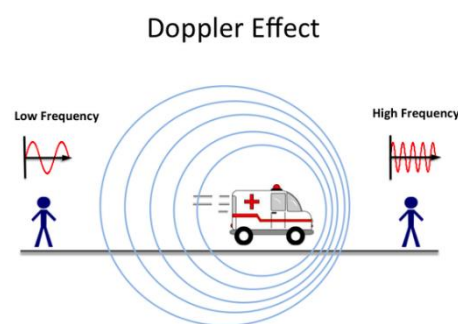
- Recently, the Union Minister for Earth Sciences commissioned two of the ten indigenously built X-Band Doppler Weather Radars (DWR) which will closely monitor the weather changes over the Himalayas.

About

- Developed By → The DWR has been designed and developed by **ISRO** and manufactured by **Bharat Electronics Limited** (BEL), Bengaluru.
- Coverage → Covering the **central and western Himalayas**, these dual polarised radars will **gather atmospheric variations** and pick signals of extreme weather events.
- Uttarakhand and Himachal Pradesh** are **highly prone to cloud bursts, landslides, heavy rain and snowfall**. Timely weather forecasts and warnings would ensure the governments make advance plans and initiate rescue measures.

📌 Radars

- Radar (Radio Detection and Ranging) → It is a **device** which **uses electromagnetic waves** in the **microwaves region to detect location** (range & direction), altitude, intensity and movement of moving and non-moving objects.
- Doppler radar →
 - It is a **specialized radar** that uses the **Doppler effect** to **produce velocity data** about objects at a distance
- Doppler effect →
 - When the source and the signal are in **relative motion to each other** there is a **change in the frequency** observed by the observer. If they are **moving closer frequency increases** and **vice versa**.
- It does this by **bouncing a microwave signal off a desired target** and **analyzing** how the object's motion has altered the frequency of the returned signal.
- This variation gives **direct and highly accurate measurements** of the **radial component** of a target's velocity relative to the radar.
- Doppler Weather Radar →
 - Based on Doppler principle the radar is designed to **improve precision in long-range weather forecasting** and **surveillance** using a parabolic dish antenna and a foam sandwich spherical radome.
 - DWR has the equipment to **measure rainfall intensity, wind shear** and **velocity** and **locate a storm centre** and the direction of a tornado or gust front.
- Types Of Doppler Radars → Doppler radar can be **divided into several different categories** according to the wavelength which **are L,S,C,X,K**.
- X band radars → They operate on a **wavelength of 2.5-4 cm** and a **frequency of 8-12 GHz**. Because of the smaller wavelength, the X band radar is more sensitive and can detect smaller particles.
- Application →
 - These radars are **used for studies** on **cloud development** because they can detect the tiny water particles and also used to **detect light precipitation such as snow**.
 - X band radars also **attenuate** (become less effective) **very easily**, so they are used for only very **short range weather observation**.



15. Semeru Volcano

Why in News?

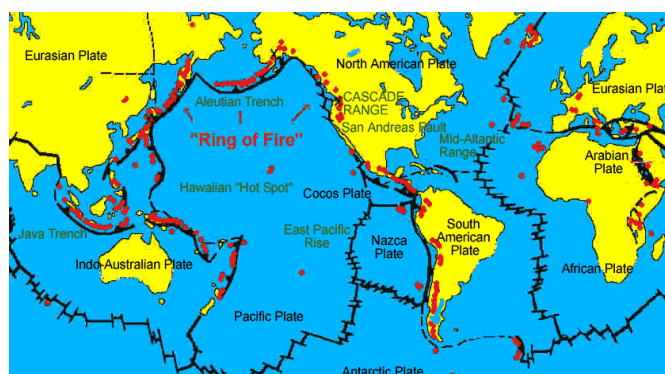
- Recently, Semeru volcano erupted in Indonesia's East Java province. Other volcanoes, such as the Merapi volcano (Java) and Sinabung volcano (Sumatra), also erupted recently.

About

- Semeru - also known as "**The Great Mountain**" - is the **highest volcano in Java** and one of the most active.
- It previously **erupted in December, 2019**.
- Indonesia**, with the **maximum number of active volcanoes in the world**, is prone to seismic upheaval due to its location on the **Pacific's Ring of Fire**.

Pacific Ring of Fire

- The Ring of Fire, also referred to as the **Circum-Pacific Belt**, is a path along the Pacific Ocean characterized by **active volcanoes** and **frequent earthquakes**.
- It traces boundaries between **several tectonic plates**—including the Pacific, Cocos, Indian-Australian, Nazca, North American, and Philippine Plates.



16. Western Disturbance

Why in News?

- According to the India Meteorological Department (IMD), a western disturbance is likely to affect the Himalayan region soon.

About

- It is an **extratropical storm** originating in the Mediterranean region that brings sudden winter rain to the **north-western parts of the Indian sub-continent**.
- It is a **non-monsoonal precipitation pattern** driven by the westerlies.
- Extratropical storms are a **global phenomenon with moisture** usually carried in the **upper atmosphere**, unlike their tropical counterparts where the moisture is carried in the lower atmosphere.
- In the case of the Indian subcontinent, moisture is sometimes **shed as rain** when the **storm system encounters the Himalayas**.
- Formation →
 - Western Disturbance **originates in the Mediterranean Sea** as **extra-tropical cyclones**.
 - A **high-pressure area over Ukraine** and neighbourhood consolidates, causing the **intrusion of cold air from Polar Regions** towards an area of relatively warmer air with high moisture.
 - This **generates favourable conditions** for **cyclogenesis in the upper atmosphere**, which promotes the formation of an eastward-moving extratropical depression.
 - They gradually travel across the **middle-east from Iran, Afghanistan and Pakistan** to enter the Indian sub-continent.

- Impact →
 - Plays important role in **bringing moderate to heavy rain** in **low-lying areas** and **heavy snow** to mountainous areas of the Indian Subcontinent.
 - This disturbance is usually **associated with cloudy sky, higher night temperatures** and **unusual rain**. This precipitation has **great importance in agriculture**, particularly for the **Rabi crops**. Wheat among them is one of the most important crops, which helps to meet India's food security.
 - Excessive precipitation due to this disturbance can **cause crop damage, landslides, floods and avalanches**.

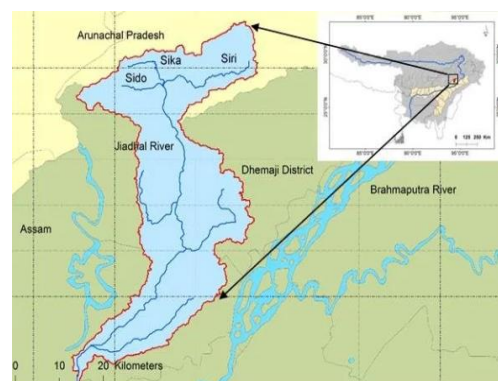
17. Jiadhal River

Why in News?

- Thousands descended on the National Highway-15 to protest against the state government's alleged tardiness to control erratic flooding of the Jiadhal river.

About

- It is a Northern **Sub-tributary** of the river Brahmaputra originates in the **sub-Himalayan mountains of Arunachal Pradesh**.
- After passing through a **narrow gorge in Arunachal Pradesh**, the river enters the plains of Assam in Dhemaji district where it **flows in braided channels**.
- The river is known as '**Kumotiya**' from the Railway line to the Gogamukh – Ghilamara P.W.D. road wherefrom it is known as the river '**Sampara**'.
- The river **finally debouches into the river Brahmaputra near Selamukh**.
- But after construction of the **embankment** over the **Kherkutiya Suti of the Brahmaputra**, the river falls into the Subansiri River.
- Heavy siltation →
 - The river Jiadhal **carries heavy silt load** from the catchment area **during the flood season** and **deposits the silt** on its bed in the plains.
 - Due to this fact, the **riverbed has risen up** considerably.
 - As a result the river follows a braided pattern and its **width is more than 3 km** in some of the reaches.
 - The river is **very much aggrading in nature**. This is why the river has a tendency to shift its course towards the left bank.



18. K2 mountain

Why in News?

- A team of climbers from Nepal become the first mountaineers to successfully complete a winter attempt on the summit of K2.

About

- K2 is the only mountain over **8,000 metres** that had **not been submitted in winter**.
- It is situated in the **Karakoram Range** to the northeast of the Himalayas.
- K2 is **surrounded by five** of the world's 17 highest mountains.
- K2 is the **world's second tallest peak** after Mount Everest. Located in **Pakistan occupied Kashmir**.



19. Ratle Hydro Electric Project

Why in News?

- The Union Cabinet has given its approval for the investment of Rs.5281.94 crore for 850 MW Ratle Hydro Electric (HE) Project.

About

- Location → It will be located **on river Chenab**, in Kishtwar district of **Union Territory of Jammu and Kashmir**.
- Implemented by → a new **Joint Venture Company** (JVC) to be incorporated between National Hydroelectric Power Corporation (**NHPC**) and Jammu & Kashmir State Power Development Corporation Ltd (**JKSPDC**) with equity **contribution of 51% and 49% respectively**.
- The Ratle Hydro Electric Project shall be **commissioned within a span of 60 months**.

20. Indian Sundarbans

Why in News?

- Zoological Survey of India's (ZSI's) publication 'Birds of the Sundarban Biosphere Reserve' states that the Indian Sunderbans is home to 428 species of birds.

About

- Sundarbans is **vast contiguous mangrove forest ecosystem** in the coastal region of **Bay of Bengal** spread **across India and Bangladesh**.
- Indian Sunderbans is **part of the world's largest mangrove forest**.
- It comprises of the **Sunderban Tiger Reserve** - home to **Royal Bengal Tigers** - is a World Heritage Site and Ramsar Site.
- Birds, like **Masked Finfoot** and **Buffy fish owl**, are recorded only here.
- The area is home to **nine out of 12 species of kingfishers** of the country as well rare species such as the **Goliath heron** and **Spoon-billed Sandpiper**.
- The **mudflats and wetlands** of Sunderbans act as a **stopover site** for migratory flight south (south wards) and back.

- [The **mudflats exposed** in the low tides, rich in microorganism, deposited during tidal activity are ideal feeding for migratory birds.]

21. India's Draft Arctic Policy

Why in News?

- Recently, India drafted a new Arctic policy that aims at expanding scientific research, sustainable tourism and exploration of mineral oil and gas in the Arctic region.

About

- Nodal Body → India has designated Goa-based **National Centre for Polar and Ocean Research** to **lead scientific research** and **act as a nodal body** to coordinate among various scientific bodies to promote domestic scientific research capacities in the Arctic.
- Objectives →
 - Promoting Scientific Study of Arctic: **Orient the curriculum on earth sciences, biological sciences, geosciences, climate change and space related programmes** with Arctic imperatives in Indian Universities.
 - Planning Explorations: **Formulating effective plans** for Arctic related programmes for mineral/oil and gas exploration in petroleum research institutes
 - Promoting Arctic Tourism: **Encouraging tourism and hospitality sectors** by building specialised capacities and awareness by engaging with Arctic enterprises.
- Pillars of the Policy → India's Arctic policy will rest on **five pillars**:
 - Science and research
 - Economic and human development cooperation
 - Transportation and connectivity
 - Governance and international cooperation
 - National capacity building.



📌 About Arctic:

- The Arctic is a **polar region** located at the **northernmost part of Earth**.
- The Arctic consists of the **Arctic Ocean**, **adjacent seas**, and **parts of Alaska** (United States), **Canada**, **Finland**, **Greenland** (Denmark), **Iceland**, **Norway**, **Russia**, and **Sweden**.
- Land within the Arctic region has **seasonally varying snow** and **ice cover**.

📌 India And The Arctic – A History Of Cooperation

- India's engagement with the Arctic **began in 1920** when it **signed the Svalbard Treaty in Paris**.
- In **2007**, India launched its **first scientific expedition** to the Arctic.

- In 2008, India had set up a research station '**Himadri**' in the international Arctic research base at **Ny-Ålesund in Spitsbergen, Svalbard, Norway**. Himadri is manned for about 180 days a year.
- **IndArc**, the **country's first multi-sensor moored observatory** was deployed in Kongsfjorden in 2014. In 2016, India's northernmost **atmospheric laboratory** was established **at Gruvebadet**.

Arctic Council

- It is an **intergovernmental forum** established by the eight Arctic States through the Ottawa Declaration of 1996.
- It **discusses and addresses issues** concerning the Arctic region.
- Members - **Canada, Denmark, Norway, Russia, USA, Finland, Sweden and Iceland**.
- Besides these, **6 organisations** representing the **indigenous people of the Arctic region** is granted the status of permanent participants.
- All decision-making happens through **consensus** between the **eight members**, and in **consultation with the permanent participants**.

22. Flash Droughts

Why in News?

- A recent study has pointed out that India could experience more flash droughts by the end of this century.

About

- A considerably **long dry spell** with **significantly low precipitation anomalies** during the monsoon results in an **increase in air temperature**.
- Increased air temperature and precipitation deficit together cause a **rapid depletion of soil moisture** leading to flash drought.
- Occurrence → Flash droughts can occur in the **monsoon season** as well, primarily **caused by the monsoon breaks** and these can also occur due to **delayed onset of the summer**.
- Duration → Normally, developing drought conditions **take months**, but flash droughts could **occur in weeks** and **stay on for months**.
- Factors →
 - **Atmospheric anomalies** (variations), **anthropogenic greenhouse gas emissions**.
 - The ongoing **climate change** has caused a significant increase in global temperature and this can lead to more and more flash droughts in the coming years.
- Detection →
 - **Early-warning systems (EWS)**, that could **identify trends in climate** and **sources of water**, are used to detect the emergence or probability of the occurrence of flash droughts.
 - **Drought monitoring** through use of **remote sensing data** and **various indices** for drought monitoring as well as through on-line help facilities.
- Flash droughts in India → The top five flash droughts in India based on the **overall severity score** occurred in **1979** (about 40% of the country was affected) **followed by 2009, 1951, 1986, and 2005**.

23. Naku La Pass

Why in News?

- Indian and Chinese Soldiers have clashed at the Balwan area in Naku La Pass in Sikkim.

About

- Naku La sector is a pass at a **height of more than 5,000 meters** above Mean Sea Level(MSL) in the **state of Sikkim**.
- It is located ahead of **Muguthang** or **Cho Lhamu** (source of River Teesta).
- The other passes located in the **state of Sikkim** are **Nathu La Pass** and **Jelep La Pass**.
- While **Nathu La pass** is located on the **east side of Sikkim**, **Naku La pass** is located on the **northern border of Sikkim**.

Also Remember

Pangong Tso Lake

- Pangong Lake is located in the **Union Territory of Ladakh**.
- It is situated at a height of almost **4,350m** and is the **world's highest saltwater lake**.
- Extending to almost **160km**, **one-third** of the Pangong Lake **lies in India** and the other two-thirds in China.



24. Ram Setu

Why in News?

- Centre gives green light to underwater study to determine Ram Setu origins. The study aims to determine the age of the chain of corals and sediments forming the Ram Setu.

About Ram Setu

- Ram Setu is a **48-km long bridge-like structure** between India and Sri Lanka.
- It is also known as **Adam's bridge**.
- The **Ramayana mentions** the bridge but there is little scientific knowledge about its formation.
- It connects **Dhanush Kodi tip of the Pamban Island** (Rameswaram Island) **of Tamil Nadu** with **north-western coast of Sri Lanka**.
- It **separates** Gulf of Mannar from the Palk Strait.

About the under-water study Project:

- The Council for Scientific and Industrial Research (**CSIR**) and the National Institute of Oceanography (**NIO**), **Goa** will **conduct the project**.



- Objective → The project will help **determine the age of the Ramayana period**. Apart from that the project also focuses on the process behind the **formation of Ram Setu**. Likewise, the project also reveals any pre-existing submerged habitations around Ram Setu.
- Duration → It will be a **three-year project**
- Technique → The age of the sediments will be determined primarily using **Carbon dating techniques**.
- Vessel → NIO's(National Institute of Oceanography) **vessel Sindhu Sadhana** will be deployed for the project. The vessel will **collect core samples** at greater depths and **perform bathymetry studies** (Bathymetry is the study of the “beds” or “floors” of water bodies, including the ocean, rivers, streams, and lakes).
- Planned tests → The study will conduct **two planned tests namely**:
 - **Side-scan SONAR** → Soundwave signals will be sent to the structure for this test. The sound waves will provide an outline of the physical structure of the Ram Setu.
 - **Silo seismic survey** → Mild earthquake-like tremor shocks will be sent at shallow depths. These shocks are the energized shockwaves capable of penetrating into the structure. The relevant instruments will capture the reflected or refracted signals. Based on the reflected signals one can get a clear image on subsurface structure.
- Significance of the project → Most importantly, Scientists believes underwater exploration studies can have the possibility to **trace numerous ship wreckages and remains from the past**.

Polity

1. Recusal of Judges

Why in News?

- Andhra High Court rejects plea for recusal of judge from hearing petitions filed against the proposed sale of government land in Guntur and Visakhapatnam districts under “Mission Build A.P.”

About

- What is it? → Recusal is the **removal of oneself as a judge or policymaker in a particular matter**, especially because of a **conflict of interest**.
- Recusal usually takes place when a judge has a **conflict of interest** or has a **prior association with the parties in the case**.
- Grounds for Recusal →
 - The judge is **biased in favour of one party**, or **against another**, or that a reasonable objective observer would think he might be.
 - Interest in the subject matter**, or relationship with someone who is interested in it.
 - Background or experience**, such as the judge’s prior work as a lawyer.
 - Personal knowledge** about the parties or the facts of the case.
 - Ex parte communications** with lawyers or non-lawyers.
 - Rulings, comments or conduct.
- Are there any laws in this regard? → There are **no written rules** on the recusal of judges from hearing cases listed before them in constitutional courts. It is left to the **discretion of a judge**.
- However, In taking **oath of office**, judges, both of the Supreme Court and of the high courts, promise to perform their duties, to deliver justice, **“without fear or favour, affection or ill-will”**.
- What has the Supreme Court said on this?
 - Justice J. Chelameswar in his opinion in Supreme Court Advocates-on-Record Association v. Union of India (2015) held that “Where a judge has a pecuniary interest, **no further inquiry** as to whether there was a **‘real danger’** or **‘reasonable suspicion’** of **bias is required to be undertaken**”.

2. National Human Rights Commission

Why in News?

- Recently, The National Human Rights Commission (NHRC) has made a series of recommendations to the Centre to eradicate manual scavenging.

About NHRC

- Background → NHRC was **established in 1993**. It is in **conformity with the Paris Principles**, adopted at the first international workshop on national institutions for the **protection of human rights** held in **Paris in 1991**.
- Status → It is a **statutory organization** established under the **Protection of Human Rights Act (PHRA), 1993**.

- It plays four key roles namely **protector, advisor, monitor** and **educator of human rights**.
- Composition →
 - **Chairperson**, should be **retired Chief Justice of India**.
 - **One Member** who is, or has been, a **Judge of the Supreme Court of India**
 - **One Member** who is, or has been, the **Chief Justice of a High Court**.
 - **Two Members** to be appointed from among persons having **knowledge of, or practical experience in**, matters relating to human rights.
- Functions →
 - The purpose of the NHRC is, **suo moto** or **through the petition of a person**, to **investigate the violation of human rights** or the failures of the state or other to prevent a human rights violation.
 - The commissions may also take on **research about human rights, create awareness campaigns** through various mediums, and encourage the work of NGOs.
- Headquartered → **New Delhi**.

3. Question Hour

Why in News?

- The Question Hour, which had been suspended by the government during the monsoon session, will resume when Parliament meets for the Budget session from January 29.

About

- The **first hour** of **every parliamentary sitting** is termed as Question hour.
- During this one hour, Members of Parliament (**MPs**) **ask questions to ministers** and **hold them accountable** for the functioning of their ministries.
- The questions can also be **asked to the private members** (MPs who are not ministers).
- Regulation → It is mentioned in the **Rules of Procedure of the House**.
 - The **presiding officers** of the both Houses (Rajya Sabha and Lok Sabha) are the **final authority** with respect to the **conduct of Question Hour**.
- Kinds of Questions → There are **three types** of questions asked.
 1. **Starred question** (distinguished by an asterisk)- this requires an oral answer and hence supplementary questions can follow.
 2. **Unstarred question**- this requires a written answer and hence, supplementary questions cannot follow.
 3. **Short notice question** is one that is asked by giving a notice of less than ten days. It is answered orally.
- Frequency → Question Hour in both Houses is held on **all days of the session**. But there are **two days** when an **exception is made**.
 - When the **President addresses MPs** from both Houses.
 - The President's speech takes place at the beginning of a new Lok Sabha and on the first day of a new Parliament year.
 - On the day the Finance Minister **presents the Budget**.

Zero Hour

- Zero Hour is an **Indian parliamentary innovation**. It is **not mentioned in the parliamentary rules book**.
- Under this, MPs can **raise matters without any prior notice**.
- The zero hour starts immediately **after the question hour** and lasts until the agenda for the day (i.e. regular business of the House) is taken up.
 - In other words, the time gap between the question hour and the agenda is known as zero hour.

4. Pardoning Powers of Governor

Why in News?

- Tamil Nadu Governor will make a decision on a plea for the release of a prisoner. The prisoner is undergoing life imprisonment for the assassination of former Prime Minister Rajiv Gandhi in 1991.

About

- **Article 161** deals with the **Pardoning Power of the Governor**.
- The Governor can **grant pardons, reprieves, respites** and **remissions of punishments** or suspend, **remit** and **commute the sentence** of any person convicted of any offence against any law relating to a matter to which the executive power of the state extends.
- The pardoning powers defined in the Constitution are →
 - **Pardon**: it means **completely absolving** the person of the crime and letting him go free. The pardoned criminal will be **like a normal citizen**.
 - **Commutation**: it means **changing the type** of punishment given to the **guilty into a less harsh one**, for example, a death penalty commuted to a life sentence.
 - **Reprieve**: it means a **delay allowed in the execution** of a sentence, usually a death sentence, for a guilty person to allow him **some time to apply for Presidential Pardon** or some other legal remedy to prove his innocence or successful rehabilitation.
 - **Respite**: it means **reducing the quantum** or **degree of the punishment** to a criminal in view of some special circumstances, like pregnancy, mental condition etc.
 - **Remission**: it means **changing the quantum of the punishment without changing its nature**, for example reducing twenty-year rigorous imprisonment to ten years.
- Difference between the pardoning powers of the President and the Governor →
 - The **Governor cannot Pardon a Death Sentence** but the President can Pardon a Death Sentence.
 - The Governor can **only suspend, remit** or **commute a death sentence**.
 - The **Governor cannot grant pardon**, reprieve, respite, suspension, remission or commutation in respect to punishment or sentence **by a court-martial**. But the **President can do so**.

2. Law Commission

Why in News?

- The Supreme Court has asked the Home and Law Ministries to explain the nearly three-year-long lapse in making appointments to the Law Commission.

About

- Status → The Law Commission of India is a **non-statutory body** constituted by the Government of India from time to time.
- Background → The Commission was **originally constituted in 1955** and is re-constituted every three years.
- The first such Commission was **established in 1834** under the **Charter Act of 1833** under the Chairmanship of **Lord Macaulay**.
- The First Law Commission of Independent India was **established in 1955** under the Chairmanship of the then Attorney-General of India, **M. C. Setalvad**.
- Composition → The 22nd Law Commission will consist of –
 - a **full-time Chairperson**;
 - **four full-time Members** (including Member-Secretary);
 - **Secretary**, Department of Legal Affairs as ex-officio Member;
 - **Secretary**, Legislative Department as ex officio Member; and
 - **not more than five part-time Members**.
- Mandate →
 - The Law Commission shall, on a **reference made to it by the Central Government** or **suo-motu**, undertake research in law and review of existing laws in India for making reforms therein and enacting new legislations.
 - It shall also **undertake studies and research for bringing reforms** in the justice delivery systems for elimination of delay in procedures, speedy disposal of cases, reduction in cost of litigation etc.

6. North East Council

Why in News?

- Recently, the Union Home Minister has chaired the 69th meeting of the North East Council (NEC) in Shillong, Meghalaya.

About

- The North Eastern Council is the nodal agency for the **economic and social development of the North Eastern Region**.
- States → It consists of the **eight States** of **Arunachal Pradesh**, **Assam**, **Manipur**, **Meghalaya**, **Mizoram**, **Nagaland**, **Sikkim** and **Tripura**.
- It was constituted in **1971** by an **Act of Parliament**.
- The constitution of the Council has marked the beginning of a **new chapter of concerted and planned endeavour** for the rapid development of the Region.
- Composition → The **Union Home Minister** is **ex-officio Chairman** and the **MoS(IC) DoNER** is the **ex-officio Vice-Chairman** of the NEC.
- Working → It is an apex level **advisory Body**, for **securing balanced and coordinated development** and facilitating effective co-ordination among the members of NEC.
- Significance of North East Council (NEC) → The NEC has been working to **raise livelihoods in the North-East** besides launching several projects, which shows how important the role of NEC is.

7. Official Secrets Act

Why in News?

- Complaints have been filed with the Mumbai Commissioner of Police demanding action against Republic TV Editor-in-Chief Arnab Goswami under the Official Secrets Act.

About

- The Official Secrets Act has its roots in the **British colonial era**. Originally enacted during the time of **Lord Curzon**, Viceroy of India **from 1899 to 1905**.
- One of the main purposes of the Act was to **muzzle** the **voice of nationalist publications**.
- The Act replaced the earlier Act, and was **extended to all matters** of **secrecy** and **confidentiality in governance** in the country.
- It broadly deals with two aspects:
 - Spying** or **espionage**, covered under Section 3.
 - Disclosure of other secret information of the government**, under Section 5.
- Is “secret information” defined? →
 - The Act does **not say** what a “**secret**” **document** is. It is the **government’s discretion to decide** what falls under the ambit of a “secret” document.

8. Corruption Perceptions Index (CPI) 2020

Why in News?

- The 2020 Corruption Perceptions Index (CPI) released by Transparency International.

About

- Prepared by → **Transparency International**.
- It is a composite index that draws from **12 surveys to rank nations** around the globe.
- It has become a **benchmark gauge** of perceptions of corruption and is used by analysts and investors.
- The index highlights the **concern of persistent corruption** in the **health care systems** and contributing in weakening of democracy amid the COVID-19 pandemic.
- How are the countries ranked? →
 - It **ranks 180 countries** and territories by their **perceived levels of public sector corruption**, according to experts and business people.
 - It uses a scale of **zero to 100**, where zero is highly corrupt and 100 is very clean.

📌 Key Takeaways

- Denmark and New Zealand topped** the list with scores of 88, followed by Finland, Singapore, Sweden and Switzerland (85 each).
- Somalia** and **South Sudan** rank **lowest at 179th** position with scores of 12.
- Indian Scenario →
 - India has **slipped six places** to **86th** among 180 countries in the corruption perception index (CPI) in 2020.
 - India was **ranked at 80th position** out of 180 countries in **2019**.

- India is **still very low** on the **corruption index**.

Transparency International

- Transparency International is a global movement working in over 100 countries to end the injustice of corruption.
- It is an **independent, non-governmental, not-for-profit**.
- Founded in **1993** and Based in **Berlin**.

International Relations

1. Global Alliance for Vaccines and Immunisation

Why in News?

- Union Health Minister of India has been nominated by the Global Alliance for Vaccines and Immunisation (GAVI) as a member of the GAVI Board.

About

- GAVI is a **public-private global health partnership** with the goal of increasing access to immunisation in poor countries.
- Created in → **2010**.
- GAVI has **observer status** at the **World Health Assembly**.
- GAVI has been **praised for being innovative, effective**, and **less bureaucratic** than multilateral government institutions like the WHO.
- Members → the **WHO, UNICEF, the World Bank**, the **vaccine industry** in both industrialized and developing countries and the **Bill & Melinda Gates Foundation among others**.
- GAVI programmes can often **produce quantified, politically appealing, easy-to-explain results** within an election cycle, which is appealing to parties locked in an election cycle.
- Its function →
 - It currently supports the **immunization of almost half the world's children**, giving it the power to negotiate better prices for the world's poorest countries and remove the commercial risks of manufacturers.
 - It also provides **funding to strengthen health systems** and **train health workers** across the developing world.
- GAVI Board →
 - The GAVI Board normally **meets twice a year** in June and November/ December and holds an annual retreat, normally in March or April.
 - The board is **responsible for strategic direction** and **policy-making, oversees the operations of the Vaccine Alliance** and monitors programme implementation.
 - With membership drawn from a range of partner organisations, as well as experts from the private sector, the Board provides a **forum for balanced strategic decision making, innovation** and **partner collaboration**.

2. International Atomic Energy Agency

Why in News?

- UN nuclear watchdog IAEA has confirmed that Iran plans to enrich uranium to up to 20% purity at Fordow plant.

About

- Set up in → **1957**.
- Purpose → To **promote safe, secure** and **peaceful use of nuclear technologies**.
- Reports to both the **United Nations General Assembly** and **Security Council**.

- Headquarters → **Vienna, Austria.**
- **Nuclear Non-Proliferation Treaty** and **other treaties** against the spread of nuclear weapons **entrust IAEA** as the **nuclear inspectorate.**
- In some countries, **IAEA applies safeguards** under agreements that cover only the **nuclear material, facilities, equipment** and/or **materials specified** in the agreement. **India is one such country.**
- India's safeguard includes **designation of**, and **visas for, inspectors**; and communications systems.
- Recently, India decide on the **number of new reactors** to be placed **under IAEA safeguards** only after assessing if these will be fuelled by uranium procured from abroad.

👉 About JCPOA

- JCPOA is an agreement signed between **Iran and the P5+1** (China, France, Germany, Russia, the United Kingdom, and the United States) on **July 14, 2015.**
- Nuclear deal was **endorsed by UN Security Council Resolution 2231.**
- Iran's compliance with the nuclear-related provisions of the JCPOA will be **verified by IAEA** according to certain requirements set forth in the agreement.
- In May, **2018, President Trump** announced that the United States would **withdraw from the JCPOA** and **reinstated U.S. nuclear sanctions** on the Iranian regime.

3. Gulf Cooperation Council

Why in News?

- Recently, Gulf states signed a 'solidarity and stability' deal at the 41st Gulf Cooperation Council (GCC) summit held in Al Ula, Saudi Arabia.

About

- Sanctions on Qatar → In **June 2017**, Saudi Arabia and its allies, the United Arab Emirates (UAE), Bahrain and Egypt **severed ties with Qatar** and **imposed a naval, air and land blockade** on the country.
- Solidarity and Stability Deal → Members of the GCC signed a deal in AlUla, Saudi Arabia to **remove all the sanctions over Qatar** and **re-open their land, sea and air borders to Qatar.**

👉 Gulf Cooperation Council

- The Gulf Cooperation Council (GCC) is a political and economic alliance of six countries in the Arabian Peninsula: **Bahrain, Kuwait, Oman, Qatar, Saudi Arabia** and the **United Arab Emirates.**
- Established in → **1981.**
- HQ → **Riyadh, Saudi Arabia.**
- Structure → The structure of the GCC consists of the **Supreme Council** (the highest authority), the **Ministerial Council** and the **Secretariat General.**



4. H1B Visa

Why in News?

- Recently, the US has amended its H-1B visa regime to give priority to higher wages and skills.

About H1B Visa

- What is it? → It is a **non-immigrant visa given by the US to employ skilled workers** from other countries for **various specialised fields** of occupation for a certain period of time.
- Duration → They are generally approved **for three years**, after which **holders often change employers** and continue working for other companies based in the US.
- The biggest beneficiaries of H-1B visas are **Indians, followed by the Chinese**.
- For example, as of April 1, 2020, the USCIS had received about 2.5 lakh H-1B work visa applications **Indians had applied for 1.84 lakh or 67 percent of these visas**.
- Present Status of Providing H-1B Visa →
- The selection of H-1B work visas was done by a **randomised lottery system**, which did **not take into account factors** such as **wage, experience** or any other requirements and demands.

👉 Recent Amendment

- H-1B cap visas would be allocated **according to wage levels**, giving **priority to those earning the highest salaries** in their respective occupations and geographic areas of employment.
- Modifying the H-1B cap selection process will **incentivise employers to offer higher salaries**, and/or **petition for higher-skilled positions**, and establish a **more certain path** for businesses to achieve personnel needs and remain globally competitive
- This rule will **increase the chance of employment** at the **higher wage levels** and thus may facilitate the **selection of the best** and **brightest students** for cap-subject H-1B status.

5. Open Skies Treaty

Why in News?

- Recently, Russia announced its withdrawal from the Open Skies treaty. The United States left the Open Skies treaty in November 2020, accusing Russia for violation of the treaty.

About

- History → It was **signed in 1992** and entered into **force on January 1, 2002**.
- Aim → To build confidence among members through **mutual openness** thus **reducing the chances of accidental war**.
- Key Features of the Treaty →
 - Under the treaty, a member state **can spy on any part of the host nation**, with the latter's consent. A country can undertake **aerial imaging** over the host state **after giving notice 72 hours before** and sharing its exact flight path 24 hours before.
 - The information gathered such as **troop movements**, **military exercises** and **missile deployments** has to be shared with all member states.

- Only approved imaging equipment is permitted on the **surveillance flights and officials** from the host state can also stay on board throughout the planned journey.
- Signatories → Currently, **34 states** are party to the treaty while a **35th, Kyrgyzstan**, has signed but not ratified it. **India is not a member** of this treaty.
- Treaty Implementation → The **Open Skies Consultative Commission** (OSCC), composed of representatives of all states-parties is **responsible for the implementation** of the Open Skies Treaty.

6. G7 summit

Why in News?

- The United Kingdom has invited Indian Prime Minister as a guest to attend the 47th G7 summit that is scheduled to be held in June 2021.

About

- It is an **intergovernmental organisation** that was formed in **1975**.
- The bloc **meets annually** to **discuss issues of common interest** like global economic governance, international security and energy policy.
- It sometimes acts in concert to help resolve other global problems, with a special focus on economic issues.
- The G-7 does **not have a formal constitution** or **a fixed headquarters**. The decisions taken by leaders during annual summits are **non-binding**.
- Members →
 - G-7 is a bloc of **industrialized democracies** i.e. France, Germany, Italy, the United Kingdom, Japan, the United States, and Canada.
 - The G7 was known as the '**G8**' for several years after the original seven were **joined by Russia in 1997**.
 - The Group **returned** to being **called G7** after **Russia was expelled** as a member in 2014 following the latter's annexation of the Crimea region of Ukraine

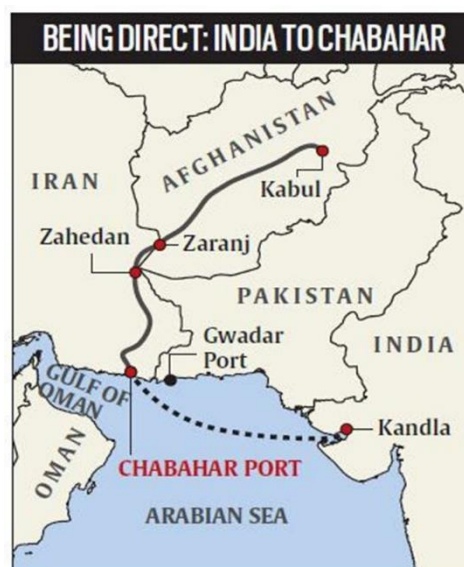
2. Chabahar Port

Why in News?

- Indian government has supplied a consignment of two Mobile Harbour Cranes- MHC to Chabahar Port in Iran.

About

- Background → The Chabahar port, **signed in 2003**, has been jointly **developed by India, Iran, and Afghanistan**.
- Location → It is a seaport in Chabahar located in **southeastern Iran**. It is located on the **Makran coast of Sistan and Baluchistan Province**, next to the **Gulf of Oman** and at the **mouth of the Strait of Hormuz**.
- It is the **only Iranian port** with **direct access to the Indian Ocean** and consists of two separate ports named Shahid Kalantari and Shahid Beheshti.



- The distance between Kandla and the Chabahar port is **less than the distance between New Delhi and Mumbai**.
- Only **72 km away** from the **Gwadar port in Pakistan** which has been developed by China.
- Significance →
 - It gives **a boost to India's bilateral ties** with Iran which is a major oil supplier for India.
 - It will give India **access to Afghanistan, Russia and Europe**, thus circumventing Pakistan
 - The **port and the rail project** (Chabahar to Zahedan to Zaranj near Afghanistan border) will **enhance connectivity**, energy supplies and trade
 - The port is also a key **link** in the **International North South Transport Corridor** (INSTC), a multi-modal network of ships, rail and road routes to move freight between India to Russia via Iran.

8. New START treaty

Why in News?

- Recently, Russia approved the extension of the New START treaty. It is the last remaining nuclear Russia-USA arms control treaty which is about to expire in February 2021.

About

- It is a treaty between the **United States of America and the Russian Federation** on measures for the further **reduction and limitation of strategic offensive arms**.
- Enforcement → It entered into force on **5th February, 2011**.
- Replaced START I Treaty (1991) → New START has **replaced the 1991 START I treaty**, which expired December 2009, and superseded the 2002 Strategic Offensive Reductions Treaty (**SORT**), which terminated when New START entered into force.
 - The START **Framework of 1991** (at the end of the Cold War) **limited both sides to 1,600 strategic delivery vehicles** and **6,000 warheads**.
- Limiting Strategic Nuclear Arsenals → It continues the **bipartisan process of verifiably reducing the USA and Russian strategic nuclear arsenals** by limiting both sides to 700 strategic launchers and 1,550 operational warheads.
- Renewal → It was to lapse in **February 2021**, but after receiving renewal approval from USA and Russia, will be **extended** for a **five-year period**.
- It also envisions a **rigorous inspection regime** to verify compliance.

9. International Energy Agency

Why in News?

- India signs Strategic Partnership Agreement with International Energy Agency (IEA). The agreement seeks to strengthen mutual trust and cooperation & enhance global energy security, stability and sustainability.

About IEA

- Established → In **1974** as per framework of the Organization for Economic Co-operation and Development (**OECD**). IEA is an **autonomous intergovernmental organisation**.

- Need → Established in the wake of the oil crisis of 1973-1974, to help its members respond to major disruptions in oil supply.
- Mandate → Over time, the mandate of the IEA has expanded to include tracking and analyzing key global energy trends, promoting sound energy policy and encouraging multinational energy technology cooperation.
- Mission → Its mission is to ensure reliable, affordable and clean energy for its member countries and beyond.
- Areas of Focus → Its mission is guided by four main areas (4E's):
 - Energy Security,
 - Economic Development,
 - Environmental Awareness and
 - Engagement Worldwide.
- Headquarter (Secretariat) → Paris (France).
- Composition and eligibility → It has 30 members at present. IEA family also includes eight association countries. A candidate country must be a member country of the OECD. But all OECD members are not IEA members.
- Reports →
 - Global Energy & CO2 Status Report.
 - World Energy Outlook.
 - World Energy Statistics.
 - World Energy Balances.
 - Energy Technology Perspectives.

10. Future Investment Initiative

Why in News?

- Union Minister for Health and Family Welfare addressed the 4th edition of the Future Investment Initiative Forum.

About

- The Future Investment Initiative (FII) is an annual investment forum held in Riyadh, Saudi Arabia, to discuss trends in the world economy and investment environment.
- Hosted by → Public Investment Fund of Saudi Arabia (PIF). The first event was held in 2017.
- Purpose of 4th FII → To find solutions on how business and government can expand access to healthcare, train healthcare workers, remove regulatory barriers and encourage investment in advanced health technologies.

👉 Key Highlights from the address

- Union Minister has highlighted the five big trends which are influencing global business, due to COVID-19:
 - The impact of Technology and Innovation
 - Importance of Infrastructure for Global Growth
 - Changes coming in human resource and future of work
 - Compassion for environment

- Business-friendly governance with a focus on the whole of society and government approach.

11. World Gold Council

Why in News?

- As per WGC, Gold demand in India hit a 25-year low at 446.4 tonnes in 2020, compared with 690.4 tonnes in 2019 due to the COVID-19 induced lockdown and on account of record high prices.

About

- The World Gold Council (WGC) is a **non-profit association** of the **world's leading gold producers**.
- It works **across all parts of the industry**, from **gold mining to investment**, and their aim is to stimulate and sustain demand for gold.
- It is an **association** whose members **comprise the world's leading gold mining companies**.
- It helps to **support its members** to **mine in a responsible way** and developed the **Conflict Free Gold Standard**.
- Headquartered in the **UK**, they have **offices in India, China, Singapore, Japan** and the **United States**.

12. WHO Executive Board

Why in News?

- If 2020 was the year of discovery of COVID-19 vaccines, 2021 will be the year India faces the challenge of getting them to people across the world who most need it, Union Health Minister Harsh Vardhan, who is the Chairman of the Executive Board of the World Health Organization, has said.

About

- It is one of the WHO's two decision making bodies. The other one is the **World Health Assembly**.
- Headquarters → **Geneva, Switzerland**.
- Composition → The Executive Board is composed of **34 individuals technically** qualified in the field of health, each one designated by a member state elected to do so by the World Health Assembly.
 - Member States are elected for **three-year terms**.
- Chairman → The chairman's post is held by **rotation for one year among regional groups**.
 - It is **not a full time assignment** and the chairman is just required to chair the Executive Board's meetings.
- Meeting → The Board meets **at least twice a year**.
- Functions → The main functions of the Executive Board are to **give effect to the decisions and policies** of the World Health Assembly, to advise it and generally to facilitate its work.

World Health Assembly

- The World Health Assembly is the **decision-making body of WHO**.
- It is attended by delegations from all WHO Member States and focuses on a **specific health agenda** prepared by the Executive Board.

- The main functions of the World Health Assembly are to **determine the policies of the Organization, appoint the Director-General, supervise financial policies, and review and approve the proposed programme budget.**
- The Health Assembly is held annually in **Geneva, Switzerland.**

Society

1. Sukanya Samriddhi Yojana

Why in News?

- Recently, the Ministry of Communication & Information Technology has provided that a total of one crore 83 lakh Sukanya Samriddhi Accounts have been opened across the country in the name of girl-child.

About

- It is small deposit scheme for girl child launched under “**Beti Bachao, Beti Padhao**” Scheme.
- Launch year → **2015**.
- Objective → Aims to **ensure equitable share to a girl child** in resources and savings of a family.
- It enables guardians to **open a savings account** for **their girl child** with an **authorised commercial bank** or **India Post branch**.
- The **individuals** can open an account with as **low as Rs. 250** and they also have to **invest a minimum of Rs. 250** to keep the account active.
 - The **maximum amount** that an individual can **deposit per year** in a Sukanya Samriddhi Yojana account is **Rs. 1.5 Lakh**.
- The **maturity period** of an SSY account is **21 years**.
 - An account holder (the girl) will be able to **withdraw** from her account once she **reaches 18 years of age**.
 - The account holder can **only withdraw 50%** of the accumulated amount once after she reaches this **specified age only** for the **purpose of higher education**.
- Eligibility →
- The SSY account can be opened by legal guardians of the girl child provided the following conditions are met:
 - The girl must be an **Indian resident**
 - The girl **shouldn't** be **more than 10 years of age**
 - Upto two accounts can be **opened in a family** with two girl children.
- Importance of Sukanya Samriddhi Yojana →
 - It is one of the most popular schemes owing to the **high-interest rate** as well as the **tax benefits it offers**.
 - The interest income generated from investing is **tax-exempt** as well and **tax benefits** are extended to the maturity amount too.

2. School Bag Policy 2020

Why in News?

- Recently, the Directorate of Education issued a circular asking school to follow the new ‘School Bag Policy, 2020’.

About

- Released by → the **National Council of Educational Research and Training (NCERT)**.
- Coverage → It lays down the guidelines on homework and weight of school bags **for classes I to XII**.

📁 Provisions

- As per the new policy, school bags should **not be more than 10% of the bodyweight of students** across classes I to X and there should be **no bags in pre-primary students**.
- It recommends **no homework** up to **class II** and a **maximum of two hours per week** for **classes III to V**, one hour a day for classes VI to VIII and two hours a day for classes IX and above.
- The policy will also require schools to introduce **infrastructural changes** as students will **not be able to carry many books daily**.
- The schools need to provide **lockers right from preschool** to senior secondary to enable children to leave books in school and carry home only what is required.

📁 NCERT

- It is an **autonomous organization** under the **Ministry of Education** (MoE) which is responsible for:
- Ensuring **qualitative improvement in school education** by undertaking and promoting research in areas related to school education.
- Prepare and publish model textbooks, supplementary material.**
- Develop and disseminate **innovative educational techniques and practices**.
- Set up in → **1961**.
- Act as a **nodal agency** for achieving the goals of **Universalization of Elementary Education**.

3. Longitudinal Ageing Study of India (LASI)

Why in News?

- Dr. Harsh Vardhan, Union Minister for Health & Family Welfare has released the India Report on Longitudinal Ageing Study of India (LASI) Wave-1 recently.

About

- What is it? → It is a full-scale national **survey of scientific investigation of the health, economic, and social determinants** and consequences of population ageing in India.
- Who conducted LASI? → The **National Programme for Health Care of Elderly**, Ministry of Health & Family Welfare has undertaken the Longitudinal Ageing Study of India.
- Other partners → **International Institute for Population Sciences**, (IIPS), **Harvard School of Public Health**, **University of Southern California**, United Nations Population Fund (**UNFPA**) and **National Institute on Ageing**.
- It covered a baseline sample of **72,250 individuals aged 45 and above** and **their spouses** including 31,464 elderly persons aged 60 and above and 6,749 oldest-old persons aged 75 and above.
- The baseline samples were covered from **all States and Union Territories** (UTs) of India (**excluding Sikkim**).
- Significance → It is **India's first** and **the world's largest ever survey** that provides a longitudinal database for designing policies and programmes for the older population.
- The unique feature of LASI is the **coverage of comprehensive biomarkers**.

4. Toycathon 2021

Why in News?

- Recently, the Union Education Minister and the Union Minister for Textiles and Women & Child Development jointly launched the Toycathon 2021.

About

- What is it? → It is a **special kind of hackathon** where students and teachers from schools and colleges, design experts, toy experts and start-ups will crowdsource **ideas** for **developing toys and games**.
- It will be based on **Indian culture, ethos, folklores, heroes** and **value systems**.
- It is an **inter-ministerial initiative** organized by →
 - The Ministry of Education's Innovation Cell with support from All India Council for Technical Education.
 - The Ministry of Women and Child Development.
 - The Ministry of Commerce and Industry.
 - The Ministry of MSME.
 - The Ministry of Textiles and Ministry of Information and Broadcasting.
- Area of Focus → It will majorly focus on **conceptualizing new and innovative toys** using local material which is economical, affordable, safe and environment friendly.

5. Institutions of Eminence scheme

Why in News?

- Recently, the University Grants Commission (UGC) amended its regulations, allowing Institutions of Eminence (IoEs) to set up campuses abroad.

About the IoEs scheme

- The **Ministry of Education** launched the IoE scheme in **2018**.
- As per scheme, **20 institutions** were to be selected (10 public and 10 private ones) that would **enjoy complete academic and administrative autonomy**.
- Aims to project Indian institutes to **global recognition**.
- It has been launched to **empower the Higher Educational Institutions** and **to help them** in becoming **world-class teaching** and **research institutions**.
 - This will enhance affordable access to high-quality education for ordinary Indians.
- Objectives → To **develop the capacity** of the students and researchers **to compete in the global tertiary education marketplace** through the acquisition and creation of advanced knowledge in those areas.
- Incentives of the scheme →
 - Institutes with IOE tag will be given **greater autonomy** and **freedom to decide fees, course durations** and **governance structures**.
 - The **public institutions** under IOE tag will receive a **government grant of ₹1,000 crore**, while the private institutions will not get any funding under the scheme.

👉 Constitutional Provisions related education

- Article 45 and Article 39 (f)** of Directive Principles of State Policy (DPSP), has a provision for **state-funded** as well as **equitable and accessible education**. Education is in the **concurrent list**.

- The **86th Amendment in 2002** made education an enforceable right under **Article 21-A**.
- **Right To Education (RTE) Act, 2009** aims to provide primary education to all children aged 6 to 14 years and enforces education as a Fundamental Right.
- It mandates **25% reservation** for disadvantaged sections of the society where disadvantaged groups.

6. NEP 2020: Implementation Plan for School Education

Why in News?

- Union Minister of Education has released details of the implementation plan of National Education Policy 2020.

About National Education Policy 2020

- It is the **third in the series** of National Education Policies (1968 and 1986 modified in 1992) in India and is the **first education policy of the 21st century**.
- NEP 2020 covers major **reforms in wider spectrum** of school education **from pre-primary to senior secondary**.
- The recommendations under NEP have **varied timelines** as the policy is made **for next 20 years**. Therefore, the implementation of NEP is being carried out in a **phased manner**.

So far steps taken includes

- **National Initiative for School Heads' and Teachers' Holistic Advancement (NISTHA)**, an initiative to build capacities of teachers and school principals at the elementary stage.
- **Digital Infrastructure for Knowledge Sharing (DIKSHA) Portal** was launched to expand E-learning by providing access to a large number of curriculum linked e-content.
- Approval for setting up of the **National Mission on Foundational Literacy and Numeracy Mission**.
- **'Manodarpan' initiative for mental health and wellbeing of students** aiming to provide emotional support and counselling to the students under distress.
- **Development of Indian Sign Language dictionary** for school education has been proposed.
- **Existing schemes**, Samagra Shiksha, Mid Day Meal and Padhna Likhna Abhiyan are being aligned with the recommendations of NEP 2020.
- **States and UTs are also constituting their own Task Force** to steer implementation of the NEP.

7. Pradhan Mantri Rashtriya Bal Puraskar

Why in News?

- 32 children awarded Pradhan Mantri Rashtriya Bal Puraskar. The Pradhan Mantri Rashtriya Bal Puraskar is given under two categories: Bal Shakti Puraskar, and Bal Kalyan Puraskar.

About Bal Shakti Puraskar

- It is given by the Government of India **every year** to **recognize exceptional achievements of children in various fields** i.e., innovation, scholastic achievements, social service, arts & culture, sports and bravery.
- Eligibility → A child who is an **Indian Citizen** and **residing in India** and is **between 5-18 years of age**.
- Award → A medal, a cash prize of **Rs. 1,00,000**, book vouchers worth **Rs.10,000**, a **certificate and citation**.

- Background → It was instituted in **1996** as the **National Child Award for Exceptional Achievement**, renamed from 2018 as Bal Shakti Puraskar.

👉 **Bal Kalyan Puraskar**

- It is given as recognition **to Individuals and Institutions**, who have made an outstanding contribution towards **service for children in the field of child development, child protection and child welfare**.
- Eligibility → An individual who is an **Indian Citizen and residing in India** and should have attained the **age of 18 years or above** (as on 31st August of respective year). S/he should have worked for the **cause of children for not less than 7 years**.
- The institution should **not be entirely funded by the government** and should have been in the field of **child welfare for 10 years** and **performing consistently in the field**.
- Award → Three awards are given in each of the two categories - **Individual and Institution** - along with **cash prizes** (Rs. 1,00,000 and Rs. 5,00,000 respectively).
- Background → It was instituted in **1979** as the **National Child Welfare Awards**, renamed from 2018 as Bal Kalyan Puraskar.

8. National Girl Child Day

Why in News?

- The National Girl Child Day is celebrated in India every year on January 24.

About

- The National Girl Child Day was **first initiated in 2008** by the Ministry of Women and Child Development with the objective to **raise awareness** among people **about inequalities, discrimination, exploitation faced by the girls in society**.
- It focuses on the **importance of girl education**, and **their health and nutrition**.
- The celebrations will also mark the anniversary of **Beti Bachao, Beti Padhao (BBBP) scheme**.
- Punjab has announced January 2021 to be the **“month of the girl child”**. The scheme **Dheeiyen Di Lohri** has also been launched.

👉 **About BBBP**

- Launch and expansion → Launched in **January, 2015** at Panipat in Haryana. All India Expansion of BBBP **covering all 640 districts** (as per Census 2011) was launched at Jhunjhunu, Rajasthan on 8th March 2018.
- It is a **tri-ministerial effort** of Ministries of Women and Child Development, Health & Family Welfare and Human Resource Development.
- Implementation → It is a **Central Sector Scheme** with **100% financial assistance** for District level component and the fund are directly released to the DC/DM's account for smooth operation of the Scheme.
- Objectives → Main Objective of the scheme is to **address the declining Child Sex Ratio** (CSR) and related issues of **empowerment of women** over a life-cycle continuum.

👉 **Others Steps Taken by Government**

- **UJJAWALA Scheme** →

- It is a **comprehensive Scheme** for **Prevention of trafficking and Rescue, Rehabilitation and Reintegration of Victims** of Trafficking and Commercial Sexual Exploitation.
- **National Education Policy (NEP)-2020 →**
 - It has introduced a “**Gender Inclusion Fund**” for targeting the development of girl child.
 - The fund will focus on **ensuring 100% enrollment of girls** in schooling and a record participation rate in higher education, decrease gender gaps at all levels, practice gender equity and inclusion in society.
- **KIRAN’ Scheme →**
 - The Department of Science and Technology (**DST**) has launched ‘Knowledge Involvement in Research Advancement through Nurturing (**KIRAN**)’ Scheme to **provide various career opportunities to women scientists and technologists**.
- **SERB Women Excellence Award →**
 - Program for Gender Advancement in S&T Institutions which started in **2020**, aims to develop a **Charter for Gender Equality in STEM** with a focus on bringing about transformational changes at the institutional level.
 - The project aims to create a **new ecosystem based on building competencies of institutions** and provide them with ongoing mentoring support to achieve transformation.
- **Ministry of Skill Development →**
 - Ministry of Skill Development is making efforts for **building a conducive ecosystem for skilling women** in India. Out of 33 National Skill Training Institutes (NSTIs), **19 NSTIs** are providing **skill training exclusively for women**.

9. PM 2.5 Exposure and Anaemia

Why in News?

- Recently, Indian Institution of Technology (IIT) Delhi has released “The Association Between Ambient PM 2.5 Exposure and Anaemia Outcomes Among Children Under Five Years of Age in India”.

About Anaemia

- According to the World Health Organization (WHO), anaemia is a condition in which the **number of red blood cells** or **the haemoglobin concentration within them is lower than normal**.
- The optimal haemoglobin concentration **needed to meet physiologic needs** varies depending upon age, sex, elevation of residence, smoking habits and pregnancy status.
- Causes →
 - **Nutritional deficiencies**, particularly iron deficiency.
 - **Deficiencies in folate, Vitamins B12 and A**.
 - **Haemoglobinopathies** (medical term for a group of blood disorders and diseases that affect red blood cells).
 - **Infectious diseases**, such as malaria, tuberculosis, HIV and parasitic infections.
- Symptoms → In its severe form, it is associated with **fatigue, weakness, dizziness, shortness of breath** and **drowsiness**.
- Treatment →
 - WHO oversees **several programmes** across all WHO Regions to **help reduce the prevalence of anaemia** through **treatment and prevention**.

- In 2016, WHO started a **five-year project** to review its **global guidelines for haemoglobin cut-offs** used to define anaemia with the aim to provide evidence-informed recommendations on assessing anaemia in individuals and populations.
- Vulnerability →
 - Anaemia is a **serious global public health problem** that particularly **affects young children** and pregnant women.
 - WHO estimates that **42% of children less than 5 years of age** and **40% of pregnant women** worldwide are anaemic.

Findings

- Extended periods of **exposure to PM 2.5** can **lead to anaemia** among children under the age of 5 years. About **63%** of the included children were found to be anaemic.
- Children at Risk →
 - Young Children: **Children with lower age** had **higher vulnerability** of being anaemic.
 - Poverty: Children from **lower wealth index levels** had **higher percentages** of anaemia.
 - Maternal Anaemia: Children **born to anaemic women** have **higher chances of developing anaemia**.
- Intensity → **Higher PM2.5 levels exposure, decreases the average haemoglobin levels** in children.

Security

1. Akash Missile

Why in News?

- The Union Cabinet chaired by the Prime Minister has approved the export of the Akash Missile system. It also approved the high-level committee formed to expedite clearance of such exports.

About

- Akash is an indigenously developed and manufactured short-range **Surface to Air Missile (SAM) system**.
- Developed by → The missile has been developed by the **Defence Research and Development Organisation (DRDO)**.
- Key Features →
- The missile has a **strike range of 25 km**. It can reach an **altitude of 18 km** and can be fired from both tracked and wheeled platforms.
- It has a large operational envelope from a **low altitude of 30 metres** to a **maximum of up to 20 km**.
- The system can simultaneously engage **multiple targets** in **Group Mode or Autonomous Mode**.
- It has built-in **Electronic Counter-Counter Measures (ECCM)** features. The entire weapon system has been **configured on mobile platforms**.
- It was inducted in **2014 in the Air Force** and in **2015 in the Indian Army**.

2. Sahayak-NG

Why in News?

- Every year, India celebrates December 4 as Navy Day to commemorate Operation Trident – a key offensive during the 1971 India-Pakistan War. This year, it is the 50th anniversary of the victory in the 1971 War.

About

- Sahayak-NG, with a **parachute system**, is an advanced version of Sahayak Mk I **air droppable container** from **IL 38SD aircraft** (Indian Navy) off **the coast of Goa**.
- Developed by → It has been developed by **two DRDO laboratories** i.e. **NSTL**, Visakhapatnam and **ADRDE**, Agra along with industry partner M/s Avantel for GPS integration.
- Key Features →
 - The container can **enhance Indian Navy's operational logistics capabilities** and provide **critical engineering stores** to ships which are deployed more than 2000 km from the coast.
 - It also **reduces the requirement of ships** to come close to the coast to collect spares and stores.
 - The GPS aided container also has the capability to **carry a payload** that **weighs up to 50 kg** and can be **dropped from heavy aircraft**.
 - After safe separation from the aircraft, the **parachute controls** the descent of Sahayak-NG for **safe touchdown on water**.
- The airworthiness of the system was **certified** by the **Centre for Military Airworthiness & Certification (CEMILAC)**.

3. Data on Police Organisations: BPRD

Why in News?

- Recently, the Bureau of Police Research and Development (BPRD) has released data on police organisations.

About Key Takeaways

- The **Backward Classes**, **Dalits** and **Tribals** constitute almost **67% of India's population** but their representation in police forces in the country is only at **51%**.
- Scheduled Tribes** form **8.6% of the population** and have **12% representation** in the police forces, placing them at a comparatively better position.
- Dalits** represent **14% of all positions** in police forces across the country. According to Census 2011, **Dalits** make up **16.6% of India's population**.
- Other Backward Classes**(OBCs) fare the **worst on the representation** front as, despite their 41% share in the population, they constitute **only 25%** of the police forces.
- Women** continue to be **represented poorly**. It is reflected in the women population per woman police ratio which **stands at 3.026 nationally**.
- Police Population Ratio → According to report, Population Per Police Person is **511.81**, that is **one policeman for every 511.81 persons** and **3.9 policemen for each VIP**. **Bihar** had the **worst ratio** with one policeman for **867.57 persons**.

📌 Bureau of Police Research and Development (BPRD)

- Established in → **1970**.
- Objective → objective of **modernisation of police forces**.
- It functions under the **aegis of Union Home Ministry**
- BPR&D **replaced Police Research and Advisory Council** formed in **1966**.
- Purpose → It is a nodal national police organisation to **study, research** and **develop on subjects** and **issues related to policing**.
- In 2008, the Government further decided to create the **National Police Mission** (NPM) under the **administrative control of BPR&D**.
- Headquarters → **New Delhi**.

4. Laser Dazzlers

Why in News?

- Recently, the Bharat Electronics Limited (BEL) has signed a contract with Indian Navy for initially supply 20 Light Amplification by Stimulated Emission of Radiation Dazzlers (Laser Dazzlers).

About

- It is used as a **non-lethal method for warning and stopping suspicious vehicles/ boats/ aircrafts/ UAVs/ pirates** etc. from approaching secured areas during both day and night.
- It is capable of dazzle and thereby **suppresses the person's/optical sensor's action** with disability glares in case of non-compliance to orders.

- It **disorients/ confuse/blind a person temporarily**.
- It also **dazzles** and **distracts aircraft/UAVs**.
- It is a **portable, shoulder operated** and **ruggedized for military use** in adverse environmental conditions.
- The Laser dazzler technology was **developed by** Defence Research and Development Organisation (**DRDO**).
- It is **indigenously designed and developed** for **first time** for the **Armed Forces**.

5. Lynx U2 Fire Control System

Why in News?

- Recently, the Ministry of Defence has decided to develop 10 Lynx U2 Fire Control System.

About

- The government has **signed a contract with Bharat Electronics Limited** (BEL) for procurement of 10 Lynx U2 Fire Control systems for frontline warships of Indian Navy.
- The Lynx system has been **designed and developed indigenously** that would further the 'Atmanirbhar Bharat' vision of Prime Minister.
- The LYNX U2 GFCs is a **Naval Gun Fire Control System** designed to acquire, track and engage targets amidst sea clutter.
- The Lynx system is **capable of accurately tracking air/surface targets**, generating required target data for predicting weapon aiming points and engaging target.
- The system will be **installed** on the **Naval Offshore Patrol Vessel** (NOPV), **Talwar** and **Teg class of ships**.
- The system including the **Tracking Radar, Servo and Weapon Control Modules** has been completely designed and developed by BEL.
- Significance of Lynx U2 Fire Control System
 - The Gun Fire Control System has been **designed with an open and scalable architecture** permitting **simple and flexible implementation** in many different configurations.
 - The indigenous system will ensure **maximum up-time of the system** and **guarantees excellent Product support** throughout its life time.
 - The system proposed in the contract is of the **fourth generation** and is a **completely indigenized system**, developed in the true spirit of '**Atmanirbhar Bharat**'.

6. National Police K-9 Journal

Why in News?

- Recently, the Union Home Minister has released the inaugural issue of the "National Police K-9 Journal".

About

- It is a **unique initiative** that will **further enrich the subjects** related to **Police Service Dog** (K-9) (PSK) teams in the country.
- It is a **biannual journal** which will be released in April and October every year.
- The journal comprises different sections in **Hindi and English**.
- The police dog squad can **act as a force multiplier** to ensure the safety of society, much like the way drones or satellites are being used in the country.

- A special '**Police K9 Cell**' was established in **November 2019** under the Police Modernization Division of the Ministry of Home Affairs with the mandate of '**Mainstreaming and Augmentation of Police Service K9s in the country**'.

7. Naval Innovation and Indigenisation Organisation

Why in News?

- Recently, Raksha Mantri has launched the Naval Innovation and Indigenisation Organisation (NIIO).

About

- Objective → To **foster innovation and indigenisation for self-reliance in defence** in keeping with the vision of Atmanirbhar Bharat.
- Structure → The NIIO is a **three-tiered organisation**.
 - Naval Technology Acceleration Council (N-TAC) will bring together the **twin aspects of innovation and indigenisation** and **provide apex level directives**.
 - Working group under the N-TAC will **implement** the projects.
 - Technology Development Acceleration Cell (TDAC) has been created for induction of **emerging disruptive technology** in an accelerated time frame.
- Functions of NIIO → The NIIO puts in place **dedicated structures** for the **end users to interact with academia and industry** towards **fostering innovation and indigenisation** for **self-reliance in defence** in keeping with the vision of Atmanirbhar Bharat.

8. LCA Tejas

Why in News?

- Cabinet has approved procurement of 73 LCA Tejas Mk-1A fighter aircraft and 10 LCA Tejas Mk-1 Trainer aircraft.

About

- What is it? → It is a **single-engine, fourth-generation, multirole light fighter aircraft** designed by the **Aeronautical Development Agency (ADA)**.
- Tejas was developed in **collaboration with Hindustan Aeronautics Limited (HAL)** for the Indian Air Force (**IAF**) and **Indian Navy**.
- It **replaced** the ageing **Mig 21 fighter planes**.
- LCA Tejas Mk 1A is an **advanced version of LCA Mk1**.
- Features →
 - The **lightest, smallest** and **tailless multi-role supersonic fighter aircraft** in its class.
 - Designed to carry a range of **air-to-air, air-to-surface, precision-guided, weapons**.
 - **Air to air refuelling** capability.
 - Maximum payload capacity of **4000 kg**.
 - It can attend the maximum **speed of Mach 1.8**.
 - The range of the aircraft is **3,000km**.
- Significance → It is the first "**Buy (Indian-Indigenously Designed, Developed and Manufactured)**" category procurement of combat aircrafts with an indigenous **content of 50%** which will progressively reach 60% by the end of the programme.

9. 9mm Machine Pistol

Why in News?

- India's first indigenous 9mm Machine Pistol has been jointly developed by DRDO and Indian Army.

About

- The Pistol is named "Asmi" meaning "**Pride**", "**Self-Respect**" & "**Hard Work**".
- Features of Asmi →
 - The Machine Pistol **fires the in-service 9mm ammunition**.
 - With an overall empty weight of **less than 2 Kg**, it features an **8-inch barrel** and **33 rounds high capacity magazine**.
 - It has an **upper receiver** made from **Aircraft grade Aluminium** and **lower receiver from Carbon Fibre**.
 - 3D Printing process** has been used in designing and prototyping of various parts including **trigger components** made by **metal 3D printing**.
 - The machine pistol can fire at a **range of 100 metres** and is in the class of the **Uzi series guns of Israel**.
- Applications → The weapon has **huge potential** in the Armed forces as a personal weapon for **heavy weapon detachments, commanders, tank and aircraft crews, drivers/dispatch riders, radio/radar operators**, counter insurgency and counter-terrorism operations among others.
- Significance → The pistol will pave way for **self-reliance** and it is expected to be **inducted by the Services and Paramilitary Forces** (PMFs).

10. Rakshita

Why in News?

- Recently, the Defence Research & Development Organisation (DRDO) has handed over 'Rakshita' to Central Reserve Police Force (CRPF).

About

- It is a **bike-based casualty transport emergency vehicle** developed by Institute of Nuclear Medicine and Allied Sciences (INMAS).
- It is fitted with a **customized reclining Casualty Evacuation Seat** (CES), which can be fitted in and taken out as per requirement.
- The other major features are the **head immobilizer, safety harness jacket, hand and foot straps for safety, adjustable footrest, physiological parameter measuring equipment** with wireless monitoring capability and auto warning system for driver.
- Significance of Rakshita →
 - The bike ambulance will help in **overcoming the problems** faced by **Indian security forces** and **emergency healthcare providers**.
 - It will provide **life-saving aid** for evacuation of injured patients from low intensity conflict areas.
 - It will be **handy in the congested streets** and **remote locations**, where access through ambulance is difficult and time consuming.

11. Desert Knight-21

Why in News?

- Indian, French Rafales to be part of Desert Knight-21 war games in Jodhpur.

About

- It is a bilateral Air exercise held **between Indian Air Force and French Air and Space Force** (Armée de l'Air et de l'Espace).
- The exercise marks an **important milestone** in the series of engagements between the two Air forces.

12.S-400 Triumf Missile

Why in News?

- Indian military specialists will soon undergo training courses on the S-400 long-range Air Defence System in Russia.

About

- S-400 Triumf is one of the **world's most advanced air defence systems**.
- It is a **mobile, surface-to-air missile system**(SAM) designed by Russia.
- Supply of S-400 missiles is one of the **flagship projects** in the **Russian-Indian military** and **military-technical cooperation**
- Key Features →
 - The missile can **destroy airborne targets** within the **range of 250km** and also capable of destroying fast moving targets such as fighter aircraft.
 - It is capable of **firing three types of missiles** to create a **layered defence**.
 - The system can **engage all types of aerial targets** including aircraft, unmanned aerial vehicles(**UAV**) and **ballistic and cruise missiles** within **the range of 400km**, at an altitude of up to 30km.
 - It can **track 100 airborne targets** and **engage six of them simultaneously**.
- India is concerned that the U.S would proceed with Countering America's Adversaries through Sanctions Act (**CAATSA**) **sanctions against India** over the **S-400 purchase from Russia**.

📌 CAATSA

- Enacted in **2017**, it is a **US federal law** that **imposed sanctions on Iran, North Korea and Russia**.
- It includes **sanctions against countries** that engage in significant transactions with Russia's defense and intelligence sectors.
- Its "**ultimate goal**", "is to **prevent revenue** from flowing to the Russian Government.

13.Exercise Kavach

Why in News?

- A large scale Joint Military exercise 'Exercise Kavach' involving assets of Indian Army, Indian Navy, Indian Air Force and Indian Coast Guard is being conducted in the coming week under the aegis of the Andaman and Nicobar Command (ANC).

About

- It is a **Joint Military exercise** involving assets of the Indian Army, Indian Navy, Indian Air Force, and Indian Coast Guard.
- Conducted under: The exercise will be conducted under the aegis of the Andaman and Nicobar Command, the only Joint Forces Command of the country.
- Aim →
 - To fine-tune joint war-fighting capabilities and Standard Operating Procedures (SOPs) for enhancing operational synergy.
 - To execute multi-domain, high-intensity offensive and defensive maneuvers in the Andaman Sea and Bay of Bengal.
- The exercise involves synergized application of maritime surveillance assets, coordinated air and maritime strikes, air defense, submarine and landing operations.

14. Smart Anti-Airfield Weapon

Why in News?

- DRDO has successfully conducted captive and release trial of indigenously developed Smart Anti-Airfield Weapon (SAAW) from Hawk-I of Hindustan Aeronautics Limited (HAL) off the Odisha coast.

About

- It is a long-range precision-guided anti-airfield weapon.
- Manufactured by → DRDO's Research Centre Imarat (RCI) Hyderabad.
- History → The system belongs to the glide bomb category and its development began around 2012-13, with crucial inputs from the Indian Air Force (IAF) and the first test was carried out in 2016.
- Features →
 - The weapon is designed to strike ground targets, especially adversary airfield infrastructure or similar strategically important installations.
 - This is a 125-kilogram class smart weapon, capable of engaging ground enemy airfield assets such as radars, bunkers, taxi tracks, and runways, up to a range of 100 kilometres.
 - The high precision guided bomb is lightweight compared to weapon systems of the same class.

👉 RUDRAM

- It is India's first indigenous anti-radiation air-to-surface missile for Indian Air Force(IAF).
- The missile is integrated on SU-30 Mk1 fighter aircraft.
- Purpose → It is designed to detect, track and neutralise the adversary's radar, communication assets and other radio frequency sources which are generally part of their air defence systems.

History and Culture

1. The Battle of Bhima-Koregaon (1818)

Why in News?

- The history of the Bhima-Koregaon battle should be taught in schools, said the Union Minister of State for Social Justice and Empowerment.

About

- A battle was fought in Bhima Koregaon **between the Peshwa forces and the British** on January 1, 1818.
- The **British army**, which comprised **mainly of Dalit soldiers**, fought the upper caste-dominated Peshwa army. The **British troops defeated the Peshwa army**.
 - Peshwa Bajirao II had **insulted the Mahar community** and **terminated them from the service** of his army. This caused them to side with the English against the Peshwa's numerically superior army.
 - The defeat of Peshwa army was considered to be a **victory against caste-based discrimination and oppression**.
- It was one of the **last battles** of the **Third Anglo-Maratha War**, which **ended** the **Peshwa domination**.
- Why is the battle significant? →
 - The battle has been seen as a **symbol of Dalit pride** because a large number of soldiers in the Company forces were the **Mahar Dalits**, the same oppressed community to **which Babasaheb Ambedkar belonged**.
 - After centuries of **inhumane treatment**, this battle was the first time that Mahars had been included in a battle in which they won.
- Dr Ambedkar's association →
 - It was Babasaheb Ambedkar's visit to the site on **January 1, 1927**, that **revitalized the memory** of the **battle for the Dalit community**.
 - He led to its **commemoration** in the **form of a victory pillar**, besides creating the discourse of Dalit valour against Peshwa 'oppression' of Dalits.

2. Mannathu Padmanabhan

Why in News?

- PM pays tribute to Sri Mannathu Padmanabhan on his Jayanti.

About

- Mannathu Padmanabhan (1878 – 1970) was an **Indian social reformer** and **freedom fighter from Kerala**.
- He took part in **anti-untouchability agitations** and **advocated opening temples** for people of all castes.
- He also participated in the **Vaikom Satyagraha**.
- He is also known for his founding of the **Nair Service Society** (NSS).

3. Yakshagana

Why in News?

- Recently, the Odisha Forest department has stressed the need for stricter monitoring of social media platforms to check pangolin poaching and trading.

About

- Yakshagana is a **traditional theatre** form of **Karnataka**.
- It is a **temple art form** that depicts mythological stories and Puranas.
- It combines **dance, music, dialogue, costume, make-up**, and **stage techniques** with a unique style and form.
- It is performed with **massive headgears, elaborate facial make-up** and **vibrant costumes** and **ornaments**.
- Usually recited in **Kannada**, it is also **performed in Malayalam** as well as **Tulu** (the dialect of south Karnataka).
- It is performed with percussion instruments like **chenda, maddalam, jagatta** or **chengila** (cymbals) and **chakratala** or **elathalam** (small cymbals).
- The most popular episodes are from the **Mahabharata** i.e. **Draupadi swayamvar, Subhadra vivah**, etc. and from Ramayana i.e. **Rajyabhishek, Lav-Kush yuddh**, etc.

👉 Other Theatre Forms

- Nautank Uttar Pradesh
- Tamasha Maharashtra
- Jatra West Bengal/Orissa and eastern Bihar
- Koodiyattam Kerala
- Mudiyettu Kerala
- Bhaona Assam
- Maach Madhya Pradesh
- Bhand Pather Kashmir.

4. Visva-Bharati University

Why in News?

- Recently, the Prime Minister addressed the Visva-Bharati University's centenary celebrations event.

About

- It was founded by Nobel laureate **Rabindranath Tagore in 1921** at Santiniketan, Bolpur in West Bengal's Birbhum district.
- It is also the **oldest Central University** in the country and an Institution of **National Importance** by an Act of Parliament in 1951.
- It brings a **synergy between the country and the rest of the world** therefore it is called Visva-Bharati.
- It consists of two campuses one at **Shantiniketan** and the other at **Sriniketan**.
 - Sriniketan focuses on** agriculture, adult education, village, cottage industries and handicrafts.
- Until independence, it was a **college**. Soon **after independence**, the **institution** was given the **status of a central university** in 1951 by an act of the Parliament.

5. New Anubhava Mantapa

Why in News?

- Karnataka CM has laid the foundation stone for the 'New Anubhava Mantapa' in Basavakalyan, the place where 12th-century poet-philosopher Basaveshwara lived for most of his life.

About

- The New Anubhava Mantapa is projected to be a **six-floor structure** in a 7.5 acres plot and it embodies the **principles Basaveshwara's philosophy** stood for.
- The new structure will **exhibit** the **12th Century Anubhava Mantapa** (often referred to as the "first Parliament of the world") established by **Basaveshwara in Basavakalyan**.

👉 Who was Basaveshwara?

- He was a **12th Century Kannada social reformer, poet and philosopher** during the rule of the Kalachuri-dynasty king Bijjala I in Karnataka.
 - He spread **social awareness** through **his poetry**, popularly known as **Vachanaas**.
- As a social reformer → He worked towards **uplifting the underprivileged classes & women** and believed that **all humans are equal**, irrespective of class, caste, creed, and gender.
 - He built the **world's first Parliament** that also gave **equal representation to women**.
 - He preached that there is **only one Supreme Being** and that is **Shiva** and that all animate and inanimate are equal before the Supreme Being.
- Socio-economic principles → He gave two very important socio-economic principles:
 - They are- "**Kayaka**" (Work-Divine work) and "**Dasoha**" (Distribution-Equal distribution).
 - According to this, every individual of society should take up the **job of his choice** and **perform it with all sincerity**.
- Major Contributions →
- He conceptualised Anubhava Mantapa –
 - It was an **academy of mystics, saints** and **philosophers of the Lingayat faith** and acted as the fountainhead of thoughts on common human values and ethics.
 - It also had **numerous Sharanas**, people from the **lower strata of society** – as **participants**.
 - It is often referred to as the "**first Parliament of the world**".
- Sharana movement → **Preaching egalitarianism**, the movement was presided over by **Basavanna**.
 - The movement, which was **too radical for its time**, attracted people from all castes, and like most strands of the Bhakti movement, produced a corpus of literature, the vachanas, that **unveiled the spiritual universe of the Virashaiva saints**.
- Kalyana Rajya → He established **Kalyan Rajya in Karnataka**, same in meaning to today's welfare state.

6. G Kishan Reddy committee

Why in News?

- Centre has decided to form a committee to protect the language, culture and land of Ladakh and ensuring citizen's participation in the Union Territory's development.

About

- Members → The Committee will be headed by the Minister of State for Home **G Kishan Reddy** and will include **elected representatives from Ladakh, Ladakh Autonomous Hill Development Council, central government, and the Ladakh administration.**
- The committee is aimed at **protecting the language, culture and land of Ladakh** and **ensuring citizen's participation** in the Union Territory's development.
- Background → The decision to form the Committee came after Union Home Minister Amit Shah met a **10-member delegation from Ladakh** who expressed their **views** about the **need to protect Ladakh's unique cultural identity.**

7. Jagannath Temple

Why in News?

- Recently, the Shree Jagannath Temple Administration (SJTA) announced that devotees don't need to produce their Covid-19 negative report for getting entry into the shrine in Puri from January 21.

About

- History → The temple is believed to be constructed in the **12th century** by King **Anatavarman 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).
- Features →
 - 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.

8. Harvest Festivals of India

Why in News?

- The harvest festivals like Lohri, Makar Sankranti and Pongal have recently been celebrated all across the country.

About Lohri

- Lohri is primarily **celebrated by Sikhs and Hindus.** It marks the **end of the winter season** and is traditionally believed to **welcome the sun** to the northern hemisphere.
- It is observed a **night before Makar Sankranti,** this occasion involves a **Puja Parikrama** around the bonfire with prasad.
- Makar Sankranti →**
 - Makar Sankranti denotes the **entry of the sun into the zodiac sign of Makara (Capricorn)** as it travels on its celestial path.

- The day marks the onset of summer and the six months auspicious period for Hindus known as **Uttarayan** – the northward movement of the sun.
- As a part of the official celebration of '**Uttarayan**', the **Gujarat government** has been hosting the **International Kite Festival since 1989**.
- **Pongal →**
 - The word Pongal means '**overflow**' or '**boiling over**'. Also known as **Thai Pongal**, the four-day occasion is observed in the month of Thai, when crops such as **rice are harvested** and **people show their gratitude** to the **almighty** and the **generosity of the land**.
 - **Tamilians celebrate** the occasion by making traditional designs known as **kolams** in their homes with rice powder.
- **Magha Bihu →** In **Assam** and many parts of the North East, the festival of Magha Bihu is celebrated. It sees the **first harvest of the season** being offered to the gods along with prayers for peace and prosperity.
- **Uttarayan → Gujarat** celebrates it in the form of the **convivial kite festival of Uttarayan**.
- **Maghi →** In **Punjab**, Makar Sankranti is celebrated as Maghi. **Bathing in a river** in the early hours on Maghi is important.
- **Saaji →** In **Shimla District of Himachal Pradesh**, Makara Sankranti is known as **Magha Saaji**. Saaji is the Pahari word for **Sankranti**, start of the new month. Hence this day marks the **start of the month of Magha**.
- **Kicheri →** The festival is known as Kicheri in **Uttar Pradesh** and involves ritual bathing.

9. Saint Thiruvalluvar

Why in News?

- Recently, the Prime Minister Shri Narendra Modi has bowed to the venerable Thiruvalluvar on Thiruvalluvar Day.

About

- Thiruvalluvar is an **ancient saint born** in the **BC era**.
- The earliest references of the poet are found in the text **Tiruvalluva Maalai**.
- He is **credited and revered by Tamil people** for writing a collection of 1330 poem couplets called '**Thirukkural**'.
 - It talks about **ethics and morality**, and is considered to be a **guideline to lead a good and righteous life**.
 - It is **widely read and respected** by the people of Tamil Nadu irrespective of the faith they belong to.
- Thiruvalluvar Day was **first celebrated** on **May 17 and 18 in 1935** but now it is usually observed either on January 15 or 16 in Tamil Nadu and is a part of Pongal celebrations.
- In the **early 16th century**, a temple dedicated to Thiruvalluvar was **built** within the **Ekambareswarar temple complex in Mylapore, Chennai**.
- In **1976**, a temple-memorial called **Valluvar Kotam** was **built in Chennai** and **houses one of the largest auditoriums in Asia**.

10. World's oldest known cave painting found in Indonesia

Why in News?

- Recently, archaeologists have discovered the world's oldest known cave art which is a life-sized picture of a wild pig that was painted at least 45,500 years ago in Indonesia.

About

- Location → The picture was found in the **Leang Tedongnge cave** in a remote valley on the **island of Sulawesi, Indonesia**.
- Consists of a figurative depiction of a **warty pig**, a **wild boar** that is endemic to this Indonesian island.
- Technique used → The researchers used a technique called **uranium-series dating** to **analyse a mineral formation** that **overlapped part of the image** and that **must have formed after the cave art** was produced. The mineral formation is **at least 45,500 years old** suggesting the artwork itself could be much older.
- Sulawesi Warty Pig Painting →
 - It dates to **at least 45,500 years ago**.
 - It shows a **pig with a short crest of upright hairs** and a **pair of horn-like facial warts** in front of the eyes, a characteristic feature of adult male Sulawesi warty pigs.
 - Painted using red **ochre pigment**, the pig appears to be **observing a fight or social interaction** between two other warty pigs.
- Significance → The painting provides the **earliest evidence of human settlement of the region**.
- Is it the oldest human produced art? → The painting may be the **world's oldest art depicting a figure**, but it is **not the oldest human-produced art**. In South Africa, a **hashtag-like doodle created 73,000 years ago** is believed to be the oldest known drawing.



11. Jallikattu

Why in News?

- With Assembly polls round the corner in Tamil Nadu, the Pongal festival and Jallikattu, the traditional bull-taming sport, have caught the attention of the political parties.

About

- The **bull-taming sport** is popular in Madurai, Tiruchirappalli, Theni, Pudukkottai and Dindigul districts — known as the **Jallikattu belt**.
- Jallikattu is celebrated in the **second week of January**, during the Tamil harvest festival, Pongal.
- A tradition over **2,000 years old**, Jallikattu is a **competitive sport** as well as an **event to honour bull owners** who rear them for mating. It is a violent sport in which **contestants try to tame a bull for a prize**; if they fail, the bull owner wins the prize.
- Why is Jallikattu important in Tamil culture? → Jallikattu is considered a **traditional way** for the **peasant community to preserve their pure-breed native bulls**. Kangayam, Pulikulam, Umbalachery, Barugur and Malai Maadu are among the popular native cattle breeds used for Jallikattu.

12. Gavi Gangadhareshwara Temple

Why in News?

- Clouds played spoilsport while citizens celebrated Sankranti by blocking the Sun's rays from falling on the Shiva Linga at the Gavi Gangadhareshwara Temple in Gavipuram. For the first time in 50 years, sun's rays didn't fall on idol on Sankranti day.

About

- Location → This temple is located in **Bengaluru, Karnataka**.
- Meaning of the Name → The temple derives its name from the **combination of topographical features** and mythology: **gavi** (cave), and **Gangadhareshwara** (shiva) means the Lord who adorns the Ganga.
- Establishment → It was built in the **16th century** by **Kempe Gowda I**, the founder of the city.
- Architecture Features →
 - Celestial Oriented Architecture: Built in **Vijayanagar style**, it has unique celestial oriented rock cut architecture due to which **Surya majjana** occurs on Sankranti every year.
 - Surya Majjana: Every year on the **Makar Sankranti**, the **sun rays fall on the Shiv linga** located in the cave (gavi) making it shine for ten minutes.
 - Two Monolithic Structures:
 - In the forecourt stand two monolithic structures, named **Suryapana** and **Chandrapana** - each consisting of a **massive disc atop** a supporting pillar.
 - They have **engravings of sitting bulls** on the discs face each other.
 - Iconography of Shiva:
 - The compound of the temple is adorned with monolith structures associated with the iconography of Shiva - **the trishula** (trident) and **the damaru** (an hourglass-shaped, two-headed drum).
 - In between the **two discs** there is a **brass dhvajastambha** (flagstaff), and a **small cubicle housing a statue** of **Nandi, Shiva's bull carrier**.

👉 Kempe Gowda I

- Kempe Gowda I was a **feudatory king** under **Vijayanagar empire**.
- He founded the **city of Bengaluru** in **1537** and named it after their family deity's consort, Kempamma.
- He is also credited with the construction of **several lakes** or **keres** for the **purposes of drinking water** and **irrigation** eg. the **Dharmambudhi lake**.
- Other Sites in Karnataka →
 - Basavakalyan,
 - Hampi (World Heritage Site),
 - Badami,
 - Aihole, etc.

13. Guru Gobind Singh

Why in News?

- Recently, the Prime Minister paid homage to Guru Gobind Singh on his birth anniversary.

About

- He was the **10th Sikh guru**.

- He was **born at Patna, Bihar**, India, on December 22, 1666. His birthday sometimes falls either in **December or January or even both months** in the Gregorian calendar. The annual celebration of the Guru's birthday is based on the **Nanakshahi calendar**.
- He became the Sikh guru at the **age of nine**, following the demise of father, Guru Tegh Bahadur, the ninth Sikh Guru.
- He is known for his **significant contributions** to the **Sikh religion**, including the **introduction of the turban to cover hair**.
- He also founded the **principles of Khalsa** or **the Five 'K's**.
- He is also responsible to establish the **highest order in the Sikh community**.
- Followers of the Sikh faith religiously **follow the morals and codes of discipline** set up by Guru Gobind Singh.
- He **fought against the Mughals** later in **battle of Muktsar** in 1705.
- He was **assassinated in 1708**.
- He named **Guru Granth Sahib**, the **religious text of the Khalsas** and the Sikhs, as the next Guru of the two communities.
- Literary →
 - His literary contributions include the **Jaap Sahib**, **Benti Chaupai**, **Amrit Savaie**, etc.
 - He also wrote the **Zafarnama** which was a letter to the Mughal Emperor Aurangzeb.

14. Veer Savarkar

Why in News?

- An MLC in Uttar Pradesh has demanded that the portrait of Hindu Mahasabha leader Vinayak Damodar Savarkar be removed from the picture gallery of the State Legislative Council saying that the installation of his frame next to those of freedom fighters amounted to an "insult" to them. This has stirred controversy in the state.

About

- Birth → VD Savarkar was born on **28th May, 1883 in Bhagur**, a village near Nashik in Maharashtra.
- Formed a youth organization- Mitra Mela, this organization was put into place to **bring in national and revolutionary ideas**.
- He was **against foreign goods** and **propagated the idea of Swadeshi**.
- He **championed atheism** and **rationality** and also **disapproved orthodox Hindu belief**. In fact, he even dismissed cow worship as superstitious.
- Vinayak Savarkar was a **president of Hindu Mahasabha** from **1937 to 1943**.
- When congress ministries offered resignation on 22nd oct 1939, **Hindu mahaasabha** under his leadership **cooperated with Muslim league** to form government in provinces like Sindh, Bengal and NWFP.
- In Pune, Savarkar founded the "**Abhinav Bharat Society**".
- He joined **Tilak's Swaraj Party**.
- He founded the **Free India Society**. The Society celebrated important dates on the Indian calendar including **festivals, freedom movement landmarks**, and was dedicated to **furthering discussion about Indian freedom**.
- He believed and advocated the use of arms to free India from the British and created a network of Indians in England, equipped with weapons.
- Important works →

- Book- **The History of the war of Indian Independence.**
- He also wrote the book '**Hindutva: who is hindu?**'.
- An **armed revolt against** the **Morley-Minto reform.**
- Two-nation theory in his book '**Hindutva**'.

15. Tripuri Risa

Why in News?

- Tripura CM has of late made a statement to sport the Risa, a customary hand-woven cloth used by Tripura's indigenous tribal communities.

About

- Risa is one of the **three parts of customary Tripuri female attire**, the other two being the Rignai and Rikutu.
- The Risa, which is essentially a **customary hand-woven cloth**, is used as **headgear, stole, female upper cloth** or presented to honour a distinguished recipient.
- The Rignai is primarily used to **cover the lower part of the body** and **literally translates** into '**to wear**'. The Rikutu covers the **upper half of the body, wrapping it all around**.
- However, it is also used as a '**chunri**' or a '**pallu**' of the Indian saree. It is also **used to cover the head** of **newly married Tripuri women**.
- Its cultural significance →
 - Apart from its **beautiful designs**, the Risa plays a host of **crucial social utilities**.
 - Adolescent Tripuri girls are first given Risa to wear when **she reaches 12-14 years** in an event called **Risa Sormani**.
 - The event involves prayers to a **Lampra god**, where **her elder women pray for her wellbeing** throughout her life.
 - However, it is also used in **religious festivals** like the **Garia Puja**, a **customary festival of the tribal communities**, or as a head turban by male folks during weddings and festivals, as a cummerbund over dhoti or headscarf.
 - The cloth is even used as a **makeshift baby carrier** on **the mother's back**.

16. Sree Narayana Guru

Why in News?

- The Vice President of India has virtually launched "Not Many, But One", an English translation of poems of Sree Narayana Gurudev.

About

- Narayana Guru (1856 – 1928) was a **social reformer**.
- He has been credited with **transforming the social fabric of kerala** and **changing the beliefs of keralites** in ways unimaginable at that point in time.
- Social reform movements:
 - He **led a reform movement in Kerala**, **rejected casteism**, and **promoted new values** of spiritual freedom and social equality.

- He stressed the need for the **spiritual and social upliftment of the downtrodden** by their own efforts through the establishment of temples and educational institutions.
- In the process, he **denounced the superstitions** that clouded the fundamental Hindu cultural convention of caste.
- He preached the '**oneness**' of humanity, crossing the boundaries of caste and creed.
- In 1888, he **installed an idol of siva at Aravippuram in Kerala** in his effort to show that the consecration of god's image was **not a monopoly** of the brahmins. This is popularly known as **Aravippuram movement**.
- In one temple he consecrated at **Kalavancode**, he **kept mirrors instead of idols**. This symbolised his message that the divine was within each individual.
- He also founded an **Advaita Ashram in Kalady**.
- He also lent his **support to the Vaikom Satyagraha** which was aimed at temple entry in Travancore for the lower castes. Mahatma Gandhi met Guru during this time.
- Important literary works → He contributed many important **literary works**, the most influential being **Atmopadesa Satakam** which he **composed in 1897**.

17. Time capsule at Aligarh Muslim University

Why in News?

- A time capsule containing the history and achievements of Aligarh Muslim University (AMU) will be buried on 26 January.

About

- The time capsule will **contain documents** showcasing the **history of the varsity** and **its journey over the past 100 years**.
- The capsule, which weighs around **1.5 tonne**, will contain documents **showcasing the rich history of the AMU**.
- It will also have the **biography of founder Sir Syed Ahmed** and **his addresses**.
- The papers which will be kept in the capsule will be **preserved** by making them **acid-free** and **with addition of some chemicals**.

About the Aligarh Muslim University

- It grew out of the work of **Sir Syed Ahmad Khan** and **the Aligarh Movement**.
- It was founded as the **Madrasatul Uloom in 1875** in Aligarh and evolved into the **Mohammedan Anglo-Oriental College** in **1877**.
- The objective was to build a college in **tune with the British education system** but without compromising its Islamic values.
- In 1920, the college was raised to the level of a **university by an Act of Parliament**.

18. Govind Ballabh Pant

Why in News?

- A statue of freedom fighter Govind Ballabh Pant that was removed from the Parliament premises recently would be unveiled at its new location.

About

- He was born on **10 September 1887** in **Shyahi Devi hills in Almora**.
- He established an organisation called **Prem Sabha in Kashipur**, that started working towards several reforms and also saved a school from shutting down due to non-payment of taxes to the British government.
- He **protested** the **zamindari system to passing the Hindu Code Bill** (in Uttar Pradesh), which made monogamy compulsory for Hindu men and gave Hindu women the right to divorce and inherit ancestral property
- He was a **key player** in the **drafting of the Constitution**
- He also worked to **protect farmers from excessive rents** levied by the British government.
- He **encouraged many cottage industries** in the country and raised his voice against the coolie-beggar law, which forced porters to transport the heavy luggage of British officials without any payment.
- He was the **first chief minister** of **Uttar Pradesh** in Independent India.
- He served as India's home minister from **1955 to 1961**. It was during his tenure that states were **reorganised on linguistic lines**.
- In **1957**, Pant was awarded **India's highest civilian award, the Bharat Ratna**.

19. Lala Lajpat Rai

Why in News?

- The Prime Minister of India paid tributes to Lala Lajpat Rai on his Jayanti.

About

- He was born in Punjab on **January 28 1865**, to Munshi Radha Krishna Azad and Gulab Devi.
- He was influenced by the **Hindu reformist movement** of **Swami Dayanand Saraswati** and became a member of existing Arya Samaj Lahore.

Roles and Contributions

- He played an instrumental role in founding the present-day **Punjab National Bank (PNB)** in **1894**.
- In 1897, he **founded the Hindu Orphan Relief Movement** to keep **Christian** missions from securing custody of orphans.
- He had also helped establish the **Dayanand Anglo-Vedic school system**, popularly known as DAV schools.
- Lala Lajpat Rai along with Bal Gangadhar Tilak and Bipin Chandra Pal formed the trinity of militant leaders known as '**Lal-Bal-Pal**'.
- He was elected as the **President** of the **Indian National Congress** in **1920**.
- He also founded the '**Servants of the People Society**' which was a non-profit welfare organization at Lahore in 1921.
- In 1928 he introduced the legislative assembly resolution for the boycott of the British Simon Commission on **constitutional reform**.
- Lajpat Rai's most important writings include →
 - **The Story of My Deportation** (1908)
 - **Arya Samaj** (1915)
 - **The United States of America: A Hindu's Impression** (1916)
 - **England's Debt to India: A Historical Narrative of Britain's Fiscal Policy in India** (1917)

- **Unhappy India** (1928).

20. Traditional handicraft toys

Why in News?

- Recently, the Department for Promotion of Industry and Internal Trade (DPIIT), Ministry of Commerce and Industry has EXEMPTED HANDICRAFT and Geographical Indications (GI) TOYS from QUALITY CONTROL ORDER to fulfill the vision of making India a global manufacturing hub for sale & exports of toys.

About India's traditional toys

- India is an old playground of a myriad of toys made from a variety of materials like wood, polymer, cloth, fibre, wood pulp, rubber and metal.
- Historically, Indian toys date **back to 5000 years**. The excavated toys and dolls found in **Harappa and Mohenjo-Daro** included small **carts, dancing woman**, etc.
- Some of the traditional toy manufacturing hubs are Channapatna in Karnataka, Chitrakoot in Uttar Pradesh, Kondapalli in Andhra Pradesh and Budni-Rewa in Madhya Pradesh.
- Traditional toy sector is **eco-friendly** (they are made up of natural products like clay papers, wood, vegetable colours etc.) Under the '**Vocal for Local**' slogan and the 'Aatmanirbhar Bharat' campaign, the government is exploring opportunities to tap the potential of the sector.

List of traditional handicraft toys:

- **Channapatna toy Karnataka Mysore** ruler Tipu Sultan, impressed by a lacquer-coated wooden artifact he received as a gift from Persia in the 18th century, invited Persian artisans to India to train the people in his realm.
- **Kinnal toys Karnataka** These are wood toys depicting mostly Hindu gods and goddesses.
- **Kondapalli toys Andhra Pradesh** Also Known as **Bommala Koluvu (Dasara dolls)** are made in Kondapalli of Krishna district, Andhra Pradesh. The style of these toys is a mix of Islamic and Rajasthani art, popular for their realistic expressions.
- **Etikoppaka Toys Andhra Pradesh Etikoppaka** Toys are made of soft wood and lacquer color. Coloured with natural dyes derived from seeds, lacquer, roots and leaves. The way of toy making is also known as turned wood lacquer craft.
- **Nirmal toys Telangana** The style of Nirmal toys of Telangana is a beautiful assimilation **Ajanta floral and Mughal miniature**.
- **Thanjavur Golu Dolls Tamil Nadu** Thanjavur Dancing Dolls, traditionally known as Thanjavur Thalayiatti Bommai, are a part of an eclectic heritage of beautiful handicrafts from Tanjore.
- **Laiphadibi Manipur Laiphadibi** or doll is a feminine image of god made from shabby clothes. From being a play thing to being an integral part of rituals, these dolls, popularly called laidhibi, are treated as living spirits.
- **Asharikandi Terracotta** Toys Assam These are similar to terracotta of Harappan civilization. They are made in Asharikandi (Madaikhal) craft village, Assam which is the single largest cluster where both Terracotta and Pottery crafts are found and practiced in traditional way.

Other traditional toys:

- Odisha's **Sambalpur toys** and paper mache and stone toys;
- Bihar's **Kanyaputri Dolls** and Sikki work;

- Uttar Pradesh's Wooden toys of Varanasi;
- West Bengal's **Natungram Dolls**.
- Tamil Nadu's **Choppu saman**
- Gujarat's **Thigda dhingla**
- Punjab's **chankana** (a toy with a whistle), **ghuggu** (rattle box for babies), **lattoo** (spinning top), **handwai** (kitchen sets)
- Maharashtra's **Bhatukali miniature** kitchen sets and Sawantwadi toys.

Miscellaneous

1. Global Pravasi Rishta Portal

Why in News?

- Recently, the Minister of State for External Affairs has launched the Global Pravasi Rishta portal and mobile App.

About

- The Global Pravasi Rishta Portal aims to **connect with Indian Diaspora across the world**.
- The portal will act as a **dynamic communication platform** between the Pravasis of India.
- The **mobile app** will be **used by the diaspora and the Indian nationals**, while the **portal web interface** will be **used by the missions**.
- The **portal** is created to enable the **registration of Indian diaspora** members i.e. NRIs, PIOs and the OCIs.
- The **portal** is going to facilitate the **Indian government to connect with the overseas Indian community**.
- It will **facilitate NRIs, OCIs and PIOs community** by connecting them to various new and existing government schemes benefiting them in various areas of interest.
- The Rishta portal will enable communication with the diaspora on a **real-time basis** and will have the **ability to issue emergency alerts and advisories**.

2. National Metrology Conclave

Why in News?

- Prime Minister Narendra Modi will deliver the inaugural address at the National Metrology Conclave on January 4, 2021 through video conferencing.

About

- Organised by → The National Metrology Conclave 2020 is being organised by **the Council of Scientific and Industrial Research-National Physical Laboratory (CSIR-NPL)**, New Delhi.
- Theme → The theme of the conclave is '**Metrology for the Inclusive Growth of the Nation**'.
- He will also dedicate **National Atomic Timescale** and **Bhartiya Nirdeshak Dravya** to the nation and lay the foundation stone of the **National Environmental Standards Laboratory**.
- The National Atomic Timescale** generates **Indian Standard Time** with an **accuracy of 2.8 nanosecond**.
- Bhartiya Nirdeshak Dravya** is **supporting testing and calibration of laboratories** for quality assurance, at par with international standards.
- The National Environmental Standards Laboratory** will aid self-reliance in the certification of ambient air and industrial emission monitoring equipment.

3. Tampon Tax Abolition

Why in News?

- The United Kingdom abolished 5% Value Added Tax (VAT) on women's sanitary products, often referred to as the tampon tax.

About

- It now **joins the list of countries** which have already eliminated this tax, which includes **India, Australia** and **Canada**.
- Until December 31, the **UK was a part of the EU**, where period products like sanitary napkins and tampons are **classified as non-essential**, and member states are **required to levy a 5% tax** on them.
- As the UK is **out of the EU**, it is **not bound** by its directives.
- In the **Republic of Ireland**, however, there is **no VAT** on such products despite the country being an EU member.
- This is because Ireland's tax rates were in place before the EU imposed its own tax laws.
- Also Remember → In **2020**, **Scotland** became the **first country in the world** to make **period products free of cost** to those who need them.

4. The Korea Superconducting Tokamak Advanced Research

Why in News?

- Korea Superconducting Tokamak Advanced Research (KSTAR) reached an ion temperature of over 100 million degrees Celsius for 20 seconds.

About

- It is **South Korea's magnetic fusion device**.
- The KSTAR has often been referred to as **South Korea's "artificial sun"**.
- It has recently set a new world record for **fusion** by reaching an **ion temperature of over 100 million degrees Celsius for 20 seconds**.
- The magnitude of the experiment can be understood from the fact that the **Sun burns at 15 million degrees Celsius**.
- By comparison, the KSTAR was able to achieve a temperature of **over 6.6 times more than that of Sun's**.

5. Digital media literacy programme

Why in News?

- The Kerala Government announced a digital media literacy programme called 'Satyameva Jayate' (Truth alone triumphs).

About

- The programme would be **taught at schools and colleges**, which would be encouraged to develop curriculum on **digital media literacy**.
- The Satyameva Jayate programme would cover five points –
 1. What is wrong information?
 2. Why they are spreading fast?
 3. What precautions have to be adopted while using the content of social media?
 4. How those who spread fake news make profit?
 5. What steps can be initiated by citizens?

- **Smartphone and internet penetration** is **much higher in Kerala** than any other state. Large number of people is now depending upon social media for news updates.
- Hence, people should **understand the laws and benchmarks** which control social media and the internet. It is **important to distinguish** between **truth and untruth**.

📌 **Satyameva Jayate**

- Satyameva Jayate (Truth alone triumphs) is a part of a mantra from the Hindu scripture **Mundaka Upanishad**.
- Following the independence of India, it was adopted as the **national motto of India** on **26th January 1950**.
- It is inscribed in the **Devanagari script** at the base of the **Lion Capital of Ashoka** and forms an **integral part of the Indian national emblem**.
- The emblem and the words "**Satyameva Jayate**" are inscribed on one side of **all Indian currency** and **national documents**.

6. Kamdhenu Gau-Vigyan Prachar-Prasar Exam

Why in News?

- Rastriya Kamdhenu Aayog has announced Kamdhenu Gau-Vigyan Prachar-Prasar Exam.

About

- Purpose → The exam has been initiated for **raising mass awareness** about **Indigenous cows** among young students and all citizens.
- It will also help **make study materials** about **cow science available**.
- It will be conducted in **four categories**, primary, secondary, college and general public levels.
- The exam will be in **Hindi, English** and **12 regional languages**.
- There will be **no fee** for taking the exam.
- Kamdhenu Gau-**VigyanPrachar**-Prasar Exam will be an **online exam** to be conducted throughout the country on **25th February, 2021**.
- The Exam will be an **annual event** of the Rashtriya Kamdhenu Aayog in future.

📌 **Rashtriya Kamdhenu Aayog**

- Constituted in **2019**, the Aayog is a **high powered permanent apex advisory body** with the mandate to help the Central Government to develop appropriate programmes **for conservation, sustainable development** and **genetic upgradation of indigenous breeds of cows**.
- It comes under the **Ministry of Fisheries, Animal Husbandry and Dairying**.
- Rashtriya Kamdhenu Aayog will function as an **integral part of Rashtriya Gokul Mission**.

7. Pravasi Bharatiya Divas

Why in News?

- The 16th Pravasi Bharatiya Divas Convention, is being organized on 9th January 2021, despite the ongoing Covid pandemic.

About

- When did it start? → The first time it was observed in **2003**, however, and it was **made a biennial event from 2015**.
- Why is the Pravasi Bhartiya Diwas important? → It commemorates the **return of Mahatma Gandhi from South Africa**. He returned on **9th January 1915** to India.
- Pravasi Bharatiya Divas (PBD) is celebrated on **9th January** to **mark the contribution of Overseas Indian community** in the development of India.
- PBD Convention is the flagship event of the **Ministry of External Affairs** and provides an **important platform** to **engage and connect with the overseas Indians**.
- The theme of 16th PBD Convention 2021 → **“Contributing to Aatmanirbhar Bharat”**.
- Significance → These conventions provide a platform to the overseas Indian community to **engage with the government and people of the land of their ancestors** for mutually beneficial activities.

8. Eri silk

Why in News?

- Assam government will provide khadi shirt, eri shawl and eri stole to Grade IV employees in a phased manner, in a move to pay tributes to Mahatma Gandhi and his movement for Khadi

About

- Eri silk comes from the **caterpillar of Samia ricini, found in northeast India** and some parts of China, Japan.
- The name "eri" is derived from the Assamese word "era", which means "**castor**", as the **silkworm feeds on castor plants**.
- Eri silk is also known as **endi** or **errandi in India**.
- The woolly white silk is often referred to as the **fabric of peace** when it is **processed without killing the silkworm**. This process results in a silk called **Ahimsa silk**. Moths leave the cocoon and then the cocoons are harvested to be spun.
- The eri silkworm is the only **completely domesticated silkworm other than Bombyx mori**.

👉 Also Remember

- India has the distinction of being the only country in the world producing **all Five major types of silk** broadly divided into two categories:
- **Mulberry silk** → Mainly in Karnataka.
- **Non-mulberry Silk** → **Temperate tussar silk** in Maharashtra, WB, Odisha, Jharkhand, Andhra Pradesh; **Tropical tussar silk** in sub-himalayan belt (Manipur, Assam, Meghalaya, etc); **Muga Silk** in Assam and **Eri silk** in Assam, Odisha, Bihar.

9. Khadi Prakritik Paint

Why in News?

- Union Minister for MSME Sh. Nitin Gadkari will be launching an innovative new paint “Khadi Prakritik Paint”.

About

- What is it? → It is a first-of-its-kind product, with **anti-fungal** and **anti-bacterial properties**.
- Features →
 - It is an **eco-friendly** and **non-toxic paint**.
 - It is based on **cow dung** as its main ingredient.
 - The paint is **cost-effective** and **odorless**.
- Developed by → **Khadi and Village Industries Commission** (KVIC).
- It has been **certified** by **Bureau of Indian Standards** (BIS).
- Benefits →
 - The paint is **free from heavy metals** like lead, mercury, chromium, arsenic, cadmium and others.
 - It will be a **boost to local manufacturing** and will **create sustainable local employment** through technology transfer.

10. Cherry Blossom Mao Festival

Why in News?

- In Manipur, this Festival was held at Mao area of Senapati district marking the beginning of pink season in the district.

About

- The Mao area is known for **Cherry Blossom**, a plant which is popularly known as **Sakura in Japan**.
- Manipur government started organizing the festival **from 2017 onward**.
- The festival featured the **picturesque landscape of Mao town** adorned with Cherry Blossom flowers.

11. Henley Passport Index 2021

Why in News?

- Henley & Partners has released the Henley Passport Index 2021.

About

- The Henley Passport Index is the original **ranking of all the world's passports** according to the number of destinations their holders can access without a prior visa.
- History → It was started in **2006** as **Henley & Partners Visa Restrictions Index** (HVRI) and was modified and renamed in January 2018.
- Based on → The ranking is based on **exclusive data from the International Air Transport Association** (IATA) which maintains the world's largest and most accurate database of travel information and research by the Henley & Partners Research Department.

📌 Key Takeaways

- Topped by → **Japan** continues to hold the **number one position** on the index, with passport holders able to **access 191 destinations** around the world visa-free.
- India → **India ranks 85th** in the index with a visa-free score of 58.

- Neighboring countries → **Pakistan (rank 107)** and **Nepal (rank 104)** continue to be in the '**worst passports to hold**' category with Pakistan having a visa-free score of 32 countries and Nepal having a score of 38 destinations.
- Worst Passports → **Syria, Iraq** and **Afghanistan** continue to be the countries with the **worst passports to hold** with a passport score of 29, 28 and 26 respectively.

12. National Innovation Portal

Why in News?

- The Union Minister for Science & Technology dedicated an Innovation Portal, developed by National Innovation Foundation (NIF) – India to the nation.

About

- The National Innovation Portal (NIP) is **currently home to about 1.15 lakh innovations** scouted from common people of the country, **covering Engineering, Agriculture, Veterinary and Human Health**.
- In terms of domain areas, presently the innovations **cover Energy, mechanical, automobile, electrical, electronics, household, nutraceuticals** etc.

About National Innovation Foundation (NIF) – India

- It is an **autonomous body** of the **Department of Science and Technology** (DST), Government of India.
- Set up in **February 2000** at **Ahmedabad, Gujarat** to provide institutional support for scouting, spawning, sustaining and scaling up the grassroots innovations across the country.
- It is India's national initiative to **strengthen the grassroots technological innovations** and **outstanding traditional knowledge**.
- Its mission is to **help India become a creative and knowledge-based society** by expanding policy and institutional space for grassroots technological innovators.

13. Global Risks Report, 2021

Why in News?

- According to the Global Risks Report, 2021 released virtually by World Economic Forum (WEF) recently, infectious diseases topped the global risks chart, displacing climate change.

About

- Report findings are based on the **Global Risks Perception Survey** (GRPS). GRPS was undertaken by **more than 650 members** of leadership communities of WEF (World Economic Forum).
- Aim → To **highlight the risks and consequences of widening inequalities** and **increasing societal fragmentation**, due to the COVID-19 pandemic, in 2021 and over the next decade.

Key Takeaways

- Top Risk by Impact → The risk posed by **infectious diseases** has been **ranked as no. 1** on the list of risks, while in 2020 was listed at 10th place.

- Impact of Covid-19 → The **immediate human and economic cost of COVID-19** is **huge**. It threatens to scale back years of progress on reducing global poverty and inequality. It will also **damage social cohesion and global cooperation**.
- Widening digital gaps → **Digitalization** which was **accelerated by the pandemic** is **widening the digital gap** between individuals and across countries. Thereby it is aggravating existing inequalities, polarization, and regulatory uncertainties.
- Climate concerns → Despite the impact of COVID-19, **climate-related matters make up the bulk of this year's risk list**. The report has described these threats as an existential threat to humanity.

👉 World Economic Forum

- It was established in **1971** as a **not-for-profit foundation** and is headquartered in Geneva, Switzerland.
- It is the International Organization for **Public-Private Cooperation**.
- It engages the **foremost political, business, cultural** and **other leaders of society to shape global, regional** and **industry agendas**.

14. Regulatory Compliance Portal

Why in News?

- Recently, the Department for Promotion of Industry and Internal Trade (DPIIT) has launched a regulatory compliance portal that will act as a bridge for citizens, industries and the government to minimise burdensome compliances.

About

- Aim → Portal is aimed at **minimizing the regulatory burden on businesses and citizens**. For that, it will act as a **bridge** between citizens, industries and the Government.
- It will also act as a **first-of-its-kind central online repository** of all Central and State-level compliances.
- Key Features →
 - All Central Ministries and States/UTs will **rationalize and simplify** their **regulatory processes** and **remove burdensome compliances**
 - All such changes would be **captured and updated** on the Regulatory Compliance Portal.
 - Industry stakeholders would also be able to **submit compliances and proposed recommendations**. This will be assessed by concerned Government authority and suitable action would be undertaken to minimize the regulatory compliance burden.
- Nodal Department → **DPIIT** will act as the **nodal department** for coordinating the exercise of minimizing regulatory compliance burden for citizens and businesses.

15. Shaheen-III Missile

Why in News?

- Recently, Pakistan has successfully test-fired the Shaheen-III missile.

About

- It is a **nuclear-capable surface-to-surface ballistic missile** which can strike targets up to 2,750 km.

- The launch of the missile was aimed at **revalidating various design and technical parameters** of the weapon system.
- Other Recent Developments → China had recently asked India to “objectively” view the **Eagle-IX** (or **Shaheen-IX**) **military exercise taking place between the Chinese and Pakistani air forces**, amid increasing tensions with India.

16. National Road Safety Council

Why in News?

- Union Minister for Road Transport & Highways Shri Nitin Gadkari had addressed the 19th Meeting of National Road Safety Council (NRSC) and called for reducing road accidents by half by the year 2025.

About

- It is an **advisory body** which was established under **section 215 of the Motor Vehicles Act, 1988**.
- Its main objective is to **improve road safety aspects** in road transport sector.
- The Council is chaired by the **Union Minister of Road Transport and Highways**.

17. Green Bonds

Why in News?

- According to the Reserve Bank of India (RBI), the cost of issuing green bonds in India has generally remained higher compared to other bonds. It is largely due to asymmetric information.

About

- It is a **debt instrument** just like any other normal bond, **issued by an issuer for raising funds**.
- The only difference is that these instruments are designed specifically for funds to **support specific projects benefitting the environment**.
- Green bonds typically come with **tax incentives** to enhance their attractiveness to investors.
- The **World Bank** issued the **first official green bond in 2009**.

Green Bonds in India

- **Yes Bank** was the first Indian Bank to **issue Green Infrastructure Bonds** (GIBs) in India in **2015**.
- SEBI has allocated the following **eight categories** with the tag of green projects:
 - a) **renewable energy** b) **clean transportation** c) **sustainable water management** d) **climate change** e) **energy efficiency** f) **sustainable waste management** and g) **land use** and h) **biodiversity conservation**.

18. MGIEP

Why in News?

- Mahatma Gandhi Institute of Education for Peace and Sustainable Development (MGIEP) in news.

About

- MGIEP is a United Nations Educational, Scientific and Cultural Organisation's (**UNESCO's**) **category 1 Research Institute**.

- Establish → It was **established by UNESCO** in cooperation with the Government of India in 2012.
- Working → It will support member governments, **provide advocacy**, **commission research** and **enhance capacity building**.
 - It focuses on **mobilising the world's youth** to put into practice in their own communities the UN's Sustainable Development Goals.
 - It will act as a clearing house for **Education for Sustainable Development (ESD)** and **Peace Education**.
- Both **MGIEP and UNESCO** will **play a major role** in the implementation of the National Educational Policy - 2020.

19. Project Long Ops

Why in News?

- Scientists from the United Kingdom and Japan have come together to develop new, safer technologies to dismantle old nuclear facilities like the Fukushima Daiichi reactors, which were severely damaged by an earthquake and a tsunami in March 2011.

About

- The project is to use **long-reach robotic arms** and hence is called "**LongOps Project**".
- The project will **reduce the risks to human health** and will **speed up decommissioning** of nuclear reactors that are non-operational.
- The LongOps project is to be implemented at a **cost of 12 million Euros** (Rs 120 crores).
- It will focus on **fast decommissioning of nuclear sites**.
- Apart from dismantling nuclear fission sites, the project will also **focus** on **automating parts of nuclear fusion power generation process**.
- The project will also help to **improve and dismantle nuclear fusion facilities** such as the **Joint European Torus**.
 - Joint European Torus is a **nuclear fusion experiment** located in **Culham Centre for Fusion Energy, UK**.
 - It was the first reactor to run on the production fuel of **50-50 mix of tritium and deuterium**. It was shut down in 2009 to adopt concepts used in ITER project.

20. Indian Telecom Services and Performance Index

Why in News?

- Recently, the Telecom Regulatory Authority of India (TRAI) has released the "Indian Telecom Services Performance Indicator Report".

About

- **Parameters** used for calculating the index are as follows
 - Telecom subscribers (Wireless + Wireline)
 - Internet/Broadband Subscribers
 - Broad casting & Cable Services
 - Revenue and Usage Parameters

- Wireless Data usage

📌 Highlights from the Report (Quarter July – Sep 2020):

- The number of telephone subscribers in India **increased by 0.70%** over the previous quarter.
- This reflects a **year-on-year decline of 2.22%** over the previous year in the same quarter.
- The total number of internet subscribers also **registered an increase in the quarter, showing a rise of 3.66%**.
- While the **broadband subscriber base increased in the quarter**, the narrowband subscriber base declined.
- Since its introduction in the **year 2003, DTH (direct-to-home) service** has **displayed phenomenal growth**.

21. Global Firepower Index 2021

Why in News?

- Global Firepower has published the Global Firepower Index (GFP) /Military Strength Ranking 2021.

About

- It ranks each **nation's potential war-making capability** across land, sea and air with conventional weapons.
- Factors → The index is calculated using **fifty individual factors** such as geography, logistical capability, manpower, land forces, airpower, natural resources, naval forces and financials.

📌 Key Takeaways

- The **United States military** was ranked the **most powerful armed force** in the world closely followed by Russia and China.
- **India** was ranked **fourth in the Index** with 542 combat aircraft, 17 submarines, 4,730 tanks, and 37 attack helicopters.
- **Pakistan** was **ranked the tenth** most powerful country in the Index. It has surpassed Israel, Indonesia, Iran, and Canada in terms of military power.

22. The Great Reset

Why in News?

- What is The Great Reset and why is it controversial – In News.

About

- The Great Reset is an initiative by the **World Economic Forum**.
- It has been **conceptualised by** the founder and executive chairman of the WEF, **Klaus Schwab**, and has evolved over the last few years.
- It is based on the assessment that the **world economy is in deep trouble**.
- The current situation has been made **worse by factors**, like the **effects of the pandemic on global society**, the **unfolding technological revolution**, and the **consequences of climate change**.
- The world must act **jointly to revamp all aspects of our societies** and **economies**, from education to social contracts and working conditions.

- Every country must participate and every industry must be **transformed**.
- In short, there is a need for '**Great Reset**' of **capitalism**.

23. Indian Telegraph Act, 1885

Why in News?

- Following violent protests, the Union Home Ministry has issued orders to suspend Internet in some areas in Delhi under the Temporary Suspension of Telecom Services (Public Emergency or Public Safety Rules 2017) of the Indian Telegraph Act, 1885.

About

- It governs the **use of wired and wireless telegraphy, telephones, teletype, radio communications and digital data communications**.
- It gives the Government of India **exclusive jurisdiction** and privileges for establishing, maintaining, operating, licensing and **oversight of all forms of wired and wireless communications** within Indian territory.
- It also authorizes government law enforcement agencies to **monitor/intercept communications** and **tap phone lines** under conditions defined within the Indian Constitution.
- **Section 5(2)** of the act allows central and state governments to prevent the transmission of messaging during a "**public emergency or in the interest of public safety**", or "**in the interests of the sovereignty and integrity of India, the security of the state**".

24. Padma Awards

Why in News?

- 7 personalities have been awarded the Padma Vibhushan, 10 named for the Padma Bhushan and 102 named for Padma Shri.

About

- History → The Padma Awards are **announced annually** on the **Republic Day** (26th January). Instituted in 1954, it is one of the **highest civilian honours of India**.
- Objective → The Award seeks to recognize achievements in all **fields of activities** or **disciplines** where an **element of public service is involved**.
- Selection Process →
 - The Awards are conferred on the recommendations made by the **Padma Awards Committee**, which is constituted by the Prime Minister every year.
 - The awards are presented by the **President of India** usually in the month of March/April every year.
- The Awards are given in three categories →
 - **Padma Vibhushan** (for exceptional and distinguished service).
 - **Padma Bhushan** (distinguished service of higher order).
 - **Padma Shri** (distinguished service).

Also Remember

Bharat Ratna

- Bharat Ratna is the **highest civilian award** of the country.
- It is awarded in recognition of **exceptional service/performance of the highest order** in any **field of human endeavour**.
- It is treated on a different footing from Padma Award. The recommendations for Bharat Ratna are **made by the Prime Minister to the President of India**.
- The number of Bharat Ratna Awards is restricted to a **maximum of three in a particular year**.

25. India Justice Report 2020

Why in News?

- India Justice Report 2020 has been released by TATA Trusts.

About

- Prepared by → The report has been prepared by **Tata Trusts** along with the **Centre for Social Justice, Common Cause, CHRI, DAKSH** and, **TISS-Prayas** and, **Vidhi Centre for Legal Policy**.
- The Report assesses the **capacity of various states to deliver justice**.
- Parameters → The report analyzed the performance of 18 large and mid-sized states and eight smaller states. It is based on **four pillars** of the justice delivery system: 1) **judiciary**, 2) **police**, 3) **prisons** 4) **legal aid**.
- It also **analysed expenditure, vacancies, representation of women** and **members of SC, ST, and Other Backward Classes** of these states.

👉 Key Findings

- Overall Ranking of States →
 - **Maharashtra** has retained the **top spot** on delivery of justice to people among large and mid-sized states **followed by Tamil Nadu, Telangana, Punjab, and Kerala**.
 - Among the **small states** (with a population of less than 1 crore), **Tripura** has **topped** the **list followed by Sikkim**.
- Women Ratio in Police Force → **Bihar leads** the list of **25 states** for employing most women in its police force which is 25.3%.
- Women Ratio in Judiciary → Overall, **only 29% judges** in **High Courts** across the country are women, but **no state except Sikkim has over 20% women judges**.

26. Kala Utsav 2020

Why in News?

- Recently, Kala Utsav 2020 - an annual function to promote arts in education, was organised by the Ministry of Education.

About

- Background → Kala Utsav National Competition was launched in **2015**.
- Objective → To **promote arts in education by nurturing** and show casing the artistic talents of school students. Children with special needs too will have the **opportunity to display their talents**.

- Agencies involved → Kala Utsav is an initiative of the **Department of School Education and Literacy** of the Ministry of Human Resource Development (**HRD**).
- **Kala Utsav 2020** was launched online on **10 January 2021** through a **digital platform**. The Indigenous Toys and Games segment was introduced in Kala Utsav 2020.

Other Initiatives Taken for Promoting Arts:

- **Kala Sanskriti Vikas Yojana** (Ministry of Culture).
- **Scheme for Safeguarding the Intangible Cultural Heritage** (Ministry of Culture).

27. Merger of four media with (NFDC)

Why in News?

- Recently cabinet approves merger of four media units with national film development corporation (NFDC).

About

- NFDC is a **Central Public Sector Undertaking**, incorporated in the year **1975** with the primary object of planning and promoting an organized, Film Industry.

Other Merged film and media units are:

- **Films Division**, established in **1948**, was created primarily to **produce documentaries and news magazines** as publicity for government programmes and to keep a cinematic record of Indian history.
- **Children's Film Society was founded in 1955** with the specific objective of providing children and young people **value-based entertainment** through the medium of films.
- **National Film Archives of India** was established in **1964** with the primary objective of acquiring and preserving Indian cinematic heritage.
- **Directorate of Film Festivals** was set up in **1973** to promote Indian films and cultural exchange
-

28. Monpa Handmade Paper

Why in News?

- Recently, the Monpa Handmade Paper of Arunachal Pradesh has been revived with the committed efforts of Khadi and Village Industries Commission (KVIC).

About

- Monpa is a **fine-textured handmade paper**, which is called **Mon Shugu** in the local dialect, is integral to the vibrant culture of the local Monpa tribe in Tawang.
- Great historic and religious significance as it is the paper used for **writing Buddhist scriptures and hymns** in monasteries.
- Monpas used to **sell these papers to countries like Tibet, Bhutan, Thailand and Japan** as no paper making industry existed in these countries at that time.
- However, the local industry gradually began declining and the indigenous **handmade paper was taken over by inferior Chinese paper**.
- The Monpa handmade paper, will be made from the **bark of a local tree called Shugu Sheng**, which has **medicinal values** too.

Quick revision (True/False)



1	Akash Missile System -> It is a surface-to-surface missile with a range of 25 Kms.	
2	Global Housing Technology Challenge-India -> Launched by Ministry of Housing & Urban Affairs.	
3	SAHAYAK-NG -> Indigenous cryogenic engine designed by ISRO.	
4	Ruthenium 106 -> used in medicine for cancer radiation therapy, especially for eye and skin tumours.	
5	Laser Dazzlers -> is a portable, shoulder operated and ruggedized for military use in adverse environmental conditions.	
6	Paradip Port -> Odisha.	
7	Current Account surplus -> it has become uncompetitive, and investors are not willing to invest there.	
8	Global Alliance for Vaccines and Immunisation -> is a public-private global health partnership with the goal of increasing access to immunisation in poor countries.	
9	Scheme for Remission of Duties and Taxes on Exported Products (RoDTEP) -> for the Exporters to make Indian products cost-competitive and create a level playing field for them in the Global Market.	
10	International Organization of Securities Commissions (IOSCO) -> It is intergovernmental organization that works closely with G7 nations.	
11	India's first Lithium refinery will be set up in -> Assam.	
12	The Battle of Bhima-Koregaon (1818) -> fought in Bhima Koregaon between the Peshwa forces and the British on January 1, 1818.	
13	Sukanya Samridhi Yojana -> is small deposit scheme for girl child launched under "Beti Bachao, Beti Padhao" Scheme.	
14	Covaxin -> Developed by Bharat Biotech and it is India's first indigenous vaccine against Covid-19.	
15	Nair Service Society -> Founded by Raja Ram Mohan Ray.	
16	Strait of Gibraltar -> linking the Arctic Ocean with the Bering Sea.	
17	Sagarmala Seaplane Services (SSPS) -> The project aims to connect Indian states with its neighbouring countries through seaplane services.	
18	National Police K-9 Journal -> It is released annually by Union Home Affairs Ministry.	
19	Changalikodan Nendran Banana -> Kerala.	
20	International Atomic Energy Agency -> set up in 1957 to promote safe, secure and peaceful use of nuclear technologies.	
21	Deepor Beel -> is a permanent freshwater lake. in Kamrup district of Assam.	

22	KSTAR is a magnetic fusion device belongs to -> France.	
23	Bird flu -> It will not infect humans, though human-to-human transmission is common.	
24	Yakshagana -> is a traditional theatre form of Uttar Pradesh.	
25	TRIFOOD Parks -> joint initiative of TRIFED and the Ministry of Food Processing.	
26	Asian Waterbird Census -> In India, the AWC is annually coordinated by the Bombay Natural history Society (BNHS) and Wetlands International.	
27	Grand Renaissance Dam is located -> Mekong River, China.	
28	Gulf Cooperation Council -> alliance of Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and Iran.	
29	Rashtriya Kamdhenu Aayog -> Constituted in 2019. under Ministry of Agriculture & Farmers' Welfare.	
30	New Anubhava Mantapa -> embodies the principles Basaveshwara's philosophy.	
31	India Report on Longitudinal Ageing Study of India (LASI) -> undertaken by the National Programme for Health Care of Elderly, Ministry of Health & Family Welfare.	
32	Caracal -> It is a medium size wild cat found in some parts of Assam and Arunachal Pradesh.	
33	Magneto-Telluric (MT) method -> It will ascertain the presence of fluid, which generally enhances the possibility of triggering of earthquakes.	
34	Naval Innovation and Indigenisation Organisation -> is a three-tiered organisation - Naval Technology Acceleration Council (N-TAC); Working group; Technology Development Acceleration Cell (TDAC).	
35	Food and Agriculture Organization -> specialized agency of the United Nations. HQ: Paris, France.	
36	Bureau of Indian Standards -> is the National Standard Body of India working under the aegis of Ministry of Commerce and Industry.	
37	Pravasi Bharatiya Divas -> commemorates the return of Mahatma Gandhi from South Africa.	
38	G Kishan Reddy committee -> for the development of Industries in the UT of Jammu & Kashmir.	
39	National Internet Exchange of India (NIXI) -> It is an Internet Service Provider (ISP) and will provide Internet connections or Transit services.	
40	Trade Policy Review Mechanism -> It is an important mechanism under the World Trade Organization's (WTOs) monitoring function.	
41	Vanadium -> It is a high-value metal used in the manufacture of partially hydrogenated oils or Trans fats.	
42	Jagannath Temple -> constructed in the 12th century by King Anatavarman Chodaganga Deva of the Eastern Ganga Dynasty.	

43	Sultanpur National Park -> Haryana. is a bird paradise for bird watchers.	
44	Lake Chad -> located in the Sahelian zone of West-central Africa.	
45	Atal Tinkering Labs -> an initiative of Ministry of Science and Technology.	
46	TROPEX Exercise -> It is a trilateral exercise between India, Singapore and Thailand.	
47	Cherry Blossom Mao Festival -> Mizoram.	
48	LCA Tejas -> replaced the ageing Mig 21 fighter planes.	
49	CollabCAD Software -> developed by Ministry of Earth Sciences. Is Weather Forecast software.	
50	Jayant Kumar Dash committee -> on digital lending — including online platforms and mobile apps.	
51	Lumpy Skin Disease -> is an infectious viral disease of the cattle and bovine animals.	
52	One Planet Summit -> Organized by France in cooperation with the United Nations and the World Bank.	
53	Sulawesi Warty Pig Painting -> dates to at least 45,500 years ago. World's oldest known cave painting found in Indonesia.	
54	9mm Machine Pistol -> jointly developed by DRDO and Indian Army. can fire at a range of 100 metres and is in the class of the Uzi series guns of Israel.	
55	National Innovation Foundation (NIF) – India -> an autonomous body of the Department of Science and Technology (DST).	
56	National Skill Development Corporation -> is a not-for-profit public limited company. Under Ministry of Finance.	
57	Gavi Gangadhareshwara Temple -> located in Bengaluru, Karnataka. built in the 16th century by Kempe Gowda I.	
58	Doppler Weather Radars -> developed by ISRO and manufactured by Bharat Electronics Limited (BEL), Bengaluru.	
59	Grid-connected Rooftop Solar Scheme -> providing 40% subsidy for the first 3 kW and 20% subsidy beyond 3 kW and up to 10 kW.	
60	Jallikattu -> bull-taming sport. Karnataka.	
61	Adaptation Gap Report 2020 -> Released by World Meteorological Organization.	
62	G7 -> formed in 1999. not have a formal constitution or a fixed headquarters.	
66	Harike Wetland -> Uttarakhand.	
67	Petroleum Conservation Research Association (PCRA) -> is a registered society set up under the aegis of the Ministry of New and Renewable Energy.	
68	5G technology -> deliver multi-Gbps peak rates, ultra-high latency.	
69	Western Disturbance -> an extratropical storm originating in the Mediterranean region that brings sudden winter rain to the north-western parts of the Indian sub-continent.	

70	Indian Star Tortoise -> Wild Life Protection Act 1972: Schedule I.	
71	Chabahar Port -> located in southeastern Iran, next to the Gulf of Oman.	
72	Greater Adjutant Stork -> now restricted to a few isolated pockets in Rajasthan and Gujarat in India and PrekToal in Cambodia.	
73	Jiadhal River -> is a northern sub-tributary of the river Brahmaputra originates in the sub-Himalayan Mountains of Arunachal Pradesh.	
74	National Startup Advisory Council -> The term of the Non-official members of the Council shall be for a period of two years.	
75	Question Hour in Indian Parliamentary System -> A starred question requires an oral answer and hence supplementary questions cannot follow.	
76	Dragon fruit -> world's largest producer and exporter of dragon fruit is Vietnam.	
77	MIKE programme -> related with Tiger conservation.	
78	S-400 Triumf Missile -> one of the world's most advanced air defence systems. designed by Russia.	
79	India Innovation Index -> released by NITI Aayog. Karnataka has continued to occupy the top position.	
80	Tripuri Risa -> is one of the three parts of customary Tripuri female attire, the other two being the Rignai and Rikutu.	
81	Exercise Kavach -> It is a joint military exercise between India and Thailand.	
82	Global Risks Report, 2021 -> released by World Economic Forum.	
83	AstroSat -> A communications satellite.	
84	Mahatma Gandhi Institute of Education for Peace and Sustainable Development (MGIEP) -> established by UNESCO in cooperation with the Government of India in 2012.	
85	India Science -> implemented and managed by Prasar Bharati.	
86	Smart Anti Airfield Weapon (SAAW) -> is a 125 Kg class smart weapon, capable of engaging ground enemy airfield assets up to a range of 1000 kms.	
87	Indian Telecom Services and Performance Index -> released by Niti Aayog	
88	Project Long Ops -> The project aimed at manufacturing nuclear powered ships and aircrafts for cargo supply.	
89	Global Firepower Index 2021 -> published by World Economic Forum.	
90	Arctic Council -> India is a member of Arctic Council.	
91	The Great Reset -> initiative by the World Economic Forum. based on the assessment that the world economy is in deep trouble.	
92	Law Commission -> is a Constitutionally mandated body.	
93	UJJAWALA Scheme -> to distribute 50 million LPG connections to women of Below Poverty Line families.	
94	Anaemia -> is a condition in which the number of White blood cells concentration within them is lower than normal.	

95	Wildlife Crime Control Bureau -> Functions Under Biological Diversity Act, 2002.	
96	Kanha Tiger Reserve -> is located in Odisha. Hard Ground Barasingha is found exclusively.	
97	New START treaty -> is a treaty between the USA and China on measures for the further reduction and limitation of strategic offensive arms.	
98	Transparency International -> Intergovernmental organization.	
99	Lala Lajpat Rai -> founded the 'Servants of the People Society'.	
100	India Justice Report 2020 -> released by International Court of Justice.	

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