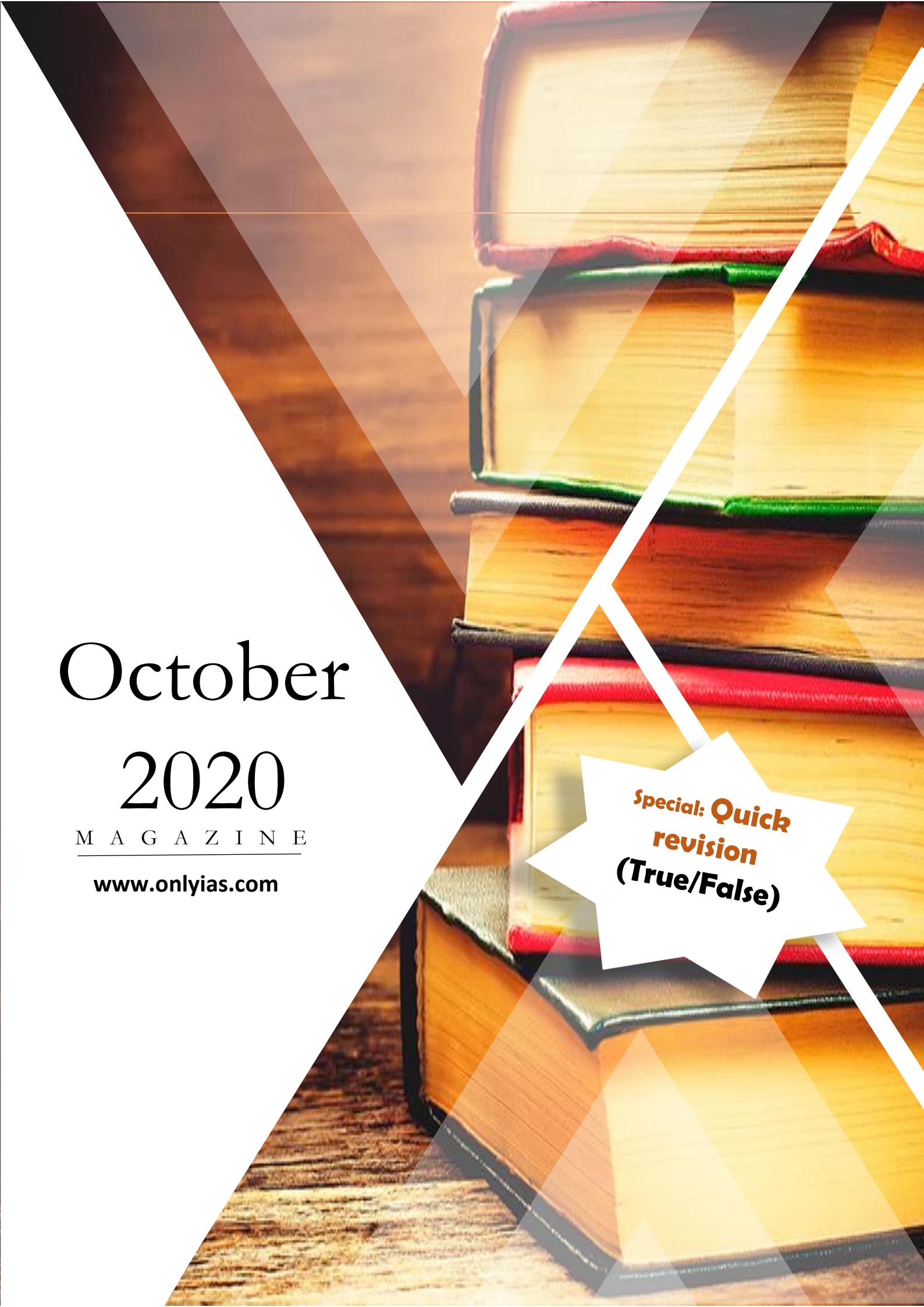

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Special: Quick revision (True/False)

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Economy

1. ESG Funds

Why in News?

- The ESG funds are increasingly becoming popular in the mutual fund industry in India. Recently, ICICI Prudential Mutual Fund has come out with its ESG fund.

About ESG Funds

- What is it? ➔ ESG is a combination of three words i.e. **environment, social and governance**.
- It is a **kind of mutual fund**. Its investing is used synonymously with **sustainable investing or socially responsible investing.**
- Difference between the ESG funds and other funds
    - Typically, a mutual fund looks for a **good stock of a company** that has **potential earnings, management quality, cash flows,** the business it operates in, competition etc.
    - However, while selecting a stock for investment, the **ESG fund shortlists companies** that **score high on environment, social responsibility and corporate governance**, and then looks into financial factors.
    - Therefore, the key difference between the ESG funds and other funds is 'conscience' i.e the ESG fund focuses on companies with **environment-friendly practices, ethical business practices and an employee-friendly record.**
- Regulated by ➔ **Securities and Exchange Board of India** (SEBI).
- The **first ESG mutual fund** was launched by the **State Bank of India** - SBI Magnum Equity ESG Fund.

2. Ambedkar Social Innovation and Incubation Mission

Why in News?

- Union Social Justice Minister launched the Ambedkar Social Innovation and Incubation Mission.

About ASIIM

- Objectives ➔
    - To **promote entrepreneurship among the SC Youth** with special preference to Divyangs.
    - To **support (1,000) innovative ideas till 2024** through a synergetic work with the **Technology Business Incubators** (TBIs) set up by the Department of Science and Technology.
- Implemented By ➔ **Venture Capital Fund for SCs** (VCF-SCs) which was set up in **2015-16** with the Fund size of **Rs. 500 Crore**. Under this fund, 117 companies promoted by SC entrepreneurs have been **sanctioned financial assistance to set up business ventures.**
- Features ➔
    - **1,000 SC youth** would be **identified** in the **next 4 years with start-up ideas** through the Technology Business Incubators (TBIs) in various higher educational institutions.
    - They will be **funded @ Rs. 30 lakhs in 3 years** as **equity** (investment) funding so that they can **translate their start-up ideas into commercial ventures.**
    - Successful ventures would **further qualify** for **venture capital funding of up to Rs. 5 Crore** from the VCF-SCs.

- Eligibility ➔
  - Youth who have been **identified by the TBIs**.
  - Students who have been **awarded under the Smart India Hackathon** or **Smart India Hardware Hackathon** being conducted by the Ministry of Education.
  - Innovative ideas **focusing** on the **socio-economic development of the society identified** in the TBIs.
  - Start-ups nominated and supported by corporates through **Corporate Social responsibility** (CSR) **funds**.
- Significance ➔ ASIIM under VCF-SC will **promote innovation in the SC youth** and would help them to **become job-givers** from job-seekers.

3. Tribal Entrepreneurship Development Programme

Why in News?

- Recently, the Union Minister of Tribal Affairs has launched the 'Tribal Entrepreneurship Development Programme'.

About Tribal Entrepreneurship Development Programme

- It is a **joint initiative** of Ministry of Tribal Affairs and Associated Chambers of Commerce and Industry of India (ASSOCHAM).
- It is aimed at **ensuring the quality of life** to the last man in the line and **strengthening tribal entrepreneurship**.
- It would optimise the contribution of the tribal community to the growing economy of the country and support **India's vision of becoming "Atmanirbhar"**.

About ASSOCHAM

- The Associated Chambers of Commerce and Industry of India (ASSOCHAM) is one of the **apex trade associations of India.**
- The organisation **represents the interests of trade and commerce** in India, and acts as an **interface between issues and initiatives.**
- The goal of this organisation is to **promote both domestic and international trade**, and **reduce trade barriers** while **fostering conducive environment** for the growth of trade and industry of India.

4. Pakur Honey

Why in News?

- Recently, the Union Minister of Tribal Affairs has decided to launch 'Pakur Honey' through TRIFED & Tribes India.

About Pakur Honey

- It is **100% natural honey** which is Multi Floral, Forest Fresh, gathered by **Santhal Tribals** and Vulnerable Pahadhiya tribes from **Pakur, Jharkhand**.
- The tribal Santhal community of Pakur District, Jharkhand have set an example by **exploring the potential** of **beekeeping commercially**.

- The Pure Multiflora Honey is **collected from** a **variety of flowers and floras**.
- The Natural Multiflora honey is a **good source of anti-oxidants** and **antiseptic vitamins**, **nutrients**, **enzymes** and other herbal properties that no other super-food can provide.
- It will be available in two different tastes, i.e. **Karanj and Multifloral** (Wild).

5. Tribes India E-Marketplace

Why in News?

- Minister of Tribal Affairs will virtually launch India's largest handicraft and organic products marketplace- Tribes India E-Marketplace on the occasion of Gandhi Jayanti.

About

- What is it? ➔ It is an ambitious initiative through which TRIFED aims to **onboard 5 lakh tribal producers for sourcing of various handicraft**, **handloom**, **natural food products** across the country and brings to you the best of tribal produce.
- The suppliers comprise of **individual tribal artisans**, **tribal SHGs**, **Organisations/ Agencies/ NGOs** working with tribals.
- Significance ➔ This path-breaking **initiative of TRIFED** under the Ministry of Tribal Affairs will showcase the produce and handicrafts of tribal enterprises from across the country.
- It will **help them market their products directly**.

👉 Also Remember

TRIBES INDIA joins Amazon Seller Flex program

- It is a **long-standing partnership with Amazon**, which has enabled sellers and artisans to sell Tribes India products across India and the world.
- It will help to **accelerate the growth of tribal-owned and run handicraft businesses**, TRIFED (Tribes India) will now be associated with Amazon's Seller Flex Program.
- This program is intended to **share Amazon's best practices in warehousing**, **inventory management**, **and shipping with sellers**.
- The support and expertise from Amazon will help **empower thousands of artisans and weavers** who are part of Tribes India.

TRIFED

- TRIFED is a national-level apex organization functioning under administrative control of **Ministry of Tribal Affairs**.
- Established in ➔ August 1987 by then Ministry of Welfare under Multi State Cooperative Societies Act 1984 (which has now been replaced by Multi-State Cooperative Societies Act, 2002).
- Headquartered in ➔ **New Delhi**.
- Objectives ➔ The ultimate objective of TRIFED is **socio-economic development of tribal people** in the country by way of marketing development of the tribal products such as metal craft, tribal textiles, pottery, tribal paintings and pottery on which the tribals depends heavily for a major portion of their income.

- Functions ➔ It mainly undertakes two functions **Minor Forest Produce (MFP) development and Retail Marketing and Development.**

Minor Forest Produce (MFP)

- **The non-wood forest products** generally termed Minor Forest Produce.
- This includes **all non-timber forest produce** of plant origin and includes bamboo, canes, fodder, leaves, gums, waxes, dyes, resins and many forms of food including nuts, wild fruits, honey, lac, tusser etc.
- They form a **major portion of their food, fruits, medicines, and other consumption items** and provide cash income through sales.

6. National Startup Awards

Why in News?

- Minister of Commerce & Industry will be releasing the results of the first edition of National Startup Awards.

About

- It was set up by the Department for Promotion of Industry and Internal Trade (**DPIIT**), **Ministry of Commerce and Industry.**
- Aim ➔ To **recognize and reward outstanding Startups and ecosystem enablers** that are building innovative products or solutions and scalable enterprises, with high potential of employment generation or wealth creation, demonstrating measurable social impact.
- Categories ➔ The awards will be given across **12 sectors** namely Agriculture, Education, Enterprise Technology, Energy, Finance, Food, Health, Industry 4.0, Space, Security, Tourism and Urban Services.
    - Apart from these, startups are to be selected from those which **create impact in rural areas**, are **women-led and founded in academic campuses.**

7. Long term repo operation (TLTRO)

Why in News?

- The Reserve Bank of India (RBI) has said it will conduct on-tap targeted long-term repo operations (TLTRO) for an amount of Rs 1 lakh crore to ensure comfortable liquidity conditions in the system.

About TLTRO

- What is it? ➔ The LTRO is a **tool under which the central bank provides one-year to three-year money to banks** at the prevailing repo rate, accepting government securities with matching or higher tenure as the collateral.
- How is it different from LAF and MSF? ➔
    - While the RBI's current windows of liquidity adjustment facility (**LAF**) and marginal standing facility (**MSF**) offer banks money **for their immediate needs ranging from 1-28 days, the LTRO supplies them with liquidity for their 1- to 3-year needs.**
    - LTRO operations are intended to **prevent short-term interest rates** in the market from **drifting a long way away from the policy rate, which is the repo rate.**
- Why is it important? ➔

- As **banks get long-term funds at lower rates**, their cost of funds falls.
- In turn, they reduce interest rates for borrowers.
- LTRO helped RBI ensure that **banks reduce their marginal cost of funds-based lending rate**, without reducing policy rates.
- LTRO also showed the market that RBI **will not only rely on revising repo rates** and **conducting open market operations** for its monetary policy, but also use new tools to achieve its intended objectives.

8. Round the Clock RTGS Facility

Why in News?

- The Real Time Gross Settlement System (RTGS), used for large value transactions, will be made available round-the-clock from December 2020.

About

- It enables **real-time transfer of funds** to a beneficiary's account and is primarily meant for large-value transactions.
- Real time means the **processing of instructions at the time they are received** and **gross settlement** implies that settlement of funds transfer instructions occurs individually.
- Current Scenario ➔ RTGS is available for customers **from 7.00 a.m. to 6.00 p.m. on all working days of a week**, except second and fourth Saturdays of every month.
- 24x7x365 RTGS Decision ➔ The Reserve Bank of India (**RBI**) has decided to make available the **RTGS system round the clock on all days from December 2020** in order to facilitate swift and seamless payments in real-time for domestic businesses and institutions.

👉 **RTGS vs NEFT**:

- Use ➔ **RTGS** is meant for **large-value instantaneous fund transfers** while **NEFT** is generally used for fund transfers of **up to Rs. 2 lakh**.
  - The minimum amount to be remitted through RTGS is Rs. 2,00,000 with no upper or maximum ceiling.
  - There is **no limit imposed by RBI** for funds transfer through **NEFT system**. However, banks may place amount limits based on their own risk perception with the approval of its board.
- Mechanism ➔
  - NEFT is an **electronic fund transfer system** in which the transactions received up to a particular time are processed in batches.
  - Contrary to this, in RTGS, the transactions are processed **continuously on a transaction by transaction basis** throughout the **RTGS business hours**.

9. Nobel Prize in Economics

Why in News?

- The 2020 Nobel Prize in Economic Sciences has been awarded to Paul R. Milgrom and Robert B. Wilson "for improvements to auction theory and inventions of new auction formats.".

About

- Auction theory studies **how auctions are designed**, **what rules govern them**, **how bidders behave and what outcomes are achieved**.
- The **oldest** form of auction is the **auction of a bankrupt person's property to pay off his creditors**. This simple design of such an auction is the highest open bidder getting the property (or the commodity in question).
- Over time, the format of auctions has widened to include other commodities such as **spectrum for radio or telecom use**, **carbon dioxide emission credits**, **electricity or the right to collect the local garbage** etc.
- Different auction models are needed for **depending upon the commodities**, **purpose of the auction and the entities conducting the auction**.
- For e.g. Maximizing the profit may be the motive of a private auction while making a service affordable can be the purpose of auctioning a service by the government. Wrong auction design can lead to a second-hand market where companies trade among themselves with little revenue accruing to the government or little benefit to the public.
- How an auction is designed, has a **tremendous impact not just on the buyers** and **the sellers** but also on the **broader society**.
- Three key variables need to be understood while designing an auction.
    1. **Rules of Auction** i.e. closed/sealed bids, single bids versus multiple bids.
    2. **Commodity or service being put up for auction** i.e. how does each bidder value an item.
    3. **Uncertainty** regarding which bidder has what information about the object, or even the value another bidder associates with the object.

10. India Energy Modelling Forum

Why in News?

- NITI Aayog announced the governing structure of India Energy Modelling Forum (IEMF).

About IEMF

- It is a joint initiative of **NITI Aayog and United States Agency for International Development** (USAID) under the US–India Strategic Energy Partnership.
- Aim ➔ It aims to **engage Indian researchers**, **knowledge partners**, **think tanks and national and international government agencies** and departments for modelling and long-term energy planning.
- Governing structure of IEMF ➔
    - It will consist of an **inter-ministerial** and a **steering committee**.
    - The **inter-ministerial committee** will be **convened by NITI Aayog and headed by its CEO**
        - The committee will **review the studies/modelling activities** and provide directions and new areas of research.
    - The **steering committee** will comprise **representatives of the ministries**, **Industry Associations** (FICCI and CII), Academia (IIT Bombay, Ahmedabad, and Delhi) and **Policy research organizations**, **think tanks and funding agencies**.

11. National Authority for Recycling of Ships

Why in News?

- Union government has established National Authority for Recycling of Ships under the section 3 of the Recycling of Ships Act, 2019.

About

- What is it? ➔ The **Directorate General of Shipping** will be now notified as National Authority for Recycling of Ships.
- It will be set up in **Gandhinagar, Gujarat**.
- The location of the office will **benefit the Ship Recycling yard owners situated in Alang, Gujarat** which is home of Asia's largest ship breaking and ship recycling industry in the world.
- It will be the **apex body,** which is **authorised to administer, supervise and monitor all activities** relating to ship recycling.
- DG Shipping will be the final authority for the **various approvals required by the Ship-Recycling yard owners and State Governments.**
- Under **Ship Recycling Act, 2019**, India has acceded to **Hong Kong Convention for Ship Recycling** under International Maritime Organization (**IMO**).
- **DG Shipping** is a **representative of India in IMO** and all the conventions of IMO are being enforced by DG Shipping.

12. Open market operations

Why in News?

- The Reserve Bank of India (RBI) has said it would conduct Open Market Operation (OMO) purchase of State Developments Loans as per its October 9 announcement.

About

- What is it? ➔ Open market operations is the **sale and purchase of government securities and treasury bills by RBI** or the central bank of the country.
- Objective ➔ To **regulate the money supply** in the economy.
- It is one of the **quantitative monetary policy tools**.
- How is it done? ➔ RBI carries out the OMO **through commercial banks** and does **not directly deal with the public.**
- OMOs vs liquidity ➔
    - When the central bank wants to **infuse liquidity** into the monetary system, it will **buy government securities** in the open market. This way it provides commercial banks with liquidity.
    - In contrast, when it **sells securities**, it **curbs liquidity**. Thus, the central bank indirectly controls the money supply and influences short-term interest rates.
- RBI employs two kinds of OMOs ➔
    1. **Outright Purchase (PEMO)** – this is permanent and involves the outright selling or buying of government securities.
    2. **Repurchase Agreement (REPO)** – this is short-term and are subject to repurchase.

13. India's First Seaplane Project

Why in News?

- The first of the five seaplane services in Gujarat will be inaugurated on October 31, the birth anniversary of Sardar Vallabhbhai Patel.

About

- What is seaplane? ➔ A seaplane is a **fixed-winged aeroplane designed for taking off and landing on water**. It offers the public the speed of an aeroplane with the utility of a boat.
- The first seaplane project of the country shall connect **Sabarmati River in Ahmedabad to the Statue of Unity in Kevadia in Narmada district.**
- Ministry ➔ **Union Ministry of Civil Aviation**.
- Other spots ➔ **Dharoi dam** (Mehsana district) **to connect Ambaji and Shatrunjay dam** (Bhavnagar district) and **Tapi in the next phase**.
- As per the directive, the **Airports Authority of India** (AAI) **requested state governments of Gujarat, Assam, Andhra Pradesh and Telangana** and the administration of Andaman & Nicobar to **propose potential locations** for setting up water aerodromes to boost the tourism sector.

Impact it will have on the environment

- The **water aerodrome** is **not a listed project/activity** in the Schedule to the Environmental Impact Assessment Notification, 2006 and its amendments.
- However, the **Expert Appraisal Committee** was of the opinion that the activities proposed under the water aerodrome project may have a **similar type of impact as that of an airport**.
- In its proposal seeking environmental clearance, the Director of Aviation, Government of Gujarat, had **expressed fears of environmental impact during the stage of construction.**
- Also, according to the state government, during seaplane operations, there will be **turbulence created in the water** while takeoff and landing of seaplanes which will **lead to more mixing of oxygen in the water** having a **positive impact on the aquatic ecosystem** near seaplane operations

14. Ayushman Sahakar Scheme

Why in News?

- Union Minister for Agriculture launched AYUSHMAN SAHAKAR, a unique scheme to assist cooperatives to play an important role in creation of healthcare infrastructure in the country.

About

- Nodal Body ➔ The scheme has been formulated **by the National Cooperative Development Corporation** (NCDC).
- Aim ➔ To **extend term loans** to prospective cooperatives to the tune of **Rs.10,000 Crore** for the setting up of **healthcare related infrastructure, education and services**.
- Eligibility ➔ Any **Cooperative Society** with suitable provision in its byelaws to **undertake healthcare related activities** would be able to access the NCDC fund.
- NCDC assistance will flow either through the State Governments/ UT Administrations or directly to the eligible cooperatives.
- Incentives ➔ The scheme provides **interest subvention of 1% to women majority cooperatives**.

👉 **NCDC**

- It is an apex level **statutory autonomous institution** set up by the Government of India under an Act of the Parliament in **1963**.
- It is under the administrative control of the **Ministry of Agriculture and Farmers Welfare**.

15. Regulatory Sandbox

Why in News?

- The International Financial Services Centres Authority (IFSCA) has introduced a framework for "Regulatory Sandbox".

About

- What is a regulatory sandbox? ➔ It is a **safe harbour**, where **businesses can test innovative products** under relaxed regulatory conditions.
- Typically, participating companies **release new products in a controlled environment** to a limited number of customers for a limited period of time.
- IFSCA Regulatory Sandbox ➔
    - The Regulatory Sandbox **shall operate within the IFSC located at GIFT City**.
    - Entities operating in the **capital market, banking, insurance and financial services space** shall be granted certain facilities and flexibilities to experiment with **innovative FinTech solutions** in a live environment with a limited set of real customers for a limited time frame.
    - These features shall be **fortified with necessary safeguards for investor protection and risk mitigation**.

👉 International Financial Services Centres Authority

- What is it? ➔ It is a **statutory body** established in **2020**.
- It works under the **Department of Economic Affairs, Ministry of Finance**.
- Headquartered in ➔ **Gandhinagar, Gujarat**.
- Objective ➔ IFSCA has an objective to **develop a world class FinTech hub** at the IFSC located at GIFT City in Gandhinagar (Gujarat, India).
- Roles and functions ➔ Its main function is to **develop and regulate the financial products, financial services** and **financial institutions located**/performed in the International Financial Services Centres in India.
- Composition ➔
    - The IFSCA will consist of **nine members, appointed by the central government**.
    - This Include **Chairperson, a member each from the RBI, SEBI**, the Insurance Regulatory and Development Authority of India (**IRDAI**), and the Pension Fund Regulatory and Development Authority (**PFRDA**)
    - **Two members** from the **Ministry of Finance**.
    - **Two other members** will be appointed on the **recommendation of a Selection Committee**.
- All members of the IFSC Authority will have a **term of three years, subject to reappointment**

16. Country's first multi-modal logistic park

Why in News?

- The first-ever multi-modal logistic park shall come up in Assam on October 20, 2020.

About

- Ministry ➔ **Ministry for Road Transport and Highways**.
- The park will provide **direct connectivity to air, road, rail and waterways to the people**.
- It will be developed under the ambitious **Bharatmala Pariyojana** of the Government of India.

17. Consumer Price Index for Industrial Workers (CPI-IW)

Why in News?

- The labour ministry has revised the base year of the Consumer Price Index-Industrial Workers (CPI-IW) from 2001 to 2016, giving more weight to spending on housing, education and health in inflation index calculation.

About

- Why the base year has been changed? ➔ It reflects the **changing consumption pattern**, **giving more weightage to spending on health**, **education**, **recreation** and **other miscellaneous** expenses, while reducing the weight of food and beverages.
- Changes ➔
    - Following the change in base year, the index will give **39% weight to food and beverage consumption** of workers now as against 46.2% earlier. In contrast, **spending on housing** will get **almost 17% weight** as against 15.2% earlier.
    - Among consumption categories, a segment comprising **spending on heads** like education, health and transport by workers has been given a **sizable jump** in weight **from 23% earlier to 30% now**.

👉 Consumer Price Index (CPI)

- What is it? ➔ It **measures changes in the price level of a market basket** of consumer goods and services purchased by households.
- Released by ➔ CPI data is **released monthly** by the Central Statistics Office (**CSO**) which functions under the **Ministry of Statistics and Programme Implementation**.
- There are four types of CPI ➔ a) **CPI-IW** (Industrial Worker), b) **CPI-UNME** (Urban Non-Manual Employees), c) **CPI-AL** (Agricultural Labourers) and d) **CPI-RL** (Rural Labourers)
- Determining inflation ➔ RBI has **adopted CPI** as the key measure for determining inflation situation of Indian economy on the recommendation of Urjit Patel Committee.

👉 Consumer Price Index-Industrial Workers (CPI-IW)

- The CPI-IW is mainly used for **determining dearness allowance** (DA) paid to central/state government employees and workers in the industrial sectors besides **measuring inflation in retail prices**, **fixation and revision of minimum wages in scheduled employments**.

- CPI-IW is compiled and maintained by the **Labour Bureau**, an attached office of the **Ministry of Labour & Employment**.

18. World Economic Outlook

Why in News?

- According to the October update of the World Economic Outlook 2020, India's gross domestic product (GDP) will witness a contraction of over 10%.

About

- Global growth would **contract by 4.4% in 2020** and **bounce back to 5.2% in 2021**.
- **Indian economy**, severely hit by the pandemic, is projected to **contract by 10.3% in 2020**.
- The spread of the **Covid-19 and containment measures have severely disrupted** supply and demand conditions in India.
- However, **India** is likely to **bounce back with an 8.8% growth rate in 2021**, thus regaining the position of the fastest-growing emerging economy, surpassing China's projected growth rate of 8.2%.

WEO

- What is it? ➔ It is a survey by the **International Monetary Fund** (IMF).
- It is usually **published twice a year** in the months of April and October.
- Parameter ➔ WEO typically compares countries on the **basis of GDP growth rate, or on absolute GDP**.
- However, **per capita income also involves** another variable like the overall population and is arrived at by dividing the total GDP by the total population.

19. Compound Interest Waiver Scheme

Why in News?

- Government of India has announced a scheme called, 'Scheme for grant of ex-gratia payment of difference between compound interest and simple interest for six months to borrowers in specified loan accounts'.

About

- Aim ➔ To provide major relief **for individuals and MSME borrowers** by waiver of the compound interest on specified loans for **six months period**.
- What does it mean? ➔ In simple words, the borrowers need to **pay simple interest on their loan amount for the six month period** between March and August as against the compound interest.
- Categories ➔ The loans eligible under the scheme include **MSME loans, education loans, housing loans, consumer durable loans, credit card dues, automobile loans, personal loans** to professionals and consumption loans.
- Eligibility ➔ Any borrower whose aggregate of all facilities with lending institutions is more than ₹2 crore (sanctioned limits or outstanding amount) will **not be eligible for ex-gratia payment** under this scheme. Also, the loan accounts should **not be non-performing assets**(NPA) as on the date mentioned above.

- Lending Institutions ➔ The lending institution has to be **either a banking company**, or **a public sector bank, co-operative bank or a regional rural bank, or All India Financial Institution**, a non-banking financial institution, housing finance company or a micro finance institution.

👉 Also Remember

Simple and Compound Interest:

- Simple interest is **calculated on the principal**, or original, amount of a loan.
- On the other hand, Compound interest is **calculated on the principal amount** and **also on the accumulated interest of previous periods** and can thus be regarded as "**interest on interest**".

20. National Program and Project Management Policy Framework

Why in News?

- NITI Aayog and Quality Council of India (QCI) have recently launched the 'National Program and Project Management Policy Framework' (NPMPF), with the aim of bringing radical reforms in the way infrastructure projects, are executed in India.

About

- It is developed by **NITI Aayog and the Quality Council of India** which proposed a four-level certification system for project managers linked to project scale.
- The framework envisages to bring **radical reforms in the way infrastructure projects** are executed in India.
- It has an **action plan to** ➔
    - Adopt a program and project management approach to infra development.
    - Institutionalize and promote the profession of program and project management and build a workforce of such professionals.
    - Enhance institutional capacity and capability of professionals.

👉 Quality Council of India

- Formation ➔ QCI was set up in **1997** as an **autonomous body**.
- It was setup jointly by the Government of India and the Indian Industry represented by the **three premier industry associations i.e.**
- Associated Chambers of Commerce and Industry of India (**ASSOCHAM**),
- Confederation of Indian Industry (**CII**) and
- Federation of Indian Chambers of Commerce and Industry (**FICCI**)
- Aim ➔ It aims to establish and operate **national accreditation structure** and **promote quality through National Quality Campaign.**
- Nodal Ministry ➔ The **Department of Industrial Policy & Promotion, Ministry of Commerce & Industry**, is the nodal ministry for QCI.
- Chairman of QCI is **appointed by the Prime Minister** on recommendation of the industry to the government.

21. Kumhar Sashaktikaran Yojana

Why in News?

- Recently, electric pottery wheels to 100 potter families in Maharashtra were distributed under the KSY of Khadi and Village Industries Commission (KVIC).

About

- Launched in ➔ 2018.
- Aim ➔ To **strengthen and improve the living of potters** in the country by making them self reliant (Atma Nirbhar).
- Features ➔ Providing potters with **modern equipment and training** to reconnect them with the society and revive their art.
- Implementation ➔ KVIC has created proper **marketing channels** including **tie-up with the Indian Railway** for selling the products of potters.
- Benefits ➔ Proper training and distribution of advanced equipment under the scheme has **eliminated drudgery from the process of pottery making and also resulted in increasing the production by 3-4 times**.
- This has led to an **increase in income** of potters manifolds.

👉 Khadi and Village Industries Commission (KVIC)

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

22. Index of Eight Core Sector Industries

Why in News?

- Recently, the Office of Economic Adviser within the Department for Promotion of Industry and Internal Trade released the Index of Eight Core Industries (ICI) for September 2020.

About Core Sector Industries

- What is it? ➔ The eight core sector industries include **coal**, **crude oil**, **natural gas**, **refinery products**, **fertiliser**, **steel**, **cement** and **electricity**
- Weightage ➔ The eight core industries comprise nearly **40% of the weight** of items included in the **Index of Industrial Production (IIP).**
- The eight Core Industries in decreasing order of their weightage ➔ **Refinery Products**> **Electricity**> **Steel**> **Coal**> **Crude Oil**> **Natural Gas**> **Cement**> **Fertilizers.**
- Significance ➔
- The eight industries are the essential "**basic**" and/or "**intermediate**" **ingredient** in the **functioning of the broader economy.**

- The mapping of health of eight core industries provides a **fundamental understanding of the state of the economy**.

23. Depreciation of Rupee

Why in News?

- Recently, the Indian rupee depreciated below the 74 levels against the US dollar.

About

- What is it? ➔ Manage Floating exchange rate **lies in between** of the two **extremes of fixed and floating exchange rate.**
- In a floating exchange rate system, **market forces** (based on demand and supply of a currency) **determine the value of a currency.**
- Currency Appreciation ➔ It is an **increase in the value of one currency** in relation to another currency.
    - Currencies appreciate against each other for a variety of reasons, including **government policy, interest rates, trade balances and business cycles.**
    - Currency appreciation **discourages a country's export activity** as its products and services become costlier to buy.
- Currency Depreciation ➔ It is a **fall in the value of a currency** in a floating exchange rate system.
    - **Economic fundamentals, political instability, or risk aversion** can cause currency depreciation.
    - Currency depreciation **encourages a country's export activity** as its products and services become cheaper to buy.

24. AMENDMENTS TO PUBLIC PROCUREMENT ORDER, 2017

Why in News?

- Recently, Public Procurement (Preference to Make in India) Order, 2017 was amended to give more preference to local suppliers.

About Public Procurement (Preference to Make in India), Order 2017

- It was issued under General Financial Rules 2017 to **promote domestic value addition in public procurement**.
- Under this, as revised in June 2020, **only Class-I and Class-II local suppliers are eligible to bid** in procurement of all goods, services or works, and with estimated value of purchases less than Rs. 200 crores.
    - **Global tender enquiry** can be issued with the approval of the competent authority for purchases less than Rs. 200 crores.
- It is applicable on procurement of goods, services and works (including turnkey works) by a Central Ministry, Department, attached, subordinate offices, autonomous bodies controlled by the Government of India, Government companies, their Joint Ventures and Special Purpose Vehicles.
- For the verification of the local content, **self-certification would be necessary**. Nodal Ministries may also constitute committees with internal and external members for independent verifications of the self-declarations.
- A committee in **Department for Promotion of Industry and Internal Trade** will oversee the implementation of this order.

Other measures for promotion of local supplies in public procurement:

- **Public Procurement Policy for Micro and Small Enterprises (MSEs) Order, 2018**
  - It was notified under Micro, Small and Medium Enterprises (**MSME) Development Act, 2006**. Under this, every Central Ministry /Department / PSUs shall set an annual target for **25% procurement from MSE Sector.**
  - A sub-target of **4%** and 3% out of 25% is earmarked MSEs owned by **SC/ST and Women** entrepreneurs respectively.
  - **358 items are also reserved** for exclusive purchase from MSE sector.
- **Government eMarketplace (GeM).**
  - GeM was launched in 2016 as **an end-to-end e-portal for procuring common-use goods and services** by Central and State Government Departments, PSUs, autonomous institutions and local bodies.
  - It aims to bring in transparency, promote ease of doing business, simplify the process of procurement.
  - The purchases through GeM by Government users have been made mandatory by Ministry of Finance.
- **Defence Acquisition Procedure (DPP) 2020**
  - It proposes **increasing the Indigenous Content (IC) stipulated** in various categories of procurement by about 10% to support the 'Make in India' initiative.
  - It also proposes, **New Category Buy** (Global – Manufacture in India) with minimum 50% IC on cost basis of total contract value.

25. BILATERAL NETTING

Why in News?

- Recently Bilateral Netting of Qualified Financial Contracts Act, 2020 was enacted with an aim to ensure financial stability and promote competitiveness in Indian financial markets.

About Bilateral Netting

- A bilateral netting agreement **enables two counterparties in a financial contract to offset claims against each other** to determine a single net payment obligation due from one counterparty to the other.
  - **Netting** refers to **offsetting of all claims arising from dealings between two parties**, to determine a net amount payable or receivable from one party to other
- Similarly, a multilateral netting agreement allows counterparties to offset claims against each other through a **Central Counterparty (CCP**) in a clearing house under the **Payment and Settlement Systems (Amendment) Act (2015).**
- **Earlier, Indian financial contract laws did not permit bilateral netting**, however, they did allow multi-lateral netting.
- In India, **Bilateral contracts constitute 40%** of total financial contracts, while **multilateral contracts constitute 60%.**
- Netting is very common in advanced economies where the settlement is based on net positions in bilateral or multilateral financial arrangements rather than by gross positions. At present, major jurisdictions such as the **U.S., U.K., Australia, Canada, Japan, France, Germany, Singapore and Malaysia** have legal provisions in place for netting agreements.

- Global regulatory bodies such as the **Financial Stability Board** (FSB) and the **Basel Committee** on Banking Supervision have **supported** the use of such netting.

About Bilateral Netting of Qualified Financial Contracts Act, 2020

- It seeks to provide a **legal framework for bilateral netting of qualified financial contracts** (QFC) which are over the counter derivatives (OTC) contracts.
- Act seeks to provide
  - **designation of any bilateral agreement** or contract or transaction, or type of contract, as qualified financial contract by the Central Government or any of the **regulatory authorities namely**:
    - Reserve bank of india (**RBI**),
    - Securities and Exchange Board of India (**SEBI**),
    - Insurance Regulatory and Development Authority of India (**IRDAI**),
    - Pension Fund Regulatory and Development Authority (**PFRDA**)
    - International Financial Services Centres Authority (**IFSCA**)
  - **determination of the net amount payable** under the close-out netting in accordance with the terms of the netting agreement.
  - **imposing of certain limitations** on powers of administration practitioner.

26. PANDEMIC RISK POOL

Why in News?

- A working group of IRDAI has recommended setting up of an Indian Pandemic Risk Pool with public-private-government participation to provide coverage for losses resulting from pandemics like COVID-19 in future.

About pandemic risk pool

- A pool refers to the **practice of insurance companies coming together and committing funds to meet claims arising out of any particular insured risk in proportion to the business they do**. In this manner, claim pay-out is shared among all pool participants.
- This method is followed **when there is too much uncertainty about the risk for any insurer to take a call**, like in nuclear risks, or when the losses are high and companies are reluctant to issue policies.
- Similar pandemic pool proposals across the world, including in the US, France and Germany, are in various stages of approval.

Also Remember

General Insurance Corporation of India (GIC Re):

- GIC Re was setup in 1972, under the Companies Act, 1956.
- It was formed for the purpose of **superintending, controlling and carrying** on the business of general insurance.

Indian Terrorism Pool:

- India has created a **Pool for Terrorism in 2002**, that covers loss, damage, cost or expense directly caused by, resulting from or in connection with any action taken in suppressing, controlling, preventing or minimizing the consequences of an act of terrorism by the duly empowered government or military authority.

- The **Pool is administered by GIC Re**.

Indian Nuclear Pool:

- Indian Nuclear Insurance Pool was created in 2015 by GIC-Re, **along with several other Indian Insurance Companies.**
- It has a capacity of ₹1500 crore to provide insurance to cover the liability as prescribed under **Civil Liability for Nuclear Damage Act, 2010.**

27. REVISED PRIORITY SECTOR LENDING (PSL) GUIDELINES

Why in News?

- The Reserve Bank of India (RBI) revised priority sector lending (PSL) guidelines to include entrepreneurship and renewable resources, in line with emerging national priorities.

About PSL

- The concept of '**Priority sector lending**' focuses on the idea of increasing the lending of the banks towards few specified sectors and activities in the economy. The banks are mandated to encourage the growth of such sectors with adequate and timely credit.

Following are the key features of PSL methodology:

- The provisions of PSL **apply to every Commercial Bank** [including Regional Rural Bank (**RRB**), Small Finance Bank (SFB), **Local Area Bank**] and Primary (Urban) Co-operative Bank (**UCB**) other than Salary Earners' Bank licensed to operate in India by the Reserve Bank of India.
- All scheduled commercial banks and foreign banks (with a sizable presence in India) are mandated to set aside **40% of their Adjusted Net Bank Credit (ANDC) for lending to these sectors**.
- Regional rural banks, co-operative banks and small finance banks have to **allocate 75% of ANDC to PSL**. Total PSL target for urban cooperative banks will also be increased from present 40% of their adjusted net bank credit (ANBC) to 75% by 31 March 2024.

Priority Sector Lending Certificates (PLSCs):

- Under the PSLC mechanism, the **seller sells** fulfilment of priority sector obligation and the **buyer buys the obligation with no transfer of risk** or loan assets.
- This also incentivizes surplus banks as it **allows them to sell their excess achievement over targets** thereby enhancing lending to the categories under priority sector.

Some of the salient features of revised PSL guidelines are:

- **Fresh categories included in the PSL category**:
  - bank finance of **up to ₹50 crore to start-ups**.
  - loans to farmers both for installation of solar power plants for **solarisation of grid-connected agriculture pumps.**
  - for setting up **compressed biogas** (CBG) plants.
- Higher weightage has been assigned to incremental priority sector credit in '**identified districts**' where priority sector credit flow is comparatively low.

- The targets prescribed for 'small and marginal farmers' and 'weaker sections' are being increased in a phased manner.
- Higher credit limit has been specified for **farmer producer organisations (FPOs**)/farmers producers companies (FPCs) undertaking farming with assured marketing of their produce at a pre-determined price.
- Loan limits for renewable energy have been **doubled**.
- For improvement of health infrastructure, credit limit for health infrastructure (including those under '**Ayushman Bharat'**) has been doubled.

Environment

1. Lion-tailed Macaque

Why in News?

- Habitat loss puts lion-tailed macaque in IUCN endangered list for the sixth time.

About

- The scientific name ➔ **Macaca silenus**.
- Habitat ➔ It is a primate **endemic to small and severely fragmented rainforests of the Western Ghats in Karnataka, Kerala and Tamil Nadu.**
- It is also known under its original name of **Sahyadri or Benevolent Mountains**.
- Lion-tailed macaques play important role in the ecosystem they live, as they **disperse seeds of fruits and plants** they consume.
- Conservation efforts ➔
    - **Appendix I** of CITES
    - **Schedule I, Part I**, of the Indian Wildlife (Protection) Act, 1972
    - IUCN: **Endangered**.
- The Lion-tailed Macaque is considered to be **omnivorous, eating mainly fruit, insects, eggs** as well as **small animals** on occasion.
- Threats ➔ a) **Overpopulation** b) **Habitat destruction** and c) **Hunting among others**.

2. Namami Gange Programme

Why in News?

- PM Modi inaugurated 6 mega projects in Uttarakhand under Namami Gange.

About Namami Gange Programme

- What is it? ➔ It an Integrated Conservation Mission, approved as a 'Flagship Programme' in June 2014.
- Purpose ➔ It seeks to accomplish the **twin objectives** of **effective abatement of pollution and conservation and rejuvenation of National River Ganga.**
- It is being operated under **Ministry of Jal Shakti**.
- Implementation ➔
    - The program is being implemented by the **National Mission for Clean Ganga** (NMCG), and its state counterpart organizations i.e., **State Program Management Groups** (SPMGs).
    - NMCG is the implementation wing of **National Ganga Council** (set in 2016; which replaced the National Ganga River Basin Authority (NRGBA).
    - National Ganga Council (NGC) was Created in **October 2016** under the River Ganga (Rejuvenation, Protection and Management) Authorities Order, 2016. It is **Headed by Prime Minister**.

- Funding ➔ It has a **Rs. 20,000-crore**, **centrally-funded**, **non-lapsable corpus** and consists of nearly **288 projects**.
- Main Pillars of the Namami Gange Programme are ➔ Sewerage Treatment Infrastructure, River-Surface Cleaning, Afforestation, Industrial Effluent Monitoring, River-Front Development, Bio-Diversity, Public Awareness, Ganga Gram.

3. Platylestes Kirani

Why in News?

- Recently, the scientists from the Zoological Survey of India (ZSI) have identified Platylestes Kirani in the wetlands of Kannur district.

About Platylestes Kirani

- It is a **new species of damselfly** which is named after late C.G. Kiran, odonatologist and the author of the book Dragonflies of Kerala.
- It is a **small dull colored damselfly with apple green eyes**.
- The species is mainly found foraging **inside the shoreline vegetation** and occasionally **resting on the stems** or **on the leaf blades** of grasses and sedge.
- The species can be easily distinguished from all other species of Platylestes, by its **unique coloration**, **distinct black marking on its synthorax** and **shape of anal appendages**.

👉 Platylestes Platystylus

- It is a **damselfly species** in the **family Lestidae**.
- The species is known from old records from **West Bengal in India**, **Myanmar**, **Thailand and Laos**.
- It is listed as '**Least Concern** (LC)' under the IUCN Red List of Threatened Species.

4. Xoo Infection

Why in News

- Recently, scientists from the Centre for Plant Molecular Biology (CPMB) have uncovered the mechanism by which a bacterium called Xoo interacts with rice plants and causes disease.

About

- What is it? ➔ Xanthomonas oryzae pv. oryzae (Xoo) causes a serious bacterial leaf blight disease in rice. It is also known as **Bacterial blight**.
- Xoo is a **gram-negative bacteria**.
- Concern ➔ It causes **huge yield losses** to rice cultivation throughout the world.
- Transmission ➔ Xoo infection **initiates from the leaf sheath** and eventually **spreads to mature leaves through the water flow** under optimum temperature and high humidity conditions (Vascular disease).
    - Since **rice paddies** are **flooded throughout** most of the growing season, Xoo may easily spread among crops; bacteria travel through the water from infected plants to the roots and leaves of neighbouring rice plants.
    - Wind may also help spread the Xoo bacteria to other crops and rice paddies.

- Impact on Other Crops ➔ In addition to rice, Xoo may infect other plants, such as **rice cut-grass** (Leersia oryzoides), **Chinese sprangletop** (Leptochloa chinensis), and **common grasses and weeds**.
- Prevention ➔ The most-common method of defending against rice bacterial blight is the **cultivation of rice varieties with genes** that **confer resistance** to Xoo infection.
- New Approach ➔
    - Scientists from Centre for Plant Molecular Biology (**CPMB**), **Osmania University, Hyderabad are working to identify and develop few molecules** which are derived either from the Xoo bacterium or from the infected rice cell walls.
    - Treatment of rice with **cellulase, a cell wall degrading enzyme secreted by Xoo induces rice immune responses** and protects rice from subsequent infections by Xoo.
    - The **cellulase protein** has the features of a **typical vaccine** as it is a potent elicitor of rice immune responses.

👉 Rice

- Season ➔ **Kharif Crop**
- Temperature ➔ Between **22-32°C with high humidity**.
- Rainfall ➔ Around **150-300 cm.**
- Soil Type ➔ **Deep clayey and loamy soil**.
- Some of the most important rice-growing regions are **Assam, West Bengal, coastal regions of Odisha, Andhra Pradesh, Telangana, Tamil Nadu,** Kerala and Maharashtra, particularly the (Konkan coast) along with Uttar Pradesh and Bihar.
- Diseases in rice are mainly caused by bacteria, viruses, or fungi. Few major diseases are ➔
    - **Sheath blight**: Caused by fungus Rhizoctonia solani.
    - **Brown Spot**: One of the most common and most damaging fungal diseases.
    - **Tungro**: Caused by the combination of two viruses, which are transmitted by leafhoppers.
    - **Bakanae**: Seedborne fungal disease.
    - **Blast (node and neck):** Caused by the fungus Magnaporthe oryzae.

👉 Centre for Plant Molecular Biology

- Established in **1990** to take up **research in plants based on cues** from the science of plant molecular biology.
- CPMB is **one of the 7 Centers of Excellence** created in the country with initial **financial assistance from the Department of Biotechnology**, Government of India.
- Currently it is one of the **leading Centers of the country in Plant Molecular Biology** (study of molecular basis of plant life).

5. Madhuca diplostemon

Why in News?

- A tree species, long believed extinct, has been rediscovered after a gap of more than 180 years from a sacred grove in Kollam district, Kerala.

About

- Scientists have **identified the tree as Madhuca diplostemon** (family Sapotaceae), a **threatened species of the Western Ghats** whose specimen was first collected in 1835.
- In **1835, Robert Wight**, a surgeon-botanist with the East India Company, had collected three specimens of the species.
- Only one mature tree has been found so far, which makes this **remarkable rediscovery extremely valuable** from a scientific, environmental and conservation point of view.
- Since the species is represented only by one specimen in a **single locality**, it is **eligible to be categorised 'Critically Endangered'** by the IUCN.

6. CBD Oil

Why in News?

- These days, there are diverse opinions rising regarding the legalization of CBD oil in India after recent controversy rose after the alleged suicide of an actor.

About

- CBD oil is an **extract from the cannabis plant**.
- The two main active substances in it are **cannabidiol** or **CBD** and **delta-9 tetrahydrocannabinol**, or **THC**.
- The **high** that is caused by the **consumption of cannabis is due to THC**.
- CBD, however, does **not cause a "high"** or **any form of intoxication**.
- CBD oil is made **by extracting CBD from the cannabis plant, then diluting** it with a carrier oil like coconut or hemp seed oil.

What are the effects of Cannabidiol?

- Cannabidiol has **effects on the brain, preventing the breakdown of a chemical** that aggravates the pain and affects mood, and mental function. It can **reduce pain and anxiety**.
- It also **reduces psychotic symptoms** associated with conditions such as **schizophrenia** as well as **epilepsy**.

7. Indian Gazelle (Chinkara)

Why in News?

- Recently, the ornithologists and researchers from Pune have reported three successful incidents in which Chinkara fawns were rescued, examined, treated, and re-wilded during foaling season.

About

- What is it? ➔ The Indian Gazelle (Chinkara) is an **antelope endemic to the Indian subcontinent**.
- Chinkara are native to **Iran, Afghanistan, Pakistan, and India**.
- It is protected under **Schedule 1** of the Wildlife Protection Act, 1972.
- Chinkara are **herbivores** (folivores, frugivores) as they **feed on grasses, different leaves and fruits** (melon, pumpkin).
- Chinkara are classified as **Least Concern (LC)** on the **IUCN Red List** of **Threatened Species**.

8. Ecosystem Services

Why in News?

- According to a study by the Energy and Resources Institute (TERI), the annual economic value of ecosystem services provided by the Delhi zoo works out to be ₹422 crore. The study was commissioned by the Central Zoo Authority.

About

- These are the **direct and indirect contributions of the ecosystems to humankind's well-being**.
- Classification ➔ Ecosystem services can be categorized into **four types**:
    1. **Provisioning services** → Products obtained from ecosystems such as food, freshwater, fibre, genetic resources and medicines.
    2. **Regulating services** → Benefits obtained from regulation of ecosystem processes such as flood prevention, climate regulation, water purification and pollination
    3. **Supporting services** → Non-material benefits obtained from ecosystems (e.g. nutrient cycling, soil formation).
    4. **Cultural services** → Non-material benefits that people obtain from ecosystems such as spiritual enrichment, intellectual development, recreational activities and aesthetic values.

👉 Central Zoo Authority

- It is a **statutory body** established in1992 under the **Wildlife Protection Act,1972**.
- Nodal Ministry ➔ **Ministry of Environment, Forests and Climate Change**
- Objective ➔ To **regulate zoos** across the country and to lay down guidelines under which animals may be transferred among zoos nationally and internationally.
- Composition ➔ It is **chaired by the Union Environment Minister** with 10 members and member secretary.

👉 The Energy and Resources Institute (TERI)

- TERI is a **non-profit research institution** that conducts research work in the fields of energy, environment and sustainable development.
- Established in ➔ **1974**.
- Aim ➔ It aims to focus on **formulating local and national level strategies** for shaping global solutions to critical issues.
- Functions ➔ It **conducts research work** in the fields of energy, environment and sustainable development.
- Its key focus lies in **promoting clean energy, water management, pollution management, sustainable agriculture and climate resilience.**

9. My Ganga My Dolphin campaign

Why in News?

- National Mission for Clean Ganga(NMCG), the Wildlife Institute of India and the Forest Department has launched the My Ganga My Dolphin campaign on the occasion of Ganga River Dolphin Day.

About

- Aim ➔ To **promote and boost Dolphin based ecotourism** in the country and to conduct Dolphin census.

- The programme also includes **dolphin safari in six sites** across the states of **Uttar Pradesh, Bihar and West Bengal.**

👉 **Also Remember**

National Mission for Clean Ganga (NMCG):

- It has been established as an **Authority** under **National Council for River Ganga (Rejuvenation, Protection and Management) Act, 2016.**
- It is the **implementing agency** of the Namami Gange Programme at the national level.
- Gangetic river dolphin:
- It is India's **national aquatic animal** found in parts of the **Ganges, Meghna and Brahmaputra river systems in India, Nepal and Bangladesh.**
- IUCN Red List ➔ **Endangered**.

Wildlife Institute of India(WII):

- It was established in **1982** as an **autonomous institution** under the **Ministry of Environment Forest and Climate change.**
- It carries out **wildlife research** in areas of study like Biodiversity, Endangered Species, Wildlife Policy, Wildlife Management among others.
- Headquarters ➔ **Dehradun, India**.

10. Yuddh Pradushan Ke Virudh

Why in News?

- Delhi Government has launched an anti-pollution campaign named Yuddh Pradushan Ke Virudh campaign.

About

- What is it? ➔ It is an **anti-pollution campaign**.
- Purpose ➔ Seeks to **reduce air pollution levels in Delhi during winter**.
- The campaign will include **release of a Green Delhi app**, creation of a **war room** to monitor progress, **processing liquid solution** for farms in order to curb stubble burning, and **hotspot-specific action plans**.

11. Ratification of 7 Persistent Organic Pollutants

Why in News?

- The Union Cabinet has approved the ratification of seven chemicals listed under Stockholm Convention on Persistent Organic Pollutants (POPs).

About

- Seven POPs ➔ The **seven POPs prohibited** from manufacturing, trading using, importing and exporting are:
    - Chlordecone
    - Hexabromobiphenyl
    - Hexabromodiphenyl ether and Hepta Bromodiphenyl Ether
    - Tetrabromodiphenyl ether and Pentabromodiphenyl ether

- Pentachlorobenzene
- Hexabromocyclododecane and
- Hexachlorobutadiene.

- Significance ➔ The ratification process would **enable India to access Global Environment Facility** (GEF) **financial resources**.
- **What are POPs?**
  - These are **chemicals** that remain intact in the **environment for long periods**, become **widely distributed geographically, accumulate in the fatty tissue of living organisms and are toxic to humans and wildlife**.

👉 The Stockholm Convention:

- It is a **global treaty** to **protect human health and the environment from POPs**.
- It was **opened for signature in 2001** in Stockholm (Sweden) and became **effective in 2004**.
- POPs are **listed in various Annexes** to the Stockholm Convention after thorough scientific research, deliberations and negotiations among member countries.
- Objectives ➔
  - Support the transition to safer alternatives.
  - Target additional POPs for action.
  - Cleanup old stockpiles and equipment containing POPs.
  - Work together for a POPs-free future.
- **India ratified** the **Stockholm Convention in 2006**.
- The convention calls to **ban nine of the dirty dozen chemicals** (key POPs), limit the use of **DDT to malaria control, and curtail inadvertent production of dioxins and furans.**
- The convention listed twelve distinct chemicals in three categories:
  1. **Eight pesticides** - Aldrin, Chlordane, DDT, Dieldrin, Endrin, Heptachlor, Mirex and Toxaphene.
  2. **Two industrial chemicals** - Poly chlorinated biphenyls and Hexachlorobenzene.
  3. **Two unintended by-products of many industrial processes** - Poly chlorinated dibenzo-p-dioxins and dibenzofurans. (Commonly referred to as dioxins and furans).

👉 Global Environment Facility

- Formation ➔ GEF was established with the **Rio Earth Summit of 1992**.
- Headquarter ➔ **Washington, D.C., USA**.
- Involved Bodies ➔ The GEF is jointly managed by the United Nations Development Programme (**UNDP**), **the World Bank**, and the United Nations Environment Programme (**UNEP**).
- Purpose ➔ The **financial mechanism** was established to **help tackle our planet's most pressing environmental problems.**
- Working ➔ It provides **funds to the developing countries** and **transition economies** for projects related to climate change, biodiversity, the ozone layer, etc.
- It is a financial mechanism **for 5 major international environmental conventions** ➔
  - The United Nations Framework Convention on Climate Change (**UNFCCC**),
  - The United Nations Convention on Biological Diversity (**UNCBD**),
  - The Stockholm Convention on Persistent Organic Pollutants (**POPs**),

- The United Nations Convention to Combat Desertification (**UNCCD**), and
- The **Minamata Convention on Mercury**.

12. Bio-decomposer

Why in News?

- Delhi Chief Minister has announced that the Delhi government will start spraying bio-decomposer solutions to prevent stubble burning in non-basmati rice fields in the national capital.

About

- What is it? ➔ It is a **decomposer capsule** which could be **converted into a liquid solution and sprayed on fields** with crop stubble. The solution when sprayed in the fields **can decompose crop residue and turn it into manure.**
- Who developed it? ➔ It has been developed by **the Indian Agricultural Research Institute(IARI), Pusa**.
- Benefits ➔
- The solution **increases soil fertility** and **reduces the use of fertilisers**.
- It is a **low-cost, simple and effective way** to deal with the problem of stubble burning.
- What is Stubble Burning ➔ It is the **practice of intentionally setting fire to residues** which remains after the harvest of a crop. It is usually done to clear the field quickly for the next season and to burn off weeds and other pests.

13. Abortelphusa Namdaphaensis

Why in News?

- It is a new freshwater crab species found recently on the edge of a small stream in Namdapha Tiger Reserve.

About

- The genus (**Abortelphusa**) is **named after the Abor Hills**, the species (**Namdaphaensis**) is named **after Namdapha.**
- Namdapha is known for its **rich biodiversity**, and believed to be the rare area that harbours four large cats: **tigers, snow leopards, clouded leopards and leopards**.

14. Graded Response Action Plan (GRAP)

Why in News?

- The Supreme Court has directed Delhi and neighbouring States to implement air pollution control measures under "very poor" and "severe" category air quality of GRAP.

About

- What is it? ➔ Approved by the **Supreme Court in 2016**.
- The plan was **prepared by EPCA**.
- It works only as **an emergency measure**.
- As such, the plan does **not include action by various state governments** to be taken throughout the year to **tackle industrial, vehicular and combustion emissions**.

- When the air quality **shifts from poor to very poor**, the **measures listed** have to be followed since the plan is incremental in nature.

Overview of the plan:

- The plan **requires action** and **coordination among 13 different agencies** in **Delhi, Uttar Pradesh, Haryana and Rajasthan (NCR areas).**
- At the head of the table is the **EPCA, mandated by the Supreme Court**.
- Before the imposition of any measures, **EPCA holds a meeting with representatives** from all NCR states, and a call is taken on which actions has to be made applicable in which town.

15. India's Sulphur Dioxide (SO2) Emissions

Why in News?

- Greenpeace India and the Centre for Research on Energy and Clean Air (CREA) has released its annual report titled "Ranking the World's Sulfur Dioxide (SO2) Hotspots: 2019-2020".

About Sulphur Dioxide

- What is it? ➔ Sulphur dioxide (SO2) is a **colorless gas** with a **strong odour**, similar to a just-struck match.
- It is formed when **fuel containing sulphur**, such as coal and oil, is **burnt, creating air pollution**.
- Most sulphur dioxide air pollution comes from the **burning of coal and oil in power plants**.
- It is also **emitted by trains, large ships**, and **some diesel equipment** that burns high sulphur fuel and also by volcanic eruptions.
- It is used as a **food preservative** for some fruits and vegetables.
- It becomes a **liquid under pressure**.
- **Sulfur dioxide and nitrogen oxides** affect the environment when they react with substances in the atmosphere to **form acid rain**.

👉 Key Take Away

- Top SO2 Emitters ➔ **India** has continued to occupy the **top spot in the world** in sulphur dioxide(SO2) emissions for the fifth consecutive year in 2019.It was **followed by Russia and China**.
- India's SO2 Emissions ➔ In 2019, **India** emitted **21% of global anthropogenic (human-made)** SO2 emissions.
    - However, India's SO2 emissions have recorded a **decline of approximately 6% in 2019** as compared to 2018.
- SO2 Emission in Cities ➔ Among large cities, **Chennai is one of the biggest emission hotspots** in the country.
- Emission Hotspots ➔ The biggest emission hotspots in India are **thermal power stations** (or clusters of power stations).

- The major SO_2 emission hotspots in India are **Singrauli in MP**, **Neyveli** and **Chennai in Tamil Nadu**, Talcher and Jharsuguda in Odisha, Korba in Chhattisgarh, Kutch in Gujarat, Ramagundam in Telangana and Chandrapur and Koradi in Maharashtra.

- Recommendations ➔ Most of the power plants in India **lack flue-gas desulfurization**(FGD) **units**. Hence, FGD units should be **installed to reduce SO_2 emissions**.

16. Animal Discoveries 2019 and Plant Discoveries 2019

Why in News?

- Animal Discoveries 2019 and Plant Discoveries 2019.

About

- Animal Discoveries 2019 lists **368 faunal species** as new to science, and **116 species** as first records from India.
- Plant Discoveries 2019 **lists 180 new plant species** and **73 new records** discovered from India.
- The number of plant species found in India according is **50,012,** and accounts **roughly for 12% of all flora species in the world.**

👉 Zoological Survey of India

- Purpose ➔ **zoological research and studies** to promote the survey, exploration, and research of the fauna in India.
- Established in ➔ **1916**.
- Headquartered in ➔ **Kolkata, West Bengal**.
- It functions under the **Ministry of Environment, Forest and Climate**.

👉 Botanical Survey of India (BSI):

- Founded in **1890**, it comes under the **Ministry of Environment, Forest and Climate Change**.
- Purpose ➔ **Survey, research and conservation of plant resources, flora and endangered species of India** including by collecting and maintaining germplasm and gene bank of endangered, patent and vulnerable plant species.

17. Tree Transplantation Policy

Why in News?

- Delhi Cabinet has approved the 'Tree Transplantation Policy' for the preservation of trees in the Capital.

Key Points

- Agencies concerned will have to **transplant 80 per cent of the trees affected by their projects** to a new location.
- More importantly, 10 saplings will be planted in addition to the whole tree being dug up with the root intact and scientifically transplanted at another location instead of being felled.
- A dedicated **panel of government agencies** with track record and experience of tree transplantation is being formed under the policy.

- Payments for transplantation will be made after one year to ensure this, and if less than 80 per cent of the transplanted trees survive, payment will be deducted.
- The government will also form **local committees**, which will include citizens, for checking, monitoring and certification of the tree transplantation exercise.
- A dedicated **Tree Transplantation Cell** will also be formed by the Delhi government and local committees, which will include government officials, citizens to monitor the transplanted trees and to certify that the task has been done with due diligence.

18. Goa becomes first 'Har Ghar Jal' State

Why in News?

- Goa has become the first 'Har Ghar Jal' State in the country as it has successfully provided 100% Functional Household Tap Connections(FHTCs) in the rural areas by utilising the benefits under Jal Jeevan Mission(JJM).

About Jal Jeevan Mission

- Aim ➔ It aims to **provide safe and adequate drinking water** through individual household tap connections (HarGharJal) to all rural households by 2024.
- Implementation ➔ It is being implemented by the **Department of Drinking Water and Sanitation** under the **Jal Shakti Ministry**.
- Funding Pattern ➔ The fund sharing pattern between the Centre and states is **90:10 for Himalayan and North-Eastern States, 50:50 for other states and 100% for Union Territories.**
- Features ➔
    - The mission will be based on a **community approach to water** and will include **extensive Information**, Education and communication as a key component of the mission.
    - It will also implement **source sustainability measures** as **mandatory elements** such as recharge and reuse through grey water management, water conservation and rainwater harvesting.

19. Brahma Kamal

Why in News?

- The rare Brahma Kamal, the only flower known to bloom after sunset and just once a year has been spotted in the higher reaches of the Himalayas in Uttarakhand.

About

- What is it? ➔ It is a **species of flowering plant native to the Himalayas**, Himachal Pradesh and Uttarakhand, India, Mongolia, Burma and southwest China.
- It is also the **state flower of Uttarakhand**.
- Named after? ➔ The flower is named **after God Brahma** who is believed to have created the universe. The flower only blooms for a few hours and is said to bring good luck and prosperity.
- Significance ➔ The flower also finds itself **mentioned in the scriptures** and is **offered in many holy shrines** including Kedarnath, Badrinath and Tunganath.
- Uses ➔ The flower is **highly valued in Tibetan medicine** and **Ayurveda for its healing properties**. It is extensively used by the local population to treat cuts and bruises.

20. Synedrella Yellow Vein Clearing Virus

Why in News?

- Recently, a new study with researchers from National Centre of Biological Sciences (NCBS-TIFR), Bengaluru, has discovered a new step in the arms race between the virus called Synedrella Yellow Vein Clearing Virus and the plants it attacks.

About

- The virus was isolated by the researchers from a plant named **Synedrella nodiflora**, and it was able to **infect tobacco and tomato plant.**
- It is a representative of the **Begomovirus family of viruses** and **Begomoviruses** are a large **family with about 400 members.**
- The Plant targets the protein called **BetaC1 made by the virus** which helps in successful infection and intracellular movement within the plant.
    - The plants degrade BetaC1 protein of virus by tagging this protein with another smaller protein called ubiquitin.
- The **virus uses the plant's machinery to create a small modification of the BetaC1 protein** and it adds a tiny protein called **SUMO** to the betaC1 protein in a process termed **SUMOylation**.
- The BetaC1 hijacks the **SUMO pathway machinery** of the plants and makes itself a **substrate for SUMOylation**.

👉 Begomovirus

- Begomovirus is a **genus of viruses**, in the **family Geminiviridae**.
- Begomoviruses have **monopartite** or **bipartite genomes**, **are whitefly-transmitted** and are found in **both the Old and New Worlds.**
- They are plant viruses that as a group have a **very wide host range**, **infecting dicotyledonous plants**.

21. World Migratory Bird Day

Why in News?

- The World Migratory Bird Day(WMBD) 2020 is being observed on 10th October, 2020.

About

- What is it? ➔ It is an **annual awareness-raising campaign** highlighting the need for the **protection of migratory birds and their habitats.**
- Who organises it? ➔ It is **organized by** Convention on the Conservation of Migratory Species of Wild Animals (**CMS**) and the African-Eurasian Migratory Waterbird Agreement (**AEWA**) – together with Environment for the Americas (**EFTA**).
- When is it organized? ➔ Since,2018 the day is **organized twice a year** on the second Saturday in May and in October.
- Theme ➔ **Birds Connect Our World**.

👉 AEWA:

- It is an **intergovernmental treaty** dedicated to the **conservation of migratory waterbirds** and **their habitats** across Africa, Europe, the Middle East, Central Asia, Greenland and the Canadian Archipelago.
- It was developed under the framework of the **Convention on Migratory Species** (CMS) and **administered by** the United Nations Environment Programme(**UNEP**).

👉 **CMS or the Bonn Convention**:

- It is an **intergovernmental treaty**, concluded under the aegis of UNEP.
- It was signed in **1979 in Bonn, Germany**, and entered into force in 1983.
- It is the **only global convention** specializing in the **conservation of migratory species**, their habitats and migration routes.

22. Nitrous Oxide (N2O)

Why in News?

- Human emissions of nitrous oxide (N2O) — a greenhouse gas 300 times more potent than carbon dioxide (CO2) — increased by 30 per cent between 1980 and 2016.

About N2O

- What is it? ➔ Nitrous oxide is **a dangerous gas** for the **sustainable existence of humans on Earth**.
- It has the **third-highest concentration** (Co2 and Methane are other two gases) **in our atmosphere** among greenhouse gases responsible for global warming.
- N2O can live in the atmosphere for **up to 125 years**.
- N2O is also the **only remaining threat to the ozone layer**, for it accumulates in the atmosphere over a long period of time, just like CO2.

About the research

- Nitrous oxide global concentration levels have **increased from 270 parts per billion (ppb) in 1750 to 331 ppb in 2018 — a jump of 20 per cent.**
- The growth has been the **quickest in the past five decades** because of **human emissions**.
- The research was conducted through an **international collaboration** between the International Nitrogen Initiative (**INI**) and the **Global Carbon Project of Future Earth**, a partner of the World Climate Research Programme.

23. Murder Hornets and Furry Puss Caterpillars

Why in News?

- Recently, the health officials in Virginia, Washington have warned the State from Murder Hornets and Furry Puss Caterpillars.

About Murder Hornets

- It is the **world's largest wasps**, also known as the **Asian giant hornets**.
- It is **native to East Asia and Japan**.

- It is native to **temperate and tropical East Asia**, **South Asia**, **Mainland Southeast Asia** and **parts of the Russian Far East**.
- It is infamous for **ruthlessly ripping** apart honeybees and decimating their hives.

👉 About Furry Puss Caterpillars

- The furry puss caterpillar, named after the **far less vicious house cat**, is essentially a **southern flannel moth in its larva stage**.
- The caterpillar is widely regarded as one of the **most poisonous of its kind** in the **United States** as it closely **resembes a wig or toupée**.
- The bristly hair that coats it, hides **small and toxic spines** that can get lodged in a person's skin and cause immediate and intensely burning pain.

24. Fishing Cat

Why in News?

- The Chilika Development Authority(CDA) has designated the fishing cat as ambassador which is being called as an important step towards conservation of the vulnerable species.

About Fishing Cat

- What is it? ➔ It is a **medium-sized wildcat** found in **South** and **Southeast Asia**.
- They are **nocturnal** and are an **adept swimmer** which enters water frequently to prey on fish and other animals.
- Habitat ➔ In India, fishing cats are mainly found in the **mangrove forests of the Sundarbans**, on the **foothills of the Himalayas** along the Ganga and **Brahmaputra river valleys and in the Western Ghats**.
- Significance ➔ In 2012, the **West Bengal** government officially declared the **Fishing Cat as the State Animal**.
- Conservation Status ➔
  - IUCN Red List → **Vulnerable**.
  - CITES → **Appendix II**
  - Indian Wildlife Protection Act,1972 → **Schedule I**
- Threat ➔ **Habitat Destruction**, **Hunting**, **Ritual Practices, Poaching among others**.

Chilka Lake

- It is **Asia's largest brackish water** lake spread over districts of **Odisha** at the mouth of the **Daya River**, flowing into the **Bay of Bengal**.
- In 1981, Chilika Lake was designated the first Indian wetland of **international importance** under the **Ramsar Convention**.

25. Fly Ash

Why in News?

- NTPC Ltd. under Ministry of Power, has started to collaborate with cement manufacturers across the country to supply fly ash as part of its endeavour to achieve 100% utilisation of the by-product produced during power generation.

About

- What is it? ➔ It is a **byproduct from burning of coal in electric power generating plants**.
- It is called fly ash because it is **transported from the combustion chamber** by exhaust gases.
- It is collected from the **exhaust gases by electrostatic precipitators** or **bag filters**.
- Composition ➔ All fly ash includes substantial amounts of **silicon dioxide** (SiO_2), **aluminum oxide** (Al_2O_3) and **calcium oxide** (CaO), the main mineral compounds in coal-bearing rock strata.
- Properties ➔
    - **Resemble Portland cement** but is chemically different.
        - Portland cement is a binding material in the form of a finely ground powder, that is manufactured by burning and grinding a mixture of limestone and clay.
        - Its chemical composition includes calcium silicates, calcium aluminate and calcium aluminoferrite.
    - **Exhibit cementitious properties**.
        - A cementitious material is one that hardens when mixed with water.
- Uses ➔ It is used in **concrete and cement products, road base, metal recovery**, and **mineral filler** among others.
- Harmful Effects ➔ Fly ash particles are **toxic air pollutants**. They can trigger **heart disease, cancer, respiratory diseases and stroke.**
    - When **combined with water** they cause **leaching of heavy metals in ground water**.
    - It also **pollutes the soil**, and **affects the root development system of trees**.
    - Radiation: For an equal amount of electricity generated, fly ash contains a **hundred times more radiation than nuclear waste secured via dry cask or water storage.**

👉 NTPC

- NTPC Ltd. is a **central Public Sector Undertaking** (PSU) under the **Ministry of Power**.
- Aim ➔ To **provide reliable power and related solutions in an economical, efficient and environment-friendly manner**, driven by innovation and agility.
- It became a **Maharatna company** in May **2010**.
- It is located in **New Delhi**.

26. Thattekkad Bird Sanctuary

Why in News?

- Recently, an extent of one kilometre around the boundary of Thattekkad Bird Sanctuary has been notified as its eco-sensitive zone (EZ).

About

- What is it? ➔ It is the **first Bird Sanctuary in Kerala harbours** a wide range of flora and fauna.
- It is also known as **Salim Ali Bird Sanctuary** which was constituted in **1983**.
- Dr. Salim Ali, the legendary '**Bird Man of India**', during his survey in 1933, noted the bird diversity of Thattekkad as the richest bird habitat.
- It is located in the **Kothamangalam Taluk of Ernakulam district on the northern bank of the Periyar River**.

- The common birds are **Indian roller**, **Cuckoo**, **common snipe**, **crow phesant**, **grey drongo**, **Malabar trogon**, **wood peckers**, **lare pied wagtail** and **Indian hill myna**.

27. MOSAiC Expedition

Why in News?

- The Multidisciplinary Drifting Observatory for the Study of Arctic Climate(MOSAiC) Expedition which began from Norway has successfully concluded at the port of Bremerhaven, Germany.

About

- What is it? ➔ It is **an international research expedition** that aims to take the **closest look ever at the Arctic as the epicenter of global warming** and to gain fundamental insights that are key to better understand global climate change.
- Led by ➔ The project has been designed by an **international consortium of leading polar research institutions** led by Germany's Alfred Wegener Institute, Helmholtz Centre for Polar and Marine Research(**AWI**).
- RV Polarstern (a polar research ship) ➔ Under the mission, German research icebreaker **Polarstern** was **set sail from Norway to spend a year drifting through the Arctic Ocean – trapped in ice.**

28. State of Climate Services 2020 Report

Why in News?

- United Nations(UN) World Meteorological Organization(WMO) has released a report titled "State of Climate Services 2020 Report: Move from Early Warnings to Early Action".

About

- What is it? ➔ It **identifies where and how governments can invest in effective early warning systems** that strengthen countries resilience to multiple weather, climate and water-related hazards and provides successful examples.

👉 Key Highlights from the report:

- Impact of Disasters ➔ Over the past 50 years, disasters attributed to weather, climate and water-related hazards have claimed **over 2 million lives and cost the world economy $3.6 trillion. By 2030**, this number could increase by almost 50% at a cost of around $20 billion a year.
- Reasons for Disasters ➔ Between 1970 and 2019, **79% of disasters worldwide** involved **weather, water**, and **climate-related hazards**. Over the last 10 years (2010-2019), the percentage of disasters associated with weather, climate and water related events increased by 9% compared to the previous decade.

👉 WMO:

- What is it? ➔ It is a **specialized agency of the United Nations** responsible for promoting international cooperation on atmospheric science, climatology, hydrology and geophysics.
- Headquarters ➔ **Geneva, Switzerland**.
- Reports ➔ **State of Climate report**, **Greenhouse Gas Bulletin report** among others.

29. Skinks of India

Why in News?

- Recently, the Zoological Survey of India (ZSI) brought a study on skinks (a kind of lizard), titled Skinks of India.

About Skinks

- What is it? ➔ It is the **largest family of lizards**, having long bodies, relatively small or no legs, no pronounced neck and glossy scales.
- It is **found around homes, garages, and open spaces** such as sparks and school playgrounds, and around lakes.
- Skinks are **non-venomous, highly alert, agile and fast moving** and actively forage for a variety of insects and small invertebrates.
- They have a **prominent role in maintaining ecosystems**, however, not much is known about their breeding habits, and ecology because identification of the species can be confusing.
- In **India skinks** are found in **all kinds of habitats** in the country, from the Himalayas to the coasts and from dense forests to the deserts.

👉 **Key findings**:

- **India** is home to **62 species of skinks** and about **57% of all the skinks** found in India (33 species) are **endemic**.
- They are found in **all kinds of habitats** in the country, **from the Himalayas to the coasts and from dense forests to the deserts.**
- With **1,602 species of skinks** across the world, making it the **largest family of lizards**, their occurrence in India is **less than 4 % of the global diversity**.

👉 **Zoological Survey of India**

- The Zoological Survey of India (ZSI), a **subordinate organization of the Ministry of Environment, Forest and Climate Change.**
- Established in ➔ **1916**.
- Purpose ➔ It is a **national centre for faunistic survey and exploration of the resources** leading to the advancement of knowledge on the exceptionally rich faunal diversity of the country.
- Headquarters ➔ It has its headquarters at **Kolkata and 16 regional stations** located in different geographic locations of the country.

30. Wheat Bran Marine Bacterial Consortia

Why in News?

- The National Institute of Ocean Technology (NIOT) has developed an eco-friendly crude oil bioremediation mechanism technology.

About

- It has been developed **using consortia of marine microbes wheat bran** (WB) immobilized on agro-residue bacterial cells.
- In marine ecosystem, **hydrocarbon clastic deep sea microbial consortium** (two or more group of bacteria) plays an **important role in breaking down oil** in the event of a spill.
- The microbial community serves as **energetic primary degraders of complex mixture of petroleum hydrocarbons** into **various aldehydes, ketones and acidic metabolites**.
- Significance of the finding ➔
    - It was found that **complete breakdown and degradation of crude oil** was achievable using wheat bran marine bacterial consortia.
    - The NIOT study found that **immobilised bacterial cells** had **better oil degrading capacity** than the free bacterial cells.
    - They could **remove 84 per cent** of the **oils within 10 days**.
    - Whereas the free bacterial cells degraded a **maximum of 60 per cent** of the **crude oil at optimised conditions**.

31. Chinese Pink Dolphins

Why in News?

- According to recent observations Chinese pink dolphins are making a comeback in the Pearl river estuary, one of the most heavily industrialised areas on Earth.

About

- Scientific Name ➔ **Sousa Chinensis**.
- Habitat ➔ Coastal waters of the **eastern Indian and western Pacific Oceans**.
- This species is often referred to as the **Chinese white/pink dolphin in China** (including Macao), **Hong Kong, Taiwan and Singapore** as a common name.
- IUCN Status ➔ **vulnerable**.
- The World Wildlife Fund for Nature (WWF) has seen a **decline in their numbers in the past 15 years by 70-80%.**
- Threats ➔ (1) **Agricultural, industrial, and urban pollution**; (2) **Overfishing**; (3) **Marine construction**; (4) **Transport**; (5) **Selling into captivity at marine entertainment parks and aquariums**.
- Dolphins use **echolocation** to find their way in the water.
    - Echolocation is a **technique used by** bats, dolphins and other animals to determine the location of objects using reflected sound.
    - This allows the animals to **move around in pitch darkness**, so they can navigate, hunt, identify friends and enemies, and avoid obstacles.

👉 Pearl River

- The Pearl River estuary includes **Hong Kong, Macau** as well as the **mainland Chinese cities** of Shenzhen, Guangzhou and Dongguan.
- About **22 million people** live in the area.
- The estuary is one of the **busiest shipping lanes** in the world.

32. Heeng(asafoetida)

Why in News?

- Recently, scientists from the Centre for Scientific and Industrial Research (CSIR) have planted hing saplings in Himachal Pradesh.

About Heeng

- What is it? ➔ It is a **herbaceous plant** of the **umbelliferae family**.
- It is a **perennial plant** which **produces oleo-gum resin** from the roots after five years of plantation.
- Climate ➔ It **thrives in dry and cold desert conditions**.
- It is **endemic to Iran and Afghanistan** and they are the prominent global suppliers.
- Significance ➔ It is one of the **widely used spices** in Indian cuisine since time immemorial. There is **no production of heeng in India** and currently it is being **imported annually from Afghanistan, Iran and Uzbekistan**.
- Benefits ➔ It has a **range of medicinal properties**, including relief for digestive, spasmodic and stomach disorders, asthma and bronchitis. It is also commonly used to **help with painful or excessive bleeding** during menstruation and premature labour.

33. The Cat Geoglyph

Why in News?

- Recently, a giant cat geoglyph was discovered on a hill at the famous Nazca Lines site in Peru.

About

- It **dates from 500 BC – 200 AD** (Paracas age). The cat geoglyph is believed to be **older than the ones previously found at Nazca.**
- The **Paracas culture** was an Andean society existing between approximately 800 BCE and 100 BCE, with an extensive knowledge of irrigation and water management. It was in present day Peru in the Paracas Desert region.
- Representations of felines of this type are frequent in the **iconography of ceramics and textiles of the Paracas society.**

👉 The Nazca Lines

- These are a **group of geoglyphs** known for the **depictions of larger-than-life animals, plants and imaginary beings**.
- These are believed to be the **greatest known archaeological enigma**, owing to their **size, continuity, nature and quality.**
- **Drawn more than 2 millennia ago** on the surface of southern Peru's arid Pampa Colorada, the geoglyphs feature different subjects, but mainly plants and animals.
- The Lines were **first discovered in 1927**, and were declared a **World Heritage Site by UNESCO in 1994**.

34. New Species of sub-aerial Diatoms

Why in News?

- Recently, the seven new species of sub-aerial diatoms have been discovered from some areas of Western Ghats by city-based scientists from the Agharkar Research Institute (ARI).

About Diatoms

- What is it? ➔ Diatoms are **single-celled algae** which **generate nearly 25 per cent of global oxygen.**
- They are commonly found in **streams, rivers, lakes and seas**.
- They are the **only organism on the planet with cell walls** composed of transparent, opaline silica.
- Diatoms have **light-absorbing molecules** (chlorophylls a and c) that **collect energy from the sun and turn it into chemical energy through photosynthesis.**
- The diatoms **remove carbon dioxide** (CO_2) from the atmosphere through **carbon fixation**.
    - The CO_2 is converted to organic carbon in the form of sugar, and oxygen (O_2) is released.
- Diatoms produce **long-chain fatty acids**.
- Diatoms are an **important source of energy rich molecules** that are food for the entire food web, from zooplankton to aquatic insects to fish to whales.

35. International Snow Leopard Day

Why in News?

- International Snow Leopard Day was observed on 23 October. The day aims to raise awareness on conservation and protection of snow leopards.

About Snow Leopard

- The Snow Leopard is also known as **Ghost of the mountains**.
- It acts as an **indicator of the health of the mountain ecosystem** in which they live, due to their position as the top predator in the food web.
- Habitation ➔ The Snow Leopard lives **at high altitudes** in the **steep mountains of Central and Southern Asia,** and in an extremely cold climate.
    - They inhabit the higher Himalayan and trans-Himalayan landscape in the states/union territories of **Jammu and Kashmir, Himachal Pradesh, Uttarakhand, Sikkim, and Arunachal Pradesh.**
    - India is a unique country to have a good presence of **5 big cats, including Snow Leopard**. The other 4 are, **Lion, Tiger, Common Leopard, and Clouded Leopard**.
- Snow Leopard capital of the world ➔ **Hemis, Ladakh**.
- Hemis National Park is the **biggest national park of India** and also has a good presence of Snow Leopard.
- Conservation status ➔
    - IUCN Red List- **Vulnerable**
    - Convention on International Trade in Endangered Species (CITES)- **Appendix I**
    - Convention on Migratory Species (CMS)- **Appendix I**
        - **Appendix I** includes species threatened with extinction.
    - Indian Wildlife (Protection) Act 1972- **Schedule I**

- Threat ➔ Factors that have contributed to the decline in the snow leopard populations include, **reduction in prey populations**, **illegal poaching and increased human population infiltration** into the species habitat and illegal trade of wildlife parts and products among others.

👉 **Conservation Efforts Launched by India**

- **HimalSanrakshak** ➔ It is a **community volunteer programme**, to protect snow leopards, launched on 23rd October 2020.
- **SECURE Himalaya** ➔ Global Environment Facility (**GEF**)-United Nations Development Programme (**UNDP**) **funded the project** on conservation of high altitude biodiversity and reducing the dependency of local communities on the natural ecosystem.
    - This project is now operational in **four snow leopard range states**, namely, Jammu and Kashmir, Himachal Pradesh, Uttarakhand, and Sikkim.
- **Project Snow Leopard** (PSL) ➔ It was launched in **2009** to **promote an inclusive and participatory approach** to conserve snow leopards and their habitat.
- Snow Leopard is in the **list of 21 critically endangered species** for the **recovery programme** of the Ministry of Environment Forest & Climate Change.
- **Snow Leopard conservation breeding programme** is undertaken at Padmaja Naidu Himalayan Zoological Park, Darjeeling, West Bengal.

36. Himalayan Brown Bear

Why in News?

- Recently, a study on the Himalayan brown bear has predicted a significant reduction in suitable habitat and biological corridors of the species in the climate change scenario.

About Himalayan Brown Bear

- Scientific ➔ **Ursus arctos isabellinus**.
- Also known as **Himalayan red bear**, **isabelline bear** or Dzu-Teh.
- Distribution ➔ It is found in **23 protected areas** including **Himachal Pradesh**, **Uttaranchal** and **Jammu and Kashmir.**
- It is the **largest carnivore** in the highlands of Himalayas.
- Conservation Status ➔
    - IUCN Status: While the **brown bear** as a species is **classified as Least Concern by the IUCN**, this **subspecies** is **highly endangered and populations are dwindling**. It is **Endangered in the Himalayas** and **Critically Endangered in Hindu Kush**.
    - It is listed under **Schedule 1** of the Indian Wildlife (Protection) Act of 1972.

👉 **Key Takeaways**:

- About the study ➔ The study was carried out in the western Himalayas. It has predicted a **73% decline of habitat of Himalayan Brown Bear by the year 2050.**
- This decline will also **impact 13 protected areas**. Out of these 13 protected areas, eight will become completely uninhabitable by 2050.

- Recommendations ➔ The study has suggested adopting an **adaptive spatial planning** of **protected area networks in the western Himalayas** for conserving the Himalayan Brown Bear species.
- Adaptive Spatial Planning: It refers to the process of **conserving the existing landscape and augmenting the fragmented areas of the habitat of the species.**

37. Yellow Dust (Asian Dust)

Why in News?

- North Korean authorities have urged citizens to remain indoors to avoid contact with a mysterious cloud of 'yellow dust' blowing in from China which they have warned could bring Covid-19 with it.

About

- It is a **meteorological phenomenon** during which **sand from deserts in China and Mongolia** are carried by high speed surface winds **into both North and South Korea**.
- The sand particles tend to **mix with other toxic substances** such as industrial pollutants as a result of which the '**yellow dust'** is known to **cause a number of respiratory ailments**.
- Usually, when the dust reaches **unhealthy levels** in the atmosphere, authorities urge **people to remain indoors** and **limit physical activity**, particularly heavy exercise and sport.
- Sometimes, when the concentration yellow dust in the atmosphere crosses around of **800 micrograms/cubic meter, schools are shut** and **outdoor events cancelled** in the **affected areas**.

38. Aenigmachanna Gollum

Why in News?

- A 100 million-year-old fish has been discovered in Kerala which is named after the dark and conflicted character of JRR Tolkien's epic saga movie 'Lord of the Rings'.

About

- It belongs to an old family of fish, called **dragon snakeheads**, which **retains its primitive characteristics** after all these millennia.
- It looks like a **dragon, swims like an eel,** and has remained hidden for a hundred million years.
- The closest relative of the family Aenigmachannidae is the **Channidae**, of which at least 50 species can be found in the streams and lakes of Asia and tropical Africa.
- Aenigmachanna is a **Gondwanan lineage**, which has **survived break-up of the supercontinent**, with India separating from Africa at around 120 million years ago.
- Unlike the Channidae, the **Aenigmachannidae lack the suprabranchial organ** that allows the former to breathe air and proliferate widely.
- The researchers say that the area where Aenigmachanna was collected is part of the Western Ghats i.e. **Sri Lanka Hotspot**, which is among the **richest biodiversity hotspots** in the world.
- **Aenigmachanna mahabali** is a sister species of the Aenigmachanna Gollum.
- It is **endemic** to the Indian **state of Kerala**.

39. Two New Ramsar Sites

Why in News?

- Recently, Kabartal Wetland (Bihar) and Asan Conservation Reserve (Uttrakhand) have been designated as Ramsar sites, making them 'Wetlands of International Importance'.

About

- Earlier in 2020, India designated 10 more wetlands as a Ramsar site, taking the **total number from 27 to 37**.
- With **2 more inclusions**, the total number of Ramsar sites in India is 39, the **highest in South Asia**.

👉 Kabartal Wetland

- It is known as **Kanwar Jheel**, it covers 2,620 hectares of the **Indo-Gangetic plains** in the **Begusarai district of Bihar**.
- It acts as a **vital flood buffer** for the region besides **providing livelihood opportunities** to local communities.
- It is also a valuable site for **fish biodiversity** with **over 50 species documented**.
- It is an important stopover along the **Central Asian Flyway**, with **58 migratory waterbirds** using it to rest and refuel.
- Five critically endangered species inhabit the site, including three vultures – the **red-headed vulture** (Sarcogyps calvus), **white-rumped vulture** (Gyps bengalensis) and **Indian vulture** (Gyps indicus) – and two waterbirds, the **sociable lapwing** (Vanellus gregarius) and **Baer's pochard** (Aythya baeri).

👉 Asan Conservation Reserve

- ACR is a **444-hectare stretch** of the **Asan River** running down to its confluence with the Yamuna River in **Dehradun district of Uttarakhand**.
- It is **Uttarakhand's first Ramsar Site**.
- The damming of the River by the **Asan Barrage in 1967** resulted in siltation above the dam wall, which helped to create some of the **Site's bird-friendly habitats**.
- These habitats **support 330 species of birds** including the critically endangered **red-headed vulture** (Sarcogyps calvus), **white-rumped vulture** (Gyps bengalensis) and **Baer's pochard** (Aythya baeri).
- Other non-avian species present include **49 fish species**, one of these being the **endangered Putitora mahseer** (Tor putitora).

👉 Ramsar Convention

- What is it? ➔ Ramsar Convention on Wetlands is an **intergovernmental treaty**.
- History ➔ Adopted in **1971** in the Iranian city of Ramsar.
- It came into force for India on **1st February, 1982**.
- Those wetlands which are of **international importance** are **declared as Ramsar sites**.
- Mission ➔ The **Convention's mission is** "the conservation and wise use of all wetlands through local and national actions and international cooperation, as a contribution towards achieving sustainable development throughout the world".

- **Montreux Record**
  - What is it? ➔ The **Montreux Record** is a register of wetland sites on the List of Wetlands of International Importance where **changes in ecological character have occurred**, **are occurring**, or **are likely to occur** as a result of technological developments, pollution or other human interference.
  - It is **maintained as part of the Ramsar List**.
  - At present, two wetlands of India are in Montreux Record ➔ **Keoladeo National Park** (Rajasthan) and **Loktak Lake** (Manipur).
  - Chilika Lake (Odisha) was placed in the record but later removed from it.

40. The Amur Falcon

Why in News?

- Chuilon and Irang, the radio-tagged Amur Falcons have arrived in Manipur after completing one migratory journey that covered 29,000 km in 361 days.

About

- The Amur Falcon locally known as '**Akhoipuina is the world's longest travelling migratory raptors**.
- Migratory Route ➔ They breed in **East Asia and migrate to northeast India**, **Sri Lanka** and **sometimes to Thailand**, Cambodia and up to the Arabian Sea and parts of Southern Africa.
- **Doyang Lake in Nagaland** is known as a stopover for the Amur falcons during their annual migration.
- IUCN Status ➔ **Least Concern**.
- Significance ➔ **Nagaland Government** organises **Amur Falcon festival** to spread awareness about the need to provide safe passage to Amur falcons.

41. GLOBAL BIODIVERSITY OUTLOOK

Why in News?

- Recently, Fifth Global Biodiversity Outlook (GBO-5) report was released.

About GBO

- It is a flagship **publication of the Convention on Biological Diversity (CBD)**.
- It is a periodic report that summarizes the latest data on the **status and trends of biodiversity** and draws conclusions relevant to the further implementation of the CBD.
- **GBO-5** provides global summary of progress towards the Aichi Biodiversity Targets and is based on a range of indicators, research studies and assessments as well as the national reports provided by countries on their implementation of the CBD.
- **Suggestion to achieve 2050 Vision for Biodiversity:**
  - Land and forests transition
  - Sustainable freshwater transition
  - Sustainable fisheries and oceans transition
  - Sustainable agriculture transition
  - Sustainable food systems transition
  - Cities and infrastructure transition
  - Sustainable climate action transition

- Biodiversity-inclusive One Health transition

About Convention on Biological Diversity (CBD):

- It entered into force in 1993. It has 3 main objectives:
  - The conservation of biological diversity
  - The sustainable use of the components of biological diversity
  - The fair and equitable sharing of the benefits arising out of the utilization of genetic resources
- It has been ratified by 196 nations, **including India**.
- **CBD has two supplementary agreements, or protocols** –
  1. **Cartagena Protocol on Biosafety** governing the movements of Living Modified Organisms.
  2. **Nagoya Protocol** on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization (**ABS**).

About Aichi Biodiversity Targets

- In 2010, at Nagoya, Parties to the Convention on Biological Diversity (CBD) adopted the Strategic Plan for Biodiversity 2011–2020, a ten-year framework for action by all countries and stakeholders **to safeguard biodiversity and the benefits** it provides to people.
- As part of the Strategic Plan 20 ambitious but realistic targets, known as the Aichi Biodiversity Targets, were adopted.

Science and Technology

1. Crimean-Congo Haemorrhagic Fever (CCHF)

Why in News?

- There might be a possible spread of the Congo fever in the Maharashtra district of Palghar.

About CCHF

- Caused by ➔ a **tick-borne virus** (Nairovirus) of the Bunyaviridae family.
- Transmission ➔ It is transmitted **through bite of Hyalomma tick**, an external parasite, living by feeding on the blood of mammals, birds etc.
- Human-to-human transmission ➔ **Close contact with** the blood, secretions, organs or other **bodily fluids of infected persons**.
- Virus can **lead to epidemics**, with a **high case fatality ratio** (10-40%).
- CCHF is **endemic in all of Africa**, the **Balkans**, the **Middle East and in Asia**.
- Symptoms ➔ **Fever, bodyache, dizziness, sore eyes and photophobia** (sensitivity to light).
- Treatment ➔ (1) The antiviral drug **ribavirin** has been used to treat CCHF infection with apparent benefit; (2) There are **no vaccines widely available for human or animal use**.

2. Graphene Mask Inactivates Coronaviruses

Why in News?

- Recently, the researchers from the City University of Hong Kong have produced a laser-induced form of graphene masks that inactivate the coronavirus species.

About

- All carbon-containing materials, such as **cellulose or paper**, can be **converted into graphene**.
- The researchers described the production of laser-induced graphene as a "**green technique**."
- Benefits ➔ (1) It is **reusable**; (2) Can also be **produced at low cost**.

👉 Graphene

- It is a **single layer (monolayer) of carbon atoms**.
- It is the **building-block of Graphite**.
- It is the **strongest** known material.
- Other Properties ➔ (1) High thermal stability; (2) High elasticity; (3) High electrical conductivity; etc.
- Uses ➔ It can be used in **miniaturised electronics to biomedical devices** like computers, solar panels, etc.

Do you know?

- Diamond, graphite and fullerenes are the **important allotropes of pure carbon**.
- Allotropy: Property of some chemical elements to **exist in two or more different forms**, in the same physical state.

- Graphene is also known for **antibacterial properties**.

3. Responsible AI for Social Empowerment (RAISE) 2020

Why in News?

- Global Virtual Summit on Artificial Intelligence (AI), RAISE 2020- 'Responsible AI for Social Empowerment 2020,' shall be held from October 5-9, 2020.

About

- What is it? ➔ RAISE 2020 is a **first of-its-kind, global meeting of minds on Artificial Intelligence** to drive India's vision for social transformation through responsible Artificial Intelligence.
- Organised by ➔ The Ministry of Electronics and Information Technology (**MeitY**) and **NITI Aayog**.
- It will be a **global meeting of minds to exchange ideas and chart a course for using AI** for social transformation, inclusion, and empowerment in areas like Healthcare, Agriculture, Education and Smart Mobility, among other sectors.
- Participants ➔ The event will witness robust **participation from global industry leaders, key opinion makers, Government representatives and academia.**
- Significance ➔ Industry analysts predict that Artificial Intelligence could **add up to USD 957 billion to India's economy by 2035.**

4. Nobel Prize for Medicine or Physiology

Why in News?

- Americans Harvey J Alter and Charles M Rice, and British scientist Michael Houghton have been awarded the Nobel Prize for Medicine or Physiology for the discovery of the hepatitis C virus.

About Their Contributions

- The trio's work helped explain a major **source of blood-borne hepatitis** that couldn't be explained by the hepatitis A and B viruses.
- Thanks to their discovery, **highly sensitive blood tests for the virus** are now available and these have essentially eliminated post-transfusion hepatitis in many parts of the world, greatly improving global health.
- Their discovery also allowed the rapid development of **antiviral drugs directed at hepatitis C.**

What is Hepatitis C?

- What is it? ➔ It is **a liver disease**.
- Caused by the hepatitis C virus (HCV): the virus can **cause both acute and chronic hepatitis**.
- Hepatitis C is a **major cause of liver cancer**.
- Spread ➔ The hepatitis C virus **is a bloodborne virus**: the most common modes of infection are through exposure to small quantities of blood.
- Cases of Hepatitis C ➔ According to WHO, about **71 million people** (6 -11 million of them in India) have chronic infection with the Hepatitis C.
- Treatment ➔

- **Antiviral medicines** can cure more than 95% of persons with hepatitis C infection, thereby reducing the risk of death from cirrhosis and liver cancer, but access to diagnosis and treatment is low.
- There is currently **no effective vaccine against hepatitis C;** however, research in this area is ongoing.

- Types of Hepatitis Viruses ➔
  - There are 5 main hepatitis viruses, referred to as **types A, B, C, D and E.**
  - Hepatitis A and E are typically **caused by ingestion of contaminated food or water**.
  - Hepatitis B, C and D usually occur as a result of **parenteral contact with infected body fluids.**

About Nobel Prize in Medicine:

- Awarded by ➔ the **Nobel Assembly at Karolinska Institutet, Stockholm, Sweden**.
- History ➔ First awarded in **1901**.
- Award ➔ The award comes with a **gold medal and prize money of 10 million Swedish kronor** (over USD 1,118,000), courtesy of a bequest left 124 years ago by the prize's creator, **Swedish inventor Alfred Nobel**.

5. Nobel Prize for Physics 2020

Why in News?

- Recently, the Royal Swedish Academy of Sciences decided to award one half of the 2020 Nobel Prize in physics to Roger Penrose and the other half jointly to Reinhard Genzel and Andrea Ghez for furthering the understanding of black holes.

About

- A black hole is **formed when stars collapse** and can be **defined as a space in the universe with an escape velocity** so strong that **even light cannot escape it**.
- The **escape velocity** is the speed at which an **object must travel to override a planet or an object's gravitational force.**
- Since **light cannot get out**, black holes are **invisible** and can only be **tracked** with the **help of a space telescope or other special tools.**
- The reason light cannot escape is mainly that the **gravity inside a black hole is very strong** as a result of a lot of matter being **squeezed** into a small space.

👉 Observations on Black Holes

- **Penrose** has been awarded the prize for the discovery that black hole formation is a **robust prediction** of the **general theory of relativity.**
- Penrose's work has shown that black holes are a **direct consequence of Albert Einstein's general theory of relativity**.
- Penrose used **Einstein's general theory of relativity** in order to prove that the **process of formation of black holes is a stable one.**
- **Genzel and Ghez** have been awarded the prize for the **discovery of a supermassive compact object** at the centre of our galaxy.
- Genzel and Ghez, on the other hand, have discovered that an **invisible** and an **extremely heavy object govern the stars' orbit** at the centre of the Milky Way.

- The work of Genzel and Ghez tells us that at the centre of our galaxy the Milky Way lies an **invisible supermassive object,** of which a **black hole provides a reasonable explanation**.

6. Nobel Prize in Chemistry for CRISPR Technology

Why in News?

- French-American duo Emmanuelle Charpentier and Jennifer Doudna have been awarded the 2020 Nobel Prize for the chemistry of CRISPR, which allows scientists to 'cut-paste' inside a genetic sequence.

About

- The CRISPR is an acronym for **Clustered Regularly Interspaced Short Palindromic Repeats**, developed in the year 2012
- CRISPR has made **gene editing very easy and simple**, and at the same time extremely efficient.
- The technology works in a simple way — it **locates the specific area in the genetic sequence** which has been **diagnosed** to be the cause of the problem, **cuts it out, and replaces it with a new** and correct sequence that no longer causes the problem.
- The technology **replicates a natural defence mechanism** in some bacteria that use a similar method to protect itself from virus attacks.

Working of CRISPR

- An RNA molecule is programmed to **locate the particular problematic sequence** on the **DNA strand**.
- A special protein called **Cas9**, often described in popular literature as '**genetic scissor', is used to break and remove the problematic sequence.**
- A **DNA strand**, when broken, has a **natural tendency to repair itself**. But the **auto-repair mechanism** can lead to **the re-growth** of a problematic sequence.
- **Scientists intervene** during this auto-repair process by **supplying the desired sequence of genetic codes**, which replaces the original sequence.
- It is like **cutting a portion of a long zipper somewhere** in between and replacing that portion with a fresh segment.
- Because the entire process is **programmable**, it has a **remarkable efficiency** and has already brought almost miraculous results.

Uses of CRISPR

- There are a whole **lot of diseases and disorders**, including some forms of cancer, that are **caused by an undesired genetic mutation.**
- These can all be **fixed with this technology**. There are vast applications elsewhere as well. **Genetic sequences of disease-causing organisms** can be altered to **make them ineffective**.
- Genes of plants can be edited to make them withstand pests, or **improve their tolerance to drought or temperature**.

7. FELUDA Covid-19 test

Why in News?

- Union Health Ministry will soon roll out the FELUDA paper strip test for SARS-CoV-2 diagnosis.

About FELUDA Covid-19 test

- Feluda is the acronym for **FNCAS9 Editor Linked Uniform Detection Assay**.
- It is an **accurate and low-cost paper-based test strip** to detect Covid-19 in less than 30 minutes.
- It has been approved for commercial launch by the **Drugs Controller General of India**.
- Developed by the Council of Scientific and Industrial Research (**CSIR**) and **Tata Group**.
- How it works? ➔
    - It uses indigenously developed CRISPR gene-editing technology to **identify and target the genetic material** of **SARS-CoV2**, the virus that **causes Covid-19**.
- Significance ➔
    - According to CSIR, the test matches **accuracy levels of RT-PCR tests**.
    - It has a **quicker turnaround time** and requires **less expensive equipment**.
    - 'Feluda' is also the **world's first diagnostic test** to deploy a specially **adapted Cas9 protein** to successfully detect the virus.

8. Electronic Vaccine Intelligence Network (eVIN)

Why in News?

- The eVIN network is being repurposed for the delivery of the COVID-19 vaccine.

About

- What is it? ➔ It is an indigenously developed technology system that **digitizes vaccine stocks** and **monitors the temperature of the cold chain through a smartphone application.**
- Objective ➔ It is aimed at **strengthening immunization supply chain systems** across the country.
- Implemented by ➔ It is being implemented under the **National Health Mission (NHM) by** the **Ministry of Health and Family Welfare** in partnership with the United Nations Development Programme (**UNDP**).
- Benefits of eVIN ➔
    - It has helped create a **big data architecture** that generates actionable analytics encouraging data-driven decision-making and consumption-based planning.
    - It helps in **maintaining optimum stocks** of vaccines leading to cost savings. Vaccine availability at all times has increased to 99% in most health centres in India.
    - While **instances of stock-outs have reduced by 80%,** the time taken to replenish stocks has also **decreased by more than half**, on an average.

9. Mars Opposition

Why in News?

- Due to the 'opposition' effect, Mars will look much brighter and bigger than usual in October 2020.

About

- Opposition, in astronomy, is the circumstance in which **two celestial bodies appear in opposite directions in the sky.**

- Examples ➔
    - The Moon, when full, is said to be in **opposition to the Sun**; the **Earth is then approximately between them**.
    - A **superior planet** (one with an orbit farther from the Sun than Earth's) **is in opposition when Earth passes between it and the Sun.**
    - The opposition of a planet is a **good time to observe it**, because the planet is then typically at its **nearest point to the Earth** for a given year and because it is close, the planet appears brighter in the sky.
    - The planets **Venus and Mercury**, whose orbits are smaller than Earth's, can **never be in opposition to the Sun**.

About Mars Opposition: Mars and the Sun are on directly opposite sides of Earth.

- Timing ➔
    - About **every 26 months**, the **Earth passes between the Sun and Mars**, this is when the three are arranged in a **straight line**.
    - In 2020, while Mars' closest approach to Earth was on **6th October**, the **opposition happened on 13th October**.
        - Mars's **next** close approach will happen on **8th December, 2022**, when the planet will be 62.07 km away from the Earth.
        - Significantly, the **closest distance is relative** and **hence can vary**.
        - As per NASA, Mars made its closest approach to **Earth in 2003** in **nearly 60,000 years** and it won't be that close to the planet until **2287**.
        - This is because the orbits of Earth and Mars are **not perfectly circular** and their **shapes can change slightly** because of gravitational tugging (pulling) by other planets. For instance, **Jupiter influences the orbit of Mars**.

10. 'Saviour Sibling' Experiment

Why in News?

- India's first 'saviour sibling' experiment is a success according to involved doctors.

About

- Under 'saviour sibling' experiment, **baby's bone marrow was used to save child**.
- One-year-old sibling has **saved her brother's life by donating her bone marrow**.
- Girl named Kavya was conceived by her parents through **invitro fertilisation (IVF)** to save her brother, Abhijeet Solanki, who was born with Thalassemia.

What is Thalassemia?

- Thalassemia is a **disorder** where the **haemoglobin count is low in blood** and such persons **require frequent blood transfusions.**
- Thalassemia major is the **most severe form of beta thalassemia**.
- It develops when **beta globin genes are missing**.

- The symptoms of **thalassemia major** generally appear **before a child's second birthday**.
- The **severe anaemia** related to this condition can be **life-threatening**.
- The only way to save a patient with Thalassemia major is through a bone marrow transplant, from a human leukocyte antigen **HLA-identical donor**.

11. New Shephard

Why in News?

- New Shephard, a rocket system has successfully completed its seventh test launch after it took off from a test facility in Texas, US.

About

- What is it? ➔ It is a **rocket system** meant to **offer flights to space over 100 km** above the Earth and accommodation for payloads.
- Essentially, it has been **designed to take astronauts and research payloads past** the Karman line – the internationally recognised boundary of space.
- Built by ➔ The system is built by Amazon founder **Jeff Bezos's space company** called **Blue Origin**.

12. Frontier Technologies Cloud Innovation Centre

Why in News?

- Recently NITI Aayog has announced the establishment of a Frontier Technologies Cloud Innovation Centre (CIC) with Amazon Web Services, AWS.

About

- This aims to **address societal challenges** through **digital innovation**, which is first of its kind in India.
- This CIC is **part of the AWS CIC Global Programme** which provides an opportunity for government agencies, non-profits and educational institutions, to **come together on pressing challenges, apply design thinking, test new ideas, and access the technology expertise of AWS.**
- The NITI Aayog Frontier Technologies CIC will be a **great enabler to budding innovators and start-ups**.
- It shall help in **piloting state-of-the-art, cloud-centric digital innovations** by **making use of emerging technologies** such as Artificial Intelligence, Internet Of Things, robotics, blockchain**.**

13. OSIRIS-REx

Why in News?

- Recently, NASA's OSIRIS-REx spacecraft briefly touched down on the surface of asteroid Bennu to collect rock and dust samples.

About OSIRIS-REx

- What is it? ➔ **OSIRIS-REx** (Origins, Spectral Interpretation, Resource Identification, Security, Regolith Explorer) is a **NASA asteroid-study and sample-return mission**.
- Aim ➔ To travel to a **near-Earth asteroid** named **Bennu** and bring **a small sample back to Earth for study by 2023.**

- Significance ➔ The material returned is expected to **enable scientists** to **learn more about the formation and evolution of the Solar System**, its initial stages of planet formation, and the source of organic compounds that led to the formation of life on Earth.

👉 **Asteroid Bennu**

- The name Bennu comes **from an Egyptian deity** related to the Sun, often depicted as a gray heron.
- The asteroid was discovered by a team from the NASA-funded **Lincoln Near-Earth Asteroid Research team** in **1999**.
- Scientists believe that it was formed in the **first 10 million years** of the solar system's formation, implying that it is **roughly 4.5 billion years old**.
- Because of Bennu's age, it is likely to contain material that **contains molecules** that were **present when life first formed on Earth**, where life forms are based on **carbon atom chains**.

14. COVIRAP Testing

Why in News?

- Recently, Indian Council of Medical Research (ICMR) has approved a new low-cost Covid-19 diagnostic method named COVIRAP.

About

- What is it? ➔ It is a **cuboid-shaped portable testing device** that can deliver **results in an hour making** it an effective tool to scale up Covid-19 screening in **peripheral and rural areas**.
- Developed by ➔ **the Indian Institute of Technology (IIT), Kharagpur**.
- How it works? ➔
    - The machine employs an **isothermal nucleic acid amplification method**.
    - Once the sample was processed in the machine after being **mixed with solutions** developed by the IIT team, treated paper strips — similar to the pregnancy strips — **are dipped into it**, and the **emergence of coloured lines will depict the presence of the virus.**

15. National Super Computing Mission (NSM)

Why in News?

- Recently, the Department of Science and Technology has announced that the third phase of the National Supercomputing Mission (NSM) will kick start in January 2021, taking computing speed to around 45 petaflops.

About NSM

- Parent Body ➔ It is steered **jointly by** the Ministry of Electronics and IT (**MeitY**) and Department of Science and Technology (**DST**).
- Implemented by ➔ the Centre for Development of Advanced Computing (**C-DAC**), **Pune** and the Indian Institute of Science (**IISc**), **Bengaluru**.
- The major objective of the NSM are ➔ To **make India one of the world leaders in Supercomputing** and **to enhance India's capability** in solving grand challenge problems of national and global relevance

- Targets ➔ The target of the mission was set to establish a **network of supercomputers ranging** from a **few Tera Flops (TF) to Hundreds of Tera Flops (TF)** and three systems with greater than or equal to 3 Peta Flops (PF) in academic and research institutions of **National importance across the country by 2022**.
- Achievements ➔
    - The first supercomputer assembled indigenously, called **Param Shivay**, was installed in IIT (BHU).
    - The similar systems **Param Shakti and Param Brahma** were installed at IIT-Kharagpur and IISER, Pune.

16. Tubarial salivary glands

Why in News?

- Scientists in the Netherlands have discovered a potential new organ in the human throat that they stumbled upon while carrying out research on prostate cancer.

About

- What is it? ➔ It is about **3.9 centimetres in length** on average and is located over a piece of cartilage called the **torus tuberous**, the structure that **supports the entrance of the auditory tube**.
- Function ➔ Researchers suspect that the glands probably **lubricate and moisten the upper throat behind the nose and mouth.**
- Significance ➔ The discovery is potentially **good news for some cancer patients** with head and neck cancers as radiation oncologists can circumvent these areas and protect them from the side effects of radiation.

Also Remember

Salivary Glands:

- Until now, there were three known large salivary glands in humans:
    - Under the tongue,
    - Under the jaw and back of the jaw,
    - Behind the cheek.
- These glands **produce saliva necessary** for swallowing, digestion, tasting, mastication and dental hygiene.

17. Room Temperature Superconductivity

Why in News?

- Scientists have reported the discovery of the first room-temperature superconductor, after more than a century of waiting.

About

- The superconductor was **formed by squeezing carbon, hydrogen and sulfur between the tips of two diamonds** and hitting the material with laser light to induce chemical reactions.
- At a pressure about **2.6 million times that of Earth's atmosphere**, and **temperatures below about 15° C**, the electrical resistance vanished.

- However, the new material's superconducting superpowers **appear only at extremely high pressures, limiting its practical usefulness.**
- Significance ➔
    - All superconductors previously discovered had to be **cooled, many of them to very low temperatures**, making them **impractical for most uses**.
    - But, the recently discovered superconductor can operates **at room temperature**- the material is superconducting **below temperatures of about 15° Celsius**.
- What are Superconductors?
    - Superconductors **transmit electricity without resistance**, allowing current to **flow without any energy loss**.
    - When superconductivity was discovered in **1911**, it was found only at temperatures close to absolute zero (−273.15° C).
- Potential applications ➔
    - If a room-temperature superconductor could be **used at atmospheric pressure**, it could **save vast amounts of energy lost to resistance in the electrical grid.**
    - And it could **improve current technologies**, from MRI machines to quantum computers to magnetically levitated trains. Dias envisions that humanity could become a "**superconducting society**."

18. SOFIA

Why in News?

- NASA's Stratospheric Observatory for Infrared Astronomy(SOFIA) has confirmed for the first time water on the sunlit surface of the Moon.

About

- What is it? ➔ It is an **airborne observatory** jointly built by **NASA and German Aerospace Centre.**
- It features a **reflecting telescope mounted** on a modified **Boeing 747SP aircraft** flying into the **stratosphere** at 38,000-45,000 feet.
- Purpose ➔ It allows researchers to **observe the infrared universe as many objects in space emit** almost all their energy at infrared wavelengths and are often invisible when observed with visible light.
- Significance of the discovery of water on Moon ➔ **NASA's Artemis programme plans** to **send the first woman and the next man to the Moon in 2024** and hopes to establish a sustainable human presence there by the end of the decade. If space explorers can **use the Moon's resources**, it means they **need to carry less water from Earth.**

19. Earth Observation Satellite EOS-01: ISRO

Why in News?

- India would launch its latest earth observation satellite EOS-01 and nine international customer satellites from Satish Dhawan Space Centre in Andhra Pradesh's Sriharikota.

About

- What is it? ➔ It is an **earth observation satellite** and is intended for applications in **agriculture**, **forestry and disaster management support**.
- This will be the **51st mission of ISRO's workhorse**, the Polar Satellite Launch Vehicle.

👉 Earth observation satellites

- Earth observation satellites are the **satellites equipped with remote sensing technology**. Earth observation is the **gathering of information about Earth's physical, chemical and biological systems**.
- Many earth observation satellites have been **employed on sun-synchronous orbit**.

👉 Polar Satellite Launch Vehicle

- India's Polar Satellite Launch Vehicle (PSLV) is the **third generation launch vehicle**.
- It is a **four-staged** launch vehicle with **first and third** stage using **solid** rocket motors and second and fourth stages using **liquid** rocket engines.
- It is the first Indian launch vehicle to be equipped with liquid stages.
- Initially, PSLV had a **carrying capacity** of 850 kg but has been enhanced to **1.9 tonnes**.
- PSLV's first successful launch was in October 1994. PSLV was used for two of the most important missions. These are **Chandrayaan-1 in 2008** and **Mars Orbiter Spacecraft in 2013**.

20. MARS ORBITER MISSION

Why in News?

- Indian Space Research Organisation's (ISRO) Mars Orbiter Mission completed six years of orbiting Mars.

About MOM

- MOM was the **first interplanetary mission of ISRO**, launched in **2013 by PSLV-C25** and got inserted into Martian orbit in 2014 in its first attempt.
- Its scientific objectives include **exploration of Mars surface features, morphology, mineralogy and Martian atmosphere by indigenous scientific instruments**.
- Technological objectives included **deep space communication**, **navigation**, **mission planning and management**.
- Mars Orbiter Mission carried five payloads to accomplish its scientific objectives.
    - **Methane Sensor for Mars**: It is designed to measure Methane (CH_4) in the Martian atmosphere and map its sources.
    - **Mars Color Camera (MCC)**: Tri-color MCC gives images & information about the surface features and composition of Martian surface.
    - **Lyman Alpha Photometer**: It measures the relative abundance of deuterium and hydrogen from Lyman-alpha emission in the Martian upper atmosphere. Measurement of D/H (Deuterium to Hydrogen abundance Ratio) helps to understand the loss process of water from the planet.
    - **Mars Exospheric Neutral Composition Analyser (MENCA):** It is a quadruple mass spectrometer capable of analysing the neutral composition in the range of 1 to 300 amu with unit mass resolution.

- **Thermal Infrared Imaging Spectrometer (TIS)**: It measures the thermal emission and can be operated during both day and night. Many minerals and soil types have characteristic spectra in TIR region. TIS can map surface composition and mineralogy of Mars.

How MOM has helped so far?

- Helped prepare a **Martian Atlas** based on the images provided by the orbiter.
- **Phobos and Deimos**, the two moons of Mars, were also imaged from close distances by the Mars Colour Camera.
- It made a finding that **dust storms on the Mars** can rise up to hundreds of kilometres.
- **Albedo map of Mars** has been prepared using MOM will be useful to **study the surface properties of Mars**.
- Albedo is the fraction of solar energy reflected from planetary surface back into space.

Other missions to Mars in news

- **ExoMars 2022 ➔** joint programme of European Space Agency (ESA) and the Russian space agency. It comprises two missions: First, Trace Gas Orbiter – launched in 2016 and, second, comprising a rover and surface platform, is planned for 2022.
- **Mars 2020 Rover ➔** Under this, NASA's Perseverance rover will seek signs of ancient life and collect rock and soil samples for possible return to Earth. It was launched in 2020.
- **Hope Mission ➔** Launched by UAE in 2020, it is Arab world's first mission to Mars.
- **Tianwen-1 ➔** It is China's first Mars exploration mission, launched in 2020.

21. ASSISTED REPRODUCTIVE TECHNOLOGY

Why in News?

- Recently, Assisted Reproductive Technology (ART) (Regulation) Bill, 2020, was introduced in the Lok Sabha.

About Key provisions of the bill

- **Assisted Reproductive Technology (ART) ➔** The Bill defines ART to include all techniques that seek to obtain a pregnancy by handling the sperm or the oocyte (immature egg cell) outside the human body and transferring the gamete or the embryo into the reproductive system of a woman. Examples of ART services include **gamete (sperm or oocyte) donation**, in-vitro-fertilisation (fertilising an egg in the lab), and **gestational surrogacy** (the child is not biologically related to surrogate mother). ART services will be provided through:
  - **ART clinics**, which offer ART related treatments and procedures, and
  - **ART banks**, which store and supply gametes.
- **Regulation of ART clinics and banks ➔** Every ART clinic and bank must be registered under the **National Registry of Banks and Clinics of India**.
- **Conditions for gamete donation and supply, offering ART services** have also been prescribed. Institute of National Importance (INI)
- **Rights of a child born through ART ➔** A child born through ART will be deemed to be a **biological child of the commissioning couple** and will be entitled to the rights and privileges available to a natural child of the commissioning couple. **A donor will not have any parental rights over the child**.
- **National and State Boards ➔** The National and State Boards for Surrogacy constituted under the Bill, will regulate of ART services. The State Boards will coordinate enforcement of the policies and guidelines for ART as per the recommendations, policies, and regulations of the National Board.

- **Offences and penalties ➔** Bill includes various offences under its purview such as (i) abandoning, or exploiting children born through ART, (ii) selling, purchasing, trading, or importing human embryos or gametes, (iii) using intermediates to obtain donors, (iv) exploiting commissioning couple, woman, or the gamete donor in any form, and (v) transferring the human embryo into a male or an animal.

Types of ARTs

- **In Vitro Fertilization**: It is the most common form of ART that is used by maximum patients. In this, woman's eggs are combined with man's sperm in a laboratory. The fertilised egg is then placed inside the woman's uterus in a procedure called embryo transfer.
- **Gamete intrafallopian transfer (GIFT)**: The man's sperm and a woman's egg are made to combine in a lab. Then the eggs are implanted into the fallopian tubes and the fertilization occurs inside a woman's body.
- **Intrauterine insemination (IUI)**: Also known as artificial insemination, it involves insertion of the male partner's (or a donor's) sperm into a woman's uterus at or just before the time of ovulation by long narrow tube.
- **Gestational Surrogacy**: In this, the embryo is created via IVF, using the eggs and sperm of the intended parents or donors, and is then transferred to the surrogate. The child is thus not biologically related to the surrogate mother, who is often referred to as a gestational carrier.

Geography

1. Zombie fires

Why in News?

- 'Zombie fires' becoming more frequent in Arctic in addition to fires occurring in the once-frozen tundra.

About

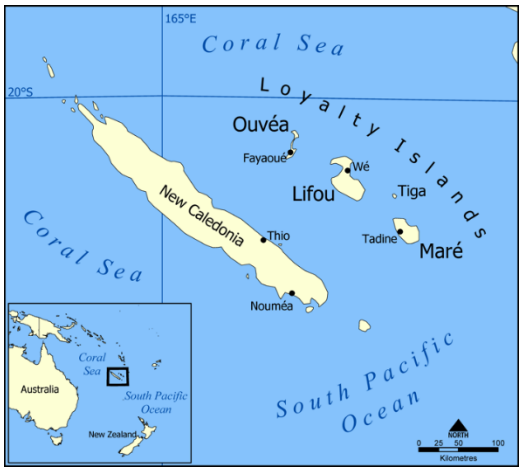
- What is it? ➔ It is a **fire from a previous growing season** that can smoulder under the ground which is **made up of carbon-rich peat.**
- When the weather warms, the fire can reignite. These are also known as **holdover fires**.
- Concern ➔ The fires in the Arctic spreading to areas which were **formerly fire-resistant** is a more worrying feature.
- The **tundra** — **north of the Arctic Circle** — is **drying up** and **vegetation** there like moss, grass, dwarf shrubs, etc are **starting to catch fire**.
- The fires and record temperatures have the potential of **turning the carbon sink into a carbon source** and **increasing global warming**.

2. New Caledonia

Why in News?

- The French territory of New Caledonia voted against independence from France in a referendum held recently.

About New Caledonia



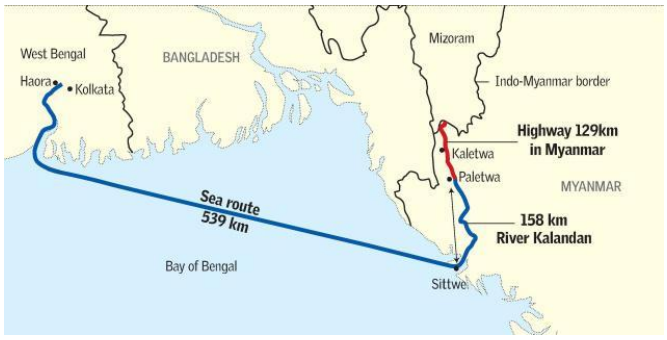
- Located in the **southwest Pacific Ocean**, to the south of Vanuatu, about **1,210 km east of Australia**.
- The archipelago, **part of the Melanesia subregion**, includes the main island of Grande Terre, the Loyalty Islands, the Chesterfield Islands, the Belep archipelago, the Isle of Pines, and a few remote islets.
- It is **part of Zealandia**.
- The **Diahot River** is the longest river of New Caledonia.
- New Caledonia was classified as an **overseas territory beginning in 1946**, but as a result of the **1998 Nouméa Accord**, it gained a special status (statut particulier or statut original) in 1999.

3. Sittwe Port

Why in News?

- India and Myanmar have agreed to work towards the operationalization of the Sittwe port.

About



- What is it? ➔ It is a **deepwater port** constructed **by India in 2016** at Sittwe, the capital of Rakhine State in Myanmar.
- The port is situated at the **mouth of the Kaladan River** and is being **financed by India** as a **part of the Kaladan Multi-Modal Transit Transport Project.**

👉 **Kaladan Multi-Modal Transit Transport Project**:

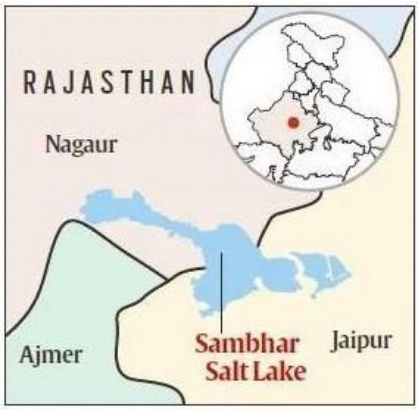
- It is aimed at **connecting the eastern Indian seaport of Kolkata with Sittwe seaport in Myanmar**.
- In Myanmar, it will then **link Sittwe seaport to Paletwa in Chin State** via the **Kaladan river boat route** and then from **Paletwa by road to Mizoram state in Northeast India**.
- Significance ➔ The project will **reduce distance from Kolkata to Sittwe** by approximately 1328 km and will reduce the need to transport goods through the **narrow Siliguri corridor** also known as Chicken's Neck.

4. Sambhar Lake

Why in News?

- Rajasthan government has decided to build temporary shelters for migratory birds near the Sambhar Lake (near Jaipur) before 2020's winter season.

About Sambhar Lake



- What is it? ➔ It is **India's largest inland saline water body** located near **Jaipur in Rajasthan**.
- Geography ➔
- The lake is surrounded on **all sides by the Aravali hills** and is spread across Jaipur and Nagaur districts and also a part of Ajmer district in Rajasthan.
- The lake receives water from **five rivers Medtha**, **Samaod**, **Mantha**, **Rupangarh**, **Khari** and **Khandela**.
- Significance ➔ The lake was also designated as a **Ramsar site in 1990.**It is also famous for salt production and is also an **Important Bird Area**(IBA).

Why there is a need for shelters:

- Every year, a large number of birds from the **cold northern regions of Central Asia come to Sambhar Lake**.
- In **2019**, more than **20,000 migratory birds died** due to **avian botulism** in the lake.

👉 **Avian Botulism**:

- It is a **neuro-muscular illness**.
- Caused by ➔ **Botulinum** (natural toxin) that is produced by bacteria, Clostridium botulinum.
- The bacteria is **commonly found in the soil, rivers, and seawater**. It **affects both humans and animals**.
- The bacteria also **need anaerobic** (absence of oxygen) **conditions** and do not grow in acidic conditions.
- The illness **affects the nervous system of birds**, leading to **paralysis** in their legs and wings.

5. Khardungla Pass

Why in News?

- Recently, the Indian Air Force (IAF) celebrated its 88th Anniversary on 8th Oct and in order to commemorate this event, the IAF achieved a new record of the highest Skydive Landing at Khardungla Pass.

About Khardungla Pass

- What is it? ➔ It is known as the **gateway to the Nubra and Shyok Valleys** in the union territory of Ladakh.
- It is the **highest motorable pass** in the world.
- Khardung La Pass is **positioned on the Ladakh range**, which is 40 km from Leh, at an altitude of 18,379 ft (5602 m).
- The tourists are required to **carry the Inner Line Permit** (ILP) to pass through Khardung La.
- The roads at Khardungla Pass are maintained by the **Border Roads Organisation** (BRO).
- It is historically important as it lies on the **major caravan route from Leh to Kashgar in Central Asia**.
- It is located on **western side of the Aksai Chin**.

6. Kyrgyzstan

Why in News?

- Street protests erupted in Kyrgyzstan earlier this week following recent parliamentary election. The opposition has alleged that the vote was rigged.

About

- Often referred to as '**Central Asia's only democracy**.
- Capital- **Bishkek**.
- It is a **landlocked** Central Asian country.
- Shares a **long border with China**.
- China has built **road and rail networks with Kyrgyzstan and Uzbekistan**.
- It is a **member of the Russia-led Collective Security Treaty Organisation and hosts a Russian air base**.

7. Hurricane Delta

Why in News?

- Recently, Hurricane Delta made landfall in the USA state of Louisiana, which is still recovering from the damage caused by a previous hurricane (Laura) in August 2020.

About

- What is it? ➔ Hurricane Delta is the **10th named storm to make USA landfall** so far this year, breaking a record that has stood **since 1916**.
- Delta is also the **first Greek alphabet** named hurricane on record to make landfall in continental USA.

Hurricanes:

- Hurricanes are the **biggest and most violent storms** on the planet.
- Every year, **between June and November** they **hit the Caribbean**, **the Gulf of Mexico** and the **eastern coast of the United States**, sometimes leaving a trail of destruction in their wake.
- Different Names ➔
  - Western North Pacific → **Typhoons**.
  - Bay of Bengal and Arabian Sea → **cyclones**.
  - In Australia → **Willy-Willy**
- Naming ➔ Each year, tropical storms are named in **alphabetical order**. The names come from a list of names for that year. There are **six lists of names**. Lists are **reused every six years**.

8. Mount Kilimanjaro

Why in News?

- Recently, a fire that has broken out on the slopes of Mount Kilimanjaro, the highest peak in Africa.

About

- Location ➔ Located in **Tanzania**, Mount Kilimanjaro is **Africa's tallest mountain** at about 5,895 meters.
- It is also the **largest free-standing mountain rise in the world**, meaning it is not part of a mountain range.
- Kilimanjaro is a **stratovolcano or composite volcano**.
- The mountain is also known for its **snow-capped peak** which might disappear within the next 20 years or so as per the warnings by the scientists.

9. Impact-based cyclone warning system

Why in News?

- India Meteorological Department(IMD) has launched a dynamic, impact-based cyclone warning system.

About

- Aim ➔ To **minimise economic losses and damage to property from cyclones** that hit the country's coasts every year.
- Features ➔

- Under this, **district or location will issue specific warnings** which will factor in the infrastructure, local population, settlements, land use as well as other elements will be disseminated and prepared.

- All the disaster management agencies will also make the **extensive use of geological, cartographic** and **hydrological data** available for the concerned district.
- If a district is to be **hit by a wind up to 160 kmph**, the system will **warn about the kind of infrastructure** that will likely get damaged and these can be mapped.

👉 IMD

- It was established in **1875**.
- It is an agency of the **Ministry of Earth Sciences**.
- It is the principal agency **responsible for meteorological observations, weather forecasting and seismology**.

10. Zozilla tunnel

Why in News?

- Union Minister for Road Transport, Highways will initiate the first blasting for Zozila Tunnel in J&K.

About

- Zozilla tunnel involves construction of a **14.15 Km long tunnel** at an altitude of about **3000 m under Zojila pass**.
- The tunnel will provide **all-weather connectivity** between **Srinagar valley and Leh** (Ladakh plateau) on **NH-1**, and will bring about an **all-round economic and socio–cultural integration of Jammu & Kashmir**.

👉 Zoji La

- Zoji La is a **high mountain pass in the Himalayas** in the Indian union territory of Ladakh.
- Located in the Drass, the pass **connects the Kashmir Valley to its west with the Drass** and **Suru valleys to its northeast** and the Indus valley further east.

11. Taiwan Strait

Why in News?

- U.S. warship in Taiwan Strait enrages China. China claims sovereignty over the island and surrounding seas.

About

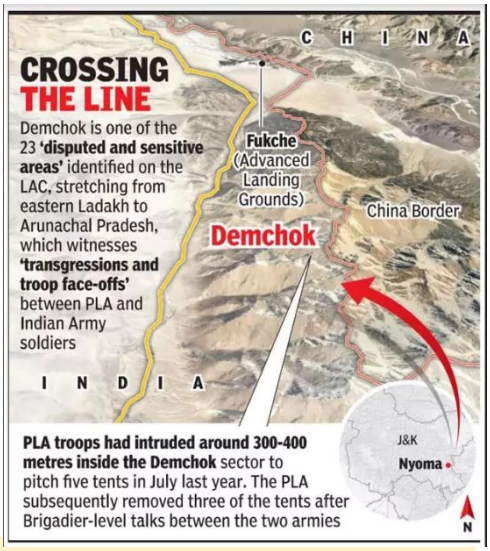
- What is it? ➔ The Taiwan Strait is a **110-mile-wide channel** that separates mainland China from the island of Taiwan.
- It is also known as the **Formosa Strait or the Tai-hai** (the Tai Sea).

- The Taiwan Strait makes up **part of the South China Sea**, and its northern portion is linked to the East China Sea.
- The strait borders the south eastern part of China and **runs along the eastern part of China's Fujian Province**.

12. Demchok sector

Why in News?

- Chinese soldier who strayed across LAC in Ladakh's Demchok sector released.



About

- It is a **disputed region** centered on the **villages of Demchok, Ladakh** and **Dêmqog, Ngari Prefecture**, situated near the confluence of the Charding Nullah and Indus River.
- It **is part of the greater Sino-Indian border dispute** between China and India. Both India and China claim the **disputed region**, with a **Line of Actual Control** between the two nations situated along the Charding Nullah**.**

13. Kaleshwaram Lift Irrigation Project

Why in News?

- Recently, the National Green Tribunal (NGT) has declared that the environmental clearance (EC) granted to the Kaleshwaram Lift Irrigation Project in Telangana was ex post facto (i.e. granted after completion of substantial work) and illegal.

About

- Location ➔ Kaleshwaram Multipurpose Lift Irrigation Project is **located in Telangana**. It was **initiated in 2016** on the Godavari River.
- The project starts at the **confluence point of Pranahita River and Godavari River**.
- It is touted as the **world's largest multi-stage, multi-purpose lift irrigation**.
- Details ➔ The total length of Kaleshwaram project is approximately **1,832 kms**. It has **20 reservoirs spread** across **13 districts** with a **total capacity to store 145 TMC**.
- Significance ➔
- The project will **support crop cultivation** on **45 lakh acres of land**.
- It will also meet the **drinking water requirement of 70% of the state** and also cater to the **needs of the industry.**

14. South Asian Flash Flood Guidance System

Why in News?

- Recently, the India Meteorological Department (IMD) has launched the South Asian Flash Flood Guidance System (FFGS), which is aimed at helping disaster management teams and governments make timely evacuation plans ahead of the actual event of flooding.

About Flash Floods

- These are **sudden surges in water levels** during or following an intense spell of rain.
- These are **highly localised events of short duration** with a very high peak and usually have less than six hours between the occurrence of the rainfall and peak flood.
- The flood **situation worsens in the presence of choked drainage lines or encroachments** obstructing the natural flow of water.
- Concerns ➔
- Forecasting flash floods is **very difficult as an event can occur within three to six hours** and the water run-off quantity is very high.
- **Frequency of extreme rainfall events has increased due to climate change** and south Asia is highly prone to flash floods.

👉 **South Asian Flash Flood Guidance System**:

- It has been developed by **US-based Hydrologic Research Centre** after the **World Meteorological Organisation** (WMO) and few South Asian countries put forth their views and the urgent need for such a warning system.
- Warning Mechanism ➔
- Based on the **rainfall and potential flooding scenario**, flash flood **warnings will be issued** to respective nations.
- **Flash flood threat warning** will be issued **six hours in advance**, whereas **flood risk warning** will be issued **24 hours in advance**. Warnings about watershed level will be issued 12 hours in advance.
- India's Role ➔
- **India is leading the delegation** of nations, including **Bhutan**, **Sri Lanka**, **Bangladesh** and **Nepal**, **in sharing hydrological and meteorological data** towards preparing flash flood forecasts.
- India's National Disaster Management Authority (**NDMA**) and the Central Water Commission (**CWC**) partnered in developing the system.

15. Libya

Why in News?

- Rival parties in Libya announced a historic ceasefire followed by five days of the 5+5 Libyan Joint Military Commission (JMC) talks in Geneva, giving way to the possibility that the long-drawn conflict might be coming to an end.

About

- Libya, officially the State of Libya, is a country in the **Maghreb region in North Africa**.
- Bordered by ➔ the **Mediterranean** Sea to the north, **Egypt** to the east, **Sudan** to the southeast, **Chad** to the south, **Niger** to the southwest, **Algeria** to the west, and **Tunisia** to the northwest.

- Libya is the **fourth largest country in Africa** and is the 16th largest country in the world.
- It has the **10th-largest proven oil reserves** of any country in the world.
- The largest city and capital, **Tripoli**, is in western Libya.

16. Ropeway Project on Mount Girnar

Why in News?

- Prime Minister Narendra Modi launched the world's longest temple ropeway project at Girnar in Junagadh.

About

- What is it? ➔ The **2.3 km- long** ropeway project is being **touted as the longest temple ropeway in Asia**.
- Mount Girnar has **Gorakhnath peak**, **Guru Dattatreya peak** and a **Jain temple**.
- It is the **fourth ropeway in Gujarat** along with Banaskantha, Pavagadh and Satpura.
- Developed by ➔ **Usha Breco Limited** at an investment of ₹130 crore.
- Benefits ➔
    - It will give a **boost to adventure activities** as well as **tourism** in the state.
    - Sites like **Shivarajpur beach** which has got **blue flag certification and Statue of Unity**, provides a lot of employment opportunities to the locals.

👉 **Mount Girnar**:

- **Lord Dattatreya** performed penance at the top of the hill.
- Also a **kshetra** where 22nd Tirthankar Lord Neminath attained Nirvana.
- Located **near Junagadh in Junagadh district**, **Gujarat**.

17. Srisailam Hydroelectric Power Plant

Why in News?

- Recently Srisailam Hydroelectric power station started its operation after, witnessing a massive fire accident in August 2020.

About

- Location ➔ Srisailam Hydroelectric Power Plant is constructed **across the Krishna River located between Kurnool and Mahabubnagar districts.**
- History ➔ The construction of the project started in **1980**.
- The Srisailam is a **Gravity & Masonry type dam**.

Gravity Dam

- What is it? ➔ A gravity dam is a type of dam which is **constructed from concrete or stone masonry**.
- It is designed in such a way so that it is **capable of holding the water pressure by using the weight of its material alone** and doesn't depend on other parts.
- Benefits ➔ It will remain **unaffected** even after the **strongest earthquakes happen**.
- Examples ➔ **Tungabhadra Dam**, **Sardar Sarovar Dam**, **Bhakra Dam**, **Hirakud Dam** are some of the gravity dams located in India.

18. FENI BRIDGE

Why in News?

- Union Road Transport Minister Nitin Gadkari announced that the 1.8 kilometre long Feni bridge connecting Sabrum in India with Ramgarh in Bangladesh will be completed by December this year.

About FENI BRIDGE

- Name ➔ Feni Bridge is known as **Maitree Setu in Chattogram**.
- Location ➔ The bridge is being **built over the Feni River** and will **connect Tripura with Chittagong port of Bangladesh.**
- Timeline ➔ The foundation of the bridge was laid in **2015** jointly by Prime Minister Narendra Modi and Bangladesh Prime Minister Sheikh Hasina. The project is **scheduled to be completed by April next year**.
- Agencies Involved ➔ The bridge is being **constructed by the National Highways Infrastructure Development Corporation Ltd** of Ministry of Road and Transport highways, Government of India.

Feni River

- It originates in the **South Tripura district**, passes through Sabroom town on the Indian side, and **meets the Bay of Bengal** after it **flows into Bangladesh**.
- It forms **part of the India-Bangladesh border**.

19. Typhoon Molave: Vietnam

Why in News?

- Recently, Typhoon Molave has slammed into central Vietnam and has set off a series of landslides that buried villages and towns.

About

- Typhoon is a regionally specific name for a strong "**tropical cyclone**".

- Tropical cyclones are known as '**typhoons**' in the **northwest pacific ocean**, **hurricanes** in the North Atlantic Ocean, **Willy-willies** in north-western Australia and **Tropical Cyclones** in the Indian Ocean Region.
- A tropical cyclone is a generic term used by meteorologists to **describe a rotating, organized system of clouds and thunderstorms** that originates over tropical or subtropical waters and has closed, low-level circulation.
    - Tropical cyclones **rotate counterclockwise** in the **Northern Hemisphere**.
    - These are measured by the **Saffir-Simpson Hurricane Wind Scale**.
- Naming of Typhoons ➔ **The Regional Specialized Meteorological Centre** (RSMC) Tokyo - Typhoon Centre **assigns a tropical cyclone a name** from the five lists. The name 'Molave' is contributed by the Philippines.

20. Indus Suture Zone

Why in News?

- Scientists from Wadia Institute of Himalayan Geology(WIHG), Dehradun, have found that the Indus suture zone of Himalayas that was conventionally thought to be locked is tectonically active.

About

- It is a **suture zone in the Ladakh region** where Indian and Asian Plates join.
- Geological Features that proves Indus Suture Zone is Tectonically active:
- **Sedimentary beds** are **tilted and thrust broken**.
    - **Rivers** are associated with **uplifted terraces**.
    - Bedrock shows brittle deformation at much shallower depths.

Suture Zone

- It is a **linear belt of intense deformation** where distinct terranes or tectonic units with **different plate tectonic**, **metamorphic** and **paleogeographic histories join together**.

21. Dam Rehabilitation and Improvement Project

Why in News?

- Cabinet Committee on Economic Affairs chaired by the Prime Minister has approved the Dam Rehabilitation and Improvement Project (DRIP) Phase II & Phase III.

About

- Aim ➔ To **improve the safety and operational performance** of selected dams across the whole country along with **institutional strengthening and generating revenue** for sustainable operation and maintenance of dams.

- Funding ➔ It is an **externally aided project** with the **financial assistance of the World Bank**(WB) and Asian Infrastructure Investment Bank(**AIIB**).
- Duration ➔ The Project will be implemented over a **period of 10 years** duration in **two Phases** each of six years duration with **two years overlapping from April, 2021 to March, 2031**.
- Components ➔
    - Rehabilitation and improvement of dams and associated appurtenances
    - Dam safety institutional strengthening in participating States and Central agencies
    - Exploration of alternative incidental means at few of selected dams to generate the incidental revenue for sustainable operation and maintenance of dams and
    - Project management.

Polity

1. Data Governance Quality Index: NITI Aayog

Why in News?

- The Department of Fertilizers (Ministry of Chemicals and Fertilizers) has been ranked 3rd out of the 65 Ministries/Departments on Data Governance Quality Index (DGQI).

About DGQI

- Conducted by **Development Monitoring and Evaluation Office** (DMEO), Niti Aayog to assess different Ministries/Departments' performance on the **implementation of Central Sector Schemes** (CS) and **Centrally Sponsored Schemes (CSS).**
- **Objective** ➔ To drive **healthy competition** among them and promote **cooperative peer learning** from best practices.
- **Benefits** ➔ Improve the implementation framework of **government policies, schemes and programmes** to achieve the desired goals.
- **Six major themes of DGQI** ➔ Data Generation; Data Quality; Use of Technology; Data Analysis, Use and Dissemination; Data Security and HR Capacity and Case Studies.
- Ministries/Departments were classified in six categories ➔ **Administrative, Strategic, Infrastructure, Social, Economic and Scientific.**

2. Judgment on Right to Protest

Why in News?

- Recently, the Supreme Court (SC) has upheld the right to peaceful protest against the law but also cleared that public ways and public spaces cannot be occupied and that too indefinitely.

About High points of the judgment are as follows

- The judgment upheld the right to peaceful protest against a law but made it **unequivocally clear** that **public ways and public spaces cannot be occupied, and that too indefinitely.**
- In a democracy, the rights of free speech and peaceful protest were indeed "**treasured**", they were to be **encouraged and respected**.
- But these rights were also **subject to reasonable restrictions imposed** in the interest of sovereignty, integrity and public order, Police regulations also weighed in.
- Fundamental rights do **not live in isolation**, the **right of the protester** has to be **balanced** with the **right of the commuter** and they have to **co-exist in mutual respect**.
- It highlighted that the **State or UT administrations** have the **entire responsibility** to **prevent encroachments in public spaces** and should not wait for courts to pass suitable orders.
- The verdict also dwelt on the **merits and demerits of technology impacting social movements.**

3. Election symbols

Why in News?

- During the Bihar Assembly Election, voters can expect to see a myriad of symbols like chapati roller, dolli, bangles, capsicum on the ballots.

About

- What is it? ➔ It is a **standardised symbol allocated to a political party**.
- Need of Election Symbols ➔ It helps the several **unrecognised parties** and **independent candidates** differentiate themselves from one another and help voters identify the party of their choice.
- Types of Election Symbols ➔ As per the **Election Symbols (Reservation and Allotment) (Amendment) Order, 2017**, party symbols are either:
    - Reserved → **Eight national parties** and **64 state parties** across the country have reserved symbols.
    - Free → The Election Commission also has a pool of nearly **200 "free" symbols** that are allotted to the **thousands of unrecognised regional parties** that pop up before elections.
- How are symbols allotted to political parties? ➔ **The Election Symbols (Reservation and Allotment) Order, 1968** empowers the EC to recognise political parties and allot symbols:
    - A party/candidate has to provide a **list of three symbols** from the EC's free symbols list at the time of filing nomination papers. Among them, one symbol is allotted to the party/candidate on a **first-come-first-serve basis**.
    - When a recognised **political party splits, the Election Commission takes the decision** on assigning the symbol. For example, when the Samajwadi Party split, the EC allotted the 'bicycle' to the Akhilesh Yadav faction.

4. Chapter Proceedings

Why in News?

- 'Chapter proceedings' were began against Republic Editor-in-Chief who was summoned by Mumbai Police.

About Chapter Proceedings

- Chapter proceedings are **preventive actions taken by the police** if they fear that a particular person is likely to create trouble and disrupt the peace in society.
- Chapter proceedings is **not a legal term**.
- According to officers, **since all the sections related to preventing of crime fall under a single chapter, it was colloquially called "chapter proceedings"** and has since been used to refer to actions of this nature.
- These proceedings are **unlike punitive action** taken in case of an FIR with an intention to punish.
- Here, the police **can issue notices** under **sections of the Code of Criminal Procedure** to ensure that the person is aware that creating nuisance could result in action against him.
- This includes **paying a fine**, in the absence of which, he **could be put behind bars**.
- Procedures involved are as follows
    1. Generally a notice is **issued to a person under section 111 of the CrPC**.
    2. Whereby he is asked to **present himself before the Executive Magistrate** an **ACP-rank officer** in a Commissionerate of a deputy collector in rural areas who has issued the notice.

5. District Development Councils (DDCs)

Why in News?

- The Central Government recently amended the Jammu and Kashmir Panchayati Raj Act, 1989 and facilitate the setting up of District Development Councils (DDC).

About DDCs

- What are DDCs? ➔ This system **effectively replaces the District Planning and Development Boards in all districts**, and will prepare and approve district plans and capital expenditure.
- The DDCs will act as a **new unit of governance in J&K**.
- Composition of DDCs ➔
    - Their key feature, however, is that the DDCs will have **elected representatives from each district**.
    - Their number has been specified at **14 elected members per district representing its rural areas**, alongside the Members of Legislative Assembly chairpersons of all Block Development Councils within the district.
- Term of reference ➔
    - The term of the DDC will be **five years**, and the electoral process will allow for **reservations for Scheduled Castes, Scheduled Tribes and women.**
    - The **Additional District Development Commissioner** (or the Additional DC) of the district shall be the **Chief Executive Officer** of the District Development Council.
    - The council, as stated in the Act, will hold at least **four "general meetings" in a year**, one in each quarter.
- Who will elect the members of DDC? ➔ They will be **directly elected by voters in the Union Territory**.

6. ECI Committee on Expenditure Limit

Why in News?

- Recently, the Election Commission of India (ECI) has constituted a committee to examine the issues concerning the expenditure limit for a candidate.

About

- Background ➔ The committee was set up after the Ministry of Law & Justice has notified an amendment in Rule 90 of Conduct of Elections Rules,1961 **increasing the existing election campaign expenditure limit by 10%** with immediate effect in the wake of the COVID-19 pandemic situation.
- Members of the Committee ➔ The committee comprises **Harish Kumar (Ex.IRS)** and **Umesh Sinha**(DG-Expenditure).
- Terms of Reference ➔ The committee will have **following terms of reference**:-
    - To assess the change in number of electors across the States/Union Territories and its bearing on expenditure.
    - To assess the change in Cost Inflation Index and its bearing on the pattern of expenditure incurred by the candidates in recent elections.
    - To seek views/inputs of the political parties and other stakeholders.
    - To examine other factors which may have bearings on expenditure.

👉 **Expenditure Limit:**

- What is it? ➔ Election Commission of India **imposes limits on the expenditure incurred by a candidate**, but **not political parties** on their election campaign.
- Range ➔ The expenditure limits range **from Rs. 20 lakh to Rs. 28 lakh for assembly elections** and from **Rs. 54 lakh to Rs.70 lakh for Lok Sabha elections**.
- Earlier Revision ➔ The expenditure limit was **last revised in 2014** while the same was **done for Andhra Pradesh and Telangana in 2018**, following their bifurcation in 2014.
- After that, the limit has not been increased despite an **increase in the electorate** and an **increase in the Cost Inflation Index**.

7. Withdrawal of General Consent to CBI

Why in News?

- Recently, the Maharashtra government withdrew its general consent to the Central Bureau of Investigation (CBI) to probe cases in the State.

About

- What is consent? ➔ CBI is **governed by the Delhi Special Police Establishment Act,1946** that makes consent of a state government mandatory for conducting investigation in that state.
- Types: There are **two kinds of consent** ➔
    1. Case Specific: As CBI has jurisdiction **only over central government departments and employees**, it can investigate a case involving state government employees or a violent crime in a given state **only after that state government gives its consent**.
    2. General consent: It is normally given to help the CBI seamlessly conduct its investigation into cases of corruption **against central government employees in the concerned state**. Almost **all states have given such consent**.
- What does general consent withdrawal mean? ➔ It means the **CBI will not be able to register any fresh case** involving a central government official or a private person stationed in the state without getting case-specific consent.
- Does that mean that the CBI can no longer probe any case in the two states? ➔ **No**, CBI would **still have the power to investigate** old cases registered when general consent existed. Also, cases **registered anywhere else in the country**, but involving people stationed in Maharashtra would allow CBI's jurisdiction to extend to this state.

👉 CBI

- It is the **premier investigating police agency** in India which functions under the **Department of Personnel**, Ministry of Personnel, Pension & Public Grievances.
- It is governed by the provisions of the **DSPE Act,1946**.
- It is also the nodal police agency in India which **coordinates investigation on behalf of Interpol Member countries**.

8. National Conference on Vigilance and Anti-Corruption

Why in News?

- The Prime Minister has inaugurated the National Conference on Vigilance and Anti-Corruption.

About

- Organized by ➔ The conference is **organised by the Central Bureau of Investigation**(CBI).
- Aim ➔ To **raise awareness and reaffirm India's commitment** to promotion of integrity and probity in public life through citizen participation.
- Theme ➔ **Vigilant India, Prosperous India**.

👉 CBI

- It is the **premier investigating police agency** in India which functions under the **Department of Personnel, Ministry of Personnel, Pension & Public Grievances.**
- It is governed by the provisions of the **DSPE Act,1946**.

9. Agreement for Electronic Exchange of Customs Data

Why in News?

- Department of Posts, Government of India (India Post) and United States Postal Service (USPS) have entered into an agreement for Electronic Exchange of Customs data related to postal shipments exchanged between the two countries.

About

- Objective ➔ The primary objective of this agreement is **to facilitate 'ease of exports' for small and large exporters** through postal channels from different parts of the country.
- Features ➔ The agreement will make it **possible to transmit and receive electronic data of international postal items prior to their physical arrival at the destination** and would enable customs clearance of postal items in advance in line with the evolving global postal framework.
    - **Exchange of Electronic Advance Data** (EAD) will be a key driver towards **promoting mutual trade** with emphasis on the exports.
    - **USA is the top export destination for India** (~17%) which is also reflected in exchange of goods through postal channels.
    - In 2019, around 20% of international **Express Mail Service** (EMS) and 30% of Letters & Small Packets transmitted by India Post were destined to the USA whereas 60% of the Parcels received by India Post were originated from the USA.
- Benefit ➔ This will **fulfill a major demand of the export industry** to expedite customs clearances of export items and will contribute towards making India an Export Hub for the world.

👉 India Post

- India Post is the **trade name for the Department of Posts** (DoP), a government-operated postal system in India under the **Ministry of Communications**.
- Role ➔

- **Delivering mails, accepting deposits under Small Savings Schemes**, providing life insurance cover under Postal Life Insurance (**PLI**) and Rural Postal Life Insurance (**RPLI**) and **providing retail services** like bill collection, sale of forms, etc.
- It also **acts as an agent for the Government of India** in discharging other services for citizens such as Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) wage disbursement and old age pension payments.

- Significance ➔ With **1, 55,531 Post Offices**, the DoP has the **most widely distributed postal network in the world**.

10.Joint Parliamentary Committee (JPC)

Why in News?

- The Joint Committee of Parliament on the Data Protection Bill sought an affidavit from Twitter Inc., the U.S.-based parent company of the social media platform, asking them to explain why it had shown Ladakh as a part of China.

About JPC

- What is it? ➔ A Joint Parliamentary Committee (JPC) is set up to **examine a particular bill presented before the Parliament**, or for the purpose of **investigating cases of financial irregularities** in any **government activity**.
- The JPC is an **ad-hoc body**.
- It is set up for a given **period of time** and is **aimed at addressing a specific issue**.
- Composition ➔
  - In order to set up a JPC, a **motion is passed in one House and supported by the other House**.
  - The committee's members are **decided by Parliament**.
  - The number of members **can vary**. There are **twice as many Lok Sabha members** as the **Rajya Sabha**.
- Powers and Functions ➔
  - A JPC is authorised to **collect evidence in oral or written form or demand documents** in connection with the matter.
  - The proceedings and findings of the committee are **confidential**, except in matters of public interest.
  - The government can take the decision to **withhold a document** if it is considered **prejudicial to the safety or interest of the State.**
  - The Speaker has the final word in case of a dispute over calling for evidence.
  - The committee can **invite interested parties** for inquiry and summon people to appear before it.
  - The committee gets **disbanded following the submission of its report to Parliament**.

11. Central Vigilance Commission

Why in News?

- CVC has decided to receive through email, from November 1 onwards, all vigilance clearance proposals for the Board level, all-India and Central services officials for appointment, empanelment, promotion and other related issues.

About CVC

- What is it? ➔ It is the **apex vigilance institution** created via executive resolution (based on the recommendations of Santhanam committee) in 1964 but was conferred with **statutory status in 2003**.
- It submits its **report to the President of India**.
- The CVC is **not controlled by any Ministry/Department**. It is an **independent body** which is only responsible to the Parliament.
- Composition ➔ Consists of **central vigilance commissioner** along with **2 vigilance commissioners**.
- Appointment ➔ They are **appointed by the President of India** on the **recommendations of a committee** consisting of Prime Minister, Union Home Minister and Leader of the Opposition in Lok Sabha (if there is no LoP then the leader of the single largest Opposition party in the Lok Sabha).
- Term ➔ Their **term is 4 years or 65 years**, whichever is earlier.
- Removal ➔ The Central Vigilance Commissioner or any Vigilance Commissioner can be removed from his office **only by order of the President** on the ground of **proved misbehavior or incapacity** after the Supreme Court, on a reference made to it by the President, has, **on inquiry**, reported that the Central Vigilance Commissioner or any Vigilance Commissioner, as the case may be, ought to be removed.

12. Now, outsiders can buy land in Jammu and Kashmir

Why in News?

- Ministry of Home Affairs has introduced the 'Union Territory of Jammu and Kashmir Reorganisation (Adaptation of Central Laws) Third Order, 2020'.

About

- Permanent residents ➔ The **term permanent residents** of the State' has been **removed** from important provisions of laws.
    - No domicile or permanent resident certificate is required to buy land in Jammu and Kashmir. **Urban or non-agricultural land can be sold to outsiders.**
- Implementation of RERA ➔ **Real Estate (Regulation & Development) Act, 2016** has been **notified** in the J&K.
- Jammu and Kashmir Industrial Development Corporation (JKIDC) ➔ It has been established to **acquire, promote and sell land for the purpose of industrial undertakings.**
- Declaration of strategic area ➔ An **Army officer not below the rank of Corps Commander** can declare an area as Strategic Area within a local area, only for direct operational and training requirements of the armed forces.
- Contract Farming ➔ **permits contract farming on agricultural lands**. Nothing shall prohibit the transfer of ownership of land for 'contract farming', or grant of lease or mortgage for the loan. Earlier, it was limited to the mortgage for loans.
- Usage of agricultural land ➔ **No sale, gift, exchange or mortgage of the land** shall be **valid in favour of a person who is not an agriculturist.**
    - However, the government may allow transfer of land in favour of a person or an institution for the purpose of promotion of healthcare or senior secondary or higher or specialized education in J&K.

IR

1. Green Strategic Partnership

Why in News?

- India and the Kingdom of Denmark have launched the Green Strategic Partnership for delivering sustainable solutions to India.

About

- The Partnership will focus on **expanding economic ties, green growth**, and **cooperation** on global challenges such as climate change.
- Green growth is a term to describe a **path of economic growth** that uses natural resources in a sustainable manner.

Key points of the deal are as follows

- Danish companies with **niche technologies and expertise** have **offered to help India** in meeting its **air pollution control targets**, including in the key area of **tackling the problem of burning crop stubble**.
- Other key points under the partnership include dealing with the **Covid-19 pandemic and cooperation in water efficiency** and **water loss**.
- The creation of **India-Denmark energy parks** in areas with large numbers of Danish firms and an India-Denmark skill institute to train Indian manpower has been proposed.
- The Green Strategic Partnership will build on an existing **Joint Commission for Cooperation** and **existing joint working groups**.

2. Coalition for Epidemic Preparedness Innovations (CEPI)

Why in News?

- Translational Health Science And Technology Institute (THSTI) has been chosen by CEPI as one of the global network of laboratories for centralised assessment of COVID-19 vaccines.

About CEPI

- What is it? ➔ CEPI is a **global partnership** launched in **2017** to **develop vaccines to stop future epidemics**.
- CEPI was **founded in Davos (Switzerland)** by the governments of **Norway and India**, the Bill & Melinda Gates Foundation, the Wellcome Trust, and the World Economic Forum.
- The **Department of Biotechnology**, Ministry of Science & Technology, and Government of India has been **implementing the IndCEPI mission 'India Centric Epidemic Preparedness** through Rapid Vaccine Development: Supporting Indian Vaccine Development'.

- The objectives of this mission are **aligned with that of CEPI** and **aims to strengthen the development of vaccines** and **associated competencies/technologies** for the diseases of epidemic potential in India.

👉 **Translational Health Science and Technology Institute (THSTI):**

- It is an **autonomous institute** of the **Department of Biotechnology** (DBT).
- It is located in **Faridabad (Haryana).**

3. Financial Action Task Force (FATF)

Why in News?

- FATF is all set to decide on Pakistan's grey list status in a virtual meeting scheduled later this month.

About FATF

- What is it? ➔ The Financial Action Task Force (FATF) is an **inter-governmental body** established in **1989** on the initiative of the G7.
- It is a "**policy-making body**" which works to generate the necessary political will to bring about national legislative and regulatory reforms in various areas.
- Secretariat ➔ The FATF Secretariat is housed at the OECD headquarters in Paris.
- Roles and functions ➔
    - Initially it was established to **examine and develop measures to combat money laundering**.
    - In October 2001, the FATF expanded its mandate to incorporate efforts to **combat terrorist financing**, in **addition to money laundering**.
    - In April 2012, it added efforts to **counter the financing of proliferation of weapons of mass destruction**.
- Composition ➔ The FATF currently **comprises 37 member jurisdictions** and **2 regional organisations**, representing most major financial centres in all parts of the globe. It also has observers and associate members.
- Objectives ➔ To **set standards and promote effective implementation of legal, regulatory and operational measures** for combating money laundering, terrorist financing and other related threats to the integrity of the international financial system.

4. Khardungla Pass

Why in News?

- New Development Bank has approved infrastructure projects worth 741 million dollars in India.

About

- It is a **multilateral development bank** operated by the BRICS states (Brazil, Russia, India, China and South Africa).
- History ➔ During the **sixth BRICS Summit in Fortaleza** (2014), the leaders signed the Agreement establishing the New Development Bank (**NDB**). The Bank **formally came into existence as a legal entity** in **2015**.
- Purpose ➔ The bank is set up to **foster greater financial** and **development cooperation** among the five emerging markets.

- Headquartered ➔ **Shanghai, China**.
- In 2018, the NDB received **observer status in the United Nations General Assembly**, establishing a firm basis for active and fruitful cooperation with the UN.
- Voting ➔ In the New Development Bank each participant country will be **assigned one vote, and none of the countries will have veto power.**
- Roles and functions ➔ The Bank will **mobilise resources for infrastructure and sustainable development projects in BRICS** and other emerging economies and developing countries, to supplement existing efforts of multilateral and regional financial institutions for global growth and development.

5. World Food Programme

Why in News?

- Recently, the Norwegian Nobel Committee had announced the 2020 Nobel Peace Prize to the United Nations (UN) agency World Food Programme (WFP).

About WFP

- World Food Programme (WFP) is **the UN agency focused on hunger alleviation and food security**.
- It was established in **1961** after the 1960 Food and Agricultural Organization (FAO) Conference.
- Headquarters ➔ **Rome** (Italy).
- It works closely with its **two Rome-based sister organizations**, the **Food and Agriculture Organization of the United Nations and the International Fund for Agricultural Development.**
- It is a member of the United Nations Development Group (**UNDG**) and part of its Executive Committee.
- WFP has been working in India since 1963.
- It is **governed by an Executive Board**, which consists of **36 member states**.
    - It is headed by an **Executive Director**, who is appointed jointly by the UN Secretary-General and the Director-General of the Food and Agriculture Organization of the United Nations.
    - The Executive Director is appointed for **fixed five-year terms**.

6. Skal International Asia Area (SIAA)

Why in News?

- The UT of Jammu and Kashmir has won the bid to host the 50th annual Skal International Asia Area (SIAA) Congress in 2021 during the annual general meeting recently against four other cities.

About

- Founded in ➔ **1934.**
- Purpose ➔ Skal International is the only professional organization **promoting global Tourism and friendship**, uniting all sectors of the Tourism industry.
- It is the **world's largest global network of Tourism Professionals** promoting Tourism, Business and Friendship worldwide.
- Members ➔ Its members are **Directors and Executives of the Tourism sector** who relate to each other to address issues of common interest, improving a business network and promoting destinations.
- Status ➔ It is an **Affiliated Member** of the World Tourism Organization (**UNWTO**).

- Skal International holds an **annual World Congress each year** in a different country.

7. Asian Development Bank

Why in News?

- ADB, India sign $270 million loan to improve urban services in 64 Madhya Pradesh small cities.

About Asian Development Bank

- What is it? ➔ It is a **regional development bank**.
- Established in ➔ **1966**
- HQ ➔ **Manila, Philippines**.
- ADB is an **official United Nations Observer**.
- Who can be its members? ➔
    - The **bank admits the members** of the United Nations Economic and Social Commission for Asia and the Pacific (**UNESCAP**, formerly the Economic Commission for Asia and the Far East or ECAFE) and **non-regional developed countries.**
    - ADB now has **68 members**, **49 from within Asia**.
- Voting rights ➔
    - It is **modeled closely on the World Bank**, and has a **similar weighted voting system** where votes are distributed in proportion with members' capital subscriptions.
    - As of 31 December 2019, ADB's five largest shareholders are **Japan and the United States** (each with 15.6% of total shares), **the People's Republic of China** (6.4%), **India** (6.3%), and **Australia** (5.8%).
- Roles and functions ➔
    - Dedicated to **reducing poverty in Asia and the Pacific** through inclusive economic growth, environmentally sustainable growth, and regional integration.
    - This is **carried out through investments** – in the **form of loans**, **grants** and **information sharing** – in infrastructure, health care services, financial and public administration systems, helping nations prepare for the impact of climate change or better manage their natural resources, as well as other areas.

8. United Nations Human Rights Council (UNHRC)

Why in News?

- Recently Pakistan has been re-elected to the United Nations Human Rights Council (HRC) with an overwhelming majority securing 169 votes in the 193-member UN General Assembly.

About

- What is it? ➔ The Human Rights Council is an **inter-governmental body** within the United Nations system.
- Location ➔ It meets at the **UN Office at Geneva**.
- Establishment ➔ It was **founded in 2006**
- Functions ➔
    - It **investigates allegations of breaches** of human rights in UN member states.

- It also **addresses important thematic human rights issues** such as freedom of expression, women's rights, LGBT rights, and the rights of racial and ethnic minorities.

- Membership ➔
  - The Council is made of **47 Member States**, which are **elected by the UN General Assembly**. The Council's Membership is based on **equitable geographical distribution**.
    - Group of African States (13)
    - Group of Asia-Pacific States (13)
    - Group of Eastern European States (6)
    - Group of Latin American and Caribbean States (8)
    - Group of Western European and other States (7)
  - The **members of the Council** shall serve for a **period of three years** and shall **not be eligible** for immediate re-election after two consecutive terms.

9. United Nations Relief and Works Agency (UNRWA)

Why in News?

- India has contributed one million dollars to the United Nations Relief and Works Agency(UNRWA) for Palestine Refugees.

About

- What is it? ➔ It was established as a **subsidiary organ of the United Nations** General Assembly in 1949 and became **operational in 1950**.
- Aim ➔ To **provide assistance and protection for registered Palestine refugees** to help them achieve their full potential in human development.
- Who are Palestinian refugees? ➔ The operational definition of Palestine refugees is people **whose normal place of residence was Palestine between 1946 and 1948 and who lost both their homes and means of livelihood** as a result of the 1948 Arab- Israeli conflict.
- Areas of Operation ➔ The aid is provided in **five areas of operation** namely **Jordan, Lebanon, Syria, the Gaza Strip and the West Bank** including East Jerusalem. The aid for Palestinian refugees outside these five areas is provided by UNHCR.
- Funding ➔ It is funded almost **entirely by voluntary contributions from UN Member States**. It also receives some funding from the **Regular Budget of the United Nations** which is used mostly for international staffing costs.
- Significance ➔ It is the **only UN agency** dedicated to helping refugees from a specific region or conflict.

10. International Solar Alliance (ISA)

Why in News?

- India and France were re-elected as president and co-president at the third assembly session of the International Solar Alliance (ISA) for a term of two years.

About Key Highlights from the Summit

- **CSCA** ➔ The assembly approved the **initiative of the ISA Secretariat in institutionalizing ISA's engagement** with the private and public corporate sector through the **Coalition for Sustainable Climate Action** (CSCA).
- **Visvesvaraya award** ➔ The assembly conferred the Visvesvaraya award which **recognizes the countries with maximum floating solar capacity** in each of the four regions of ISA. The awards **went to Japan** for the Asia Pacific region and the **Netherlands for Europe** and Others region.
- **ISA CARES** ➔ In the wake of the global pandemic, ISA had set up ISA CARES, an initiative **dedicated to deployment of solar energy in the healthcare sector in ISA Member countries**.The initiative aims to **solarize one primary health sector in each district of the target Member countries**.
- **Solar Risk Mitigation Initiative** ➔ It is an **initiative of World Bank** in partnership with ISA, Agence Française de Développement (AFD) and International Renewable Energy Agency(IRENA). It aims to support countries in **developing sustainable solar programs** that will **attract private investments and so reduce reliance on public finances.**
- **STAR-C (Solar Technology Application Resource-Center)** ➔ It is an initiative of ISA with the aim of **building a network of technical training and research centers** in order to **promote knowledge dissemination** and **capacity-building** with regards to solar energy and infrastructure projects.

👉 **International Solar Alliance (ISA):**

- It is a **treaty-based international intergovernmental organization** jointly launched by India and France on the side-lines of the COP 21 to the United Nations Framework Convention on Climate Change in 2015.
- Aim ➔ To work for **efficient exploitation of solar energy** to reduce dependence on fossil fuels.
- The ISA Headquarters ➔ **Gurgaon, India**.

11. ASEAN PhD Fellowship Programme

Why in News?

- Recently, the students from ASEAN member states who have been selected for the prestigious ASEAN PhD Fellowship Programme (APFP) were virtually addressed.

About

- What is it? ➔ The ASEAN PhD (APFP) Fellowship Programme was **announced on in 2018** by Indian administration.
- Under the APFP, **one thousand fellowships** will be **provided** exclusively to the ASEAN citizens.
- APFP is the **largest capacity development programme** undertaken by the Government of India for foreign beneficiaries.
- Under the **program students of the ASEAN member states** have got the opportunity to study in the IITs, which are **among the best global institutions**.
- APFP will **open many doors to synergies** in the **field of technology and research for the academicians, researchers and the scientists** from India and ASEAN.

👉 **ASEAN**

- The Association of Southeast Asian Nations is a **regional intergovernmental organization** comprising ten countries in Southeast Asia.
- Formed in ➔ 1967.
- HQ ➔ Jakarta, Indonesia
- Purpose ➔ It promotes **intergovernmental cooperation** and **facilitates economic, political, security, military, educational, and sociocultural integration** among its members and other countries in Asia.
- ASEAN countries ➔ Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand and Vietnam.

12. United Nations Alliance of Civilizations (UNAOC)

Why in News?

- Recently UNAOC has condemned the beheading of a teacher in the north-western suburbs of Paris in France.

About UNAOC

- What is it? ➔ The United Nations Alliance of Civilizations (UNAOC) was established in **2005**.
- It was the **political initiative of Mr. Kofi Annan**, former UN Secretary-General and co-sponsored by the Governments of Spain and Turkey.
- The United Nations Alliance of Civilizations High Representative and Secretariat are **based and operating from New York.**
- It is an initiative that **seeks to galvanize international action against extremism** through the forging of international, intercultural and interreligious dialogue and cooperation.

13. G-20 Anti-Corruption Working Group

Why in News?

- Union minister Jitendra Singh addressed the first-ever ministerial meeting of G-20 anti-corruption working group.

About ACWG

- Formation ➔ In **June 2010** at the **Toronto Summit**, the G20 Anti-Corruption Working Group's (**ACWG**) was **set up.**
- Purpose ➔ Responsible for **updating and implementing the G20 Anti-corruption Action Plan**.
- Reports to **G20 Leaders**.
- It **cooperates closely with and supports the work of relevant international organizations**, including the Organization of Economic Cooperation and Development, the United Nations, the World Bank, the International Monetary Fund and the Financial Action Task Force.

👉 G20

- What is it? ➔ It is an **international forum for the governments and central bank governors** from 20 major economies.
- Founded in ➔ **1999**
- Aim ➔ Its aim was to **review policy decisions** to enhance international financial stability

- It now **deliberates on global economic issues** and other important development challenges.
- 20 Members (EU + 19 Countries) ➔ Argentina, Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, Mexico, Russia, Saudi Arabia, South Africa, South Korea, Turkey, the United Kingdom, the United States and the European Union.

👉 G20+

- The G20 developing nations, also called G21/G23/G20+ is a **bloc of developing nations**.
- Established on ➔ **August 20, 2003**.
- Its origins can be traced to the **Brasilia Declaration** signed by the foreign ministers of India, Brazil and South Africa on 6th June 2003.
- Significance ➔ The G20+ is responsible for **60% of the world population**, **26% of the world's agricultural exports** and **70% of its farmers**.

14. ILO Governing Body

Why in News?

- Recently India has assumed the Chairmanship of the Governing Body of International Labour Organization (ILO).

About

- Labour & Employment Secretary **Apurva Chandra** has been **elected as the Chairperson** of the Governing Body of the ILO for the period October 2020-June 2021.
- The Chairperson of the Governing Body of ILO is a **position of international repute**.
- The Governing Body (GB) is the **apex executive body of the ILO**.
- GB **meets thrice a year**, in March, June and November, Functions of GB are as follows
    - It takes **decisions on ILO policy**,
    - Decides the **agenda of the International Labour Conference**,
    - **Adopts the draft programme and budget** of the organisation for submission to the conference,
    - **Elects the Director-General**.
- The **broad policies of the ILO** are set by the International Labour Conference, which meets once a year in June, **in Geneva, Switzerland**.

👉 International Labour Organization

- What is it? ➔ The **only tripartite United Nations (UN) agency**, since **1919**, the ILO brings together governments, employers and workers of **187 member States**, to set labour standards, develop policies and devise programmes promoting decent work for all women and men.
- Status ➔ The ILO became the **first specialized agency** of the **UN** in 1946.
- Role ➔ The principal means of action in the ILO is the **setting up the International Labour Standards** in the form of Conventions and Recommendations.
    - **Conventions** are **international treaties and are instruments**, which create **legally binding obligations** on the countries that ratify them.
    - **Recommendations** are **non-binding** and **set out guidelines** orienting national policies and actions.
- Headquarters ➔ **Geneva, Switzerland**.

- It received the **Nobel Peace Prize in 1969**.
- Reports ➔ It releases the annual **World Employment and Social Outlook (WESO) Trends report.**
- India and ILO ➔ **India**, a **Founding Member of the ILO**, has been a permanent member of the ILO Governing Body since 1922. The first ILO Office in India started in 1928.

15. Basic Exchange and Cooperation Agreement (BECA)

Why in News?

- Recently, India and the USA have concluded the 3rd India-USA 2+2 dialogue in New Delhi. India and the US have signed the Basic Exchange and Cooperation Agreement(BECA) for geo-spatial cooperation.

About BECA

- What is it? ➔ It is a **communication agreement** between the National Geospatial-Intelligence Agency of the US Department of Defence and the Ministry of Defence of the Government of India.
- Purpose ➔ It allows India and the US to **share military information** including **advanced satellite and topographic data** such as maps, nautical and aeronautical charts and geodetic, geophysical, geomagnetic and gravity data.
- Significance ➔ It will enable India to use US geospatial maps to **enhance military accuracy of automated hardware systems and weapons** such as cruise and ballistic missiles.
- BECA is **one of the four foundational military communication agreements** between the two countries. The **other three are**:
    1. General Security Of Military Information Agreement.
    2. Logistics Exchange Memorandum of Agreement.
    3. Communications and Information Security Memorandum of Agreement.

Logistics Exchange Memorandum of Agreement(LEMOA):

- Signed in **2016**.
- It allows both countries to have **access to each other's designated military facilities for refueling and replenishment**.

General Security Of Military Information Agreement(GSOMIA):

- Signed in **2002**.
- It allows militaries to **share the intelligence gathered** by them.
- An extension to the GSOMIA, the **Industrial Security Annex** (ISA), was signed at the 2+2 dialogue in 2019. ISA provides a **framework for exchange and protection of classified military information** between the USA and Indian defence industries.

COMCASA (Communications Compatibility and Security Agreement):

- Signed in **2018**.
- It aims to provide a **legal framework** for the **transfer of highly sensitive communication security equipment** from the **USA to India** that will streamline and facilitate interoperability between their armed forces.

👉'2+2' Dialogue

- 2+2 Ministerial is the **highest-level institutional mechanism** between the two countries.
- It is a **format of dialogue** where the defence/foreign ministers or secretaries meet with their counterparts from another country.
- India holds such talks with **Australia, Japan and the USA**.

Society

1. Partnership for Maternal, Newborn and Child Health (PMNCH)

Why in News?

- Indian Health Minister recently participated in PMNCH 'Accountability Breakfast' through Video Conference.

About

- The event was co-hosted by the **White Ribbon Alliance** (WRA) and **Every Woman Every Child** (EWEC).
- Theme of the Event ➔ **Protecting gains in Reproductive, Maternal and Child Health from the Covid pandemic**.

👉 PMNCH

- Launched in ➔ **2005**.
- PMNCH is an **alliance of more than 1000 organizations** in **77 countries** from the sexual, reproductive, maternal, newborn, child and adolescent health communities, as well as health influencing sectors.
- Governance ➔ Governed by a **Board**, and administered by a **Secretariat hosted at the World Health Organization in Geneva, Switzerland.**
- Roles and functions ➔ The Partnership provides a platform for organizations to **align objectives**, **strategies and resources**, **and agree on interventions** to improve maternal, newborn, child and adolescent health.

👉 The White Ribbon Alliance

- What is it? ➔ WRA is a **nonpartisan**, **non-profit** and **non-governmental membership organization** that aims to decrease maternal and newborn death globally.
- Formation ➔ Founded in **1999** and same year it came to India as WRA India
- Headquarters ➔ **Washington, D.C., USA**.

👉'Every Woman Every Child' (EWEC) Movement

- It was **launched by the United Nations** during the United Nations Millennium Development Goals Summit in **September 2010**.
- Every Woman Every Child is an **unprecedented global movement** that **mobilizes and intensifies international and national action** by governments, the private sector, and civil society to address the major health challenges facing women, children, and adolescents around the world.

2. AYUSH GRID Project

Why in News?

- Recently, the Ministry of AYUSH has endorsed the operational integration of AYUSH GRID Project with the National Digital Health Mission.

About AYUSH GRID Project

- The project was initiated by the Ministry of AYUSH in 2018 for creating a **comprehensive IT backbone** for the entire sector.
- It is conceptualized for **digitalization of the entire AYUSH Sector**.
- It is aimed at **connecting all hospitals and laboratories** so that **case histories and observations** can be collated to **generate evidence** about the **efficacy of the traditional systems of medicine**, including Ayurveda.
- About National Digital Health Mission ➔
    - The NDHM is a **complete digital health ecosystem**. The digital platform will be launched with **four key features** — health ID, personal health records, Digi Doctor and health facility registry.
    - At a later stage, it will also **include e-pharmacy and telemedicine services, regulatory guidelines** for which are being framed.

3. Poverty and Shared Prosperity Report

Why in News?

- The World Bank has released its biennial Poverty and Shared Prosperity Report.

About

- What is it? ➔ It is a **biennial report of the World Bank**.
- Aim ➔ The report aims to provide the latest and most accurate estimates on **trends in global poverty and shared prosperity.**

👉 **Key takeaways**:

- **Global extreme poverty** is expected to **rise in 2020** for the first time in over **20 years due to disruption** of the COVID-19 pandemic.
- Extreme poverty defined as living on **less than $1.90 a day** is likely to **affect between 9.1% and 9.4% of the world's population in 2020.**

Other Reports by World Bank:

- World Development Report
- Global Economic Prospect (GEP) Report
- Logistics Performance Index
- Remittance Report
- Global Financial Development Report
- Human Capital Index.

4. SVAMITVA SCHEME

Why in News?

- Prime Minister Narendra Modi will launch the physical distribution of Property Cards under the SVAMITVA Scheme on October 11, 2020 to transform rural India.

About

- The SVAMITVA scheme, which was **launched in April this year**, aims to **provide the record of rights to village household owners in rural areas and issue Property Cards.**
- The Scheme is being implemented across the country in a **phased manner** over a period of four years and will cover around **6.62 lakh villages** of the country.
- The launch will enable around **one lakh property holders** to **download their Property Cards through the SMS link** delivered on **their mobile phones**. This would be followed by **physical distribution of the Property Cards** by the respective State governments.
- The move will pave the way for using property as a **financial asset by villagers** for **taking loans and other financial benefits.**

5. Vigyan Jyoti

Why in News?

- Department of Science & Technology(DST) and IBM India have announced collaborations to scale up two DST initiatives–Vigyan Jyoti and Engage with Science (Vigyan Prasar).

About Vigyan Jyoti

- Launched Year ➔ **2019**.
- Nodal ministry ➔ **Ministry of Science & Technology** (DST).
- Coverage ➔ The programme **covers girl students from grade 9 to 12.**
- Aim ➔ To create a **level-playing field for the meritorious girls in high school** to pursue Science, Technology, Engineering, and Mathematics (STEM) in their higher education and become self-reliant.
- Implementation ➔ The program is currently **implemented by Jawahar Navodaya Vidyalaya** (JNV) in **58 districts** with the participation of about 2900 students.

Vigyan Prasar

- It is an **autonomous body** under the **DST** to help India's science popularization agenda through several strategic initiatives, including '**Engage With Science**'.

Engage With Science

- It is an **interactive platform** that will be **built on top of the India Science Over-The-Top (OTT) platform** to encourage and inspire high school students to pursue Science & Technology (S&T) for a career.

6. Commitment to Reducing Inequality (CRI) Index, 2020

Why in News?

- Oxfam has released a report titled "Commitment to Reducing Inequality (CRI) Index,2020".

About

- What is it? ➔ The index **ranks 158 countries measuring their policies and actions** in three areas that it said are proven to be **directly related to reducing inequality**:
    - Public services (health, education and social protection)
    - Taxation and
    - Workers rights.

👉 **Key Takeaways**:

- Topped by ➔ The index has been **topped by Norway** followed by **Denmark and Germany**.
- India ➔ It has been **ranked 129** overall in the index.
    - **Public Services:** In terms of its public services such as health, education and social protection, India has been **ranked 141**.
    - **Taxation**: In terms of taxation, India has been ranked 19th in the index.
    - **Workers Rights**: India has fared poorly in protecting labour rights and has slipped to rank 151.

7. STARS Project

Why in News?

- Recently Union Cabinet has approved World Bank supported Strengthening Teaching-Learning and Results for States -STARS project.

About

- Type ➔ The project would be implemented as a **Centrally Sponsored Scheme** under the Department of School Education and Literacy, Ministry of Education(**MOE**).
- Aim ➔ To **support the states in developing and improving school education outcomes**.
- The STARS programme is **partly funded by the World Bank**.
- Coverage ➔ The project covers **6 States** namely **Himachal Pradesh, Rajasthan, Maharashtra, Madhya Pradesh, Kerala and Odisha.**
- Components ➔ The STARS Project has **two major components**:
- At **National Level**, the project envisages the following interventions which will benefit all states and UTs:
    - To **strengthen the national data systems** to capture robust and authentic data on retention, transition and completion rates of students.
    - To support in improving states **Performance Grading Index**(PGI) **scores** by incentivizing states governance reform agenda through SIG (State Incentive Grants).
    - To support the establishment of the **National Assessment Center (**PARAKH).
    - It also includes a **Contingency Emergency Response Component** (CERC) which will help government respond to situations leading to loss of learning such as school closures, inadequate facilities and use technology for facilitating remote learning among others.
- At **State Level**, the project envisages:
    - **Strengthening** Early Childhood Education and Foundational Learning
    - **Improving** Learning Assessment Systems
    - Strengthening classroom instruction and remediation through teacher development and school leadership
    - **Governance and Decentralized Management** for Improved Service Delivery among others.
    - **Strengthening Vocational education** in schools through mainstreaming, career guidance and counselling, internships and coverage of out of school children

8. Stacked odds

Why in News?

- United Nations (UN) has released a report titled "Stacked odds" on the occasion of International Day of the Girl Child,2020.

About

- This report has been combined with observations, data and studies **conducted by Walk Free**, International Labor Organization (**ILO**) and the International Organization for Migration (IOM).

Key Takeaways from the report:

- Females across the world account for about **71% of all victims of Modern Slavery**.
- One in **every 130 females** globally is **living in modern slavery**. Females account for **99% of all victims of forced sexual exploitation**, **84%** of all victims of forced marriage, and **58%** of all victims of forced labour.
- Modern slavery:
- It is defined as the **systematic removal of a person's freedom**, where one person is exploited by another for personal or financial gain.

👉 ILO:

- Established in ➔ **1919**.
- Purpose ➔ To promote **social and economic justice through setting up of international labour standards**.
- Headquarters ➔ **Geneva, Switzerland**.

👉 IOM:

- It is an **intergovernmental organization** established in **1951**.
- Purpose ➔ It **provides services and advice concerning migration to governments and migrants** including internally displaced persons, refugees, and migrant workers.
- In 2016, it became a **related organization of the United Nations**.
- Headquarters ➔ **Geneva, Switzerland**.

9. Thalassemia Bal Sewa Yojna

Why in News?

- The Ministry of Health and Family Welfare launched the second phase of "Thalassemia Bal Sewa Yojna" for the underprivileged Thalassemic patients.

About

- The Hematopoietic Stem Cell Transplantation (HSCT) program was **launched in 2017** and is **funded by Coal India Corporate Social Responsibility** (CSR). It will be **extended** for next two years from 2020.
- Objective ➔ It aims to provide a **one-time cure opportunity for Haemoglobinopathies** like Thalassaemia and Sickle Cell Disease for patients who have a matched family donor.
- Eligibility ➔ Only patients whose **monthly family income is below Rs 20,000** will be eligible for this assistance.
- The scheme has been **extended** to **cover Aplastic Anaemia patients** (lack of blood cell production in body).

- Funding ➔ The CSR initiative was targeted to **provide financial assistance** to **a total of 200 patients** by providing a package cost not exceeding rupees 10 lakhs per HSCT.
- Statistics ➔ It is estimated **10,000 to 12,000 children** are **born with thalassemia every year** in India.

👉 **Sickle Cell Disease**

- It is an **inherited disease** caused by defects, called **mutations**, in the beta globin gene that **helps make hemoglobin**. The red blood cells become **hard and sticky** and look like a **C-shaped** farm tool called a "**sickle**". The sickle cells die early, which causes a constant shortage of red blood cells.
- **World Sickle Cell Day 2020** was observed to **increase awareness** about the Sickle Cell Disease (**SCD**) at the **national level**.
- The day is recognised by the United Nations and **celebrated every year on 19th June**.

10. Global Hunger Index 2020

Why in News?

- The Global Hunger Index 2020 report has been released.

About

- What is it? ➔ It is an annual report jointly published by **Ireland's Concern Worldwide** and **Germany's Welthungerhilfe**.
- Aim ➔ To **measure and track hunger** at the global, regional and country levels.
- Indicators ➔ The **four indicators** for the index are:
  - **Undernourishment** (share of the population with insufficient caloric intake),
  - **child wasting** (low weight for height, reflecting acute undernutrition)
  - **child stunting** (low height for age, reflecting chronic undernutrition) and
  - **Child mortality rate** under 5 years of age.
- Based on the values of the four indicators, the GHI determines hunger on a **100-point scale** where 0 is the best possible score (no hunger) and 100 is the worst. Each country's GHI score is **classified by severity, from low to extremely alarming**.

👉 **Key Takeaways**:

- **India ranks 94** out of 107 countries in the Index lower than neighbours such as Bangladesh (75) and Pakistan (88).
  - Child stunting ➔ India has **improved** significantly from **54% in 2000 to less than 35% now**.
  - Child wasting ➔ India's child wasting rate is at around **17.3%.**
  - Child mortality rates ➔ India has **improved** in child mortality rates which is now at **3.7%**
  - Undernourishment ➔ India has about **14%** of the total population which **gets an insufficient caloric intake**.

11. Anemia Mukt Bharat Index

Why in News?

- Recently, the Union Ministry of Health & Family Welfare has released the Anemia Mukt Bharat (AMB) Index.

About Key Highlights

- **Haryana** was **ranked at the top** slot with an AMB Index of 46.7 among the 29 states.
- It is one of the 11 states of India that has achieved the **national health policy targets well before 2020**.

👉 Anemia Mukt Bharat:

- What is it? ➔ It is an initiative of the **Ministry of Health and Family Welfare** and **UNICEF**.
- Aim ➔ To **reduce the prevalence of Anemia all over India**.
- Target Beneficiaries ➔ The target beneficiaries are Children (6-59 months), Children(5-9 years), **Adolescent Girls & Boys of 10-19 years**, **Women of Reproductive Age** (15-49 years), **Pregnant Women and Lactating Mothers**.
- Target Interventions ➔ **Prophylactic Iron and Folic Acid supplementation**, **Deworming**, Intensified Year round behaviour change communication activities, Testing of anemia using digital methods, **Mandatory provision of Iron and Folic Acid fortified foods** in government-funded health programmes and Addressing non-nutritional causes of anemia.

👉 Anemia

- What is it? ➔ Anemia is a condition in which you **lack enough healthy red blood cells** to **carry adequate oxygen** to your body's tissues. Having anemia can make you feel tired and weak.
- Causes ➔ Anemia is caused due to **iron deficiency**.
- There are **many forms** of anemia, each with its own cause. Anemia can **be temporary or long term**, and it can **range from mild to severe**.
- Symptoms ➔ may include **fatigue**, **skin pallor**, **shortness of breath**, **light-headedness**, **dizziness or a fast heartbeat**.

12. CHILD CARE LEAVE

Why in News?

- Union Minister of Personnel, Public Grievances, Pensions said that the male employees of the government are also now entitled to Child Care Leave.

About

- However, the provision of Child Care Leave (CCL) will be available **only for those male employees** who happen to be "**single male parent**".
- This may include male employees **who are widowers or divorcees** or **even unmarried** and may therefore, be expected to take up the responsibility of child care as **a single - handed parent**.
- The orders regarding this had **been issued quite some time back** but somehow did **not receive enough circulation in the public.**
- An employee on Child Care Leave may now **leave the head quarter with the prior approval of Competent Authority**. In addition, the **Leave Travel Concession** (LTC) may be availed by the employee even **if he is on Child Care Leave.**
- Child Care Leave can be **granted at 100% of leave salary** for the **first 365 days and 80% of leave salary for the next 365 days.**

- In case of a **disabled child**, the condition of availing Child Care Leave up to the **age of 22 years of the child** has been **removed** and now Child Care Leave can be availed by a government servant for a disabled child of any age.

13. Annual State of Education Report (ASER) survey

Why in News?

- The ASER Wave 1 Survey was recently released since the COVID-19 crisis interrupted this years' trajectory.

About

- What is it? ➔ ASER is a **nationwide survey of rural education** and **learning outcomes** in terms of reading and arithmetic skills.
- Conducted by ➔ the **NGO Pratham** for the last 15 years.
- This year, the survey was conducted **via phone calls**.
- ASER has been conducted **every year since 2005** in **all rural districts** of India. It is the **largest citizen-led survey in India.**
- Significance ➔ It is also the **only annual source** of information on children's learning outcomes available in India.

👉 **Key findings- impact of Covid- 19 Pandemic**:

- About **20% of rural children** have **no textbooks at home**. In Andhra Pradesh, less than 35% of children had textbooks. More than 98% had textbooks in West Bengal, Nagaland and Assam.
- In the **week** of the survey, about **one in three rural children** had **done no learning activity at all**.
- About **two in three** had **no learning material or activity given by their school** that week, and only one in 10 had access to live online classes.
- **3% of rural children** aged 6-10 years had **not yet enrolled in school** this year, in comparison to just 1.8% in 2018.

14. Operation Meri Saheli

Why in News?

- The "Meri Saheli" initiative was started as a pilot project in South Eastern Railway in September 2020. Recently it was extended to all zones after getting encouraging response from lady passengers.

About

- What is it? ➔ It is initiative for focused action on **security of women across all zones** with an objective to **provide safety and security to lady passengers** travelling by trains for their entire journey from starting station to destination station.
- Strategy ➔
- The Strategy entails **interaction with lady passengers** especially those **travelling alone by a team of young lady RPF personnel** at the originating station.

- These lady passengers are briefed about **all precautions** to be taken during the journey and told to dial 182 in case they **face or see any problem** in the coach.
- The platform duty RPF personnel at the stopping stations En-route **keep unobtrusive watch** over the **concerned coaches and berths** and if need arises, interact with the lady passengers.

15. NATIONAL MEDICAL COMMISSION

Why in News?

- Recently, National Medical Commission (NMC) was constituted which replaces Medical Council of India (MCI).

About

- NMC has been setup under **National Medical Commission Act** (NMC Act), 2019 which repealed the **Indian Medical Council Act, 1956.**
    - It was recommended by **Prof. Ranjit Roy Chaudhury committee** (2015).
- Composition ➔ NMC will consist of 25 members, appointed by the central government. A Search Committee will recommend names to the central government for the post of Chairperson, and the part time members.
- Functions of NMC:
    - **framing policies for regulating medical institutions** and medical professionals, assessing the requirements of healthcare related human resources and infrastructure, ensuring compliance by the State Medical Councils of the regulations made under the Act,
    - framing guidelines for determination of **fees for up to 50% of the seats** in private medical institutions and deemed universities which are regulated under the Act.
- It supervises following autonomous boards setup under the Act.
    - **Under-Graduate Medical Education Board** and **Post-Graduate Medical Education Board** to set standards and regulate medical education at undergraduate level and postgraduate level respectively.
    - **Medical Assessment and Rating Board** for inspections and rating of medical institutions and
    - **Ethics and Medical Registration Board** to regulate and promote professional conduct and medical ethics and also maintain national registers of (a) licensed medical practitioners and (b) Community Health Providers (CHPs).
- NMC may grant a **limited license to certain mid-level practitioners** who may prescribe specified medicines in primary and preventive healthcare.

Other key features of NMC Act

- Act seeks to provide for a medical education system which ensures:
    - availability of adequate and high-quality **medical professionals**,
    - adoption of the **latest medical research** by medical professionals,
    - **periodic assessment** of medical institutions, and
    - an effective **grievance redressal** mechanism
- Under the Act, central government will constitute a **Medical Advisory Council.** It will be the primary platform through which the states/union territories can put forth their views and concerns before the NMC.
- There will be a uniform **National Eligibility-cum-Entrance Test** for admission to under-graduate and post-graduate super-speciality medical education in all medical institutions regulated under the Act.

- There would be a common final year undergraduate examination called the **National Exit Test** for the students graduating from medical institutions to obtain the license for practice. This test will also serve as the basis for admission into post-graduate courses at medical institutions under the Act

Security

1. Global Counter Terrorism Council

Why in News?

- International Energy Security Conference 2020 was recently organised by Global Counter-Terrorism Council (GCTC).

About GCTC

- What is it? ➔ It is a **registered non-profit International Think Tank** initiated by public spirited individuals to **awaken further issues of national interest and global conscience** about terrorism as a threat to humanity, human security etc.
- Members ➔ Members **belong to different faculties & background** like senior bureaucrats, academicians, officers from the armed forces & paramilitary services, distinguished diplomats, leading researchers, media analysts, parliamentarians, professionals, corporate heads, human rights groups.
- Purpose ➔ They provide **support and regularly contribute with the aim to deliberate on the root causes of Global Terrorism** and to present effective solutions to the problems faced by society and the government.

2. BrahMos Missiles

Why in News?

- The BrahMos Land-Attack Cruise Missile (LACM) featuring indigenous Booster and Airframe Section was successfully flight tested.

About

- Bodies Involved ➔ It is a **joint venture** between the Defence Research and Development Organisation of India (**DRDO**) and the **NPOM of Russia**.
    - Brahm
    - os is named on the rivers Brahmaputra (India) and Moskva (Russia).
- Features ➔ It is a **supersonic missile** travelling at a speed of **Mach 2.8** (nearly three times the speed of sound).
- It is a **multiplatform** i.e it can be launched **from land, air, and sea and multi capability missile with pinpoint accuracy** that works in both day and night irrespective of the weather conditions.
- It is, therefore, used by all three forces, **the Army, Navy and the Air Force**.
- It operates on the "**Fire and Forget**" **principle** i.e it does not require further guidance after launch.
- It is the **heaviest weapon** to be deployed on **Sukhoi-30 MKI fighter aircraft**, with a **weight of 2.5 tonnes**.
- Its range has been recently enhanced **from 300 Km to 450-600 Km**,
- Increasing the missile's range became possible after India's induction into the Missile Technology Control Regime (MTCR) in **June 2016**.
- The missile features **indigenous Booster and Airframe Section**, along with many other indigenous sub-systems.

- Advantages ➔ BrahMos has been **deployed in Ladakh** as well as the **Eastern Sector in Arunachal Pradesh** to tackle any threats in the ongoing standoff with China.
- Others ➔ India is also working on a **hypersonic missile, BrahMos-II** (K), capable of **taking out hardened targets** such as underground bunkers and weapon storage facilities at seven times the speed of sound (Mach 7).

3. Exercise Bongosagar

Why in News?

- The second edition of Exercise Bongosagar, bilateral naval exercise between India and Bangladesh, was commenced in Northern Bay of Bengal on 3rd October 2020.

About

- Its first edition was held in 2019.
- Aim ➔ To develop **interoperability and joint operational skills** through the conduct of a wide spectrum of **maritime exercises and operations**.
- **Participants ➔ Naval ships** from both the countries along with the **maritime patrol aircraft and helicopters** will be participating in the exercise.
- It will be followed by the 3rd edition of India-Bangladesh Coordinated Patrol (**IN-BN CORPAT**), wherein both countries will undertake joint patrolling along the **International Maritime Boundary Line** (IMBL).
- CORPATs have **strengthened understanding between both** the navies and instituted measures to **stop the conduct of unlawful activities.**
- Significance ➔
    - The exercise reflects the **priority that Indian Navy accords to the Bangladesh Navy as part of the SAGAR** (Security And Growth for All in the Region) Vision.
    - This year's edition assumes greater significance since it is being **conducted during Mujib Barsho**, the 100th birth anniversary of Bangabandhu Sheikh Mujibur Rahman.
    - It **strengthens** the close and long-standing **India-Bangladesh relations** covering a wide spectrum of activities and interactions. Both countries share close **cultural bonds** and a **shared vision of democratic society and a rules-based order.**

4. Shaurya Missile

Why in News?

- Recently, India has successfully test-fired a new version of nuclear-capable Shaurya Missile off the coast of Odisha.

About Shaurya Missile

- What is it? ➔ It is a **surface-to-surface nuclear-capable ballistic missile**.
- Shaurya is a **land variant of short-range Submarine** Launched **Ballistic Missile (SLBM) K-15 Sagarika**, which has a range of at least 750 kilometers.
- Payloads ➔ It is capable of carrying payloads of **200 kg to 1000 kg**.
- These ballistic missiles **belong to the K missile family** - codenamed after late Dr. APJ Abdul Kalam - which are launched from Arihant class of nuclear submarines.

- Features ➔ Shaurya, like many of the modern missiles, is a **canister-based system**, which means that it is **stored and operated from specially designed compartments.**
- The missile is **less vulnerable to anti-ballistic missile defence systems** due to its **high maneuverability**.

The K Family of Missiles:

- The K family of missiles are primarily **Submarine Launched Ballistic Missiles** (SLBMs).
- These have been indigenously developed by **Defence Research and Development Organisation** (DRDO).
- The development of these missiles **began in the late 1990s** as a step towards completing **India's nuclear triad**.
- India has also developed and successfully tested multiple times the **K-4 missiles** from the family which has a **range of 3500 km**.

5. SMART Missile

Why in News?

- Supersonic Missile Assisted Release of Torpedo (SMART) has been successfully flight tested from Wheeler Island off the coast of Odisha.

About

- What is it? ➔ SMART is a **missile assisted release of lightweight Anti-Submarine Torpedo System** for anti-submarine warfare (ASW) operations far beyond torpedo range.
- Working ➔
    - SMART, when **launched from a warship** or a **truck-based coastal battery**, takes off like a regular supersonic missile.
    - It covers most of its flight in the air at **lower altitudes with two-way data link** from the warship or an airborne submarine target detection system and **provides the exact location of the hostile submarine** to correct its flight path midway.
    - Just when it approaches close enough to the submerged submarine, the missile will **eject the torpedo system into the water** and **the autonomous torpedo will start moving towards its target** to take out the submarine.
- A number of DRDO laboratories including **DRDL**, **RCI Hyderabad**, **ADRDE Agra**, **NSTL Visakhapatnam** have developed the technologies required for SMART.
- Significance ➔ This launch and demonstration is significant in **establishing Anti-Submarine warfare capabilities**.

6. RUDRAM

Why in News?

- Defence Research and Development Organisation(DRDO) has successfully flight tested New generation Anti-Radiation Missile(RUDRAM).

About

- What is it? ➔ 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.
- Features ➔
    - The **missile's navigation mechanism** comprises an **inertial navigation system** — a computerised mechanism that uses changes in the object's own position coupled with GPS which is satellite-based.
    - For guidance, it has a "**passive homing head**" — a system that can detect, classify and engage targets (radio frequency sources in this case) over a wide band of frequencies as programmed.
    - The missile has an **operational range of more than 100 km**, based on the launch parameters from the fighter jet.

7. EXERCISE SURAKSHA KAVACH

Why in News?

- Agnibaaz Division organized Exercise Suraksha Kavach, a Joint Anti-Terrorist Exercise for both Indian Army and Maharashtra Police at Lullanagar Pune.

About

- The aim of the exercise was **to harmonize the drills and procedures of both Army and Police for activating anti-terrorist Quick Reaction Teams** (QRTs) to counter any terrorist actions in Pune.
- The exercise involved **participation of Quick Reaction Teams**, **Dog Squads** and **Bomb Disposal** Teams of Army as well as **Anti-Terrorism Squad** (ATS) and Quick Reaction Team of Maharashtra Police.

8. INS Sindhuvir

Why in News?

- India will be delivering a Kilo Class submarine INS Sindhuvir to Myanmar Navy as part of defence cooperation.

About

- Kilo class refers to **diesel-electric attack submarines** that were designed and built in the erstwhile Soviet Union.
- This will be the **first submarine of Myanmar Navy**.
- Myanmar is **one of India's strategic neighbours** and **shares a 1,640-kilometer-long border** with a number of north-eastern states including militancy-hit Nagaland and Manipur.

9. SLINEX 20

Why in News?

- Recently, the Eighth Edition of annual Indian Navy (IN) and Sri Lanka Navy (SLN) called SLINEX scheduled off in Trincomalee, Sri Lanka.

About

- What is it? ➔ It is a bilateral maritime exercise **between Indian Navy and Sri Lanka Navy.**
- The Sri Lanka Navy will be **represented by SLN Ships Sayura** (Offshore Patrol Vessel) and **Gajabahu** (Training Ship).
- The Indian Navy will be represented by **ASW corvettes Kamorta and Kiltan**.

- The Indian Navy **Advanced Light Helicopter** (ALH) and **Chetak helicopter** embarked onboard **IN ships** and **Dornier Maritime Patrol Aircraft** will also be participating.
- It aims to **enhance inter-operability**, **improve mutual understanding** and **exchange best practices** and procedures for multi-faceted maritime operations between both navies.
- The exercise is being conducted in a **non-contact** '**at-sea-only**' **format** in the backdrop of COVID-19 pandemic.

INS Kamorta

- INS Kamorta is the **first of four anti-submarine Kamorta-class stealth corvettes** which has been built for the Indian Navy.
- The Kamorta Class indigenous **Anti-submarine Warfare** (ASW) corvettes are being **built by Garden Reach Ship Builders and Engineers (GRSE).**
- The Kamorta Class succeeds the **Kora-Class guided-missile corvettes** that are in service with the Indian Navy.

INS Kiltan

- It is an **indigenously-built anti-submarine warfare stealth corvette**.
- It is the third of the four Kamorta-class corvettes being built under **Project 28**.
- It is **designed by Directorate of Naval Design** and **built by Garden Reach Shipbuilders & Engineers** (GRSE) in Kolkata.

👉 Important Bilateral and Multilateral Defence Exercises

- **Indra** ➔ India-Russia Naval Exercise
- **Malabar** ➔ US-India-Japan Naval Exercise
- **Varuna** ➔ France and India Naval Exercise
- **Simbex** ➔ India and Republic of Singapore Naval Exercise
- **Ibsamar** ➔ India, Brazil and South Africa Naval Exercise
- **Konkan** ➔ India and Britain Naval Exercise
- **Ausindex** ➔ India and Australia Naval Exercise
- **Naseem Al-Bahr** ➔ India-Oman Naval Exercise

10. Laser ATGM

Why in News?

- The indigenously developed laser-guided version of the Anti-Tank Guided Missile (ATGM) was successfully test fired by DRDO on two separate occasions recently.

About

- What is it? ➔ Anti-Tank Guided Missiles s are missile systems that can **strike and neutralise armoured vehicles** such as tanks.
- DRDO has been **working on ATGMs** that can be **launched from different platforms** as part of the Integrated Guided Missile Development Programme.
- The laser-guided ATGM, **mainly differs in one aspect from other ATGMS developed till date**.
- This ATGM is designed to be **fired from tanks**.

- Its range is **limited to 1.5 to 5 kilometres**, it locks and tracks the targets with the **help of laser** designation to **ensure precision in striking the target**.
- The missile uses a '**tandem**' **High Explosive Anti-Tank** (HEAT) **warhead**.
- The term tandem refers to the missiles using **more than one detonation in order** to **effectively penetrate the protective armours.**

11. Exercise Malabar

Why in News?

- This year Malabar 2020 will see the participation of the Australian Navy as well.

About Exercise Malabar

- What is it? ➔ It is an **annual exercise** which began in 1992 as a bilateral exercise **between India and the U.S.** Then it got **expanded** into a trilateral format with the **inclusion of Japan in 2015**.
- Aim ➔ To **strengthen cooperation and enhance interoperability** based on shared values and principles.
- Significance of Joining of Australia ➔ The joining of Australia will effectively mean that **all the four member countries of the 'Quad'** or Quadrilateral coalition will be **participating in the Malabar Exercise**.

👉 Quadrilateral Security Dialogue(QSD):

- It is the **strategic dialogue** between four countries viz. **India, United States, Japan and Australia**.
- Origin: It was originally **initiated in 2007** but later disbanded with withdrawal of Australia. It was later **revived in 2017.**
- Objective: The Quad is viewed as a group of four democracies with a shared objective to **ensure and support a free, open and prosperous Indo-Pacific region.**

12. Vessel Traffic Services and Vessels Traffic Monitoring Systems

Why in News?

- Union Minister for Shipping e-launched the development of Indigenous Software solution for Vessel traffic services (VTS) and Vessels Traffic Monitoring Systems (VTMS).

About VTS/ VTMS

- What is it? ➔ VTS and VTMS is a **software which determines vessel positions**, **position of other traffic** or **meteorological hazard warnings** and extensive management of traffic within a port or waterway.
- Vessel Traffic Services (**VTS**) contribute to the following ➔
    - Safety of life at sea,
    - Safety and efficiency of navigation,
    - Protection of the marine environment, Adjacent shore areas, Work sites and offshore installations from possible adverse effects of maritime traffic.
- The **VTMS traffic image** is compiled and **collected by means of advanced sensors** such as **radar, AIS, direction finding, CCTV and VHF** or other co-operative systems and services.
- A modern VTMS integrates all of the information into a **single operator working environment** for ease of use and in order to allow for effective traffic organization and communication.

- VTMS is **mandatory** under **IMO Convention SOLAS** (Safety of Life at Sea).
- Implementation of **National Maritime Domain Awareness programme** shall become **feasible with Indian VTS software at low cost.**
- **Ministry of Shipping** has sanctioned an amount **of Rs. 10 Crore to IIT, Chennai** for development of indigenous VTS software.

👉 Safety of Life at Sea (SOLAS)

- What is it? ➔ The International Convention for the Safety of Life at Sea (SOLAS) is an international maritime treaty which **sets minimum safety standards in the construction, equipment and operation of merchant ships**.
- Administered by ➔ **International Maritime Organization**
- The convention requires **signatory flag states** to ensure that **ships flagged by them comply with at least these standards.**
- Background ➔
    - The **first version of SOLAS Treaty** was passed in **1914** in response to the sinking of the RMS Titanic, which prescribed numbers of lifeboats and other emergency equipment along with safety procedures, including continuous radio watches.
    - The 1914 treaty **never entered into force** due to the outbreak of the First World War.
    - Further versions were **adopted in 1929 and 1948**.
- Significance ➔ SOLAS in its **successive forms** is generally regarded as the **most important of all international treaties** concerning the **safety of merchant ships**.

👉 National Maritime Domain Awareness programme

- What is it? ➔ Maritime Domain Awareness (MDA) is the **effective understanding of anything associated with the maritime domain** that could impact the security, safety, economy or environment of the nation.
- Importance ➔ The NMDA project was launched in **accordance with the vision of Prime Minister on SAGAR** (Security and Growth for All in the Region).
- Centre ➔ Information Management and Analysis Centre (**IMAC**) and Information Fusion Centre – Indian Ocean Region (**IFC-IOR**) are **two centres under** the National Maritime Domain Awareness (**NMDA**) **Project**.

13. INS Kavaratti

Why in News?

- Recently, the Ministry of Defence announced the commission of INS Kavaratti into the Indian Navy.

About

- What is it? ➔ "INS Kavaratti" an indigenously built **Anti-Submarine Warfare (ASW) stealth corvettes** under **Project 28** (Kamorta class).
- Indigenously designed by ➔ The Indian Navy's in-house organisation, **Directorate of Naval Design**(DND)
- Built by ➔ **Garden Reach Shipbuilders & Engineers** (GRSE), **Kolkata**.
- Features ➔

- Kavaratti has a **state-of-the-art weapons** and **sensor suite capable of detecting and prosecuting submarines.**
- The ship also has a **credible self defence capability** and **good endurance** for long-range deployments.
- The ship has up to **90 per cent indigenous content** and the **use of carbon composites** for the superstructure is a commendable feat achieved in Indian ship-building.

- INS Kavaratti takes its name from **erstwhile INS Kavaratti** which was an **Arnala class missile corvette** and the older Kavaratti distinguished itself by operating in support of Bangladesh's liberation in 1971.
- The other **three warships** under this **Project 28** (Kamorta class) are ➔
  - INS Kamorta (commissioned in 2014)
  - INS Kadmatt (2016)
  - and INS Kiltan (2017).

14. STAND-OFF ANTI-TANK (SANT) MISSILE

Why in News?

- India successfully test-fired the Stand-off Anti-tank (SANT) Missile off the coast of Odisha.

About SANT Missile

- What is it? ➔ It is an **air-to-surface missile**.
- Developed by ➔ **DRDO's research centre**, **Imarat**, in collaboration with the Indian Air Force.
- Range ➔ The missile can **destroy targets 15 km to 20 km away**.
- Upgraded Version ➔ The missile is an **upgraded version of the Helicopter Launched Nag (HeliNa) missile** which has a range of around 7 to 8km.
- Features ➔
  - It is equipped with a **nose-mounted active radar seeker**, enabling the launch platform to be located at a safe distance from the target area.
  - The SANT missile has **both lock-on before launch and lock-on after launch capability**.

DRDO's Nag range Missiles

- The **land version** of the DRDO's Nag missile is the Prospina which is meant for infantry.
- It can be **launched via** a tracking and launch carrier called **NAMICA** (Nag Missile Carrier).
- The system can be mounted on the **light infantry vehicle**, **BMP-2** **capable of carrying up to six missiles**.

The Helina missile

- The Helina missile is the **helicopter-launched version** in the Nag range and has an extended range.
- Its launch system is **fitted on to the HAL's Rudra helicopter** via the **Rudrasta twin-launcher system**.
- It can also be mounted on the **HAL's Light Combat helicopters**.

15. Indo-Tibetan Border Police (ITBP)

Why in News?

- The Indo-Tibetan Border Police (ITBP) celebrated its 59th Raising Day on 24th October 2020.

About ITBP

- What is it? ➔ Indo-Tibetan Border Police Force (ITBPF) is a **Central Armed Police Force** functioning under the **Ministry of Home Affairs**, Government of India.
- Founded ➔ The ITBP was raised on **24th October, 1962** during the **India-China War** and is a **border guarding police force** specializing in high altitude operations.
- Role ➔It primarily guards the **3,488 km long Indo-China border** along Tibet Autonomous Region from **Karakoram Pass in Ladakh to Jachep La in Arunachal Pradesh**.
- ITBP force is also engaged in a **variety of internal security tasks** including disaster management, civil Medical Camp, nuclear, biological and chemical disasters and UN peacekeeping missions around the world.
- ITBP was initially raised under the Central Reserve Police Force (CRPF) Act, 1949. However, in **1992**, parliament **enacted the ITBPF Act** and **the rules were framed in 1994**.

16. DEFENCE ACQUISITION PROCEDURE, 2020

Why in News?

- Recently Defence Ministry unveiled Defence Acquisition Procedure, 2020 (erstwhile Defence Procurement Procedure (DPP)).

About

- **Offset policy revised ➔** Government has **changed 15-year old policy** by removing the clause for offsets for intergovernment agreement (IGA), government-to-government defence deals and single-vendor contracts for the procurement of arms and military platforms for the armed forces.
- **Notify a List of Weapons/Platforms for Ban on Import ➔** This is done to ensure that **no equipment as mentioned in the list is procured through import post timelines notified**.
- For Indigenisation of Imported Spares ➔
    - **New Category of Buy (Global – Manufacture in India):** It has been incorporated in line with new FDI Policy and to **encourage foreign original equipment manufacturers** (OEMs) to setup 'manufacturing or maintenance entities' through its subsidiary in India while enabling requisite protections to domestic industry.
    - **Request For Information (RFI):** RFI stage will **explore willingness of the prospective foreign vendors** to progressively undertake manufacture and setup an indigenous eco system at the spares/sub component level.
- **For Time Bound Defence Procurement Process, Faster Decision Making and Ease of Doing Business ➔**
    - **Setting up of project management unit (PMU):** It will **facilitate obtaining advisory and consultancy** support in specified areas to streamline the acquisition process and support contract management.
    - **Simplification of Trial Procedures**: DAP 2020 emphasises the need to conduct trials with an objective to **nurture competition based on the principles of transparency**, **fairness** and **equal opportunities** to all and not as a process of elimination.
    - The policy also provides for **a single stage accord of AoN (Acceptance of Necessity)** in all cases up to ₹500 crore to avoid delays in approval of acquisition proposals.

- **Leasing ➔** It has been introduced as a new category for acquisition in addition to the existing 'Buy' and 'Make' categories to substitute huge initial capital outlays with periodical rental payments.
- **Strategic Partnership Model (SPM) ➔** Acquisitions under the Strategic Partnership model refer to participation of private Indian firms along with foreign OEM in 'Make in India' in defence and play the role of a System Integrator by building an extensive eco-system comprising development partners, specialised vendors and suppliers, in particular, those from the MSME sector.

Culture

1. Bharati Script

Why in News?

- Bharat Script in News.

About

- Developed By ➔ **Srinivasa Chakravathy's team at IIT Madras**.
- Features ➔
  - Bharati is a **simple and unified script** which can be used to **write most major Indian languages**.
  - It is designed using **simplest shapes**, often **borrowing simple characters** from various Indian languages/scripts and English.
  - Scripts supported are: **Hindi/Marathi** (Devanagari), **Tamil, Telugu, Gujarati, Punjabi** (Gurmukhi), **Bengali**, **Oriya, Kannada and Malayalam**.
- Use of Technology ➔
  - **Optical Character Recognition**: The Team has developed a method for reading documents in Bharati script using a multi-lingual Optical Character Recognition (OCR) scheme.
  - **Finger-spelling Method**: It can be used to generate a sign language for hearing-impaired persons.
  - **Related Applications/Tools**: Bharati Handwriting Keyboard and Bharati Transliterator.
- Significance ➔ It is in line with **'One Nation, One Script'**. It can **help the next generation of Indians** to easily read in Indian languages.

2. Bhagat Singh

Why in News?

- 28th September is the birth anniversary of revolutionary freedom fighter Bhagat Singh.

About

- Gandhi's influence ➔ **Initially**, he **supported Mahatma Gandhi** and the Non-Cooperation Movement. However, when **Gandhi withdrew the movement** in the wake of the Chauri Chaura incident, **Bhagat Singh turned to revolutionary nationalism.**
- Associations he was associated with ➔
  - In **1924** in Kanpur, he became a member of the **Hindustan Republican Association**, started by **Sachindranath Sanyal** a year earlier.
  - In **1925**, Bhagat Singh returned to Lahore and within the next year he and his colleagues started a militant youth organisation called the **Naujawan Bharat Sabha**.
  - In **1928**, he was associated with the **Hindustan Socialist Republican Association** (HSRA) along with **Sukhdev, Chandrashekhar Azad and others**.
  - Bhagat Singh and Sukhdev also organized the **Lahore Students Union** for open, legal work among the students.
- Revolutionary activities he was involved in ➔
  - **Lahore Conspiracy case**.
  - **1929 Central Assembly Bombing Case**.

- Bhagat Singh Execution ➔
    - Bhagat Singh was **arrested and charged in the Saunders murder case**, along with Rajguru, Sukhdev and others. The trio was ordered to be **hanged on 24 March 1931** but the sentence was carried out a day earlier at the Lahore Jail.
    - **23rd March** is observed as '**Martyrs' Day**' **or** '**Shaheed Diwas**' or '**Sarvodaya Day**' in honour of Bhagat Singh, Rajguru and Sukhdev.
- Political ideology ➔
    - His azaadi freedom was **not limited** to the **expelling of the British**; instead he desired azaadi **from poverty**, **azaadi from untouchability, azaadi from communal strife**, and **azaadi from every form of discrimination** and **exploitation**.

3. Sawantwadi Toy

Why in News?

- To mark the occasion of 151 years of postcards in India, Maharashtra Circle of India Post has released picture postcards on 'Sawantwadi Toys' (October 1).

About

- It refers to **hand made works of art made of wood** in Sawantwadi, a town in Sindhudurg district of Maharashtra.
- These toys are **made from the wood of the Indian Coral tree** (Erythrina variegata).
- Craftsmen who make these toys belong to the **Chittari community**.

4. Nobel Prize in Literature 2020

Why in News?

- The Nobel Prize in Literature 2020 has been awarded to the USA poet Louise Glück "for her unmistakable poetic voice that with austere beauty makes individual existence universal.

About Nobel Prize in Literature

- What is it? ➔ Established by **Alfred Nobel in 1895**, the **Nobel Prize in Literature** is **one of six awards** that also span physics, chemistry, medicine or physiology, peace and economic sciences.
- The Nobel Prize comes with a **medal** and a prize sum of **10 million Swedish kronor**.

Key Points

- **Glück**, born 1943 in New York, **lives in Massachusetts** and is also professor of English at Yale University.
- Her poetry focuses on the **painful reality of being human, dealing with themes** such as **death, childhood, and family life.**
- She is the **fourth woman** to win the prize for literature since 2010, and only the 16th since the Nobel prizes were first awarded in 1901.
    - The last American to win was **Bob Dylan in 2016**.
- Glück won the **Pulitzer Prize in 1993** for her collection **The Wild Iris** and the **National Book Award in 2014.**

5. Tech for Tribals Initiative

Why in News?

- Recently, the Ministry of Tribal Affairs has announced that it will launch the 'Tech for Tribals Initiative'.

About Tech for Tribals Initiative

- It will be a joint initiative of **TRIFED, Chhattisgarh MFP Federation and IIT-Kanpur**.
- The **TRIFED** has **collaborated with MSME through** its **ESDP scheme for providing skill upgrading** and **entrepreneurial capacity building** support to the Van Dhan tribal beneficiaries to establish their sustainable enterprise.
- It aims at the **holistic development of tribals** with a focus on entrepreneurship development, soft skills, IT, and business development through SHGs operating through Van Dhan Kendras (VDVKs).
- Under this initiative, **TRIFED has tied up reputed national institutions** such as IIT, Kanpur; Art of Living, Bangalore; TISS, Mumbai; KISS, Bhubaneswar; Vivekananda Kendra, Tamil Nadu and SRIJAN, Rajasthan, **for conducting Vandhan-ESDP Training Programs.**
- It is a **unique program** to **make tribals of India** "**Aatmanirbhar**", focusing to bridge the gap between tribal entrepreneurs and urban markets.

Van Dhan Scheme:

- It is an initiative of the **Ministry of Tribal Affairs and TRIFED** with the aim to **target livelihood generation for tribal gatherers** and **transform them into entrepreneurs**.
- Under this, Van Dhan Vikas Kendras have been set up to **cater to 10 tribal Self Help Groups**(SHG). These SHGs are **trained** and **provided with working capital to add value to the products**. The SHGs then market their products within and outside the State.

TRIFED:

- It was established in **1987** under the administrative control of the **Ministry of Tribal affairs**. It aims to **provide good price to the products** made or collected from the forest by the tribal people.

6. Kala Sanskriti Vikas Yojana

Why in News?

- Recently, the Ministry of Culture has issued guidelines for holding cultural events/activities in virtual/online mode under various scheme components of Kala Sanskriti Vikas Yojana (KSVY).

About

- The Covid-19 pandemic and the resultant lockdowns have had a **substantial impact on the performing arts and cultural sector** with in-person exhibitions, events, and performances **either cancelled or postponed**.
- The guidelines will enable artists to avail benefits under KSVY even if they are **not able to stage programs in the physical format** as before and will ensure **continued financial assistance**.
- Kala Sanskriti Vikas Yojana (KSVY) is an **umbrella scheme** under the **Ministry of Culture** for the promotion of art and culture in the country.
- It is a **central sector scheme**.

- The ministry **implements many schemes under KSVY**, where the grants are sanctioned/approved for holding programs/activities.
    - Scheme of Financial Assistance for Promotion of Art and Culture.
    - Scheme of Financial Assistance for Creation of Cultural Infrastructure.
    - Scheme for Safeguarding the Intangible Cultural Heritage, which aims to promote the 13 intangible cultural heritage of India, recognised by the United Nations Educational, Scientific and Cultural Organization (UNESCO).

13 ICH traditions recognised by UNESCO			
1.	Tradition of Vedic chanting, 2008	8.	Buddhist chanting of Ladakh: recitation of sacred Buddhist texts in the trans-Himalayan Ladakh region, Jammu and Kashmir, India, 2012
2.	Ramlila, the traditional performance of the Ramayana, 2008	9.	Sankirtana, ritual singing, drumming and dancing of Manipur, 2013
3.	Kutiyattam, Sanskrit theatre, 2008	10.	Traditional brass and copper craft of utensil making among the Thatheras of Jandiala Guru, Punjab, India ,2014
4.	Ramman, religious festival and ritual theatre of the Garhwal Himalayas, India, 2009	11.	Yoga, 2016
5.	Mudiyettu, ritual theatre and dance drama of Kerala, 2010	12.	Nowruz, 2016
6.	Kalbelia folk songs and dances of Rajasthan, 2010	13.	Kumbh Mela, 2017
7.	Chhau dance, 2010		

7. Azaad Hind Government

Why in News?

- 77th anniversary of the Azad Hind Government was witnessed in October 2020.

About Azaad Hind Government

- It was established by **Netaji Subhash Chandra Bose in 1943 at Singapore** with support from Axis Powers of Japan, Germany, Italy and allies.
- Also known as **Arzi Hukumat-e-Azad Hind**.
- Why was it set up? ➔
    - Bose was convinced that **armed struggle** was the **only way to achieve independence for India**. Under his provisional government, the Indians living abroad had been united.
    - The Indian National Army (Azad Hind Fauj) drew **ex- prisoners and thousands of civilian volunteers** from the Indian expatriate population in **Malaya** (present-day Malaysia) and **Burma** (now Myanmar).
- Under the provisional government ➔
    - Bose was the head of the state, the prime minister and the minister for war and foreign affairs.
    - Captain Lakshmi headed the women's organisation.
    - S A Ayer headed the publicity and propaganda wing.
    - Rash Behari Bose was designated as the supreme advisor.

- Key features ➔
  - The Azad Hind government had its **own court**, **civil code and currency**.
  - Its provisional capital was **Port Blair**, while its capital-in-exile was Rangoon and Singapore.
- How it came to an end? ➔
  - A provisional government was also formed in the Japanese-occupied Andaman and Nicobar Islands. The islands were **reoccupied by the British in 1945**.
  - **Bose's Death and defeat of Axis powers** in world war 2 eventually ended the Azad Hind Government.

8. Life in Miniature project

Why in News?

- Recently, the Union Minister of State for Culture and Tourism has virtually launched "Life in Miniature" project.

About

- What is it? ➔ It is a **collaboration between the National Museum (Ministry of Culture) and Google Arts & Culture**.
- Purpose ➔ Under the project, **several hundred miniature paintings** from the National Museum can be **viewed online on Google Arts & Culture** by people around the world.
- The project uses technologies like **machine learning**, **augmented reality and digitization with high-definition robotic cameras**, to showcase the special works of art in a magical new way.
- The users will be able to see **famous miniature collections of the National Museum** like the Ramayana, Royal Saga, Pahari style paintings etc.

9. Sir Syed Ahmad Khan

Why in News?

- Sir Syed's Day is observed on 17th October to mark the birth anniversary of Sir Syed Ahmad Khan.

About Sir Syed Ahmad Khan

- Early Life ➔ Sir Syed Ahmad Khan was **born in 1817** in a family that was **close to the Mughal court**, he was a man of many distinctions, a civil **servant**, **journalist**, **educationist**, **social reformer and historian among others**.
  - He served the **British administration** before the **revolt of 1857**.
- He has also written a pamphlet titled "**The Causes of the Indian Revolt**" to explain the reasons for the revolt from a Indian perspective.
- Educationist ➔ Sir Syed is, first and foremost, known for his pioneering role in **transforming the educational opportunities for Muslims**.
  - Sir Syed realised that Muslims could only make progress if they took to **modern education**. For this he **started the Aligarh movement**.
- Social Reformer ➔ He also pushed for social reforms and was a **champion of democratic ideals and freedom of speech**.
  - He was **against religious intolerance**, **ignorance and irrationalism**. He denounced purdah, polygamy and easy divorce.

- **Tahzebul Akhlaq** (Social Reformer in English), a **magazine** founded by him, tried to awaken people's consciousness on social and religious issues in a very expressive prose.

- Critical of National Movement ➔
  - In his later years Sir Syed **encouraged the Indian Muslims not to join the National Movement**. He felt that education and not politics was needed by them.
  - In a way he **encouraged the forces of communalism and separatism** at this stage.

10. Evidence of dairy production in the Indus Valley Civilisation

Why in News?

- Recently the year 2020 marks 100 years of discovery of Indus Valley Civilisation, and the latest study has shown that dairy products were being produced by the Harappans as far back as 2500 BCE.

Key findings

- By analyzing residues on ancient pots, researchers show the earliest **direct evidence of dairy product processing**, thus throwing **fresh light on the rural economy of the civilization**.
- The studies were carried out on **59 shards of pottery from Kotada Bhadli**, a small archaeological site in present-day Gujarat.
- They studied the *tooth enamel from fossils of cattle*, *water buffalo*, *goat* and *sheep* found in the area.
- Cows and water **buffalo were found to consume millets, while sheep and goats ate nearby grass and leaves**.
- Having surplus dairy production ➔
- The **Harappans** did **not just use dairy for their household**.
- The large herd indicates that milk was **produced in surplus** so that it could be **exchanged** and there could have been **trading between settlements**.

Technique used

Carbon isotope studies

- The team used **molecular analysis techniques** to study the **residues from ancient pottery**.
- As **pots are porous**, as soon as we put any liquid form of food, it will **absorb it**.
- The pot **preserves the molecules of food** such as **fats and proteins**.

11. Bundi

Why in News?

- Ministry of Tourism's Dekho Apna Desh Webinar series has organised a webinar titled "Bundi: Architectural Heritage of a Forgotten Rajput Capital".

About Bundi

- It is an erstwhile **capital of Hada Rajput province** known as **Hadauti located in south-eastern Rajasthan**.
- Known as ➔ Bundi is also known as **City of stepwells**, **blue city** and also as **Chotti Kashi**. It was known as Chotti Kashi owing to **presence of over hundred temples** within and around the hada capital.

- Temple architecture ➔
  - First Phase → Temples constructed in the early phase of Bundi's growth were in **classical Nagara style**.
  - Second Phase → In later phases new temple typologies emerged from amalgamation of **architectural form of traditional haveli with the classical Nagara style.**
  - Third Phase → **Jain temples formed** the third type of temple type constructed in an introvert form.
  - Fourth Phase → A fourth temple type emerged in the form of a raised or elevated temple.
  - Unique Feature → **Absence of monumentality** in their scale is a **distinctive feature of temples** in **Bundi**.

Important Places ➔

- **Taragarh Fort→**
  - It was **constructed by Rao raja Bair Singh in 1354**.
  - The fort includes **Hazari Darwaza, Haathi Pol, Nau Dhaan, Ratan Daulatkhana, Darikhana, Ratan Niawas, Chhatra mahal, Badal Mahal & Moti Mahal**.
- **Sukh Mahal→**
  - A **small, two-storied palace** was a summer retreat of past rulers.
  - Located on the **banks of JaitSagar lake**, the palace was constructed by **Rao raja Vishnu Singh** in 1773 A.D.
- **Rani Ki Baori→**
  - Bundi has **more than 50 stepwells** and is rightly known as the **city of stepwells**.
  - Raniji ki Baori also known as '**Queen's Stepwell'** is a famous stepwell built in **1699 by Rani Nathavati Ji** of Bundi.
- **84 Pillared Cenotaph→**
  - It is a structure **supported by 84 columns**.
  - Commissioned **by Rao Anirudh**, the Maharaja of Bundi, this cenotaph was constructed in **memory of his nurse**, **Deva**, under whose love and guidance the prince grew up.

Miscellaneous

1. iMediX-Telemedicine System

Why in News?

- Recently, the researchers at IIT Kharagpur's Department of Computer Science & Engineering have developed a telemedicine system called iMediX.

About

- The system **integrates homecare with healthcare services** from the hospital.
- The system **facilitates critical health care support to the patients** at their **doorsteps** through **remote consultation by a physician.**
- The system is **accessible by any standard internet browser** and also from a **mobile device.**

2. Air India One

Why in News?

- Recently, the Air India One has landed at the Indira Gandhi International Airport after undergoing retrofitment in the U.S. for more than two years.

About

- What is it? ➔ It is **India's first-ever VVIP plane**.
- It will be **used by** the **President, Vice-President and Prime Minister**.
- It is **one of the two Boeing 777-300 ERs**, which joined Air India's fleet in 2018.
- Features ➔
    - It is equipped with **missile warning sensors** and **counter-measures dispensing defence system**.
    - The B777 planes will have **state-of-the-art missile defence systems** called Large Aircraft Infrared Countermeasures (**LAIRCM**) and Self-Protection Suites (**SPS**).
    - The two B777 aircraft will be **operated by pilots of the Indian Air Force** (IAF) and **not of Air India.**

3. Dhaulasidh Hydro Project

Why in News?

- Prime Minister has announced the construction of 66 MW Dhaulasidh Hydro Project at Hamirpur, Himachal Pradesh.

About

- Where? ➔ The project is going to be **launched in Beas River in Hamirpur, Himachal Pradesh**.
- Capacity ➔ The capacity of the project will be **66 MW**.
- It is **a run-of-the river project** with little storage capacity for production of electricity during lean period.

4. Daring Cities 2020' conference

Why in News?

- The Chief Minister of Delhi will be among the five urban leaders from around the world to speak at the 'Daring Cities 2020'.

About

- What is it? ➔ It is an **action-oriented forum** designed to **empower urban leaders** including mayors and other decision-makers **to tackle the climate crisis**.
- Created by ➔ It was **established by ICLEI** and **the Federal City of Bonn** (Germany).
- Daring Cities 2020 ➔ It will **comprise high level and visionary speakers**. The event will help to set the **course to COP26, Daring Cities 2021 and beyond**.
- The **26th session** of the Conference of the Parties (COP 26) to the United Nations Framework Convention on Climate Change (**UNFCCC**) will be **held in 2021 in Glasgow, UK**.

5. World Habitat Day 2020

Why in News?

- The United Nations has designated the first Monday of October every year as World Habitat Day (5th October 2020).

About

- It was **established in 1985** by the United Nations General Assembly through Resolution 40/202 and was **first celebrated in 1986.**
- Aim ➔ To focus on the **state of human settlements** and people's right to sufficient shelter and also to remind people that they are responsible for the habitat of future generations.
- Theme ➔ "**Housing for All-A better Urban Future**".

👉 Also Remember

Sustainable Development Goal 11

- It aims to **make cities more inclusive, safe, resilient and sustainable**.

United Nations Human Settlements Programme (UN-Habitat)

- It was established in **1978** as a United Nations agency for human settlements and sustainable urban development.
- Headquarters ➔ **Nairobi, Kenya**.

6. World Cotton Day

Why in News?

- The Union Minister of Textiles and Women & Child Development launched the 1st ever Brand & Logo for Indian Cotton on 2nd World Cotton Day.

About

- It is observed globally on **7th October** since 2019.

- Aim ➔ The day aims to **celebrate the advantages of cotton**, ranging from its qualities as a natural fibre to the benefits people obtain from its production, transformation, trade and consumption.
- Kasturi Cotton
- **India's premium Cotton** would be known as '**Kasturi Cotton**' in the **world cotton trade** from now onwards.
- The Kasturi Cotton brand will represent **Whiteness**, **Brightness**, **Softness**, **Purity**, **Luster**, **Uniqueness and Indianness**.

Also Remember

Cott-Ally:

- It is a **mobile app** launched by **Cotton Corporation of India** (CCI) to **provide latest news** regarding **weather conditions**, **Crop situation** and best farm practices for cotton cultivation.

Cotton Cultivation in India:

- India is the **2nd largest cotton producer** and the **largest consumer** of cotton in the world.
- India produces about **6 million tons of cotton** every year which is about **23% of the world cotton**. India produces about **51%** of the **total organic cotton production** of the world which demonstrates India's effort towards sustainability.

7. Gyan Circle Ventures

Why in News?

- Ministry of Education virtually inaugurated the Gyan Circle Ventures.

About

- What is it? ➔ They are **Technology Business Incubators** (TBI).
- Funded by ➔ the **Ministry of Information Technology** (MeitY).
- Led by ➔ the **Indian Institute of Information Technology**, Sri City (Chittoor), Andhra Pradesh.
- Key features ➔
    - Gyan Circle Ventures would **function as a Technology Incubation and Development of Entrepreneurs** (TIDE 2.0) **incubation center**.
    - They will serve as a **hub for innovation** and **startups by providing support**, in various phases, via investments, infrastructure and mentoring**.**

8. DBT-BIRAC Clean Tech Demo Park

Why in News?

- Union Science & Technology Ministry has inaugurated the "DBT-BIRAC Clean Tech Demo Park" at New Delhi.

About

- What is it? ➔ The DBT-BIRAC Clean Tech Demo Park will be **used to demonstrate innovative Waste-to-Value technologies.**
- Supported by ➔ Department of Biotechnology (**DBT**) and Biotechnology Industry Research Assistance Council (BIRAC).

- Managed by ➔ **the Clean Energy International Incubation Centre** (CEIIC), a public-private-partnership incubator set up jointly by DBT, BIRAC and Tata Power.
- DBT has undertaken several initiatives under **Swachh Bharat Mission** for the development, demonstration and promotion of **innovative clean waste-to-value technologies** such as
    - Biomethanation,
    - Constructed wetlands,
    - Algal treatment
    - Water membrane filtration.

9. Kamdhenu Deepawali Abhiyan

Why in News?

- Rashtriya Kamdhenu Aayog (RKA) has started a nation- wide campaign to celebrate "Kamdhenu Deepawali Abhiyan" this year on the occasion of Deepawali festival.

About

- What is it? ➔ Kamdhenu Deepawali Abhiyan aims reaching **11 crore families to ignite 33 crore Diyas made of cow-dung** during this year's Deepawali festival.
- Significance ➔ Apart from **generating business opportunities** for thousands of cow-based entrepreneurs/farmers, the use of cow-dung products will **lead to a cleaner and healthier environment**.

👉 Rashtriya Kamdhenu Aayog

- It has been established by the government in **2019**. It seeks for **conservation protection and development of cows and their progeny.**
- It is **high powered permanent body**. At present it functions as a **part of Rashtriya Gokul Mission** under Department of Animal Husbandry and dairying, Ministry of Agriculture and Framers Welfare.
- Functions ➔
- provide the **policy framework and direction** to the cow conservation and development programmes and
- Ensure proper **implementation of laws** with respect to the welfare of cows.

10. KAPILA Kalam Program

Why in News?

- Recently, Union Education Minister virtually launched the 'KAPILA' Kalam Program for Intellectual Property Literacy and Awareness campaign.

About

- What is it? ➔ Under this campaign, students pursuing education in higher educational institutions will **get information about the correct system of application process for patenting their invention.**
- It will help in patent the inventions which will lead India towards **Self-Reliance**.
- Intellectual Property Literacy Week ➔ The week of October 15th to 23rd as '**Intellectual Property Literacy Week**'. Online awareness will be created about the system and the **importance of the process of applying for a patent.**

👉 **Institution Innovation Council**:

- Established by **Ministry of Education**, it aims to systematically foster the culture of Innovation amongst all Higher Education Institutions (**HEIs**).

11. Ayurveda Day

Why in News?

- The Ayurveda Day is being observed every year from 2016, on the day of Dhanwantri Jayanti. This year it falls on 13th November 2020.

About

- Objective ➔
  - to focus on strengths of Ayurveda and its unique treatment principles,
  - to work towards reducing the burden of disease and related mortality by utilising the potential of Ayurveda,
  - to tap into the potential of Ayurveda to contribute towards National Health Policy and National Health programmes.
- Ayurveda Day 2020 Theme ➔ 'Ayurveda for Covid-19'.

12. India joins UK-led fight against encrypted online messages

Why in News?

- India is among seven countries to back a UK-led campaign against end-to-end encryption of messages by social media giants such as Facebook.

About

- Which are the seven countries? ➔ The **UK and India** are joined by the **US**, **Canada**, **Australia**, **New Zealand and Japan**.
- What is the campaign about? ➔ The campaign is **against the end-to-end encryption** of messages by social media giants such as Facebook.
- The governments have claimed that this **feature acts as an obstacle for law enforcement against illegal activities by blocking all access to them**.
- Significance ➔ This campaign marks an expansion of the so-called "**Five Eyes**" group of nations by **including India and Japan**.

👉 **Five Eyes (FVEY):**

- It is an **intelligence alliance** comprising **Australia**, **Canada**, **New Zealand**, **the United Kingdom** and the **United States**. These countries are parties to the **multilateral UKUSA Agreement**, a treaty for joint cooperation in signals intelligence.

👉 **End-to-end encryption(E2EE):**

- It is a **system of communication** where only the communicating users can read the messages.

- In principle, it **prevents potential eavesdroppers** including telecom providers, Internet providers and the provider of communication service from being able to access the cryptographic keys needed to decrypt the conversation.

13. World Food Day

Why in News?

- Union Minister for Health and Family Welfare has presided over an event to celebrate 'World Food Day'.

About

- What is it? ➔ World Food Day is an international day celebrated every year worldwide on **16 October**.
- It commemorate the date of the **founding of the United Nations Food and Agriculture Organization in 1945**.
- The day is **celebrated widely by many other organizations** concerned with hunger and food security, including the World Food Programme and the International Fund for Agricultural Development.
- Theme ➔ **Grow, Nourish and Sustain Together**.
- Recently **WFP** received the **Nobel Prize in Peace for 2020** for their efforts to combat hunger.

👉 **Initiatives launched during the event**:

Eat Right Creativity Challenge for schools:

- It is a **poster and photography competition** that aims to promote healthy dietary habits.

Eat Smart City'(challenge):

- It was **launched by FSSAI** in **partnership with Smart City Mission** and **The Food Foundation,UK**.
- It aims to create an **environment of right food practices** and habits in India's smart cities that can be set as an example for other cities to follow.

👉 **Also Remember**

Eat Right India Movement

- It was launched **by FSSAI in 2018**. It is a **preventive healthcare measure** to trigger social and behavioural change among people.
- Aim: To **improve public health** in India and **combat negative nutritional trends** to fight lifestyle diseases.

FSSAI

- It is a **statutory, autonomous body** established under the **Ministry of Health & Family Welfare**.
- It is **responsible for protecting and promoting public health** through the regulation and supervision of food safety.

14. Solidarity Trial

Why in News?

- The World Health Organization (WHO) made available interim results from the Solidarity Therapeutics Trial.

About Solidarity Trial

- What is it? ➔ It was **initiated by WHO** and **its partners** in order to **help find an effective treatment for Covid-19.**
- Drugs Covered ➔ It covers four repurposed drugs or drug combinations — **remde sivir, hydroxychloroquine, lopinavir/ritonavir and interferon.**
- Aim ➔ To help determine whether **any of these repurposed therapies could at least moderately affect in-hospital mortality** and whether any effects differed between moderate and severe disease.
- What have the trials found? ➔ **None of the drugs was able to prove benefits across the parameters** studied especially in reducing mortality among hospitalised Covid-19 patients.

👉 **Also Remember**

RECOVERY trial:

- It is a large **randomised controlled trial** conducted in the **U.K.**
- It aims to **test five drugs to identify treatments** that may be beneficial for people hospitalised with suspected or confirmed COVID-19.

FAITH trial:

- It is a **randomised open study trial conducted by Glenmark Pharmaceuticals Ltd** to test the combined efficacy of two antiviral drugs — Favipiravir and Umifenovir as a potential COVID-19 treatment strategy.

15. CUReD

Why in News?

- Ministry of Science and Technology launched "CUReD".

About

- What is it? ➔ The CSIR Ushered Repurposed Drugs or CUReD is a website which will **provide information about the drugs, diagnostics and devices** including the **current stage of the trials**.
- Apart from information about CSIR repurposed drugs, the website 'CUReD' also provides **details about clinical trials of diagnostics and devices in which the scientific body is involved.**
- The five clinical trials involved are **Withania somnifera, Tinospora cordifolia plus Piper longum** (in combination), **Glycyrrhiza glabra, Tinospora cordifolia and Adhatoda vasica** (individually and in combination) and **AYUSH-64 formulation**.

16. India International Science Festival 2020

Why in News?

- The 6th edition of the India International Science Festival (IISF) will be held virtually in 2020.

About IISF

- What is it? ➔ It is a festival to **celebrate the achievements of India's scientific** and **technological advancements** with students, innovators, craftsmen, farmers, scientists and technocrats from India and abroad.
- Aim ➔ To **engage the public with science and celebrate the joy of science** and show the ways how science, technology, engineering and mathematics (STEM) provide solutions to improve people's lives.
- Organising Agencies ➔ **Ministry of Science & Technology** and **Ministry of Earth Sciences** in association with **Vijnana Bharati** (VIBHA) organise IISF every year.
- IISF 2020 ➔ The Council of Scientific and Industrial Research (**CSIR**) will spearhead the IISF 2020 with **support of all other concerned ministries and departments.**
- CSIR is **funded by the Ministry of Science and Technology**.

👉 Vijnana Bharati

- Founded ➔ **Swadeshi Science Movement** was **started in Indian Institute of Science- Bengaluru** by a few eminent scientists under the guidance of **Prof. K I Vasu**.
- This movement gradually gained momentum and emerged as an organization with national presence.
- Area served ➔ In **1991**, it was decided to launch the Swadeshi Science Movement at **all India Level and named it Vijnana Bharati.**
- Objective ➔ It's one of the objectives is to **motivate young scientists towards greater creativity and originality**.
- It is headquartered in **New Delhi**.

17. KHADI OAXACA

Why in News?

- Indian Prime Minister made a reference to the region of Oaxaca (pronounced O-aa-ha-ka) in Mexico where Khadi was being manufactured.

About KHADI OAXACA

- What is it? ➔ It is a **farm-to-garment collective** which comprises **around 400 families**, which live and work on traditional farms and homesteads in the **Oaxaca region of southern Mexico**.
- Founded by ➔ It has been **founded by Mark Marcos Brown**, an American living in Mexico and his wife, Kalindi Attar.
- Method ➔ It uses **cotton produced and cultivated on the Oaxaca coast**, and produces **chemical-free clothing**, relying on locally harvested plant-based dyes.

18. Kisan Suryodaya Yojana

Why in News?

- Indian Prime Minister launched the Kisan Suryodaya Yojana in Gujarat.

About Kisan Suryodaya Yojana

- Aim ➔ Aimed at providing **day-time electricity to farmers in the State for irrigation and farming.**

- Under this scheme, farmers will be able to **avail power supply from 5 AM to 9 PM**.
- Funding ➔ The state government has allocated a **budget of Rs.3500 crore** for installing **transmission infrastructure under this scheme by 2023.**
- Around **234 transmission lines** are to be installed under the scheme. Each line is to carry the **power of 66 KW**. They are to be erected to a **total length of 3,490 km**.
- Dahod, Patan, Mahisagar, Panchmahal, Chhota Udepur, Kheda, Tapi, Valsad, Anand and Gir-Somnath have been included under the Scheme for 2020-21.
- The remaining districts will be covered in a **phase-wise manner by 2022-23**.

19. India–Australia Circular Economy Hackathon (I-ACE)

Why in News?

- Recently, the NITI Aayog has launched the India–Australia Circular Economy Hackathon (I-ACE).

About

- Bodies involved ➔ It is a **joint initiative** of **AIM** (Atal Innovation Mission) and **Australia's Commonwealth Scientific and Industrial Research Organisation** (CSIRO).
- The idea of I-ACE was conceived during a **virtual summit between the Indian and Australian** prime ministers, **exploring innovative ways** to **boost circular economy in India and Australia**.
- I-ACE will focus on **identification and development of innovative technology solutions** by bright-minded students, startups and MSMEs of both nations.
- The **four key themes** for the hackathon are as follows ➔
    - Innovation in packaging reducing packaging waste
    - Innovation in food supply chains avoiding waste
    - Creating opportunities for plastic waste reduction
    - Recycling critical energy metals and e-waste

20. World Polio Day

Why in News?

- Every year, 24th October is observed as World Polio Day in order to call on countries to stay vigilant in their fight against the disease**.**

About Polio

- The WHO defines polio or poliomyelitis as "**a highly infectious viral disease, which mainly affects young children**."
- Transmission ➔ The virus is **transmitted by person-to-person**, spread mainly through the faecal-oral route or, **less frequently, by a common vehicle** (e.g. contaminated water or food) and **multiplies in the intestine**, from where it can invade the nervous system and can cause paralysis.
- Symptoms ➔
    - Most people with polio do **not feel sick**. Some people have **only minor symptoms**, such as fever, tiredness, nausea, headache, nasal congestion, sore throat, cough, stiffness in the neck and back, and pain in the arms and legs.

- In **rare cases**, polio infection causes **permanent loss of muscle function** (paralysis).
- Polio can be **fatal** if the **muscles used for breathing are paralysed** or if there is **an infection of the brain**.

- Prevention and Cure ➔
  - There is **no cure**, but it can be **prevented through immunisation**.
- Vaccines ➔
  - **Oral Polio Vaccine (OPV):** It is given orally as a birth dose for institutional deliveries, then primary three doses at 6, 10 and 14 weeks and one booster dose at 16-24 months of age.
  - **Injectable Polio Vaccine (IPV):** It is introduced as an additional dose along with the 3rd dose of DPT (Diphtheria, Pertussis and Tetanus) under the Universal Immunisation Programme (UIP).

21. E-GRAMSWARAJ PORTAL

Why in News?

- Ministry of Panchayati Raj has launched this portal to strengthen e-Governance in Panchayati Raj Institutions across the country.

About

- It aims to bring in **better transparency in the decentralised planning, progress reporting and work-based accounting**.
- It provides a **single window for capturing Panchayat information** with the complete Profile of the Panchayat, details of Panchayat finances, asset details, activities taken up through **Gram Panchayat Development Plan (GPDP) etc.**
  - For 2020-21, around 2.43 lakh Gram Panchayats have finalized their GPDP on e-Gramswaraj.

22. GHAR TAK FIBRE SCHEME

Why in News?

- Recently, 'Ghar tak Fibre' Scheme was inaugurated by the Prime Minister.

About

- Ghar Tak Fibre scheme will **connect all 45,945 villages of Bihar through optical fibre internet service**.
- The project will lead digital services including e-Education, e-Agriculture, Tele-Medicine, Tele-law and other social security schemes in Bihar ensuring easy access to all state natives.
- It will entail implementation of **1 wi-fi and 5 free of cost connections** to government institutions including primary schools, Anganwadi Centres, Aasha workers and Jeevika Didi.
- The project will be jointly **executed by Department of Telecommunications CSC e-Governance Services Ltd.**, an SPV of Ministry of Electronics & IT.

Quick revision (True/False)

1	**Bharati Script** -> Developed by Central Institute of Indian Languages. is a simple and unified script which can be used to write most major Indian languages.	
2	**Bhagat Singh** -> Associated with the Hindustan Republican Association, Naujawan Bharat Sabha, Lahore Students Union.	
3	**ESG Funds** -> Regulated by Insurance Regulatory and Development Authority.	
4	**Namami Gange Programme** -> under ministry of Drinking water and Sanitation.	
5	**Lion-tailed Macaque** -> endemic to Northeast India. IUCN: Endangered.	
6	**BrahMos Missiles** -> is a sub-sonic cruise missile. can be launched from land only.	
7	**Ambedkar Social Innovation and Incubation Mission** -> To promote entrepreneurship among the SC Youth with special preference to Divyangs	
8	**Green Strategic Partnership** -> Between India and EU.	
9	**Zombie fires** -> is a fire that continues to burn underground and then reignites on the surface after a period of time.	
10	**EX-Indra 2020** -> Denmark shared land boundary with Netherlands.	
11	**Data Governance Quality Index**-> Department of Science and technology (DoSTy).	
12	**Exercise Bongosagar**-> Naval Exercise between India and Mayanmar for maritime security.	
13	**iMediX-Telemedicine System**-> new initiative to treat CORONA patient remotely at their doorstep.	
14	**Tribal Entrepreneurship Development Programme** -> sole project of Ministry of Tribal Affairs.	
15	**Pakur Honey** -> gathered by Santhal Tribals and Vulnerable Pahadhiya tribes from Pakur, Jharkhand.	
16	**TRIFED** -> functioning under administrative control of Ministry of Agriculture & Farmers' Welfare.	
17	**Graphene** -> is a single layer (monolayer) of carbon atoms. Very Low thermal stability.	
18	**Sawantwadi Toy** -> Maharashtra.	
19	**Xoo Infection** -> Seedborne fungal disease.	
20	**Shaurya Missile** -> surface-to-surface nuclear-capable Cruise missile.	
21	**New Caledonia** -> Located in the southwest Pacific Ocean	
22	**Dhaulasidh Hydro Project** -> launched on Godavari river in Andhra Pradesh.	

23	**Madhuca diplostemon** -> rediscovered after a gap of more than 180 years from a sacred grove in Kollam district, Kerala.	
24	**Hepatitis C** -> is a liver disease. vaccine against hepatitis C is available.	
25	**SMART Missile** -> is a Anti Tank Missile.	
26	**National Start-up Awards**-> only selected from those which create impact in rural areas, are women-led and founded in academic campuses.	
27	**Indian Gazelle (Chinkara**) -> protected under Schedule 1 of the Wildlife Protection Act, 1972.	
28	**Central Zoo Authority** -> chaired by the Prime Minister.	
29	**Black hole** -> can not be explained through General Theory of relativity.	
30	**The Energy and Resources Institute (TERI)** -> non-profit research institution, Established in 1974.	
31	**Wildlife Institute of India** -> Headquarters – New Delhi.	
32	**Sittwe Port**-> is a deep-water port constructed by India in 2016 at Sittwe, the capital of Rakhine State in Myanmar	
33	**Stockholm Convention** -> Control of Transboundary Movements of Hazardous Wastes and Their Disposal.	
34	**Poverty and Shared Prosperity Report** -> is a biennial report of the World Bank.	
35	**Sambhar Lake** -> India's largest inland saline water body located in Gujrat.	
36	**Abortelphusa Namdaphaensis** -> found recently on the edge of a small stream in Bandipur Tiger Reserve, Karnataka.	
37	**CRISPR technology** -> gene editing technology.	
38	**Khardungla Pass** -> is a mountain pass in the Himalayas in East Sikkim district.	
39	**Graded Response Action Plan (GRAP**) -> Delhi and neighbouring States to implement air pollution control measures in all 24X7 weather condition.	
40	**Sulfur dioxide and nitrogen oxides** affect the environment when they react with substances in the atmosphere to form acid rain.	
41	**New Development Bank** -> Headquartered Shanghai, China. Voting - assigns votes based on capital share.	
42	**World Food Programme** -> established in 2010. Headquarters in Rome (Italy).	
43	**RUDRAM** -> India's first indigenous anti-radiation air-to-air missile for Indian Air Force(IAF).	
44	**Vigyan Jyoti** -> programme covers only girl students from grade 9 to 12.	
45	**Kyrgyzstan** -> Shares a long border with Caspian Sea.	
46	**RTGS** -> generally used for fund transfers of up to Rs. 2 lakh.	
47	**Long term repo operation (TLTRO)** -> is a tool under which the central bank provides one-year to three-year money to banks at the prevailing MSF rate.	
48	**Nitrous Oxide** -> Short lived. only remaining threat to the ozone layer.	

49	**Skal International Asia Area (SIAA**) -> only professional organization promoting global Innovation in Environment conservation.	
50	**World Migratory Bird Day** -> This year Theme - Birds Connect Our World.	
51	**Bonn Convention** -> specializing in the conservation of migratory species. intergovernmental treaty, concluded under the aegis of UNEP.	
52	**Fly Ash** – Fly ash particles are non-toxic and used in concrete and cement products, road base, metal recovery, and mineral filler among others.	
53	**Mars Opposition** -> every 26 months, the Earth passes between the Sun and Mars, this is when the three are arranged in a straight line.	
54	**Electronic Vaccine Intelligence Network (eVIN)** -> that digitizes vaccine stocks under Ministry of Science and Technology.	
55	**MOSAiC Expedition** -> aims to take the closest look ever at the Arctic as the epicentre of global warming.	
56	When a recognised political party splits, the Supreme Court takes the decision on assigning the symbol.	
57	**STARS Project** -> Center Sector Scheme. To support the states in developing and improving school education outcomes.	
58	**International Organization for Migration** -> established in 2007. Headquarters - Geneva, Switzerland.	
59	**United Nations Human Rights Council (UNHRC**) -> founded in 2006. inter-governmental body within the United Nations system.	
60	**Thalassemia** -> is a disorder where the haemoglobin count is low in blood and such persons require frequent blood transfusions.	
61	**Shanghai Cooperation Organization** (SCO) -> Its headquarter is in Shanghai, China.	
62	**Electoral Bonds** -> Any party that is registered under section 29A of the Representation of the People Act, 1951 is eligible to receive donation in form of electoral bond.	
66	**Food and Agriculture Organization** -> is a specialized agency of the United Nations.	
67	**The Giant Metrewave Radio Telescope (GMRT) Observatory** -> is a optical Telescope.	
68	**North to South** -> Tso Moriri > Wular Lake > Nawabganj BS > Asan CR.	
69	**SLINEX** -> is a bilateral army exercise between India and Sri Lanka.	
70	**Cook's Straight**-> between Australia and New Zealand.	
71	**Bahrain** -> first and only Arab states to agree to normalize ties with Israel.	
72	**NITI Aayog Frontier Technologies Cloud Innovation Center** (CIC) -> first AWS CIC in India.	
73	**ICT Grand Challenge**-> Jointly launched by ministry of jal shakti in partnership with Ministry of Electronics & Information Technology (MeitY).	

74	**Malabar Exercise**-> is a joint naval exercise between India , US and Australia.	
75	**International Financial Services Centres Authority** -> Non-statutory body, works under the Department of Economic Affairs, Ministry of Finance.	
76	**SANT**-> It has been designed and developed by the DRDO in collaboration with Israel.	
77	**Kaleshwaram Lift Irrigation Project (KLIP)** > is a multi-purpose irrigation project on the Krishna River in Kaleshwaram, Telangana.	
78	**Wildlife Institute of India** -> headquarter is in New Delhi.	
79	**The Central Information Commission** -> is a constitutional body.	
80	**INS Kavaratti** -> is an Air craft carrier corvette of the Indian Navy built under Project 28.	
81	**Indian Institute of Public Administration**-> is an autonomous research and training organization under ministry of Home Affairs.	
82	**Aditi Urja Sanch** -> A Burner is fully designed and fabricated by CSIRNCL (National Chemical Laboratory).	
83	**Azad Hind Government** -> Was formed by the Lala Har Dayal Singh in Singapore.	
84	**OSIRIS-REx** -> is a mission of European Space Agency to explore asteroid Bennu.	
85	**Anemia** -> caused due to iron deficiency	
86	**District Development Councils** (DDCs) -> Members will be indirectly elected by voters in the Union Territory.	
87	**Consumer Price Index-Industrial Workers (CPI-IW)** -> Released by Ministry of Statistics and Programme Implementation.	
88	**Harish Kumar committee** -> to examine the issues concerning the expenditure limit for a candidate in Election.	
89	**Life in Miniature project** -> collaboration between the National Museum (Ministry of Culture) and UNESCO.	
90	**SOFIA** -> is an airborne observatory jointly built by NASA and ISRO.	
91	**World Economic Outlook** -> Published by World Economic Forum	
92	**FENI BRIDGE** -> built over the Feni River and will connect Tripura with Chittagong port of Bangladesh.	
93	**Basic Exchange and Cooperation Agreement(BECA)** -> provide a legal framework for the transfer of highly sensitive communication security equipment from the USA to India.	
94	**Bundi** -> erstwhile capital of Hada Rajput province known as Hadauti located in south-eastern Rajasthan.	
95	**G20** -> bloc of developing nations. Founded in 1999.	
96	**Central Vigilance Commission** -> submits its report to the Parliament of India	

97	**Operation Meri Saheli** -> by Railway. to provide safety and security to lady passengers travelling by trains for their entire journey from starting station to destination station.	
98	**Currency Appreciation** -> encourages a country's export activity.	
99	**The Amur Falcon** -> IUCN: Endangered.	
100	**Arzi Hukumat-e-Azad Hind**.-> had its own court, civil code and currency.	

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