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MAGAZINE

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Special: **Quick revision** (True/False)

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1. PM-SAVNidhi Portal

Why in News?

- Ministry of Housing & Urban Affairs has launched "PM SVANidhi" Portal.

About

- The portal will provide an **integrated end to end IT interface to users** for availing benefits under the scheme.
- Developed by ➔ **SIDBI**, which is the scheme **implementation partner for PM SVANidhi**.
- Purpose ➔ It will **accept loan applications from Street Vendors**, who can apply directly or with the help of Common Service Centers/ Urban Local Bodies/ Self Help Groups.
- The portal will enable the implementation of the scheme **during next 21 months**.

3. SURETY BONDS

Why in News?

- Insurance regulator IRDAI has formed a panel under G Srinivasan, director, National Insurance Academy, to assess the suitability of the Indian insurance industry or any other sector to offer Surety Bonds for road contracts in the country.

About SURETY BONDS

- What is it? ➔ It is a **three-party agreement** that legally binds together a principal who needs the bond, an obligee who requires the bond and a surety company that sells the bond.
- Significance ➔ Surety bonds **provide financial guarantee** that contracts will be completed according to pre-defined and mutual terms.
- When a **principal breaks a bond's terms**, the harmed party **can make a claim** on the bond to recover losses.
- Why Surety Bond in the Road Sector? ➔ Surety bonds in the road sector **guarantees satisfactory completion** of a project by a contractor and **provide performance security** to various government agencies.

3. NHAI to Rank Roads

Why in News?

- NHAI has decided to undertake performance assessment and ranking of the highways in the country.

About Rank Roads

- Criteria ➔ The criteria for the assessment have been broadly categorized into three main heads: **Highway Efficiency** (45%), **Highway Safety** (35%) and **User Services** (20%).
- And also includes parameters like **operating s**peed, **access control**, **accident rate** and **among others**.
- There will be a **separate ranking** for Build Operate Transfer, Hybrid Annuity Model and Engineering, procurement and construction projects will also be done.
- Benefits ➔
- Bring out **operational efficiency**.

- Ensure **high-quality maintenance of roads**.
- Provide a **higher level of service**.

👉 **About NHAI**

- History ➔ The National Highways Authority of India (NHAI) was **operationalized in 1995**.
- Parent organization ➔ It is an autonomous body under the **Ministry of Road Transport and Highways**.
- Functions ➔ It is entrusted with the **responsibility of development**, **maintenance** and **operation of National Highways**.
- This is also the apex body to **improve the quality of the roads** designated as National Highways.

6. Pradhan Mantri Ujjwala Yojana (PMUY)

Why in News?

- The Union cabinet has approved an extension till end September for availing free cooking gas cylinders under the Pradhan Mantri Ujjwala Yojana (PMUY).

About PMUY

- Nodal Ministry ➔ **Ministry of Petroleum & Natural Gas**.
- Aim ➔ To **replace the unclean cooking fuels** mostly used in rural India with the clean and more efficient LPG (Liquefied Petroleum Gas).
- Launched Year ➔ **2016**
- Objectives ➔
    - **Empower women** and protect their health
    - **Reduce the serious health hazards** associated with cooking based on fossil fuel
    - **Reduce the number of deaths** in India due to unclean cooking fuel and
    - **Prevent young children** from a significant number of acute respiratory illnesses caused due to indoor air pollution.
- Features ➔ Under the scheme, an **adult woman member** of a **below poverty line family** identified through the **Socio-Economic Caste Census** (SECC) is given a **deposit-free LPG connection** with financial assistance of **Rs 1,600 per** connection by the Centre.
- Target ➔ Initially the target was **installation of 5 crore LPG connections** by 2019. But the target was revised to 8 crore which has been achieved in September,2019.

8. Agriculture Infrastructure Fund

Why in News?

- Government of India has approved setting up of an agriculture infrastructure fund with a corpus of Rs 1 lakh crore.

About Fund

- Type ➔ **Central Sector Scheme**.
- Aim ➔ To provide a **medium-long term debt financing** for investment in viable projects for **post-harvest management Infrastructure** and **community farming assets** through interest subvention and financial support.

- Duration ➔ **FY 2020 to 2029**.
- Coverage ➔ The **fund will provide loans to** Primary Agricultural Credit Societies(**PACS**), Marketing Cooperative Societies, Farmer Producers Organizations(**FPOs**), Self Help Group(**SHG**), farmers, Joint Liability Groups (**JLG**) among others.
- Interest subvention ➔ All loans will have **interest subvention of 3% per annum** up to a **limit of ₹2 crore**. This subvention will be available for a maximum period of seven years.
- Credit Guarantee ➔ Credit guarantee coverage will also be available for eligible borrowers from this financing facility under **Credit Guarantee Fund Trust** for **Micro and Small Enterprises** (**CGTMSE**) scheme for a **loan up to ₹2 crore**.
- Monitoring ➔ The **National, State** and **District level Monitoring Committees** will be set up to ensure real-time monitoring and effective feed-back.

10.   Affordable Rental Housing Complexes (AHRCs)

Why in News?

- Recently, the Union Cabinet has given its approval for Affordable Rental Housing Complexes (AHRCs) for urban migrants and poor.

About AHRCs

- AHRC will be as a sub-scheme under Pradhan Mantri Awas Yojana-Urban (**PMAY-U**).
- Nodal Ministry ➔ **Ministry of Housing and Urban affairs**.
- Approach ➔ The scheme will have a **two-pronged approach**:
    o The existing **vacant government funded housing complexes** will be converted into ARHCs through a **concession agreement for 25 years**.
    o **Special incentives** like use permission, 50% additional Floor Area Ratio, concessional loan at priority sector lending rates, tax reliefs at par with affordable housing will be offered to private and public entities to develop ARHCs on their own available vacant land for 25 years.
- Target Beneficiaries ➔ A large part of **workforce in manufacturing industries, service providers in hospitality**, and **construction or other sectors, laborers, students** etc. who come from rural areas or small towns.

13. Rewa solar plant

Why in News?

- Prime Minister will inaugurate the 750 MW Rewa Solar plant set up at Rewa, Madhya Pradesh.

About Rewa solar plant

- Developed by ➔ the **Rewa Ultra Mega Solar Limited** (RUMSL) a joint venture company of Madhya Pradesh **Urja Vikas Nigam Limited**.
- Solar Capacity ➔ The solar plant has a total solar installed capacity of **750 MW**.
- Significance ➔ It is the **first solar park of India** to receive **funding from the World Bank** and also the first project to get funding from Clean Technology Fund in India.

- The project is also the **first renewable energy project** to supply to an institutional customer outside the state, the Delhi Metro Rail Corporation.
- Impact ➜ The project would lead to **avoiding 15.4 lakh tonnes of carbon dioxide generation every year**.

👉 **Clean Technology Fund**

- What is it? ➜ It is **one of two multi-donor Trust Funds** within the Climate Investment Funds (CIFs), the other being the Strategic Climate Fund.
- Aim ➜ To provide **scaled up financing** to contribute to the **demonstration**, **deployment** and **transfer of low-carbon technologies** with a significant potential for long-term greenhouse gas emissions savings.
- Trustee ➜ The World Bank is the **Trustee and administering unit of CTF Fund**.

15. Draft rules for Code on Wages

Why in News?

- The Labour and Employment Ministry has notified the draft Code on Wages (Central) Rules under the Code on Wages,2019.

About Code on wages, 2019

- What is it? ➜ It has **amended and consolidated laws** relating to wages, bonus and related matters.
- The Code subsumed four labour laws – a) **Payment of Wages Act,1936**, b) **Minimum Wages Act, 1948** c) **Payment of Bonus Act, 1965** and the d) **Equal Remuneration Act, 1976**.

Key Provisions of Draft Wage Rules:

- Working hours ➜ The normal working day shall comprise **eight hours of work** and **one** or **more intervals of rest** which in total shall **not exceed one hour**.
- Central Advisory Board ➜ Government will set up a **Central advisory board** to fix the floor-level minimum wages.
- Calculation of minimum wage ➜ The criteria for fixing the minimum rate of wages per day for employees include: (i) **standard family of four** (self, spouse and two children) (ii) **daily intake of 2700 calories per consumption unit**, (iii) **10% expenditure on rent**, (iv) **20% expenditure of fuel, electricity**, and **miscellaneous** items, and (v) **25% expenditure on education, medical requirements and contingencies**.
- Norms for fixing minimum wage ➜ Minimum wages will be calculated on the basis of the **geographical area of employment** and the **skill category of an employee**.
- For this purpose, the central government will divide the geographical area into three categories: **metropolitan**, **non-metropolitan and rural areas.**
- The occupations are also divided into four skill categories: **unskilled**, **semi-skilled**, **skilled and highly skilled**.
- Technical committee ➜ A **Technical Committee** will be formed to suggest, modify, add or delete particular occupations in the tentative list of four categories: **unskilled**, **semi-skilled**, **skilled and highly skilled**.

17. ASEEM Portal

Why in News?

- The Ministry of Skill Development and Entrepreneurship (MSDE) has launched 'Atma Nirbhar Skilled Employee Employer Mapping'(ASEEM) portal**.**

About ASEEM Portal

- What is it? ➔ ASEEM refers to **all the data**, **trends** and **analytics** which **describe the workforce market and map demand of skilled workforce** to supply.
- Developed by ➔ The portal has been developed by the **National Skill Development Corporation** (NSDC) in collaboration with **Better Place**.
- It is an **AI-based portal** which will **map details of workers based on regions and local industry demands** and will bridge the demand-supply gap of skilled workforce across sectors.
- It will provide employers with a platform to **assess** the availability of a **skilled workforce** and **formulate their hiring plans.**

👉 About NSDC

- What is it? ➔ It is a **not-for-profit public limited company** incorporated in **2008** under section 25 of the Companies Act, 1956
- Capital Share ➔ The Government of India through the Ministry of Skills Development & Entrepreneurship (**MSDE**) **holds 49%** of the **share capital of NSDC** while the **private sector** has the **balance 51% of the share capital.**
- Aim ➔ To create **training capacity in the country, fund vocational training initiatives** and create a market ecosystem for skill development.

19. Satellite Town Ring Road (STRR)

Why in News?

- The Expert Appraisal Committee of the Environment Ministry has recommended the grant of Environmental Clearance for the development of Satellite Town Ring Road(STRR).

About STRR

- It is an **economic corridor** that encompasses **two states of Karnataka and Tamil Nadu**.
- The project is **part of Bharatmala Pariyojna** and will be implemented by the **National Highways Authority of India** (NHAI).

👉 Bharatmala Pariyojna

- It is an umbrella initiative under the **Ministry of Road Transport and Highways**.
- Aim ➔ To **subsume unfinished projects** of National Highways Development Project (NHDP) launched in 1998 and also focus on new initiatives like **development of roads for better connectivity**.
- Implementation ➔ **National Highways Authority of India** (NHAI) has been tasked with implementing the programme.

11. GOOGLE FOR INDIA DIGITISATION FUND

Why in News?

- Google has launched the India Digitization Fund through which it will invest $10 billion (Rs 75,000 crore) into India over the next 5-7 years.

About

- Aim ➜ To help **accelerate the adoption of digital services** in India.
- Mode of Investment ➜ Google will invest the amount through a **mix of equity investments**, **partnerships**, and **operational, infrastructure, and ecosystem investments**.
- Components ➜ The Investment will focus on **four areas** important to India's digitization:
    1. Enabling **affordable access and information to every Indian** in their own language
    2. Building **new services and products** that are deeply relevant to India's unique needs
    3. **Empowering businesses** as they continue on digital transformation.
    4. Leveraging technology in **AI- Artificial Intelligence for social good** in areas like education, health, and agriculture.

12. India Energy Modeling Forum

Why in News?

- An India Energy Modelling Forum was launched on July 2, 2020.

About IEMF

- Background ➜ It was established by the joint working group meeting of the **Sustainable Growth Pillar**.
- Sustainable Growth Pillar is an important pillar of **India–US Strategic Energy Partnership co-chaired by NITI Aayog and USAID.**
- The SG pillar entails **energy data management**, **energy modelling** and **collaboration on low carbon technologies** as three key activities.
- Composition ➜ The forum would include **knowledge partners**, **data agencies** and **concerned government ministries.**
- **NITI Aayog** will initially coordinate the activities of the forum and finalizing its governing structure.

👉 **Energy Modelling Forum (EMF)**

- The Energy Modelling Forum (EMF) in USA was **established in 1976** at **Stanford University**.
- Functions ➜ It was to **connect leading modelling experts** and **decision makers** from government, industry, universities, and other research organizations.
- Significance ➜ It provides an **unbiased platform** to discuss the **contemporary issues** revolving **around energy and environment.**

13. Vallarpadam Terminal of Cochin Port

Why in News?

- The Ministry of Shipping has reviewed the development activities of the Vallarpadam Terminal of Cochin Port, envisaged as first trans-shipment port of India.

About Vallarpadam Terminal

- It is a part of the **Cochin Port in Kochi, Kerala**. It is located on **Vallarpadam Island**.
- It is the terminal at the port which **handles containers**, **stores them temporarily** and **transfers them to other ships** for the onward destination.
- It is proposed to be developed as the **most preferred gateway for South India** and **leading transhipment hub of South Asia.**
- Expected Benefits ➔
  - It will **cut India's dependence on neighboring hub ports** such as Colombo in Sri Lanka, Jebel Ali in Dubai and Port Klang in Malaysia to send and receive container cargo, thus **saving time and cost** for exporters and importers.
  - It is in line with the Prime Minister's vision of **Atmanirbhar Bharat**. It will **ensure that Indian cargo trans-ship through an Indian Port.**

14. ASPIRE Portal for Automotive Industry: ICAT

Why in News?

- The International Centre of Automotive Technology (ICAT) is developing a technology platform for the automotive industry called ASPIRE - Automotive Solutions Portal for Industry, Research and Education.

About ASPIRE Portal

- Objective ➔ To **enhance the technological capability of Indian automotive sector** through exchange of knowledge & expertise, in order to make them **self-reliant** and to **facilitate the growth of the automobile sector** and overall socio-economic progress of the country.
- Functioning ➔ It will **facilitate the Indian auto industry**, **R&D institutions** and **academia** (colleges & universities) to **come together for R&D**, **technology** **development**, **shop floor/quality/warranty issue's resolution**, expert opinions on issues involving technology advancements.
- The portal will also **host grand challenges** in line with the need of the industry as will be identified from time to time, for development of key automotive technologies.

👉 International Centre for Automotive Technology (ICAT)

- The International Centre for Automotive Technology (ICAT) was established in 2006 at Manesar, Haryana.
- It is a **leading world class automotive testing**, **certification** and **R&D service provider** under the aegis of **NATRiP** (National Automotive Testing and R&D Infrastructure Project), Government of India.
- NATRiP is a **fully Government of India funded project** with a total project cost of Rs. 3727.30 crore.
- The vision is to **create state-of-art research and testing infrastructure** to drive India into the future of global automotive excellence.

15. ZORAM MEGA FOOD PARK (MFP)

Why in News?

- Union Minister of Food Processing Industries inaugurated the Zoram Mega Food Park Ltd at Kolasib in Mizoram.

About

- Location ➜ This is the first Mega Food Park operationalized in the **State of Mizoram**. It is located **near National Highway 54.**
- Benefits ➜ It will provide direct and indirect **employment to 5,000 persons** and **benefit about 25,000 farmers in the CPC** (Core Processing Centre) and PPC (primary processing Centre) catchment areas.

👉 **Mega Food Parks scheme**

- Parent Ministry ➜ **Ministry of Food Processing Industries** is implementing Mega Food Park Scheme in the country since 2008.
- Aim ➜ It aims at providing a mechanism to **link agricultural production to the market** by bringing together farmers, processors and retailers.
- Funding ➜ A maximum grant of **Rs 50 crore** is given for **setting up a MFP**, in **minimum 50 acres** of **contiguous land** with only 50% contribution to the total project cost.
- Implementation ➜ Implemented by a **Special Purpose Vehicle** (SPV) which is a Body Corporate **registered under the Companies Act.**
- Mode of operation ➜
    - The Scheme has a **cluster-based approach** based on a **hub and spokes model**.
    - It includes creation of infrastructure for primary processing and storage near the farm in the form of **Primary Processing Centres** (PPCs) and **Collection Centres** (CCs) and common facilities and enabling infrastructure at **Central Processing Centre** (CPC).
- Benefits ➜ These food parks give a **major boost to the food processing sector** by adding value and reducing food wastage at each stage of the supply chain with particular focus on perishables.

16. National Financial Reporting Authority (NFRA)

Why in News?

- Recently, It has constituted a Technical Advisory Committee (TAC) under the Chairmanship of R Narayanaswamy, Professor IIM-Bangalore.

About NFRA

- What is it? ➜ It is an **independent regulator** to oversee the **auditing profession** and **accounting standards** in India.
- It was formed in 2018 under **Companies Act 2013**.
- Composition ➜ It consists of **one chairman, 3 full-time members** and **one secretary**.
- Functions ➜ It is responsible for **transparency and reliability of financial statements** and information presented by listed companies and large unlisted companies in India.
- Its account is monitored by the **Comptroller and Auditor-General of India**.
- Headquartered ➜ **New Delhi**.
- Powers ➜
    - It can **probe listed companies and those unlisted public companies** having paid-up capital of **no less than Rs 500 crore** or **annual turnover of no less than Rs 1,000 crore**.
    - It can **investigate professional misconduct** committed by members of the Institute of Chartered Accountants of India (ICAI) for prescribed class of body corporate or persons.

👉 **Technical Advisory Committee (TAC)**

- Compositions ➔ The TAC comprises **7 members**, including the Chairman.
- Role ➔ It would **aid and advise the NFRA** on issues related to the drafts of accounting standards and auditing standards.

21. The Consumer Protection Act, 2019

Why in News?

- The Consumer Protection Act,2019 has come into force replacing the old Consumer Protection Act, 1986.

Key Features

- Central Consumer Protection Authority (CCPA) ➔ It has been set up to promote, protect and enforce the rights of the consumer by **inquiring into violations of consumer rights**, **investigating** and **launching prosecution** at the appropriate forum among others.
- Consumer Disputes Redressal Commission (CDRCs) ➔ They will be set up at the **district**, **state** and **national levels**.
- Alternate Dispute Resolution Mechanism of Mediation ➔ A complaint will be referred by a Consumer Commission for mediation wherever **scope for early settlement exists** and **parties agree for it**.

CONSUMER PROTECTION ACT 1986	PROVISIONS	CONSUMER PROTECTION ACT 2019
No separate regulator	Regulator	Central Consumer Protection Authority (CCPA) to be formed
Complaint could be filed in a consumer court where the seller's (defendant) office is located	Consumer court	Complaint can be filed in a consumer court where the complainant resides or works
No provision. Consumer could approach a civil court but not consumer court	Product liability	Consumer can seek compensation for harm caused by a product or service
District: up to ₹20 lakh State: ₹20 lakh to ₹1 cr National: above ₹1 cr	Pecuniary jurisdiction	District: up to ₹1 cr State: ₹1 cr to ₹10 cr National: Above ₹10 cr
No provision	E-commerce	All rules of direct selling extended to e-commerce
No legal provision	Mediation cells	Court can refer settlement through mediation

- Product liability ➔ A **manufacturer or product service provider** or **product seller** will be held **responsible to compensate** for injury or damage caused by defective product or deficiency in services.
- Rules on E-commerce and Unfair Trade Practices ➔ Consumer Protection (E-commerce) Rules,2020 will be notified under the Act where E-commerce entities are required to **provide information** to **consumers relating to return**, **refund**, **exchange**, **warranty and guarantee**, **delivery** and **shipment** and **country of origin among others**.
- Redressal ➔ E-commerce entities have to acknowledge the receipt of consumer complaint **within 48 hours** and **redress the complaint within one month** from the date of receipt. They will also have to **appoint a grievance officer** for consumer grievance redressal.

23. India's first public EV charging plaza

Why in News?

- Union Minister for Power inaugurated India's first public EV (Electric Vehicle) charging plaza at Chelmsford Club in New Delhi.

About

- Bodies involved ➔ Energy Efficiency Services Limited (**EESL**) in **collaboration with NDMC** has established the public EV Charging Plaza in **Central Delhi**.

- The EV charging plaza is a **new avenue for making e-mobility convenient** in India.
- Features ➔ The plaza will host **5 Electric Vehicle Chargers** of different specifications.

25.   Kakrapar Atomic Power Plant

Why in News?

- It has recently achieved its criticality, which is a landmark event in India's domestic civilian nuclear programme.

About

- Kakrapar Atomic Power Plant is the **country's first 700 MWe** (megawatt electric) **unit, located in Gujarat**.
- It is the biggest indigenously developed variant of the **Pressurized Heavy Water Reactor** (PHWR).
- The operationalization of India's first 700MWe reactor marks a **significant scale-up in technology**.
- It is significant in terms of **optimization of its PHWR design**.
- It **addresses** the **issue of excess thermal margins** and an **improvement in the economies of scale**, without significant changes to the design of the 540 MWe reactor.
- 'Thermal margin' ➔ refers to the extent to which the operating temperature of the reactor is below its maximum operating temperature.
- The 700MWe capacity would constitute the **biggest component of the expansion plan of India** to ramp up its existing nuclear power capacity of **6,780 MWe to 22,480 MWe by 2031**.

Additional Information

- Criticality ➔
  - The normal operating condition of a reactor, in which **nuclear fuel sustains a fission chain reaction**.
  - A reactor achieves criticality when **each fission event releases a sufficient number of neutrons to sustain** an ongoing series of reactions.
- Pressurized Heavy Water Reactor (PHWR) ➔ It is a nuclear reactor, which uses **natural uranium** as its fuel and **heavy water** (deuterium oxide D2O) as its **coolant** and **neutron moderator**.
- Nuclear Fission ➔ It is a process in which the **nucleus** of an **atom splits** into **two or more smaller nuclei** and usually some byproduct particles.
  - When the **nucleus splits**, the **kinetic energy** of the **fission fragments is transferred** to other atoms in the fuel as heat energy, which is eventually used to produce steam to drive the turbines.

27.   Open Credit Enablement Network (OCEN)

Why in News?

- A new credit protocol infrastructure called the OCEN protocol is set to be launched very soon.

About OCEN

- What is it? ➔ OCEN is a **credit protocol infrastructure**, which will **mediate the interactions** between loan service providers, usually fintech and mainstream lenders, including all large banks and NBFCs.
- Developed by ➔ a think tank, **Indian Software Products Industry Round Table** (iSPIRT).
- Benefits ➔ With this, a **credit will become more accessible** for a large number of entrepreneurs and small businesses in the country.

- **Private equity** and **venture capital players**, **angel investors, high net worth individuals** and others also could be **part of this exercise as investors**.
- How will it work? ➔
  - iSpirit is **partnering with key leaders** such as SBI, HDFC Bank Ltd., ICICI Bank Ltd., IDFC First Bank Ltd., Axis Bank Ltd. etc. for this **new credit rail**.
  - **Account Aggregators** which will be using these APIs to embed credit offerings in their applications, and will be called '**Loan Service Providers**', which will **play a crucial role** in **democratizing access to credit,** and **lowering interest rates for customers**.
- Former SEBI Chairman **U. K. Sinha** **MSME Committee** had recommended this architecture in 2019.

29. Kumhar Sashaktikaran Yojana

Why in News?

- The Centre has distributed 100 electric potter wheels to 100 trained artisans under the KSY.

About KSY

- Bodies involved ➔ Kumbhar Sashaktikaran Program is an initiative of the **Khadi and Village Industries Commission** (KVIC).
- Aim ➔ It aims for **empowerment of potter community** in the remotest of locations in the country.
- Coverage ➔ The program reaches out to the potters in **U.P., M.P., Maharashtra, J&K, Haryana, Rajasthan, West Bengal, Assam, Gujarat, Tamil Nadu, Odisha, Telangana and Bihar.**
- The average income of potters under the Kumhar Sashaktikaran Yojana has gone up from nearly **Rs 3,000 per month to nearly Rs 12,000 per month.**
- Benefits provided ➔
  - **Training** for advanced pottery products
  - Latest, **new technology** pottery equipment's like the electric Chaak
  - **Market linkages** and visibility through KVIC exhibitions

👉 **KVIC**

- Formation ➔ The KVIC is a **statutory body** formed in **April 1957** under the 'Khadi and Village Industries Commission Act of 1956'.
- Parent Organization ➔ It is an apex organisation under the **Ministry of Micro, Small and Medium Enterprises**, with regard to khadi and village industries within India.
- Functions ➔ It seeks to **plan, promote, facilitate, organise and assist in the establishment** and **development of khadi and village industries** in the rural areas.
- Its **head office** is in **Mumbai**, whereas its **six zonal offices** in Delhi, Bhopal, Bangalore, Kolkata, Mumbai and Guwahati.

31.SWAMIH Investment Fund

Why in News?

- Union Finance Minister has approved 81 projects under the Special Window for Affordable and Mid Income Housing (SWAMIH) fund.

About

- It has been **formed in 2019** to **complete construction of stalled**, **RERA-registered affordable** and **mid-income category housing projects** which are stuck due to paucity of funds.
- Fund ➔ The fund has a **target corpus of Rs 12,500 crore** with a greenshoe option of Rs 12,500 crore.
- Investment manager ➔ The Investment Manager of the Fund is **SBICAP**, **a wholly-owned subsidiary of State Bank of India.**
- Sponsor ➔ The sponsor of the Fund is the **Secretary**, **Department of Economic Affairs**, **Ministry of Finance** on behalf of the Government of India.
- Who will be the investors of the fund? ➔
- AIFs created/funded under the Special Window would solicit investment into the fund **from the Government and other private investors** including cash-rich financial institutions, sovereign wealth funds, public and private banks, domestic pension and provident funds, global pension funds and other institutional investors.

Also Remember

- Green Shoe Option ➔ It is an **over-allotment option** which grants the underwriter of a public offer the right to sell investors more shares than initially planned by the issuer when the demand for security issue proves higher than expected.

33. Currency swap facility

Why in News?

- The Reserve Bank of India(RBI) has signed a $400-million currency swap facility with Sri Lanka under the SAARC Currency Swap Framework 2019-22.

About Currency swap

- The term Swap means **exchange**.
- Under this, a **country provides dollars to a foreign central bank** which at the same time provides the equivalent funds in its currency to the former based on the **market exchange rate** at the **time of the transaction**.
- The parties agree to **swap back these quantities** of their **two currencies** at a **specified date in the future** which could be the next day or even two years later using the same exchange rate as in the first transaction.
- Benefits ➔ These swap operations **carry no exchange rate** or **other market risks** as transaction terms are set in advance.
- Hence, it provides benefit to the country which is **getting dollars to use reserves at any time** in order to **maintain** an appropriate level of **balance of payments or short-term liquidity**.

35. BIS-Care

Why in News?

- Union Consumer Affairs Minister has launched the Bureau of Indian Standard (BIS) Mobile App named "BIS-Care".

About BIS-Care

- The app aims to **allow consumers to check the authenticity** of the **ISI-marked** and **hallmarked products** and also lodge complaints using the application.
- It is important to **ensure** that **consumers are aware of the standards and quality products** and help in eliminating the supply of sub-standard products

👉 **Bureau of Indian Standard (BIS)**

- Formation ➔ It came into **existence in 1986** under **BIS Act,1986** and was established as the **National Standard Body of India** under the BIS Act 2016 for the harmonious development of the **activities of standardization**, **marking** and **quality certification of goods**.
- Nodal Ministry ➔ **Ministry of Consumer Affairs, Food & Public Distribution**.
- President ➔ **Union Consumer Affairs Minister** is the ex-officio President of the BIS.

37. Pre-Packs

Why in News?

- The Ministry of Corporate Affairs (MCA) has set up a committee to look into the possibility of including "pre-packs" under the current insolvency regime.

About Pre-Packs

- What is it? ➔ It is a **pre-planned process** in which a **financially distressed company** and **its creditors reach an agreement** with a buyer for its sale prior to initiating insolvency proceedings.
- The sale then takes place on the **date of initiation of insolvency proceedings** or after the appointment of insolvency administrator.
- In India's case, such a system would likely require the approval of the resolution plan from the **National Company Law Tribunal** (NCLT).
- Benefits ➔ One major benefit of pre-pack is the speed of sale, which often results in **higher returns** for creditors when compared with **alternative routes into insolvency**.
- Drawback ➔ The key drawback of a pre-packaged insolvency resolution is the **reduced transparency** compared to the Corporate Insolvency Resolution Process (CIRP) as **financial creditors** would reach an agreement with a **potential investor privately** and **not through an open bidding process**.

👉 **Insolvency and Bankruptcy Board of India**

- The Insolvency and Bankruptcy Board of India was established on **1st October 2016** under the **Insolvency and Bankruptcy Code, 2016** (Code).
- It provides for a **time-bound process** to **resolve insolvency** and the code applies to **companies**, **partnerships** and **individuals**.

38. Khazan agriculture

Why in News?

- A system of estuarine agriculture called Khazan Farming is in the state of decay in present days and they need to be saved and revived.

About

- It is **practised in Goa's estuarine system**. This system is a carefully designed **topo-hydro-engineered agro-aquacultural ecosystem** mainly based on the regulation salinity and tides.
- In **low-lying brackish coastal floodplains and mangrove forests, bunds** are made using locally available material to prevent the ingress of saltwater.
- To **control the flow of tidal waters**, openings are built in the **bunds fitted with one-way gates**. These channels fill in with the oncoming tide and bring with them fish, crab and shrimp, and the **gates** would **automatically shut** when the water level was equal on both sides.
- This **prevents the water** from **overflowing into the fields** used to grow paddy and which has a low tolerance to salt. When the tide receded, these gates would open **outwards automatically**, allowing the **water to drain out**.
- Advantages of Khazan ➔
    - **Every bit of space** is precious and **used efficiently**. The bunds are used to grow a variety of vegetables.
    - The Khazan system allows for the **farmer and the fisher** to **harmoniously coexist**

40. MONETIZATION OF DEFICIT

Why in News?

- Some economists including former RBI governor C Rangarajan have suggested that the government should monetize the deficit.

About Monetization of Deficit

- If the expenditure of the government exceeds its income, the government is said to have incurred a fiscal deficit. This deficit financing has to be done **either by borrowing from the market or monetisation of deficit through RBI**.
- In simple words, monetization of fiscal deficits involves the financing of such extra expenses with money, instead of debt to be repaid at some future dates. So, it is a form of "**non-debt financing**". As a result, under monetization, there is no increase in net (not gross) public debt.
- It can occur only through one of **two modalities**:
    1. **Direct Monetization (DM)**: Under this method, **RBI prints new currency and purchases government bonds directly from the primary market** (from the government) using this currency. As a result, this supports the spending needs of the government.
    2. **Indirect monetization (IM):** In this method, deficits are monetized as the **government issues bonds in the primary market and the RBI purchases an equivalent amount of government bonds from the secondary market** in the form of **Open Market Operations (OMOs)**.

Historical context on Monetization of deficit

- Monetisation of deficit was **in practice in India till 1997**, whereby the central bank automatically monetised government deficit through the issuance of **ad-hoc treasury bills**
- In 1994 and 1997, two agreements were signed between the government and RBI to completely phase out funding through ad-hoc treasury bills. Later on, with the enactment of Fiscal Responsibility and Budget Management **(FRBM) Act, 2003, RBI was completely barred from subscribing to the primary issuances of the government**.

- The FRBM Act as amended in 2017 contained an escape clause which permits **monetisation** of the deficit under special circumstances.

Primary vs. Secondary Market:

- The primary market is where **securities are created**, while the secondary market is where those **securities are traded by investors.**
- In the primary market, companies sell new stocks and bonds to the public for the first time, such as with an initial public offering (**IPO**).
- The secondary market is basically the stock market and refers to the BSE, NSE, New York Stock Exchange, the Nasdaq, etc.

42. BILATERAL INVESTMENT TREATY (BIT)

Why in News?

- As India attempts to attract investments, there have been calls to review India's model Bilateral Investment Treaty (BIT) 2016.

About

- Bilateral investment treaties (BITs) are treaties **between two countries** aimed at **protecting investments made by investors of both countries.**
- These treaties impose conditions on the regulatory behaviour of the host state and **limit interference with the rights of the foreign investor.**
- Imposing **obligations on host states** to accord **Fair and Equitable Treatment** (FET) to foreign investment.
- There is International Centre for Settlement of Disputes (**ICSID**) under **investor-state dispute settlement (ISDS)** mechanism for dispute redressal between international investors.

India and BIT

- **India started signing BITs in early 1990s** and signed the first BIT with the United Kingdom (UK) in 1994, since then India has signed **BITs with 84 countries**.
- BITs have been one the major drivers of FDI inflows into India. Total **FDI to India has increased** from $4,029 million in 2000-2001 to $43,478 in 2016-17.
- However, a penalty awarded by an Investor-State Dispute Settlement (ISDS) tribunal in the **White Industries case in 2011**, and subsequent ISDS notices served against India in a wide variety of cases involving regulatory measures led to a review of the BITs.
- Since its adoption, India has unilaterally terminated 66-odd BITs between 2016 and 2019. Since then, India has signed just three treaties, none of which is in force yet.

Current scenario of investment in India:

- India ranked **among the top 10 for FDI in 2019** and has **rank 63 in World Bank's 'Ease of Doing Business 2020**, still the **foreign investment has remained at 2 per cent of GDP**.

International Centre for Settlement of Disputes (ICSID)

- ICSID is the world's leading institution devoted to international investment dispute settlement. ICSID was **established in 1966** by the Convention on the Settlement of Investment Disputes for legal dispute resolution and conciliation between international investors.
- ICSID convention is ratified by 155 countries. **India is not a party to the ICSID convention**.

44.   AGRIDEX

Why in News?

- National Commodity and Derivatives Exchange (NCDEX) announced the commencement of trading in the country's first agriculture futures index called AGRIDEX.

More on news

- NCDEX AGRIDEX is **India's first return based agricultural futures Index** which **tracks the performance of the ten liquid commodities (both kharif and rabi seasons)** traded on NCDEX platform.
  Ten commodities include Castor seed, Chana, Coriander, Cotton Seed Oil cake, Guar Gum, Guar Seed, Jeera, Mustard Seed, Ref Soya oil and Soy bean.
- No group of related commodities may constitute more than 40% of the total weightage in the index in order to ensure diversification.
- It will facilitate the participants in hedging their commodity risk based on price anticipation of the products.
- It is based on the revised **guidelines issued by the Securities and Exchange Board of India (SEBI)**, which allowed futures trading in commodity indices.
- NCDEX has partnered with **National Stock Exchange (NSE) Indices**, a leading Index service provider, to maintain and disseminate real-time NCDEX AGRIDEX values.

About NCDEX:

- It is the country's leading **agricultural commodity exchange**, which offers services across the entire value-chain of agricultural commodities.
- It offers a wide range of benchmark products across agriculture commodities.
- It **brings buyers and sellers together through its electronic trading platform**.

46.   TARIFF RATE QUOTA SCHEME

Why in News?

- Centre has notified norms for import of 5 lakh tonnes of maize under Tariff Rate Quota Scheme during the current financial year at a concessional customs duty of 15 per cent.

About

- Under the scheme, the government allows import of **four products such as maize (corn), milk and cream in powder, granules, crude sunflower seed or safflower oil** and fractions thereof; and refined rape, colza or mustard oil and fractions thereof at concessional rates of customs duty.

Tariff Rate Quota (TRQ):

- It is a mechanism that **allows a set quantity of specific products** to be imported at a **low or zero rate of duty**.
- The TRQ commitment **does not apply any limits on the quantity of import** of a product.
- Instead, it **applies a higher rate of duty for that specific product once imports up to the TRQ commitment have been reached**.
- TRQ is a **two-tiered tariff instrument**.
- Imports entering within the quota portion of a TRQ are subject to a lower tariff rate called the tariff quota rate.
- The later imports (above the quota) face a much higher tariff rate, which is **normally the MFN** (Most Favored Nation) tariff.
- MFN tariffs are what countries promise to **impose uniformly on imports** from other members of the WTO.

Environment

1. Rajaji National Park

Why in News?

- Recently, a clash took place between Van Gujjars and the Uttarakhand forest officials in the Rajaji National Park.

About Rajaji National Park

- Location ➔ **Haridwar (Uttarakhand)**, along the foothills of the Shivalik range, spans 820 square kilometres.
- This area is the North Western Limit of habitat of **Asian elephants**.
- Forest types ➔ include **sal forests**, **riverine forests**, **broad–leaved mixed forests**, **scrubland and grassy**.
- Species ➔ It possesses as many as **23 species of mammals** and **315 bird species** such as **elephants, tigers, leopards, deers** and **ghorals, etc.**
- It was declared a **Tiger Reserve in 2015**.
- It is home to the **Van Gujjars** in the winters.
- Other Protected Areas in Uttarakhand ➔
  - Jim Corbett National Park (first National Park of India).
  - Valley of Flowers National Park and Nanda Devi National Park which together are a UNESCO World Heritage Site.
  - Govind Pashu Vihar National Park and Sanctuary.
  - Gangotri National Park.
  - Nandhaur Wildlife Sanctuary.

2. Assam keelback snake

Why in News?

- More than a century after it was first seen, the Assam keelback — a snake species endemic to the region — was rediscovered in 2018 at the Poba Reserve Forest (RF) by a team from Wildlife Institute of India (WII).

About

- Physical Features ➔ The species is **small** — about **60 cm long, brownish**, with a **patterned belly**.
- Unique genus ➔ This particular keelback does **not belong** to the **generalized keelback snake** of India but is rather a **unique genus** (Herpetoreas).
- Family ➔ It is a species of snake in the **subfamily Natricinae** of the **family Colubridae**.
- History ➔ It was discovered **129 years ago by Samuel Edward Peel**, a British tea planter based in Upper Assam.
- The snake's '**lost' status** has a lot to do with the habitat it occupies — in this case, a **lowland evergreen forest**.

- These forests have been **selectively degraded during the last 100 years**: tea plantations have been made, selective logging has taken place, and many other activities such as oil exploration and coal mining.
- Is the snake under threat? ➜
- Most snakes and other reptiles are categorised as '**data deficient**' in the IUCN list.
- There is **practically no information available** about it and it is **difficult to determine its status**.

3. Globba Andersonii Plant

Why in News?

- A team of researchers have "rediscovered" a rare species called Globba andersonii from the Sikkim Himalayas near the Teesta River valley region after a gap of nearly 136 years.

About Globba Andersonii Plant

- Physical Features ➜ Globba andersonii is characterised by **white flowers, non-appendaged anthers** (the part of a stamen that contains the pollen) and a "**yellowish lip**".
- It is commonly as '**dancing ladies**' or '**swan flowers**'.
- IUCN status ➜ **Critically Endangered**.
- Geographical Distribution ➜ The species is restricted mainly to **Teesta River Valley region** which includes the Sikkim Himalays and Darjeeling hill ranges.
  - The plant usually grows in a dense colony as a **lithophyte** (plant growing on a bare rock or stone).
- Methods for growth ➜ **Micro-propagation**, **tissue culture of this taxon** and **multiplication of this species** and its re-introduction in the natural habitat could be the key for it to survive and thrive in the future.

4. Central Zoo Authority

Why in News

- Union Environment Ministry has reconstituted the Central Zoo Authority (CZA) to include an expert from the School of Planning and Architecture, Delhi, and a molecular biologist.

About

- What is it ? ➜ It is a statutory body established in1992 under the **Wildlife Protection Act,1972**.
- Nodal Ministry ➜ **Ministry of Environment, Forests and Climate Change**.
- Objective ➜ The main objective of the authority is to **complement and strengthen the national effort** in conservation of rich biodiversity.
- Functioning ➜ The authority provides **recognition to zoos** and is also tasked with **regulating the zoos** across the country.
  - It lays down **guidelines and prescribes rules** under which animals may be transferred among zoos nationally and internationally.
  - It **coordinates** and **implements programmes on capacity building** of zoo personnel, planned breeding programmes and ex-situ research.
- Composition ➜ It is **chaired by the Union Environment Minister** with 10 members and member secretary.

- It can **recognize or derecognize** a zoo.

5. Two New Species of Butterfly

Why in News?

- Recently, the lepidopterists have discovered the two new species of butterfly i.e. Striped Hairstreak and Elusive Prince in Changlang district of Arunachal Pradesh.

About Striped Hairstreak

- Scientific Name ➔ **Yamamotozephyrus kwangtugenesis**
- Discovery ➔ It is found in Vijaynagar village of Changlang district of **Arunachal Pradesh**, **bordering Myanmar**.
- It was a subject of **interest for the lepidopterists** as its genus is diversified into several genera (i.e. sub-divisions) and thus, **difficult to trace**.
- Habitat ➔
    o It was first recorded in **Hainan province of China**.
    o It is also found in **North America**, from the **Rocky Mountains**

👉 Elusive Prince

- Scientific Name ➔ **Rohana tonkiniana**.
- Discovery ➔ It is found in **Miao subdivision** situated on the periphery of the **Namdapha National Park**.
- In India only a male specimen of the Elusive Prince was found.
- Initially it was considered as a **variant of the Black Prince**, but the study revealed that it is different and not recorded in India before.
- Habitat ➔ It was first recorded in **Tonkin in north Vietnam**.
- The Rohana Genus ➔ It has been represented in India by **two species** — the **Black Prince** (Rohana parisatis) and **the Brown Prince** (Rohana parvata).

👉 Namdapha National Park

- It lies at the **international border** between India and Myanmar within Changlang District in the **state of Arunachal Pradesh.**
- It is only park in the World to have the **four Feline species of big cat** namely the
    o **Tiger** (Panthera Tigris),
    o **Leopard** (Panthera Pardus),
    o **Snow Leopard** (Panthera Uncia)
    o **Clouded Leopard** (Neofelis Nebulosa).
    o **Hoolock Gibbons**, the only 'ape' species found in India is found in this National Park.

6. Tillari Conservation Reserve

Why in News?

- The Maharashtra state forest department recently declared 29.53 sq. km area of Dodamarg forest range in Sindhudurg district as Tillari Conservation Reserve.

About Tillari Conservation Reserve

- This area is known to **serve as a corridor** and even as a habitat for the population of tigers and elephants moving between the **three states of Goa**, **Karnataka** and **Maharashtra**.
- The **38-km-long Dodamarg wildlife corridor** that connects Radhanagari Wildlife Sanctuary in Maharashtra to Bhimgad Wildlife Sanctuary in Karnataka frequently witnesses elephant and tiger movement.
- Tillari will be the **seventh corridor in the state** to be declared as a conservation reserve.

👉 Conservation Reserves

- They denote protected areas which typically act as **buffer zones** to or **connectors** and **migration corridors** between established national parks, wildlife sanctuaries and reserved and protected forests.
- Such areas are designated if they are **uninhabited** and **completely owned by the Government of India** but used for subsistence by communities if part of the lands is privately owned.
- **Administration** of such reserves would be **through local people** and **local agencies** like the gram panchayat, as in the case of communal forests.

👉 Community Reserves

- They are the first instances of **private land** being **accorded protection under the legislature**.
- It opens up the **possibility of communally owned for-profit wildlife resorts**, and also **causes privately** held areas under **non-profit organizations** like **land trusts** to be given protection.
- These protected area categories were first introduced in the **Wildlife (Protection) Amendment Act of 2002** – the amendment to the **Wildlife Protection Act of 1972**.
- These categories were added because of **reduced protection in and around existing or proposed protected areas** due to private ownership of land, and land use.

7. REDD+

Why in News?

- Uganda has become the first African country to submit results for REDD+ to the United Nations Framework Convention on Climate Change (UNFCCC).

About REDD+

- What is it? ➔ It is a **mechanism** which was first negotiated by the **Parties to the UNFCCC in 2005**.
- Most of the key REDD+ decisions were **completed by 2013** with the final pieces of the **rulebook finished in 2015**.
- In this mechanism, REDD stands for "**Reducing Emissions from Deforestation and forest Degradation**"; the "**+**" signifies the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries.

- Objective ➔ To achieve **climate change mitigation** in developing countries by **incentivizing forest conservation**.
- Countries interested in REDD+ are required to progress through three phases ➔
    1. **Readiness phase**: It involves the development of national strategies or action plans, REDD+ mitigation actions and capacity building;
    2. **Implementation** of national strategies that could involve further capacity building, technology development and transfer, and results-based demonstration activities;
    3. **Results-based** payments comprise the final REDD+ phase.It provides financial incentives to developing countries that prove they stopped deforestation during a certain period of time.

8. Ophicordyceps nutans Fungus

Why in News?

- Researchers have found a fungi Ophicordyceps nutans for the first time in central India and show how it infects a stink bug.

About

- Where? ➔ The fungus was found on its specific host **insect Halyomorpha halys**.
- The **stink bug** is known to **damage the flower** and **fruits of soybean**, **green beans**, **apple**, **pear** and etc.
- Also called the stink bug, this insect is a **pest to forest trees and agricultural crops**.
- The modus operandi of the fungi involves <u>infecting the insect</u> when alive, developing **fungal mycelium inside its thorax**, and when it is time for the spores to **come out, kill the bug**.
- Morphological studies showed that it was **Ophicordyceps nutans** which has been **reported in India** only from the **Western Ghats**.
- Significance ➔ Thus these fungi can be **used as a pesticide** will help reduce the harmful effect of chemicals in our fields.

9. Nagarhole National Park: Karnataka

Why in News?

- Recently, the Karnataka Forest Department has decided to put in place a traffic monitoring mechanism along the roads adjacent to Nagarahole National Park.

About

- It is also known as '**Rajiv Gandhi National Park**.
- Timeline ➔ It was established as a **wildlife sanctuary in 1955** and was upgraded into a **national park in 1988**. It was declared as the **37th Tiger reserve** under Project Tiger in 1999.
- Location ➔ The Park lies in the **Western Ghats** and is a part of the **Nilgiri Biosphere Reserve**.
- The **Nagarahole River** flows through the park, which joins the **Kabini River** which also is a boundary between Nagarahole and Bandipur National Park.
- Flora ➔ The vegetation consists mainly of **moist deciduous forests** with predominating trees of teak and rosewood.

- Fauna ➔ **Asian elephants**, **chital** (spotted deer), **Indian mouse deer, gaur, stripe-necked and ruddy mongooses, grey langur, bonnet macaque,** Asian **wild dog, leopard, tiger, sloth bear** among others.

10. Kola Bears

Why in News?

- According to recent study Koalas in the Australian could become extinct by 2050 unless the government immediately intervenes to protect them and their habitat.

About

- Koala bear is a "**marsupial**" which is a **mammal** with a pouch for the development of offspring.
- Location ➔ They are found in the **eucalyptus forests of eastern Australia**.
- Physical features ➔ They have **grey fur** with a **cream-coloured chest**, and **strong, clawed feet**, perfect for living in the branches of trees.
- Status ➔ It is listed as **'Vulnerable'** as per the IUCN Red List of Threatened Species.

11. Saiga Antelope

Why in News?

- Saiga Antelope in Kazakhstan has experienced its largest mass calving in recent years.

About

- What is it? ➔ It is a **large migratory herbivore of Central Asia** found in Kazakhstan, Russia, Mongolia, Turkmenistan and Uzbekistan.
- IUCN Status ➔ **Critically endangered**
- CITES ➔ **Appendix II**.
- Threats ➔ **Poaching and illegal trade**, **habitat fragmentation**, **disease**, **droughts** and **temperature extremes**.

10. Dehing Patkai Wildlife Sanctuary

Why in News?

- Assam government has decided to upgrade the Dehing Patkai wildlife sanctuary into a national park amid an ongoing row over allowing coal mining within its jurisdiction.

About Dehing Patkai Wildlife Sanctuary

- The sanctuary is also known as the **Jeypore Rainforest**.
- Location ➔ It is located in the **districts of Dibrugarh and Tinsukia in Assam**.

Wildlife Sanctuary	National Park	Biosphere reserve
Famous for the conservation of **particular Flora and Fauna.**	Known for preserving the flora, fauna, landscape and historical objects.	Protects entire biodiversity (including economic development of tribal)
Allow restricted human activities. Tourism is allowed.	Strictly prohibits any human activities. Tourism is allowed.	Human activities not allowed in core zone.
Official permission is to be taken for visit	No official permission is to be taken to visit.	
No fixed boundaries	Fixed boundaries	Fixed Boundaries
Owned by the governing bodies OR private organizations.	Owned by the governing bodies only	Owned by the governing bodies
Can be upgraded to National Park	Can not be downgraded to Wildlife Century	

- Flora ➔ It is a **deciduous rainforest** interspersed with semi-evergreen and lush green flora.
- Fauna ➔ **Chinese pangolin**, **Flying fox**, **Rhesus macaque**, **Assamese macaque**, **Himalayan black bear**, **Lesser Adjutant Stork**, **White and Slender-billed Vulture**, **Leopard**, **Golden Cat**, **Jungle Cat** and **Marbled Cat**.
- Post upgradation ➔ Dehing Patkai will be the **sixth national park** in Assam — the other five being Kaziranga, Nameri, Manas, Orang and Dibru-Saikhowa.

10. EULOPHIA OBTUSA

Why in News?

- A rare orchid species — Eulophia obtusa — also known as ground orchid has been rediscovered in India after 118-year hiatus in Dudhwa Tiger Reserve.

About Index

- IUCN Status ➔ **critically endangered**.
- Background ➔ The species was **originally described from Uttarakhand** in the **19th century**, it was last recorded in Pilibhit in 1902.
- Later in **2008**, the plant species was **sighted in Bangladesh** for the first time.
- Threat ➔ **habitat loss** and **reduction in the number of mature individuals** in Bangladesh.

👉 **Dudhwa Tiger Reserve**

- Location ➔ It is a protected area in **Uttar Pradesh**.
- It shares the north-eastern **boundary with Nepal**, which is defined to a large extent by the **Mohana River**.
- The area is a **vast alluvial floodplain** traversed by numerous rivers and streams flowing in south-easterly direction.
- Flora ➔ It is home to one of **finest forests** in India, some of these trees are **more than 150 years old** and **over 70 ft tall**.
- Fauna ➔ Apart from **tigers** (estimated 106–118), it is also home to **swamp deer**, **sambar deer**, **barking deer**, **spotted deer**, **hog deer**, **Indian rhinoceros**, **sloth bear**, **ratel**, **jackal**, **civets**, **jungle cat**, **fishing cat**, etc.
- Significance ➔ In 1987, the Dudhwa National Park was brought under the purview of the '**Project Tiger**' as Dudhwa Tiger Reserve.

10. DESERT LOCUST SITUATIONS

Why in News?

- Recently, The UN's Food and Agriculture Organisation (FAO) alerted India to remain on "high alert" for the next four weeks for a locust attack.

About

- The FAO has three categories of Desert Locust situations: **outbreak, upsurge, and plague**.
- The **current locust attack** (2019-2020) has been categorised as an **upsurge**. The last **major plague was in 1987-89** and the last major **upsurge was in 2003-05**.

- Criteria ➔
- An outbreak ➔ occurs when locusts **rapidly increase in number** and **form groups, bands** and swarms in an area of about **50 km by 50 km** in one part of a country.
- An upsurge ➔ usually occurs when locusts are **able to breed uncontrolled for several successive seasons**. This causes the formation of further hopper bands and adult swarms. This generally affects an entire region.
- A plague ➔ is defined as a **period of one or more years of widespread and heavy infestations**, the majority of which occur as bands or swarms. A major plague exists when two or more regions are affected simultaneously.

👉 Desert locusts

- Desert locusts (Schistocerca gregaria), which belong to the **family of grasshoppers**, normally live and **breed in semi-arid or desert regions**.
- For laying eggs, they **require bare ground**, which is rarely found in areas with dense vegetation.
- How they form swarms? ➔
- As **individuals**, or in **small isolated groups**, locusts are **not very dangerous**.
- But when they grow into **large populations** their **behaviour changes**, they transform from '**solitary phase**' into '**gregarious phase**', and start forming 'swarms'.
- A single swarm can **contain 40 to 80 million adults** in one square km, and these can travel up to **150 km a day**.

👉 Food and Agriculture Organization (FAO):

- The Food and Agriculture Organization is an **agency of the United Nations** that leads international efforts to defeat hunger.
- Functions ➔ FAO is also a source of knowledge and information and **helps developing countries and countries in transition to modernize** and **improve agriculture, forestry** and **fisheries practices** and ensure good nutrition and food security for all.
- Formation ➔ **16th October 1945.**
- Headquarters ➔ **Rome, Italy.**

10. Golden Birdwing

Why in News?

- Recently, a Himalayan butterfly known as Golden Birdwing (Troides aeacus) has been discovered as India's largest butterfly after 88 years.

About Golden Birdwing

- Discovery ➔ The **female Golden Birdwing** was recorded from **Didihat in Uttarakhand**, the largest **male** was from the **Wankhar Butterfly Museum in Shillong**.
- Characteristics ➔ A Himalayan butterfly named Golden Birdwing is **India's largest butterfly** with a **wingspan of 194mm.**

- The hitherto largest Indian butterfly was **Southern Birdwing**, recorded by **Brigadier Evans in 1932**.
- The **female** of the species golden birdwing is **marginally larger than Southern Birdwing** (**190mm**).
- But the **male golden birdwing** is **much smaller** (106 mm).
- Measurement ➜ The only measurement used in the study of **Lepidoptera is wingspan** in which butterflies are measured from the wing base to the tip.
- Smallest butterfly ➜ The smallest butterfly is the **Quaker** (Neopithecops zalmora) with a wingspan of 18 mm.

👉 **Other butterflies in news**

- **The Malabar Banded Peacock or the Buddha Mayoori** ➜ which was recently declared the 'State Butterfly' of Kerala will have a dedicated butterfly park in Kochi.
- **Yeoman** ➜ Tamil Nadu has also recently declared Tamil Yeoman (Cirrochroa Thais)as its state butterfly to symbolise its rich natural and cultural heritage, in a move aimed at boosting the conservation efforts of the attractive insects.
- **State butterflies** ➜ Maharashtra (Blue Mormon), Uttarakhand (Common peacock), Karnataka (Southern birdwings).

10. Marmots

Why in News?

- Recently, reports of an outbreak of bubonic plague in Mongolia, China and far east Russia have emerged, caused mainly by Tarbagan Marmot (a species of Marmot).

About Marmots

- Description ➜ Marmot (genus Marmota) belongs to the **squirrel family** (Sciuridae) within the **order Rodentia**.
- Marmots are well suited for life in **cold environments** and have **small fur-covered ears**, **short**, **stocky legs**, **and strong claws for digging.**
- Marmots are diurnal (active during the day) and are almost entirely vegetarian.
- Distribution ➜
  o They are found primarily in the continents of **Europe**, **Asia** and **North America**.
  o **South Asia** or the **Indian Subcontinent** is home to the **Himalayan Marmot** and the **Long-tailed Marmot** (both are Least Concerned in the IUCN Red List).
  o **Tarbagan** or **Mongolian Marmot** (Endangered) is **found in Mongolia**, **China** and **parts of Russia**.
- Importance ➜ While digging burrows, marmots **increase aeration in the soil** which increases nutrient circulation and helps different plants to propagate.
- Threats ➜ Marmots are **hunted for their meat and fur** in China and Mongolia.

👉 **About Plague**

Plague
Infectious disease, deadly if left untreated
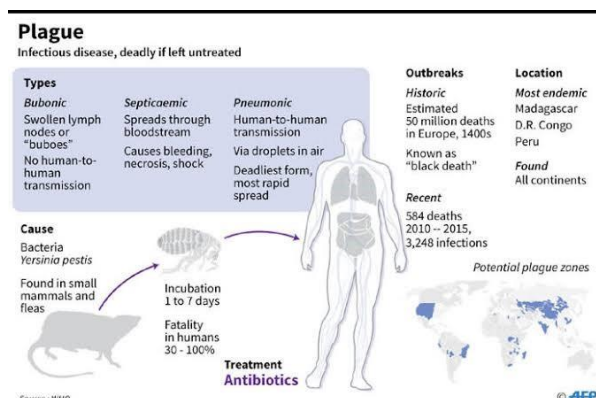
- What is it? ➜ The plague is a disease caused by the **bacteria Yersinia pestis**, which is found in animals, particularly rodents.
- Spread ➜ It can be **transmitted to humans** through **infected animals and fleas**.
- There are three types of plague:
1. Bubonic plague ➜
    a. This infects a **person's lymphatic system** (which is a part of their immune system), causing **inflammation in the lymph node**s. If left untreated, the bubonic plague can also convert into either pneumonic of septicemic plague.
    b. Its symptoms include **fever, chills, weakness and headaches**.
2. Pneumonic plague ➜
    a. It occurs when the **bacteria infects the lungs**. It is the only type of plague that can be **transmitted from human to human.**
    b. Symptoms are **chest pain, fever and cough**. It is **highly contagious** and transmissible merely by coughing.
3. Septicemic plague ➜
    a. This is when the **bacteria enters the blood stream and multiplies there**.
    b. If **left untreated**, pneumonic and bubonic plague can **lead to septicemic plague**. A person infected by septicemic plague may also notice **their skin turning black**.

10. Sitana Dharwarensis

Why in News?

- New species of a Fan-Throated Lizard, 'Sitana Dharwarensis' Discovered from Northern Karnataka.

About

- It is a new species of a fan-throated lizard; the new species is **similar to a species Sitana laticeps**.
- But Sitana dharwarensis **bears a much larger throat fan or dewlap**.
- This is the **second species** to be discovered from the open scrub and rock terrain of northern Karnataka after **Hemidactylus vijayraghavani**, a **gecko**.

10. Tetrastemma Freyae

Why in News?

- Recently, researchers have identified a new species of marine invertebrate i.e. 'Tetrastemma Freyae', found along the coast of Tamil Nadu.

About

- Characteristics ➜ It **feeds on dead and decaying material** and **helps to recycle nutrients** in coastal and deep-water sediments.
- It is associated with **sediments** and is **predatory** as it has a role in maintaining the food chain.
- It uses its **proboscis**, similar to a butterfly which **does to collect nectar**.
- It has **neurotoxins** in its proboscis which could **lead to developing drugs**.

10. Ypthima watsoni

Why in News?

- Recently, a team of wildlife researchers has rediscovered 'Ypthima watsoni' butterfly.

About Ypthima watsoni

- The species was **last seen** in the **year 1958 in Manipur**.
- The rediscovery was **after 61 years** near a village called Phuldungsei in Jampui Hills under the **North Tripura district.**
- It is a species of Satyrinae butterfly and commonly known as '**Looped three-ring'**.
- It was distributed in **Assam**, **Myanmar** and **Thailand**.

10. Rare Orchids in India

Why in News?

- Recently, two rare orchid species - Tiger orchids and Ground orchids have been found to be blooming in different parts of the country after a gap of many years.

About Tiger Orchid

- Scientific Name ➜ **Grammatophyllum speciosum**
- Characteristics ➜ It has **large and resplendent flowers** which resemble the tiger skin.
- It flowers in alternate years and **remains in bloom** for **about a month**.
- Geographical Distribution ➜ These epiphytic plants are **not native to India**, and are **endemic to southeast Asia i.e. Indonesia** and **Philippines.**
- The tiger orchid has an **entry in the Guinness Book of World Records** due to **its massive size**. Mature plant in its natural habitat weighs up to 2 tonnes.

👉 **About Ground Orchid**

- Scientific Name ➜ **Eulophia obtusa**
- Rediscovery ➜ It has been rediscovered in **Dudhwa Tiger Reserve, Uttar Pradesh** after 118 years.
- It was last recorded in Pilibhit, Uttar Pradesh in 1902.
- Geographical Distribution ➜ The species is **originally from Uttarakhand**.
- Characteristics ➜ It has **white flowers** and **bright pink hues**.
- Protection Status ➜ Listed as "**critically endangered**" in the International Union for Conservation of Nature (IUCN) Red List of endangered species.

10. Melghat Tiger Reserve

Why in News?

- The Chief Minister of Maharashtra has requested the Union government for considering an alternative alignment for the Akola-Khandwa rail line that passes through the Melghat Tiger Reserve.

About Melghat Tiger Reserve

- Location ➜ **Amaravati district of Maharashtra**.
- It is on the southern offshoot of the **Satpura Hill Range** in Central India, called **Gavilgarh Hill**.

- The **Tapti River** and the **Gawilgadh ridge** of the Satpura Range from the **boundaries of the reserve**.
- Background ➜ It was declared a **tiger reserve in 1974**. It was among the first nine tiger reserves notified in 1973-74 under **Project Tiger**.
- It was the **first tiger reserve of Maharashtra**.
- Other prominent animals ➜ **Sloth Bear**, **Indian Gaur**, **Sambar deer**, **Leopard**, **Nilgais**, etc. The endangered and '**back from extinction**' **Forest Owlet** is also found in various areas of Melghat.
- Flora ➜ The forests are of deciduous nature and have been classified as '**dry deciduous forests**'. Most prominent is **Teak**.
- Korku tribe ➜ The **Korku tribe** adds to the **cultural diversity** of the Reserve.
- Other Tiger Reserves in Maharashtra:
  - Tadoba-Andhari
  - Pench
  - Sahyadri
  - Navegaon-Nagzira
  - Bor

10. Dolphin number dips in Chambal River

Why in News?

- According to a census report prepared by Madhya Pradesh, dolphins' number in Chambal River has been reduced by 13 % in four years.

Highlights of the report

- There are just **68 dolphins left** in 435-kilometre-long Chambal river sanctuary. (There were 78 dolphins in 2016).
- The **maximum carrying capacity** of dolphins in Chambal **is 125**.
- **Reasons for the decline** ➜
  - Illegal sand mining.
  - Overuse of river water.
  - Changing River course.
  - Inland waterways / Movement of large cargo vessels.
  - Various anthropogenic / religious activities.
  - Accidental killing – by catch/ fisheries related entanglements.

👉 **Gangetic Dolphin**

- It is **India's national aquatic animal** and is popularly known as 'Susu'.
- Habitat: Found in parts of the **Ganges-Meghna-Brahmaputra** and **Karnaphuli-Sangu river systems** in **India**, **Nepal**, **and Bangladesh**.
- They are distributed across seven states in India: **Assam**, **Uttar Pradesh**, **Madhya Pradesh**, **Rajasthan**, **Bihar**, **Jharkhand** and **West Bengal**.
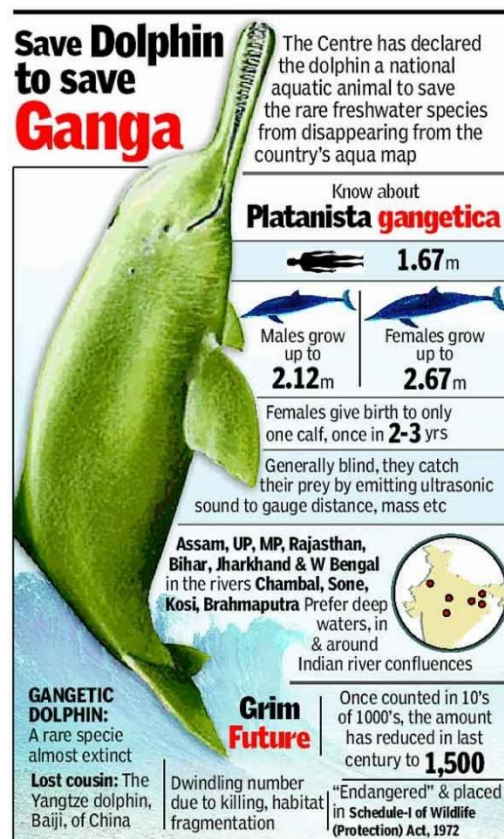
- Conservation Status ➔
    - IUCN status: **Endangered**
    - Indian Wild Life (Protection) Act: **Schedule I**
    - CITES: **Appendix I**.
- India's only sanctuary for dolphins: **Vikramshila Gangetic Dolphin Sanctuary** (VGDS) in **Bihar's Bhagalpur district**

10. Kaziranga National Park

Why in News?

- As a fresh wave of floods ravages Assam, killing, 85 per cent of the Kaziranga National Park and Tiger Reserve (KNPTR) remains submerged.

About

- Location ➔ It is located in the **State of Assam** and is the single largest undisturbed and representative area in the Brahmaputra Valley floodplain.
- Timeline ➔ The park was declared as a **National Park in 1974** and was also declared as a **Tiger Reserve in 2006**.
- Status ➔
    - In 1985, the park was designated as a **World Heritage Site by UNESCO**
    - It is also recognized as an **Important Bird Area by BirdLife International** for the conservation of avifaunal species.
- It also houses the world's largest population of **Great One-horned Rhinoceros** (IUCN Status- Vulnerable).
- The park is home to large breeding populations of **elephants, wild water buffalo, and swamp deer**.

10. KURMA

Why in News?

- Recently number of conservation agencies launched a mobile-based application called KURMA, aimed at turtle conservation.

About KURMA

- Developed by ➔ the Indian Turtle Conservation Action Network (**ITCAN**) in **collaboration with** the **Turtle Survival Alliance-India** and **Wildlife Conservation Society-India**.
- Purpose ➔ It provides **users a database to identify a species** and also provides the **location of the nearest rescue center** for turtles across the country.
- It has a **built-in digital field guide** covering **29 species** of freshwater turtles and tortoises of India.
- It has **information** on turtle identification, distribution, vernacular names, and threats.

Turtle	Tortoise
It is an aquatic and marine form.	It is a semi terrestrial and fresh water form.
It is comparatively smaller in size.	It is usually large in size.
Turtle has heart shaped carapace.	Tortoise bears somewhat ovoid carapace (top shell).
Fore and hind limbs are modified into paddles.	Fore and hind limbs are not modified into paddles.
Head of turtle is partially withdrawn into the shell.	Head of the tortoise can be completely withdraw onto the shell.
Some turtle are flesh eaters.	Tortoises are herbivorous. They feed almost entirely on vegetation.
Example: *Chelonia mydas* is commonly called as green turtle.	*Testudo* is common called land tortoise.

- If anyone reports a turtle from any part of the country using KURMA, he or she **receives advice about the species and its conservation**.

👉 **Wildlife Conservation Society India**

- The Wildlife Conservation Society **to conserve wildlife**, **backed by science**.
- It works in **partnership with the government** and **many dedicated local organizations**.
- It **deals with conservation challenges** like human wildlife interactions, voluntary relocation of people from the forests, tourism in protected areas, and so on.

10. Bhagirathi Eco-Sensitive Zone

Why in News?

- The Environment Ministry has approved the Zonal Master Plan (ZMP) for the Bhagirathi Eco-Sensitive Zone.

About

- Bhagirathi ➤ Bhagirathi is the **source stream of Ganga**, it emanates from Gangotri glacier at Gaumukh at an elevation of 3,892 m.
- Bhagirathi Eco Sensitive Zone extends from **Gaumukh to Uttarakashi** covering an **area of 4179.59 sq. kilometer**.
- Zonal master plan ➤ The ZMP is **based on watershed approach** and includes governance in the area of forest and wildlife, watershed management, irrigation, energy, tourism, public health and sanitation, road infrastructure, etc.
- The Bhagirathi Eco-Sensitive Zone notification mandates the **State Government of Uttarakhand** to **prepare ZMP** to be implemented under the supervision of the Monitoring Committee.
- Concern ➤ This approval could make the entire Bhagirathi region **extremely vulnerable to natural disasters**.

👉 **Ecological sensitive zones (ESZs)**

- Under **Environment (Protection) Act, 1-0986**, ESZs can be setup **around protected areas** (within 10 km) so as to act as **shock absorbers** for these areas.
- In these regions, **Industries causing pollution can't be set**. There is also **regulation of activities** like felling of trees, setting up of resorts.

10. Bathynomus raksasa: Isopod Species

Why in News?

- Recently, scientists have reported the discovery of the first super giant isopod species in the eastern Indian Ocean named 'Bathynomus raksasa'.

About

- The Bathynomus raksasa is a **giant isopod in the genus Bathynomus**.
- The giant isopods are distantly **related to crabs, lobsters**, and **shrimps** (which belong to the order of decapods), and are **found in the cold depths of the Pacific, Atlantic, and Indian Oceans**.

- Features ➔ The "**cockroach of the sea**" has **14 legs**. It measures around **50 centimetres (1.6 feet) in length**, which is big for isopods, which normally do not grow beyond 33 cm (just over a foot). Isopods that reach 50 cm are referred to as supergiant's.
- The **only** member of the isopod species that **exceeds the raksasa in size** is the **Bathynomus giganteus**, which is commonly found in the **deep waters of the western Atlantic Ocean**.
- Significance of discovery ➔ It is the **first 'supergiant' isopod species** to be discovered in the **eastern Indian Ocean**. The discovery takes the number of known giant isopods to 20.

10. RAISE Initiative

Why in News?

- The Ministry of Power has launches Retrofit of Air-conditioning to improve Indoor Air Quality for Safety and Efficiency (RAISE) – a joint initiative of EESL and USAID.

About RAISE Initiative

- Aim ➔ To develop healthy and energy efficient buildings by **improving indoor air quality** in **workspaces across** the nation.
- Bodies Involved ➔ It is a joint initiative of Energy Efficiency Services Limited (**EESL**) and the U.S. Agency for International Development's (**USAID**) **MAITREE programme**.
- Significance ➔ RAISE initiative can **potentially alleviate the issue of bad air quality in workspaces** across the nation and pioneer ways to make them healthier and greener.

👉 **Market Integration and Transformation Program for Energy Efficiency (MAITREE)**

- What is it? ➔ It is a **US-India bilateral Partnership program** between the Ministry of Power and USAID.
- Aim ➔ It is aimed at accelerating the **adoption of cost-effective energy efficiency** as a **standard practice** within buildings and specifically focuses on cooling.

👉 **EESL**

- Energy Efficiency Services Limited (EESL), under the administration of **Ministry of Power**, is working towards **mainstreaming energy efficiency**.
- It is **implementing** the **world's largest energy efficiency portfolio** in the country.
- EESL aims to **create market access** for **efficient and future-ready transformative solutions** that create a win-win situation for every stakeholder.

👉 **USAID**

- USAID is the **world's premier international development agency** and a **catalytic actor** driving development results.

10. Vriksharopan Abhiyan

Why in News?

- Union Home Ministry has recently launched the campaign "Vriksharopan Abhiyan".

About

- Organized by ➔ the **Ministry of Coal** which involves all coal and lignite PSUs.
- It is a **part of going green Initiative** of Ministry of Coal.
- Features ➔ Under this initiative, **large scale plantation** will be carried out in **colonies**, **offices**, **and mines** and in **other suitable areas** of coal and Ignite PSUs.
- **Seedlings** will **also be distributed** under the campaign in the nearby areas for promoting plantation by society.
- Under this initiative **six eco-parks** were **inaugurated by Home Ministry**, it will provide **avenues for the adventure**, **water sport**, **recreation**, **bird watching**, etc.
- Going Green initiative ➔ involves **maximization of green cover** through ecological reclamation of the mined-out areas and overburden dumps, avenue plantation at suitable places, and plantation in and around the mines.

10. Pied Cuckoo

Why in News?

- Recently, Wildlife Institute of India (WII), has decided to study the migration of the Pied Cuckoo Bird by tagging the bird with satellite transmitters, as a part of IBIN project.

About Pied Cuckoo

- Pied cuckoo is a **bird** with **black and white plumage** (pied) with a **fancy crest** on the head.
- Distribution ➔ It is found in **Africa and Asia**.
- In **central and northern parts of India**, pied cuckoos are migratory, they are seen only from just before the monsoon to early winter.
- They have **high site fidelity**, that is, they come back to the same location year after year.
- It is one of the **few species** that come to **India in the summer**, **most other migratory species come in winter**.
- IUCN Status ➔ **Least Concerned**.
- Significance ➔ Farmers have traditionally relied on the arrival of the pied cuckoo as a **signal of arrival of monsoon and seed sowing.**

☞ **Indian Bio resource Information Network (IBIN)**

- Indian Bio resource Information Network (IBIN) is a **larger project of Department of Biotechnology** (DBT).
- IBIN is proposed to be uniquely placed as a **single portal data** provider on **India's bio resource** - plant, animal, marine, spatial distribution and microbial resources.

10. Kongonaphon Kely

Why in News?

- study found newly described species from Madagascar which suggests that dinosaurs and pterosaurs (extinct flying reptiles) had extremely small ancestors — just 10 centimetres tall.

About Kongonaphon Kely

- Kongonaphon kely or tiny bug slayer was an **extremely small ancestor to dinosaurs** and pterosaurs (extinct flying reptiles).
- The fossils of Kongonaphon Kely were **discovered in 1998** as part of an expedition by an American–Malagasy crew made in Madagascar.
- Analysis of body size throughout the history of dinosaurs shows that ancestrally medium-sized animals **evolved into very small animals.**
- Kongonaphon, a **triassic vertebrate** would have been **around 10 cm tall** and **about 30 cm long**.
- This then evolved into **dinosaurs and pterosaurs** which could reach enormous sizes.
- From this study, it is concluded that **all flying animals** seem to have **evolved from very small ancestors**.
- Around **237 million years ago, Madagascar was directly attached to India** as part of the supercontinent Gondwana.
- In **India**, Triassic vertebrate fossils of similar age have been found in a band of rocks extending **across Madhya Pradesh, Chhattisgarh and Odisha**, but thus far nothing like Kongonaphon has been found there.

👉 **About Madagascar**

- Madagascar is an **island country** in the Indian Ocean. Madagascar is the **world's second-largest island country**.
- The country **is about 400 kilometres off the African East Coast**.
- Madagascar **split from the Indian subcontinent** around 88 million years ago.
- Madagascar is a **biodiversity hotspot**; over 90% of its wildlife is found nowhere else on Earth.
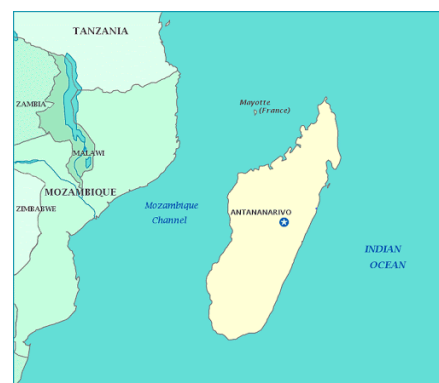
10. Global Forest Resources Assessment (FRA)

Why in News?

- Food and Agriculture Organization (FAO) has released the latest Global Forest Resources Assessment (FRA).

About FRA

- The FAO has brought out this comprehensive assessment **every five years since 1990**.
- Aim ➔ To **assess the state of forests**, **their conditions and management** for all member countries.

👉 **Key Takeaways**

- Highest Forest Area ➔ The **10 countries** that have recorded **maximum average annual net gains** in forest area during 2010-2020 are **China, Australia, India, Chile, Vietnam, Turkey, the United States, France, Italy and Romania.**
- Net Gain in Forest Area ➔ The **Asian continent** reported the **highest net gain** in forest area in 2010-2020. It recorded 1.17 million hectares (ha) per year net increase in forests in the last decade.
- India ➔ **India** reported **0.38% annual gain** in forest or 266,000 ha of forest increase every year at an average **during 2010-20**.
- Forest Employment ➔ **India** reported the **maximum employment** in the forestry sector in the world.

👉 **FAO**

- It is a **specialized agency of the United Nations** that leads international efforts to defeat hunger.
- Headquartered ➔ **Rome, Italy**.
- Aim ➔ To **achieve food security for all** and make sure that people have regular access to enough high-quality food to lead active, healthy lives.
- Reports ➔ **Global Food Price Index**, **State of the World's Forests report** among others.

10. Blue poppy

Why in News?

- A recent study indicated that it is slowly depleting at lower altitudes and rocky moraines.

About

- Scientific name ➔ **Meconopis acculette**.
- It is considered the Queen of Himalayan Flowers.
- Distribution ➔ Found from **Kumaon to Kashmir** at elevations of 3,000 to 5,000 meters.
- High alpine rock screes, small, loose stones, rock fragments and lateral periglacial moraines seem to be the **core occupancy zone** of the species.
- Concern ➔ However, a recent comparative study of abundance of the species in alpine moraines at different elevations indicated that it is **slowly depleting at lower altitudes** and **rocky moraines**.
- Not only the Blue Poppy but **several other flowering plants**, found at very high altitudes, are facing the "**climb higher or die" situation** due **to climate change**.

10. United Nations World Wildlife Crime Report

Why in News?

- The United Nations Office on Drugs and Crime recently released the World Wildlife Crime Report.

About

- The World Wildlife Crime Report was **first released in 2016** which represented the state of wildlife crime.
- The second edition of 2020 is an **evaluation of trends and changes**.

👉 **Key Takeaways**

- Illegal Tiger Products Trade ➔ **India and Thailand** are the **two main countries** which are the suppliers of the **illegal tiger products** in the world.
- The report says that India and Thailand **source 82% of illegal shipment of tiger body parts**.

👉 **UNODC**

- It was **established in 1997** through a merger between the United Nations Drug Control Programme and the Centre for International Crime Prevention.
- Aim ➔ To **assist Member States** in addressing the **issues of drugs**, **crime** and **terrorism**.
- Headquarters ➔ **Vienna, Austria**

☞ **International Consortium on Combating Wildlife Crime (ICCWC):**

- It is a **collaborative effort** of the **CITES Secretariat**, **INTERPOL**, the United Nations Office on Drugs and Crime (**UNODC**), the **World Bank** and the World Customs Organization (**WCO**).
- Aim ➔ To **strengthen criminal justice systems** and provide coordinated support at national, regional and international level to **combat wildlife and forest crime**.

10. High levels of ammonia in Yamuna water

Why in News?

- Delhi Jal Board(DJB) had to reduce water production capacity by 25% after high levels of ammonia were detected in the Yamuna river.

About Ammonia

- What is it? ➔ It is a **colourless gas** and is used as an industrial chemical in the **production of fertilisers**, plastics, **synthetic fibres, dyes** and **other products**.
- Property ➔ It consists of **hydrogen and nitrogen**. In its aqueous form, it is called **ammonium hydroxide**.
- This inorganic compound has a **pungent smell**.
- How does it occur? ➔ Ammonia occurs **naturally in the environment** from the breakdown of organic waste matter.
- It is **lighter than air**.
- Acceptable level of Ammonia ➔ If the concentration of ammonia in water is **above 1 ppm** it is **toxic to fishes**. In humans, **long term ingestion** of water having ammonia levels of 1 ppm or above may **cause damage to internal organs.**

☞ **Yamuna River**

- The river Yamuna is a **major tributary of river Ganges**.
- Origin ➔ Originates from the **Yamunotri glacier near Bandarpoonch peaks** in the Mussoorie range of the lower Himalayas in Uttarkashi district of Uttarakhand.
- It **meets the Ganges at the Sangam in Prayagraj, Uttar Pradesh** after flowing through Uttarakhand, Himachal Pradesh, Haryana and Delhi.
- Tributaries ➔ **Chambal**, **Sindh**, **Betwa** and **Ken**.

10. India's Tiger Survey Report 2020

Why in News?

- Ministry of Environment, Forest and Climate Change has released a detailed 'Status of Tigers, Co-predators and Prey in India (2018) Report' on the eve of the Global Tiger Day (29th July).

About Highlights

- Country's tiger population ➔ The total count of tigers has risen to **2,967 in 2018** from 2,226 in 2014 — an **increase of 741 individuals or 33% in four years.**
- State wise ➔ **Madhya Pradesh** has the **highest number** of tigers at 526, closely followed by **Karnataka** (524) and **Uttarakhand** (442).

- **Chhattisgarh and Mizoram** saw a **decline in tiger population** and all other States saw a "positive" increase.
- **Dampa Tiger Reserve** (Mizoram), **Buxa Tiger Reserve** (West Bengal) and **Palamau Reserve** (Jharkhand) have **no tigers left**.
- All India Tiger estimation ➔
  - The All India Tiger Estimation done **quadrennially** is steered by the **National Tiger Conservation Authority** with technical backstopping from the **Wildlife Institute of India** and **implemented by State Forest Departments and partners.**

👉 **Conservation efforts- National and Global**

- Global Tiger Day ➔ It was observed for the first time in 2010 on **July 29th** at the **St. Petersburg Tiger Summit** in **Russia** when all **13 tiger range countries** came together for the first time with the **commitment of doubling the number of wild tigers by 2022.**
- 13 tiger range countries ➔ **India, Bangladesh, Bhutan, Cambodia, China, Indonesia, Lao PDR, Malaysia, Myanmar, Nepal, Russia, Thailand and Vietnam.**
- Project Tiger ➔ It is a **Centrally Sponsored Scheme** of Government of India launched in 1973 for in-situ conservation of wild tigers in designated tiger reserves.
- The **Global Tiger Initiative (GTI) program** of the World Bank, using its presence and convening ability, brought global partners together to strengthen the tiger agenda.
- The National Tiger Conservation Authority (**NTCA**) has launched the **M-STrIPES** (Monitoring System for Tigers – Intensive Protection and Ecological Status), a **mobile monitoring system** for forest guards.

10. Green – Ag Project
Why in News?

- The Union government on July 28, 2020, launched the Green-Ag Project in Mizoram, to reduce emissions from agriculture and ensure sustainable agricultural practices.

About

- Implementing agencies ➔ The Green-Ag Project is **funded by the Global Environment Facility**, while the Department of Agriculture, Cooperation, and Farmers' Welfare (**DAC&FW**) is the **national executing agency**.
- Other key players involved in its implementation are Food and Agricultre Organization (**FAO**) and the Union Ministry of Environment, Forest and Climate Change (**MoEF&CC).**
- The project seeks to **integrate biodiversity, climate change and sustainable land management objectives** and **practices** into **Indian agriculture.**
- The project is designed to **achieve multiple global environmental benefits** in at least **1.8 million hectares** (ha) of land in five landscapes, with **mixed land-use systems**.
- It aims to bring **at least 104,070 ha** of farms under **sustainable land and water management**.
- The pilot project is supposed to end on **March 31, 2026**, in all states.
- Other states include **Rajasthan, Madhya Pradesh, Odisha and Uttarakhand**.

10. Conservation Assured | Tiger Standards [CA|TS]
Why in News?

- National Tiger Conservation Authority(NTCA) has announced the adoption of the Conservation Assured | Tiger Standards[CA|TS] across all of the country's 50 Tiger Reserves.

About CA|TS

- It was launited in 2013 as a **partnership of tiger range governments**, **inter-governmental agencies**, **institutions**, **NGOs** and **conservation organisations.**
- Purpose ➔ It is a **conservation tool** that sets best practice and standards to manage target species and encourages assessments to benchmark progress. Tigers are the first species selected for the initiative.
- Implementation ➔ **World Wildlife Fund for Nature** (WWF) is helping tiger range countries to implement CA|TS and is joined by other key global organisations.
- Significance ➔ By this **India becomes first** among the 13 tiger range countries to nationally **adopt CA|TS**.
- This brings **India's total number of registered sites to 94** (which includes sites outside the Tiger Reserves).
- This announcement further strengthens India's contribution to the global goal set in 2010 to **double the number tigers in the wild**, known **as TX2**

👉 Global Tiger Forum (GTF)

- It is an **inter-governmental international body** established in **1993** with members from willing countries to embark on a global campaign to protect the Tiger.
- It is located in **New Delhi, India**.

👉 Global Tiger Initiative (GTI)

- It was launched in **2008 as a global alliance of governments**, **international organizations**, **civil society** and the **private sector** with the aim of working together to save wild tigers from extinction.
- In **2013**, the **scope was broadened** to include Snow Leopards.

👉 WWF

- It is an **international non-governmental organization** founded in **1961** to stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature.
- Headquarters ➔ **Gland, Switzerland**.

10. HALOARCHAEA

Why in News?

- According to a study by a Pune-based institute, the colour of water in Lonar lake in Maharashtra's Buldhana district turned pink in June 2020 due to a large presence of the salt-loving Haloarchaea microbes.

About

- Haloarchaea (or halophilic archaea) are aa **class of the Euryarchaeota**, found in **water saturated** or nearly saturated with salt.
- Halobacteria are now **recognized as archaea**, rather than bacteria and are one of the largest groups.
- These microorganisms are members of the **halophile community**, in that they require **high salt concentrations to grow.**

- Their **high densities in the water** often **lead to pink** or **red colourations of the water** (the cells possessing high levels of carotenoid pigments, presumably for UV protection).

10. WILDLIFE CRIME CONTROL BUREAU (WCCB)

Why in News?

- DRI and Wildlife Crime Control Bureau (WCCB) busts syndicate smuggling exotic macaws from Bangladesh.

About WCCB

- Wildlife Crime Control Bureau is a **statutory multi-disciplinary body** established by the Government of India under the **Ministry of Environment and Forests**, to combat organized wildlife crime in the country.
- The Bureau has it's **headquartered in New Delhi**.
- It was **constituted on June 2007**, by amendment to the **Wild Life (Protection) Act, 1972** in 2006.
- UNEP has awarded WCCB with **Asia Environment Enforcement Award, 2018**.

Some Special Operations conducted by WCCB:

- **Operation Soft Gold** ➔ An operation to drag the attention of the enforcement agencies within the country to focus their attention towards the illegal wildlife trade in **Tibetan antelope (Shahtoosh) species**.
- **Operation LESKNOW-II** ➔ Towards the illegal wildlife trade in lesser known species such as **Deer, Wild Boar, Jackal, Mongoose, Monitor Lizard, Sea cucumber and Pangolin** etc.
- **Operation THUNDERBIRD** ➔ On Illegal trade in species such **as Tigers and other Asian big cats, Bears, Pangolins, Reptiles, Red Sanders, Sea-cucumber and sea horses**.
- **Operation BIRBIL** ➔ Against illegal trade in **all Birds and cat species**.
- **Operation WILDNET** ➔ To encounter the menace of the **illegal trade through e-commerce platform**.
- **Operation save Kurma** ➔ It was species specific operation **on turtles**.

10. ONE SUN ONE WORLD ONE GRID

Why in News?

- The Ministry of New and Renewable Energy (MNRE) has recently issued a request for proposal (RfP) for developing a long-term vision, implementation plan, road map, and institutional framework for its One Sun One World One Grid (OSOWOG) program.

About OSOWOG

- The idea for OSOWOG was for the **first time pitched by Indian Prime Minister in 2018** during the first General Assembly of **International Solar Alliance (ISA).**
- Through the OSOWOG initiative India plans build a **global ecosystem of interconnected renewable energy resources** that are seamlessly shared for mutual benefits and global sustainability.
- The vision behind the OSOWOG is "**The Sun Never Sets**" and is a constant at some geographical location, globally, at any given point of time. Hence solar energy can be utilized through interconnected transmission.
- The global grid plan may also leverage the ISA.
- The initiative has been taken up under **Technical assistance program of the World Bank** and is planned across 3 phases.

International Solar Alliance (ISA):

- The ISA is a **treaty-based inter-governmental organisation for solar-resource-rich countries** (which lie either completely or partly between the Tropic of Cancer and the Tropic of Capricorn) to address their special energy needs.
- The ISA was announced by Indian Prime Minister of India and then President of France in 2015, at the **21st session of United Nations Climate Change Conference of the Parties (COP-21) in Paris**, France.
- It is **headquartered in Gurgaon, India**.
- It has **67 member countries which have signed and ratified** the ISA Framework Agreement.

Science and Technology

48.Covaxin

Why in News?

- India's first COVID-19 vaccine candidate COVAXIN has received the approval of Drug Controller General of India (DCGI) for phase I and II of human clinical trials.

About Covaxin

- What is it? ➔ It is an **inactivated vaccine** created from a strain of the infectious SARS-CoV-2 virus.
- Developed by ➔ It has been developed by **Bharat Biotech** in **collaboration with** the Indian Council of Medical Research (**ICMR**) and the National Institute of Virology (**NIV**).
- CoroFlu ➔ The company is also involved in the development of **CoroFlu, a nasal vaccine for COVID-19**, as part of an international collaboration of virologists at the University of Wisconsin–Madison and vaccine firm FluGen.
- DGCI ➔ It is responsible for **approval of licences** of specified categories of drugs such as blood and blood products, IV fluids and vaccines in India.
  - It comes under the **Ministry of Health & Family Welfare**.

49.   Gold Nanoparticles

Why in News?

- National Centre for Polar and Ocean Research (NCPOR) and Goa University (GU) has successfully synthesized gold nanoparticles.

About

- They used **psychrotolerant Antarctic bacteria** through a non-toxic, low-cost, and eco-friendly way for the synthesis.
- The study revealed **genotoxic effect of GNPs** on a **sulphate reducing bacteria** (SRB).
- It displayed **enough anti-bacterial properties** by inhibiting the growth of SRB and its sulphide production by **damaging the genetic information** of the **DNA of the bacterial cell**.
- Genotoxicity ➔ **Genotoxicity** describes the property of a chemical agent that is **capable of damaging** the **genetic information of DNA** and thus causing mutation of the cell, which can **lead to cancer**.
- Benefits ➔ These **GNPs** can be used as a composite therapeutic agent clinical trials, especially in **anti-cancer, anti-viral, anti-diabetic**, and **cholesterol-lowering drugs**.

3. Polyoxometalates

Why in News?

- Scientists from the Institute of Nano Science & Technology (INST), Mohali have synthesized a novel inorganic-organic hybrid compound that can inhibit breast, lung, and liver cancer cells, opening up new possibilities for metallodrugs.

About

- What is it? ➔ The solid compound based on **phosphomolybdate cluster**, an **inorganic salt** of phosphomolybdic acid, belongs to the **Polyoxometalates family**.
- Benefits ➔ Polyoxometalates (POMs) have evolved as a **promising candidate for future metallodrugs for combating cancer.**
- POMs are an evolving class of **inorganic metal oxides**, which have established **promising biological activities** by the virtue of their great diversity in structures and properties.
- The results showed that this **hybrid solid is less toxic towards normal cells**, and its antitumor activity was also found to be comparable with that of a routinely used **chemotherapeutic agent, Methotrexate** (MTX).

51. G4 Flu Virus

Why in News?

- India and Bhutan took a major step forward for the construction of the 600 MW Kholongchhu project.

About G4 Flu Virus

- What is it? ➔ It is a **new strain of virus** that has **descended** from the **H1N1 Influenza** that was responsible for the 2009 flu pandemic.
- The **scientists identified** the virus through surveillance of influenza viruses in pigs that they carried out from **2011 to 2018** in ten provinces of China.
- They also found that the G4 strain has the **capability of binding to human-type receptors** (like, the SARS-CoV-2 virus binds to ACE2 receptors in humans).
- The virus was **able to copy itself** in human airway epithelial cells, and it showed **effective infectivity and aerosol transmission.**

👉 H1N1(Swine Flu)

- What is it? ➔ It is a highly contagious acute respiratory disease of pigs caused by **type A influenza virus**.
- Swine flu virus does **not normally infect humans**. However, sporadic human infections with swine flu have occurred.
- Symptoms ➔ **Cough, nasal secretions, fever, loss of appetite, fatigue, and headache**.
- Transmission ➔ It is transmitted by exposure to infected droplets expelled by **coughing or sneezing** or through **contact to contaminate hands or surfaces**.
- Pandemic ➔ In **2009, WHO declared** the outbreak of type A H1N1 influenza virus a **pandemic**.
- Treatment ➔ The treatment includes antiviral therapy with medicines like **Oseltamivir (Tamiflu), peramivir (Rapivab).**

52. Accelerate Vigyan Scheme

Why in News?

- Science and Engineering Research Board (SERB) has launched a new scheme called 'Accelerate Vigyan'(AV).

About Accelerate Vigyan Scheme

- Aim ➔ To give more thrust on **encouraging high-end scientific research** and **preparing scientific manpower** which can lead to research careers and knowledge-based economy.
- Components ➔ The scheme has two components **ABHYAAS and SAMMOHAN**.
1. **Mission SAMOOHAN** ➔ Marks the beginning of Accelerate Vigyan.
   - It aims to **encourage, aggregate** and **consolidate all scientific interactions** in the country under one common roof.
   - It has been sub-divided into:
     i. **SAYONJIKA** is an open-ended program to catalogue the capacity building activities in science and technology supported by all government funding agencies in the country.
     ii. **SANGOSHTI** is a pre-existing program of SERB.
2. **ABHYAAS** ➔ To **boost research and development in the country** by enabling and grooming potential PG/PhD students by means of developing their research skills in selected areas across different disciplines or fields.
   - It has two components: High-End Workshops ('**KARYASHALA**') and Research Internships ('**VRITIKA**').

54. PHOBOS

Why in News?

- The Mars Colour Camera (MCC) onboard ISRO's Mars Orbiter Mission (MOM) has captured the image of Phobos.

About PHOBOS

- Phobos is the **innermost and larger of the two natural satellites of Mars**, the other being Deimos.
- Both moons were discovered in **1877** by American astronomer **Asaph Hall**.
- Phobos is largely **believed** to be made up of **carbonaceous chondrites**.
- Phobos is a **small, irregularly shaped object** with a mean radius of 11 km and is seven times as massive as the outer moon, Deimos.
- The **violent phase** that Phobos has encountered is seen in the large section gouged out from a past collision (Stickney crater) and bouncing ejecta.

56. MOON'S SUBSURFACE

Why in News?

- Recently, NASA research says the Moon is more metallic than thought before.

How was it discovered?

- The metallic distribution was **observed by** the Miniature Radio Frequency (**Mini-RF**) instrument aboard the **Lunar Reconnaissance Orbiter** (LRO) **spacecraft**.
- The LRO's Mini-RF instrument was measuring an **electrical property** within **lunar soil** in crater floors in the Moon's northern hemisphere.
- The property, known as the **dielectric constant**, is the **ratio** of the electric permeability of a material to the electric permeability of a vacuum.

- The Mini-RF team observed that the **level of this property increased** as they surveyed **larger craters**, and kept rising in crater sizes up to 5 km in diameter. **Beyond that size**, the **value of the dielectric constant levelled off**.
- The finding could aid in drawing a **clearer connection between Earth and the Moon**.

👉 **Lunar Reconnaissance Orbiter**

- It is a **NASA moon mission** that has been in **operation since 2009**.
- The mission particularly focuses on the **moon's poles to search for water** or **ice** that could exist in permanently shadowed craters.

👉 **The Moon formation hypothesis?**

- The most popular theory about the Moon's creation is that a **Mars-sized protoplanet collided** with newly formed **Earth around 4.5 billion years ago, breaking off a piece** of our planet that went on to become its satellite.
- The hypothesis is also backed by **substantial evidence**, such as the **close resemblance** between the Moon's bulk chemical composition with that of Earth.

58.   KAWASAKI DISEASE

Why in News?

- In India and elsewhere, a new illness, with some symptoms common with the rare Kawasaki disease, has been affecting children with Covid-19.

About Multisystem Inflammatory Disorder

- The first such cases started getting reported **since April, from the US and Europe**.
- Doctors **in India** have started seeing such cases over the **last few weeks**. Last month, the World Health Organization (**WHO**) termed this new illness "**multisystem inflammatory disorder**".

👉 **Kawasaki disease?**

- Kawasaki disease **affects children**.
- Symptoms ➔ include **red eyes**, **rashes, and a swollen tongue** with **reddened lips** — often termed strawberry tongue — and an inflamed blood vessel system all over the body. There is **constant high fever** for at least five days. The disease also **affects coronary functions in the heart**.
- Background ➔ The disease derives its name from a **Japanese paediatrician**, **Tomisaku Kawasaki**, who reported the **first case in 1961**. The doctor, 95, died on June 5 this year in Tokyo.
- Causes ➔ What causes Kawasaki disease is **not yet known**. What we do know is that it is an **immunological reaction** to an infection or a virus.

60.Stevioside

Why in News?

- Researchers recently found that Stevioside when coated on nanoparticles can increase the efficiency of Magnetic hyperthermia-mediated cancer therapy (MHCT).

About Stevioside

- What is it? ➔ It is a **natural plant-based glycoside** found in leaves of Honey yerba.
- It is widely used as the **non-caloric natural sweeteners**.
- Benefits ➔ Coating the nanoparticles with the stevioside, a biosurfactant **not only improved the cellular uptake** of the nano-magnets in glioma C6 cancer cells but also **enhanced its retention time**.

62.   Raman Spectroscopy to detect RNA viruses

Why in News?

- Researchers have turned to Raman Spectroscopy to detect RNA viruses present in saliva samples.

About Raman Spectroscopy

- What is it? ➔ It is an **analytical technique** where **scattered light** is used to measure the vibrational energy modes of a sample.
- Significance ➔ Raman spectroscopy can **provide both chemical and structural information** as well as the **identification of substances** through the detection of Raman scattering from the sample.

👉 Raman Scattering or Raman Effect

- It is a **change in the wavelength of light** that occurs **when a light beam is deflected by molecules**.
- When a beam of light traverses a **dust-free**, **transparent sample of a chemical compound**, a small fraction of the light emerges in directions other than that of the incident (incoming) beam.
- Most of this scattered light is of **unchanged wavelength**. However, a small part has wavelengths different from that of the incident light; its presence is a result of the Raman effect.

64.   Measles and Rubella Elimination

Why in News?

- Recently, the Maldives and Sri Lanka have become the first two countries in the World Health Organisation's South-East Asian Region (WHO SEAR) to have eliminated both measles and rubella ahead of the 2023 deadline.

About Measles

- What is it? ➔ It is a **highly contagious viral disease** and is a cause of **death among young children globally**.
- Vulnerability ➔ It is particularly dangerous for children from the **economically weaker background**, as it attacks **malnourished children** and those with **reduced immunity**.
- Spread ➔ Measles is transmitted **via droplets from the nose**, **mouth** or **throat of infected persons**.
- It can cause serious complications ➔ including **blindness**, **encephalitis**, **severe diarrhoea**, **ear infection and pneumonia.**

👉 About Rubella

- It is also called **German Measles**.
- Rubella is a **contagious**, generally **mild viral infection** that occurs most often in **children** and **young adults**.
- Rubella infection in **pregnant women** may **cause death** or **congenital defects** known as **Congenital Rubella Syndrome** (CRS) which causes irreversible birth defects.
- Measures and Vaccinations ➔
  - The **Measles and Rubella Initiative** is a global program which aims at eliminating both these diseases.
  - The vaccine for the diseases are provided in the form of **measles-rubella** (MR), **measles-mumps-rubella** (MMR) or **measles-mumps-rubella-varicella** (MMRV) combination.

66.   Production of lithium in stars

Why in News?

- A forty-year-old puzzle regarding the production of lithium in stars has been solved by Indian researchers.

About

- What was the puzzle all about? ➔ **Stars**, as per known **mechanisms of evolution**, actually **destroy lithium** as they evolve into red giants.
- **Planets** were known to have **more lithium than their stars** as is the case with the Earth-Sun pair.
- However, **leading to a contradiction**, some stars were found that were **lithium-rich**.
- Latest findings ➔ When stars **grow beyond their Red Giant stage** into what is known as the **Red Clump stage**, they produce lithium in what is known as a **Helium Flash** and this is what enriches them with lithium.

👉 **Lithium**

- Lithium, a **light element** commonly used today in **communication device technology**.
- It was first produced in the **Big Bang**, around **13.7 billion years ago** when the universe came into being, along with other elements.
- The present abundance of lithium in the universe is **only four times the original (Big Bang) value**.
- It is **actually destroyed in the stars**.
- The **Sun**, for instance, has about a **factor of 100 lower amount** of lithium than the Earth.

68.   NEOWISE- a comet

Why in News?

- The recently discovered comet called C/2020 F3, also known as NEOWISE after the NASA telescope that discovered it, will make its closest approach to the Earth on July 22.

About comet

- Comets or **Dirty Snowballs** are mostly made of **dust, rocks and ice**, the remnants from time the solar system was formed over **4.6 billion years ago**.
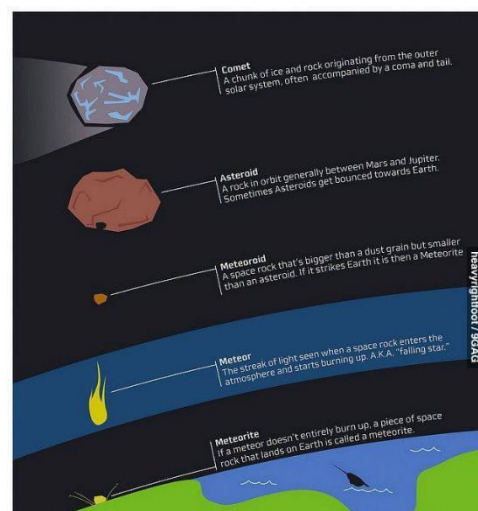
- The word comet comes from the Latin word '**Cometa**' which means '**long-haired**' and the earliest known record of a comet sighting was made by an **astrologer in 1059 BC**.
- Comets can range in their width from a **few miles to tens of miles wide**.
- As they **orbit closer to the sun**, they **heat up** and **release debris of dust** and gases that forms into a **glowing head** that can often be larger than a planet.
- The debris **forms a tail** that can stretch out to millions of miles.
- Each time a **comet passes the sun**, it **loses some of its material** and it will eventually **disappear completely** as a result.
- Comets do **not have light** of their own and what humans are able to see from Earth is the **reflection of the sun's light** off the comet as well as the energy released by the gas molecules after it is **absorbed from the sun**.

70.   Kuaizhou-11 Rocket

Why in News?

- China's 19th launch of 2020, the Kuaizhou-11 rocket, failed in its mission.

About Kuaizhou-11 Rocket

- What is it? ➔ Kuaizhou, meaning "**fast ship**" in Chinese, was operated by the commercial launch **firm Expace** and was originally scheduled for 2018 after being developed three years earlier.
- Features ➔ Also known as KZ-11, it had a **lift-off mass of 70.8 tonnes**, and was designed to **launch low-Earth and Sun-synchronous orbit satellites.**
- It was carrying two satellites — 1) a **remote sensing satellite** 2) **low-Earth orbit navigation satellite**.
- Built by ➔ **Changguang Satellite Co. Ltd.**, a commercial entity born out of the state-owned firms.

👉 **Other Important Missions of China**

- Tianwen-1 ➔ **China's Mars Mission** to be launched by July, 2020. China's previous '**Yinghuo-1' Mars mission**, which was supported by Russia failed in 2012. Tianwen-1 will **lift off on a Long March 5 rocket**.
- Long March 5 Rocket ➔ Considered as China's successful step to **operate a permanent space station and send astronauts to the Moon.**
- Tiangong ➔ **China's own space station** to be **built by 2022**. Tiangong means a **'Heavenly Palace'**.

72.   Itolizumab

Why in News?

- Recently, the Drugs Controller General of India (DCGI) has cleared Itolizumab for restricted emergency use in Covid-19 cases.

About

- What is it? ➔ It is a **monoclonal antibody drug** manufactured by **Biocon** for the treatment of severe **chronic plaque psoriasis.**
- Monoclonal antibodies are **lab-made proteins** that act like human antibodies in the immune system and fight against foreign molecules.
- How will it work? ➔ Itolizumab will be used for the **treatment of cytokine release syndrome** (CRS) in moderate to severe COVID-19 patients.

- Cytokine release syndrome (CRS) ➔ It is a **systemic inflammatory response** that can be triggered by a variety of factors such as infections and other diseases.

👉 **DCGI**

- It is a department of the Central Drugs Standard Control Organization (**CDSCO**) responsible for **approval of licences** of specified categories of drugs such as blood and blood products, **IV fluids** and vaccines in India.
- Parent Organization ➔ It comes under the **Ministry of Health & Family Welfare**.

74. Low-cost Supercapacitor

Why in News?

- Recently International Advanced Research Centre for Powder Metallurgy and New Materials (ARCI) has developed a low-cost, environmentally friendly, super capacitor electrode.

About Low-cost Supercapacitor

- The supercapacitor is developed from **industrial waste cotton** based electrode & natural seawater electrolyte.
- Industrial waste cotton was **converted into highly porous carbon fibers** by activation process and then utilised to make high-performance supercapacitor electrodes.
- Natural seawater was explored as an **environment-friendly**, **cost-effective** and **alternative aqueous electrolyte**.
- Benefits ➔
  - It may **replace** the **existing aqueous-based electrolytes** for the economic fabrication of supercapacitor.
  - The device shows **great potential** for practical application, and integration with solar cell.

👉 **Super Capacitor**

- What is it? ➔ Super Capacitor / Ultra capacitors are **next-generation energy storage device**.
- Benefits ➔ They have **ultrafast charging characteristic** as compared to conventional capacitors and lithium-ion batteries (LIB).
- Main components of supercapacitors ➔ include **electrode, electrolyte, separator**, and the **current collector**.

76. SHUDH

Why in News?

- IIT Kanpur has developed a UV sanitizing device named 'SHUDH' to make people's room COVID free.

About SHUDH

- Why? ➔ Due to Covid Pandemic People are nowadays **afraid of touching anything around**, specifically in the areas where **masses have to come**.
- To solve this problem **Imagineering Laboratory** department of **IIT Kanpur** has developed an **Ultraviolet** (UV) sanitizing product named **SHUDH**.

- Features ➔ Smartphone operated Handy Ultraviolet Disinfection Helper (SHUDH) has **six UV lights of 15 Watts each** that can be **individually monitored** from a distance.
- The device at its full operation can **disinfect a 10x10 squared feet room** in about **15 minutes**.
- Benefits ➔ SHUDH can **assist in killing the spread of corona virus** at the highly prone places such as hospitals, hotels, malls, offices and schools.

78. Kris Gopalakrishnan committee

Why in News?

- A government committee headed by Infosys co-founder Kris Gopalakrishnan has suggested that non-personal data generated in the country be allowed to be harnessed by various domestic companies and entities.

About committee

- The government committee, which submitted its report has **classified non-personal data** into three main categories, namely **public non-personal data, community non-personal data** and **private non-personal data.**
- It has also suggested setting up of a **new authority** which would be **empowered to monitor** the use and mining of such non-personal data.
- What is Non-personal data? ➔ Non-personal data is any set of data which does **not contain personally identifiable information**. This in essence means that no individual or living person can be identified by looking at such data.
- **Unlike personal data**, which **contains explicit information** about a person's name, age, gender, sexual orientation, biometrics and other genetic details, non-personal data is more likely to be in an **anonymised form.**

80. First indigenous vaccine for infant pneumonia approved

Why in News?

- The Drug Controller General of India(DCGI) has approved the first fully indigenously developed conjugate vaccine for pneumonia developed by the Serum Institute of India, Pune.

About Pneumonia

- What is it? ➔ It is an **infection in one or both lungs**. The infection causes inflammation in the air sacs in your lungs which are called **alveoli**. The **alveoli fill with fluid** or **pus** making it **difficult to breathe**.
- Causes ➔ It is caused by a number of infectious agents, including **viruses, bacteria and fungi**.
- Symptoms ➔ **High fever and chills**, **cough with phlegm**, **physical weakness** and a **feeling of being unwell, shortness of breath** and rapid breathing and a racing pulse.
- Transmission ➔
- The **viruses and bacteria** that are commonly found in a **child's nose** or **throat** can **infect the lungs** if they **are inhaled**.
- They may also **spread via air-borne droplets** from a cough or sneeze.
- It may also spread **through blood** especially during and shortly after birth.

- Treatment ➜ Pneumonia is both **preventable and treatable**.

👉 **Initiatives against Pneumonia**

- Integrated Global Action Plan for Pneumonia and Diarrhoea (GAPPD) ➜ It was **launched by WHO and UNICEF in 2009**. It aims to **end preventable childhood deaths** due to pneumonia and diarrhoea <u>by 2025</u>.
- Social Awareness and Action to Neutralise Pneumonia Successfully (SAANS) campaign ➜ It was launched by the Union **Health Ministry** to **mobilise people to protect children from pneumonia** and train health personnel and other stakeholders to provide prioritised treatment to control the disease.

82. Human Growth Hormone (hGH)

Why in News?

- Recently a 2018 Commonwealth Games silver medalist, has been handed a provisional four-year suspension after his blood sample tested positive for human Growth Hormone (hGH).

About Human Growth Hormone

- Human Growth Hormone (hGH) is **produced in the body** and **secreted by the pituitary gland** near the base of the brain.
- HGH **helps in bone**, **organ** and **cartilage growth** and also helps in **repairing damaged muscles**.
- When the gland releases the growth hormone, it results in the secretion of a protein called **IGF-1 from the liver**.
- The IGF-1 protein is what ultimately **stimulates the growth of bones**, **muscle, and other tissues**.
- hGH is **banned both in-competition** as well as **out-of-competition** by the World Anti- Doping Agency (<u>WADA</u>) as hGH is known to increase muscle mass, strength as well as **tissue-repairing effects**.

84. Hope: UAE's first mission to Mars

Why in News?

- The launch of the United Arab Emirates' (UAE) first mission to Mars is scheduled for July 16 launch. It will take off from its launch site, Tanegashima Space Center, in Japan.

About the Hope mission

- Background ➜ The Emirates Mars Mission called "Hope" was **announced in 2015** with the aim of creating **mankind's first integrated model of the Red planet's atmosphere**.
- Features ➜ Hope weighs **over 1500 kg** and will **carry scientific instruments** mounted on one side of the spacecraft, including the **Emirates exploration Imager** (EXI), which is a <u>high-resolution camera among others</u>.
- Hope orbiter ➜ The spacecraft will **orbit Mars** to **study the Martian atmosphere** and its **interaction with outer space** and **solar winds.**
- Hope will **collect data** on **Martian climate dynamics**, which should help scientists understand why Mars' atmosphere is decaying into space.
- Duration ➜ Once it launches, Hope will orbit Mars for **around 200 days**, after which it will **enter the Red planet's orbit by 2021**, coinciding with the **50th anniversary** of the **founding of UAE**.
- Executed by ➜ the **Mohammed bin Rashid Space Centre**, **UAE's space agency**.

- Significance ➔ It will help answer key questions about the **global Martian atmosphere** and the **loss of hydrogen** and **oxygen gases into space** over the span of one Martian year.

👉 **Other Two Missions on Mars**

- Perseverance ➔ **NASA's Mars rover, Perseverance**, with instruments to **search for chemical signs of past life**, is scheduled to launch on **30th July**, 2020.
- Tianwen-1 ➔ **China** is also launching an ambitious mission to Mars, **Tianwen-1**.

86. Ovarian Cancer

Why in News?

- Researchers at the Cancer Institute (WIA) have identified a panel of five protein markers in the blood that can help with an early diagnosis of a common and lethal form of ovarian cancer.

About

- Combination of five markers ➔ **CA125, IGFBP2, SPP1, TSP1 and ADI** were used for the study.
- Bio-Markers ➔ A biomarker is a **characteristic** that is **objectively measured** and **evaluated** as an indicator of **normal biological processes, pathogenic processes or pharmacological responses** to a therapeutic intervention.
- Biomarkers may be used alone or in combination to assess the health or disease state of an individual.

👉 **About Ovarian Cancer**

- Ovarian cancer **affects the female organs** that **produce eggs** (ovaries).
- Ovarian cancer often goes **undetected until** it has **spread within the pelvis and stomach**.
- At this late stage, ovarian cancer is **more difficult to treat** and **can be fatal**.
- Ovarian cancer often has **no symptoms** in the **early stages**.
- Later stages are associated with symptoms, but they **can be non-specific**, such as **loss of appetite** and **weight loss.**
- The symptoms of this cancer tend to **mimic other gastrointestinal conditions acidity**, **ascites** or a **bloated feeling.**
- **Surgery** and **chemotherapy** are generally used to **treat ovarian cancer**.
- The crude incidence rate for ovarian cancer in India is **5 to 6 per 1,00,000**. Stage IIIC cancers account for nearly 75%, with survival among them being around 30-40%.

88. IntelliMAST and TouF

Why in News?

- CSIR-CMERI, Durgapur, unveiled the COVID Protection System (COPS) for Workplace containing products like IntelliMAST and Touchless Faucet.

About Solar Based Intelligent Mask Automated Dispensing Unit cum Thermal Scanner (IntelliMAST):

- It is an **intelligent surveillance kiosk** which identifies the **body temperature** and whether an **individual is wearing Face Mask** **or** **not** through customized Software solutions.
- It will help **ensure safety of supervising staff** and implementation of precautionary measure in any large organization.
- This system **uses** **Artificial Intelligence** and **Information Technology** to give real-time results and can be synchronized with the Human Resource Data of any organization for any real-time data response and dissemination of information.
- The system is backed up by **Solar Power** for uninterrupted Power Supply during blackouts.

👉 **360° Car Flusher**:

- It is a **Sodium Hypochlorite Water Screen** which uses **specialized Nozzle Design** to ensure that the **Sanitizer Diffused Water** is evenly spread over and under the Car Body/Wheels with adequate Water Force and coverage.

👉 **Touchless Faucet (TouF)**

- The Touchless Faucet (TouF) is being launched **for households and Office Spaces**.
- The system **dispenses Liquid Soap** and **Water** from the **same Faucet with a time-gap of 30 seconds**, which is as per the latest Government guidelines.
- This System dispenses Water 30 seconds after dispensing Soap in a **Touch-free Mechanism** as per Local Government guidelines and can be very easily mounted on top of **household wash basins**.

👉 **Central Mechanical Engineering Research Institute (CMERI)**

- CMERI is a **public engineering research and development institution** in Durgapur, West Bengal.
- It is a constituent laboratory of the Indian Council of Scientific and Industrial Research (**CSIR**).
- This institute is the only national level research institute in the **field of mechanical engineering** in India.

90. Vitamin D

Why in News?

- There have been considerable discussions in scientific circles on the importance of vitamin D in these days of the COVID-19 pandemic.

About Vitamin D

- How is Vitamin D produced? ➜ It is produced when **sunlight** (or artificial light, particularly in the ultraviolet region of 190-400 nm wavelength) **falls on the skin**.
- Light triggers a **chemical reaction to a cholesterol-based molecule** and converts it into **calcidiol** in the liver and **into calcitriol in the kidney**.
- It is these **two molecules** that are **physiologically active**.
- Fat-soluble vitamin ➜ Vitamin D is a **fat-soluble vitamin**, meaning that it **dissolves in fats** and **oils** and can be **stored** in your body for a **long time**.
- Since **sunlight is important** for the generation of vitamin D, tropical countries have an advantage over the northern countries.

- **India**, being a **tropical country**, one would expect **naturally derived vitamin D levels** to be good.
- Benefits ➔ It is known to help in having the **right amount of calcium in the bones, catalyse the process of protecting cell membranes from damage, preventing the inflammation of tissues** and **helping stop tissues from forming fibres** and weakening bones from becoming brittle, leading to osteoporosis.
- Concerns ➔
    o Vitamin D **deficiency** can **affect COVID-19 high-risk patients**, particularly those who are diabetic, have heart conditions, pneumonia, obesity and those who smoke.
    o It is also associated with **infections in the respiratory tract** and **lung injury**.

92.   Asteroid 2020 ND

Why in News?

- Indian navy conducted a Passage Exercise (PASSEX) with the U.S. Navy's USS Nimitz carrier strike group.

About Asteroid 2020 ND

- It will be as close as **.034 astronomical units** (5,086,328 kilometers) to our planet.
- It is travelling at a speed of **48,000 kilometers per hour**.
- Its distance from Earth has placed it in the **potentially dangerous category**.
- How are PHAs defined? ➔ Potentially Hazardous Asteroids (PHAs) are those with a **minimum orbit intersection distance** (MOID) of **0.05 au or less**.
- NASA classifies these objects as **near-Earth objects** (NEOs).
- However, it is **not necessary** that **asteroids classified as PHAs** will impact the Earth.
- It only means there is a **possibility for such a threat**.

94.   Metamaterials

Why in News?

- Researchers in the Indian Institute of Technology Madras and the University of Nairobi have used metamaterials to improve detection of defects in large structures by guided wave ultrasound.

About Metamaterials

- What is it? ➔ Metamaterials are **artificially crafted materials** with **unique internal microstructures** that give them **properties not found in nature**.
- The constituent artificial units of the metamaterial can be **tailored in shape, size,** and **interatomic interaction**, to exhibit unusual properties.
- Potential applications of metamaterials ➔ Include **optical filters**, **medical devices**, **remote aerospace applications** and **among others.**

👉 Guided wave testing (GWT)

- Sound waves are **sent along the length of the structure** rather than into the structure, allowing the waves to **travel longer distances**.
- GWT has **poorer resolution** than conventional ultrasound-based testing due to diffraction limitations.

- The research team **used metamaterials to improve** the resolution of guided ultrasound waves.

96. World's Most Agile, Lightest Surveillance Drone "Bharat"

Why in News?

- The Defence Research and Development Organisation (DRDO) has provided drones named 'Bharat' to Indian Army.

About

- What is it? ➜ It is an **indigenously** developed drone developed by **Defence Research and Development Organisation** (DRDO).
- Features ➜ The drone is equipped with **artificial intelligence** that helps it to detect friends and enemies and take action accordingly.
- It has been made in a way that ensures its **survival in extreme cold weather temperatures** and **harsher weather**.
- It can also provide a **real-time video transmission** during the missions and have advanced night vision capabilities.
- It can also **detect humans** who are **hidden in deep forests**.
- It is built in a way that **Radars cannot detect its presence** and thus can be used in swarm operations.

98. Venus Coronae

Why in News?

- Researchers have recently studied the formation of Venus' ring-shaped volcanic structures called "Coronae".

About

- They are formed by **plumes of molten rock** rising from the mantle up through the crust.
- This **process is similar** to how Earth's volcanos function.
- Interestingly, most of Earth's volcanism occurs along the boundaries of tectonic plates, but **modern Venus doesn't seem to possess tectonic plates.**
- They identified **three dozen features on Venus**, which they state could have been **created by volcanism**.
- If this is true then it will **potentially reshape our understanding** about the planet and its evolution.

- Venus was earlier determined to be an **inactive planet**. However, now it is being said that the **interior is still churning** and can **feed many active volcanoes**.
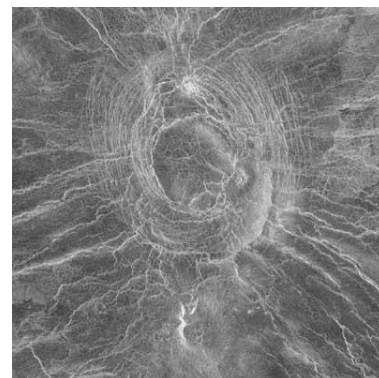
100. ASTHROS Mission to stratosphere

Why in News?

- NASA has announced the launch of ASTHROS mission from Antarctica in 2023.

About ASTHROS Mission

- ASTHROS stands for **Astrophysics Stratospheric Telescope for High Spectral Resolution Observations at Submillimeter-wavelengths**.
- Aim ➔ To send a telescope aboard a balloon of the size of a football stadium into the stratosphere to **observe wavelengths of light invisible from the Earth.**
- Significance ➔ The mission will help in trying to find answers about **formation of giant stars in the galaxy**.
- Stratosphere ➔ It is a layer of Earth's atmosphere that is **located above the troposphere** and **below the mesosphere**.
- The ozone layer which **absorbs** and **scatters the solar ultraviolet radiation** is in this layer.
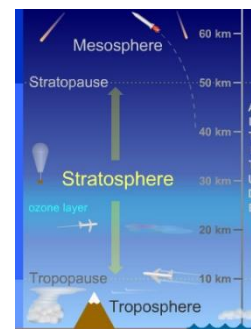
Geography

102.   Kholongchhu Hydel Project

Why in News?

- India and Bhutan took a major step forward for the construction of the 600 MW Kholongchhu project.

About Kholongchhu Hydel Project

- What is it? ➜ It is a **run-of-the-river project** located on the lower course of the **Kholongchu River in Trashiyangtse district in eastern Bhutan.**
- Implementation ➜ The project will be implemented by **Kholongchhu Hydro Energy Limited**, a **joint venture** company formed between Druk Green Power Corporation (**DGPC**) of Bhutan and Satluj Jal Vidyut Nigam Limited (**SJVN**) of India.
- The Kholongchhu project is regarded as a "**milestone**" in the **India-Bhutan partnership**, under which four hydropower projects have been **built in the last 30 years totalling a capacity of 2,100 MW**.
- Part of India's commitment ➜ It is one of four additional projects agreed to in 2008, as a part of India's commitment to helping Bhutan create a **total 10,000 MW of installed capacity by 2020**.
- Other hydroelectric power projects in Bhutan build with India's involvement are ➜
    - 720 MW **Mangdechhu**
    - 1200MW **Punatsangchhu-1** and 1020MW **Punatsangchhu-2**.

👉 **Whats' so special with the project?**

- It is the first hydropower joint venture project in Bhutan's **less developed eastern region of Trashiyangtse**.
- It is the first time an India-Bhutan hydropower project will be constructed as a **50:50 joint venture** and **not as a government-to-government agreement.**

103.   Increasing instances of lightning strikes: WMO

Why in News?

- The World Meteorological Organization (WMO) has released its findings on lightning strikes which had happened around the world.

Key Points

- **Brazil** ➜ recorded the **longest lightning strike** that travelled a distance of 709 kilometres in 2018.
- **Argentina** ➜ recorded a lightning strike that lasted continuously for **16.73 seconds** in 2019.
- India ➜ **Uttar Pradesh** recorded the **maximum number of deaths** due to lightning in India. It was **followed by Bihar.**

👉 **Lightning**

- What is it? ➔ It is a **very rapid** and **massive discharge of electricity** in the atmosphere, some of which is directed towards the Earth. These discharges are generated in **giant moisture-bearing clouds** that are **10-12 km tall**.
- How is it formed? ➔
  o Air generally **acts as an insulator** between the **positive and negative charges** in the cloud and between the cloud and the ground.
  o But when the opposite charges build up enough, this **insulating capacity of the air breaks down** and there is a **rapid discharge of electricity** that we know as **lightning**.
- Effects of Lightning:
  o Direct strike ➔ **Victims** may sustain a direct strike, which is **often fatal**.
  o Contact injury ➔ This occurs when lightning strikes **an object**, such as a **car or metal pole** that the **victim is touching.**
  o Ground current➔ This occurs when lightning strikes the ground near a victim and the ground current **passes from the strike point through the ground** and **into the victim among others**.

👉 **About WMO**

- The World Meteorological Organization (WMO) is an **intergovernmental organization** with a **membership of 192 Member States** and **Territories.**
- Headquarters location ➔ **Geneva, Switzerland**
- Founded ➔ **23 March 1950**
- What does WMO do? ➔ WMO coordinates the activities of National **Meteorological and Hydrological Services** in 192 States and Territories so that basic weather, climate and water services are made available to anyone who needs them, when they need them.
- Reports ➔ **Greenhouse Gas Bulletin**, **Status of the World Climate**.

104. Timbuktu: The faraway land

Why in News?

- Timbuktu is a western African city whose name is a metaphor for a place too exotic and remote to even imagine, now is in the grasp of Covid-19.

About

- Timbuktu is a **city in Mali**, situated **20 km north of the Niger River**.
- The mystique of Timbuktu owes a **lot to its inaccessibility**, which continues even today.
- It is located on the **southern tip of the Sahara desert** where there is nothing but thousands of miles of barren desert to its north.
- It was a **regional trade centre in medieval times**, where caravans met to exchange salt from the Sahara Desert for gold, ivory, and slaves from the Sahel, which could be reached via the nearby Niger River.

106.   Botswana

Why in News?

- Hundreds of elephants have died mysteriously in Botswana's Okavango Delta. The cause is yet to be established.

About

- Location ➔ Botswana is a **landlocked country** in Southern Africa.
- Bordered by ➔ **South Africa** to the south and southeast, **Namibia** to the west and north, **Zimbabwe** to the northeast and **Zambia** to the north.
- Botswana is currently home to more elephants than any other African country, and southern Africa remains a stronghold for 293,000, or **70%, of the estimated remaining African elephants**.
- The **Okavango Delta** is a vast **inland river delta** in northern Botswana. It was inscribed on the **World Heritage List in 2014**.

108.   Karan-4

Why in News?

- Karan 4 (Co 0238) is sugarcane variety developed at ICAR- Sugarcane Breeding Institute (SBI) Regional Centre, Karnal in Haryana.

About

- Early maturing, High yielding.
- **High sugar content**.
- Moderately **resistant to red rot** and **smut diseases**.
- Can **tolerate water deficit**, waterlogging and saline conditions.
- Widely **suitable for planting in autumn, spring and summer**.
- **Good ratoon-ability** and **tolerance to low temperatures** make it durable for raising a second ratoon crop. [A new crop (especially of rice, bananas, or sugar cane) that grows from the stubble of the crop already harvested.]
- It has also **helped increase sugarcane yield** in **subtropical states.**

110.   IDLIB

Why in News?

- Syrian and Russian planes have carried out deadly aerial strikes on schools, hospitals and markets in Idlib province. UN investigators have termed these attacks as war crimes.

About

- Idlib is a city in northwestern Syria, 59 kilometers southwest of Aleppo, which is the **capital of the Idlib Governorate**.
- It is situated in **north-western Syria, bordering Turkey**.

112.   Natanz

Why in News?

- Recently a fire broke out at the Natanz nuclear enrichment facility of Iran.

About

- The **Karas Mountains** are in the vicinity.
- **Iran's central facility** for uranium enrichment is located here.
- Also known as the **first Pilot Fuel Enrichment Plant of Iran**.
- It is one of sites **monitored by the International Atomic Energy Agency** (IAEA) after Joint Comprehensive Plan of Action (also known as Iran nuclear deal) in 2015.

114.   BHASHAN CHAR

Why in News?

- Bangladesh has announced that it will not move the Rohingyas settled on the Bhashan char island amid Corona pandemic.

About BHASHAN CHAR

- It is also known as **Char Piya**.
- It is an **island in Bangladesh**.
- It is located in the **Bay of Bengal**.
- The island was formed with **Himalayan silt** in 2006.
- It **spans 40 km²**.

116.   'Churachandpur Mao Fault' in Mizoram

Why in News?

- Mizoram's zone of "scary" earthquakes is caught between two subterranean faults called the 'Churachandpur Mao Fault'.

About

- The CMF is named after **two places in Manipur** and **runs north-south into Myanmar along the border of Champhai.**
- The **Mat Fault** runs **northwest-southeast** across **Mizoram**, beneath river Mat near Serchhip.
- It is **defined by straight valleys**; most prominent being between Kangpokpi and Maram region of Mizoram.
- The fault takes a **north-easterly trend from Maram** where the fault zone is characterized by **active landslides during the monsoon.**
- Why study CMF?
    - Faults are **discontinuities or cracks** that are the **result of differential motion within the earth's crust**.
    - **Vertical** or **lateral slippage of the crust** along the faults causes an earthquake.

118.   Mont Blanc

Why in News?

- The melting Mont Blanc glacier in the French Alps yielded a clutch of newspapers with banner headlines from when Indira Gandhi became India's first and so far only woman Prime Minister in 1966.

About Mont Blanc

- Mont Blanc is the **second-highest mountain in Europe** after Mount Elbrus.
- It is the highest mountain in the Alps and Western Europe.
- It **rises 4,808 m** above sea level and is **ranked 11th in the world** in topographic prominence.
- The **mountain stands in a range** called the **Graian Alps**, between the regions of Aosta Valley, Italy, and Savoie and Haute-Savoie, France.
- It is the **tallest peak in the Alps** and the highest summit in Western Europe, hence its epithet the "**Roof of Europe**".

120.   Nagorno-Karabakh region

Why in News?

- The territorial dispute and ethnic conflict between Armenia and Azerbaijan over Nagorno-Karabakh region have erupted again.

About Nagorno-Karabakh region

- Location ➜ It is a **landlocked region** in the **South Caucasus** within the mountainous range of Karabakh.
- It is internationally recognized as **part of Azerbaijan**.
- Dispute: Nagorno-Karabakh is a disputed territory internationally recognized as **part of Azerbaijan** but **mostly governed by the Republic of Artsakh**, de facto independent state with an Armenian ethnic majority backed by neighbouring Armenia.

122.   Azad Pattan Hydropower Project

Why in News?

- Pakistan and China have signed an agreement for the Azad Pattan hydel power project.

About Azad Pattan Hydropower Project

- What is it? ➜ It is a **700 MW** hydroelectric project **on the Jhelum River** in Pakistan Occupied Kashmir (PoK).

- It is the **second biggest power project** of china in Pakistan under the China Pakistan Economic Corridor (**CPEC**).

👉 **Other projects**

- **Kohala hydropower project** ➔ It is a Hydroelectric power project to be built <u>on the Jhelum river</u>. It is being set up by China under China-Pakistan Economic Corridor (<u>CPEC</u>).
- **Diamer-Bhasha Dam** ➔ It is located <u>on the Indus River</u> in northern Pakistan between Kohistan district in Khyber Pakhtunkhwa and Diamer district in Gilgit Baltistan. It is being <u>built with the help of China</u>.

👉 **About Jhelum River**

- The Jhelum River (725 km) is the **westernmost of the five rivers** (Beas, Chenab, Jhelum, Ravi, and Sutlej) of the Punjab region that **merge with the Indus River in eastern Pakistan**.
- It flows into **northern India** and **eastern Pakistan**.
- It is a **tributary of the Chenab River**.
- The river Jhelum is called **Vitasta in the Rigveda**.
- **Alexander the Great** and his army **crossed the Jhelum in BC 326** at the **Battle of the Hydaspes** where he defeated the Indian king, Porus.
- Origin: rises from **Verinag Spring** situated at the foot of the Pir Panjal in Kashmir Valley.

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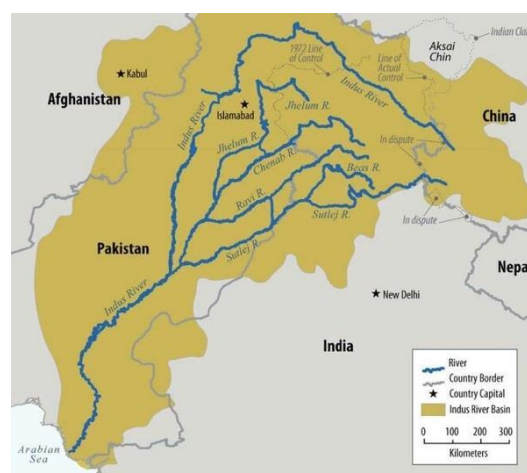
124.   Hurricane Hanna

Why in News?

- Recently, Hurricane Hanna has made landfall (the point at which a hurricane reaches land) in Texas with life-threatening storm surge and strong winds.

About

- It has reached wind speeds of up to 90 mph and is expected to produce heavy rains across portions of **southern Texas** and **northeastern Mexico**, which will <u>result in flash flooding</u> and <u>isolated minor</u> to moderate river flooding.
- It has been categorised as a **Category 1 storm** on the Saffir–Simpson hurricane wind scale (**SSHWS**).

👉 **Hurricane**

- It is a <u>tropical cyclone</u> that occurs in the **Atlantic Ocean** and **the northeastern Pacific Ocean**.
- These are formed over the **warm ocean waters** near the **equator.**
- Hurricanes typically form **between 5 to 15 degrees latitude** north and south of the equator.

👉 **Saffir-Simpson Hurricane Wind Scale**

- It is a **1 to 5 rating** based on a hurricane's sustained wind speed. This scale estimates potential property damage.

126. Nag River

Why in News?

- Recently, the Bombay High Court said that the Nag river has become extremely polluted due to industrialisation and urbanisation.

About

- The **Nagpur city** derives its name from the Nag river which passes through the city.
- Origin ➔ The Nag river **originates from the Ambazari Lake** in west Nagpur.
- Major Tributaries ➔ **Pili river.**

128. Mausam app and KRCN

Why in News?

- Ministry of Earth Sciences (MoES) has launched Mausam app and Knowledge Resource Centre Network(KRCN) on the occasion of 14th foundation day of MoES.

About Mausam app

- Developed by ➔ It has been **designed and developed jointly by** the International Crops Research Institute for the Semi-Arid Tropics (**ICRISAT**), Indian Institute of Tropical Meteorology (**IITM**), Pune and India Meteorological Department (**IMD**).
- It aims to **provide current weather of a location**, issue warnings of severe weather events that are likely to occur in the immediate future and provide tracking of approaching weather events.

👉 **Knowledge Resource Centre Network (KRCN)**

- It will be a **one-point stop to access research**, **publications, e-resources of all institutions** functioning under the **Ministry of Earth Sciences** (MoES).

130. Tuting-Tidding Suture Zone (TTSZ)

Why in News?

- Wadia Institute of Himalayan Geology(WIHG) has conducted a study pertaining to the Arunachal Himalaya which has revealed that the area is generating moderate earthquakes at two different crustal depths.

About TTSZ

- What is it? ➔ It is a **major part of the Eastern Himalaya** where the Himalaya takes a **sharp southward bend** and connects with the Indo-Burma Range.
- Importance ➔ This part has gained importance due to growing need of **constructing roads** and **hydropower projects** emphasising the need for understanding the pattern of seismicity in this region.

- Significance of the study ➔ This detailed assessment of seismicity in this region will be **helpful for planning any large scale construction** in this region in the future and also **improve earthquake preparedness** in the area.

👉 **Mohorovicic or Moho Discontinuity**

- It is the boundary **between the crust and the mantle**.
- In geology, the word **discontinuity** is used for a surface at which **seismic waves change velocity**.
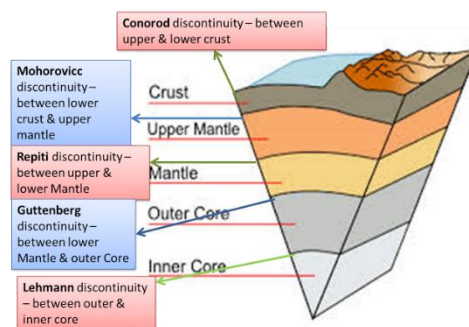
132.   RHINE RIVER

Why in News?

- Germany's Rhine River is entering dry summer months with water levels at their lowest in two decades.

About

- The Rhine is one of the major European rivers, which has its **sources in Switzerland** and flows in a mostly northerly direction and **emptying into the North Sea**.
- It runs for over 1,232 km from its source in the in the **Swiss Alps** (in Switzerland), issuing from the **Rheinwaldhorn Glacier**.
- It is called different names depending on the country it flows through, it is called Rhein in Germany; Rhine in France and **Rijn in Netherlands**.
- **The Rhine flows through six countries** –**Switzerland**, Principality of **Liechtenstein, Austria, Germany, France and the Netherlands** before flowing into the **North Sea at Rotterdam**, as it enters Germany it becomes the border between Germany and France.

134.   PRESENA GLACIER CONSERVATION

Why in News?

- A team of conservationists has begun the process of laying vast tarpaulin sheets to cover over 100,000 sq metres of the Presena glacier in Northern Italy to prevent it from melting due to global warming.

About the conservation

- The conservation project was first undertaken by **Italian firm Carosello-Tonale in 2008** at which time only 30,000 sq. metres of the glacier was covered.
- **Tarpaulin sheets** are being used to cover over 100,000 sq. metres of the Presena glacier.

- Once they stretched over the snow, Bags of sand are used to weigh them down.
- Geotextile **tarpaulins that reflect sunlight**, maintaining a temperature lower than the external one and thus preserving as much snow as possible.
- There are similar glacier cover systems on a few Austrian glaciers, but the surface covered by the tarpaulins is much smaller.
- Presena glacier is situated between the regions of **Trentino and Lombardy** in Northern Italy, the **glacier is part of the Presanella Mountain (Alps) group**.

Polity

136. Attorney General of India

Why in News?

- President of India has reappointed Senior Advocate K.K. Venugopal as Attorney General for India for one year.

About Attorney General of India

- Constitutional Provision ➔ **Article 76** of the Indian Constitution deals with the position of Attorney General of India.
- Appointment ➔ Attorney General (AG) is **appointed by the President**. He must be a person who is qualified to be appointed as a **judge of the Supreme Court**.
- Removal ➔ The **Constitution hasn't explicitly** fixed the term of office of the AG as well as it does **not contain the procedure** and **grounds for his removal**. Hence, he holds office during the **pleasure of the President**.
- Remuneration ➔ The remuneration of AG is **not fixed by the constitution**. He receives such remuneration as **determined by the President**.
- Duties ➔
  - To give **advice to the Government of India** on the legal matters.
  - To perform other legal duties which are referred or **assigned to him by the President**.
  - To discharge the functions conferred on him **by the Constitution** or **any other law**.
- Rights ➔
  - He has the **right of audience in all courts** in the Territory of India.
  - He has the **right to speak** and **to take part in the proceedings** of **both the Houses of Parliament** or their joint sitting and any committee of the Parliament of which he may be named a member but without a right to vote.
  - He enjoys **all immunities** and **privileges** available to the Member of Parliament.
  - He is not considered as a government servant and he can **practise privately too** as he is not debarred from private legal practice.

2. Ranbir Singh Committee

Why in News?

- Recently, the Ministry of Home Affairs (MHA) has constituted a national level committee for reform in criminal law.

About

- Chaired by ➔ **Ranbir Singh**, chairperson, Vice-Chancellor, National Law University (NLU).
- The Committee has **several leading legal academicians** and will **gather opinions online**, **consult with experts** and **collate materials** and submit a report to the Government of India.

4. e-SamikSha Platform

Why in News?

- Cabinet Secretary has ordered a revamp of the e-SamikSha platform to ensure that various milestones and targets put in place since 2014 are being met.

About

- What is it? ➔ It is a **real time**, **online system for monitoring follow-up action** on the decisions taken during the presentations made by different Ministries/Departments to the Prime Minister.
- Developed by ➔ It has been developed by **Cabinet secretariat** with the technical help from **National Informatics Centre** (NIC).

6. First ever e-Lok Adalat

Why in News?

- Recently, Chhattisgarh organises India's first e-Lok Adalat.

About

- The **Chhattisgarh High Court** and the State **Legal Services Authority** organized the e-Lok Adalat.
- **Cases related to money** like settlements, accident claims, bouncing of cheques besides family disputes among others are usually resolved by Lok Adalat.
- In case the parties and lawyers face difficulty in connecting through video-conferencing, they can present their cases even through **WhatsApp video call**.

8. Plea Bargaining

Why in News?

- Many members of the Tablighi Jamaat belonging to different countries have obtained release from court cases in recent days by means of plea bargaining.

About Plea Bargaining

- What is it? ➔ It refers to a **person charged with a criminal offence negotiating with the prosecution** for a lesser punishment than what is provided in law by **pleading guilty** to a less serious offence.
- Origin ➔ Plea bargaining was introduced in **2006** as part of a set of **amendments to the Criminal Procedure Code** (CrPC) as Chapter XXI-A, containing Sections 265A to 265L.
- Who can initiate plea bargaining ➔ The plea bargaining process in India can be initiated only by the accused and the accused will have to **apply to the court for invoking the benefit of bargaining**.
- Cases where Plea Bargaining is allowed ➔
- Someone who has been **chargesheeted for an offence** that does **not attract the death sentence**, **life sentence** or a **prison term** above seven years.
- The offence does **not** have an **impact on the socio-economic condition** of the country.
- The offence is **not committed against a woman** or a **child** **below the age of 14**.

11. Prime Minister's Awards for Excellence in Public Administration

Why in News?

- Ministry of Personnel, Public Grievances & Pensions has recently launched the restructured Prime Minister's Awards for Excellence in Public Administration 2020 scheme and web portal.

About

- Government of India has instituted a scheme in 2006 namely, "The Prime Minister's Awards for Excellence in Public Administration" - **to acknowledge**, **recognize** and **reward the extraordinary** and **innovative work done by Districts/ Organizations** of the Central and State Governments.
- The Scheme was **restructured in 2014** for recognizing the performance of District Collectors in **Priority Programs**, **Innovations** and **Aspirational Districts**.
- The Scheme has been **restructured again in 2020**, to recognize the performance of the District Collectors towards **outcome indicators**, **economic development**, **peoples' participation** and **redressal of public grievances**.
- Nominations have been called in for **four major categories**:
    1. District Performance Indicators Programme
    2. Innovation General Category
    3. Aspirational Districts Program
    4. Namami Gange Program
- The award for the very **first time seeks to recognize** the efforts of District level officials in the Namami Gange Programme.
- The award under the restructured scheme shall be **conferred by the Prime Minister on Rashtriya Ekta Diwas** - October 31, 2020 at the Statue of Unity, Kevadia, Gujarat.

13. SECTION 153 IN THE REPRESENTATION OF THE PEOPLE ACT, 1951

Why in News?

- Political parties are increasingly voicing concerns over holding elections in Bihar amid a pandemic.

About

- The Election Commission (EC) is mandated under law to hold elections at any time **within six months before** the **five-year term of the Lok Sabha** or **Legislative Assembly expires**.
- Under **Section 153** of the Representation of the People Act, 1951, the **Election Commission can** "**extend the time**" for completing an election, but such extension should not go beyond the date of the normal dissolution of the Lok Sabha or the Assembly.
- But, Powers under Section 153 can be **exercised only after an election schedule** has been **notified**.
- If the election schedule is **not notified** then **EC can postpone elections** through its **extraordinary powers under Article 324.**
    o The Commission will have to **inform the government** of its **inability to hold polls on time**.
    o The **government** and the **President** will then **decide the future course** — to impose President's Rule or allow the incumbent Chief Minister to continue for six months.

15. Discretionary powers of Governor

Why in News?

- A Constitution Bench judgment of the SC has held that a Governor is bound to convene a meeting of the Assembly for a floor test on the recommendation of the Cabinet.

About

- In **Nabam Rebia Vs Deputy Speaker 2016 case**, SC held that a Governor cannot employ his 'discretion', and should strictly abide by the "**aid and advice**" of the **Cabinet to summon the House**.
- The Governor can **summon**, **prorogue** and **dissolve the House only on the aid and advice of the Council of Ministers** with the Chief Minister as the head. And not at his own.
- Governor's discretionary powers are **limited** to specified areas like **giving assent** or **withholding/referring a Bill** to the **President** or **appointment of a Chief Minister** or **dismissal of a government** which has lost of confidence but refuses to quit, etc.
- The area for the exercise of his discretion is limited, even in this limited area, **Governor's choice of action should not** be **arbitrary or fanciful**.
- It must be a **choice dictated by reason**, **actuated by good faith** and tempered by caution.

👉 Article 163

- The article explains about discretionary powers of governor, under which it states the following ➔
- If any question arises the decision of the Governor in his discretion shall be **final**, and the **validity of anything done by the Governor** shall **not** be called in **question** on the ground that he ought or ought not to have acted in his discretion.
- The question whether any, and if so what, advice was tendered by Ministers to the Governor shall **not be inquired into in any court**.
- Thus Article 163 of the Constitution does not give the Governor a "**general discretionary power** to **act against or without the advice of his Council of Ministers**".

17. ONLINE DISPUTE RESOLUTION

Why in News?

- Recently, there were calls for advancing Online Dispute Resolution (ODR) in India including by NITI Aayog CEO.

About Online Dispute Resolution (ODR)

- Online Dispute Resolution (**ODR) is form of Alternative dispute redressal mechanism** (ADR) that uses negotiation, mediation and arbitration techniques to resolve disputes **with help of the Internet and ICT**.
- **ODR uses technology and employ data management tools** to ensure predictability, consistency, transparency and efficiency of the judicial process.
- Models under ODR:
  - **Opt-in model**, in which option of **going into mediation is voluntary**.
  - **Opt-out model**, under which it is **mandatory to enter into mediation for at least one session**, and then the **parties have the liberty to opt out if they feel so**.

ODR focuses on

- **Dispute resolution**: Resolving disputes that reach the courts through open, efficient, transparent process.

- **Dispute containment and avoidance**: Facilitate and ensure through ODR that a problem does not reach the stage of a dispute thus ensures a problem does not become a dispute.
- ODR is more suited to complaints that are of low value, high volume and occurring between users with access to internet.
- E- commerce companies in **US began ODR in early 2000** and country court mandates ODR as first step.

ODR across the world

- In **European Union** it is mandatory to all online traders to provide link to EU's ODR platform.
- In **England tax incentives** are provided for cases with mediation under ODR.

IR

137.   United Nations Convention Against Torture (UNCAT)

Why in News?

- The Bahuda Yatra, the return journey of the deities to the Puri Jagannath temple after the annual Rath Yatra, was recently concluded amid permitted restrictions.

About UNCAT

- What is it? ➔ The UNCAT is an __international human rights treaty__, under the review of the UN and was adopted in __1984__.
- Aim ➔ It aims to __prevent torture__ and __other acts of cruel, inhuman, or degrading treatment__ or punishment around the world.
- Implementation ➔ The convention __requires states to take effective measures__ to prevent torture in any territory under their jurisdiction and forbids states to transport people to any country where there is reason to believe they will be tortured.
- Since the convention's entry into force, the __absolute prohibition against torture__ and __other acts of cruel__, __inhuman__, or __degrading treatment__ or punishment has become __accepted as a principle of customary international law.__
- The Committee against Torture (CAT) ➔ It is a body of human rights experts that __monitors implementation of the Convention__ by State parties.
- India Position ➔ __India signed the convention in 1997__ but it remains among a handful of countries including Pakistan and China which are __yet to ratify__ the convention.

2. INTERPOL

Why in News?

- Iran has issued an arrest warrant for US President Donald Trump and has requested the Interpol to issue a "Red Notice" and detain him and others who they believe carried out the drone strike that killed Iranian general Qassem Soleimani in Baghdad on January 3 this year.

About

- Full name ➔ The __International Police Organisation__ is commonly known as Interpol.
- Mandate ➔ It is an international organization facilitating __international police cooperation__ against cross-border terrorism, trafficking, and other crime.
- Governance ➔ All decisions regarding the activities of INTERPOL are made by the General Assembly which is it's 's __supreme governing body__ which __meets annually__.
- Status ➔ It is '__NOT__' a __unit__ or __part of united nation system__. It is an __independent international organization__.
- HQ ➔ __Lyon in France__.
- Founded in ➔ __1923__.
- __India joined__ the organisation __in 1949__, and is one of its oldest members.

- Red Notice ➜ To **seek the location and arrest of a person** wanted by a judicial jurisdiction or an international tribunal with a view to his/her extradition. It is the "**closest instrument to an international arrest warrant**."

4. Countering America's Adversaries Through Sanctions Act

Why in News?

- Recently, the USA has reiterated its position and asked all its allies and partners, including India, to stop transactions with Russia.

About

- Purpose ➜ Countering America's Adversaries through Sanctions Act (CAATSA), aims at **taking punitive measures against Russia, Iran, and North Korea**.
- It was passed in the backdrop of **Russia's military intervention in Ukraine** and its alleged meddling in the 2016 US presidential elections.
- It primarily deals with **sanctions on the Russian oil and gas industry**, **defence and security sector, and financial institutions**.
- It empowers the US President to **impose at least 5 of 12 listed sanctions** enumerated in **Section 235** on persons engaged in a "**significant transaction**" with the Russian defence and intelligence sectors.
- Concerns ➜ **India** could face **US sanctions** for **purchasing high-value military defense items**, in particular the **S-400 Triumf missile defense system** from Russia under the act.

  👉 **S-400**

- It is an **advanced air defence system** that can simultaneously track numerous incoming objects — all kinds of aircraft, missiles and UAVs in a radius of a few hundred kilometres and launch appropriate missiles to neutralise them.

WHAT IS CAATSA?

Countering America's Adversaries Through Sanctions Act. Enacted in August 2017, came into effect in January. Targets Iran, North Korea and Russia

INDIA'S WORRY

One of its provisions targets Russian defence firms and countries doing business with them. India has defence deals worth over $12 billion in the pipeline with Russia

THE SOLUTION

New clauses inserted by the US in the National Defense Authorization Act (US military budget), which empower the Trump administration to suspend CAATSA sanctions, but it has to certify that India is reducing its dependence on Russia

6. Open Skies Agreement

Why in News?

- The UAE is keen to have an open sky agreement with India.

About

- The **National Civil Aviation Policy, 2016**, allows the government to enter into an '**open sky' air services agreement** on a **reciprocal basis** with SAARC nations as well as countries beyond a 5,000-kilometre radius from New Delhi.

- This implies that nations within this distance need to enter into a **bilateral agreement** and **mutually determine the number of flights** that their airlines can operate between the two countries.
- India has open sky agreements with **Japan, Greece, Jamaica, Guyana, Czech Republic, Finland, Spain and Sri Lanka.**

8. Chabahar Rail Line

Why in News?

- The Iranian government has decided to proceed with the construction of Chabahar Rail Project on its own, citing delays from the Indian side in funding and starting the project.

About Chabahar Rail Line

PROJECT ROADMAP

- What is it? ➔ It is a **628-kilometre** railway line that **connects Chabahar Port to Zahedan**, along the border with Afghanistan.
- Involved bodies ➔ The project was to be carried out between **Indian Railways Construction Ltd** (IRCON) and the **Iranian Railways** as a part of a trilateral agreement signed in 2016 between **Iran**, **India and Afghanistan**.
- The entire project would be **completed by March 2022**, and that Iranian Railways will **proceed without India's assistance**. However, the work was never started as the **United States imposed sanctions on Iran**.
- Iran will be using approximately **$400 million** from the Iranian **National Development Fund**.
- Concerns for India ➔ The development comes as China finalizes a **massive 25-year**, **$400 billion strategic partnership deal with Iran**.

👉 About Chabahar Port

- Location ➔ Chabahar port is located on the **Gulf of Oman** and is only 72 km away from the Gwadar port in Pakistan which has been developed by China.
- The port serves as the **only oceanic port of Iran** and consists of two separate ports named **Shahid Beheshti** and **Shahid Kalantari**.
- Significance for India ➔ It is intended to provide an **alternative route for trade** between India and Afghanistan and is also considered as a **gateway for trade with central Asian nations**.

10.   Afghanistan–Pakistan Transit Trade Agreement

Why in News?

- Pakistan has allowed Afghanistan to send goods to India using the Wagah border. The decision is a part of Islamabad's commitment under the Afghanistan-Pakistan Transit Trade Agreement (APTTA).

About APTTA

- The Afghanistan–Pakistan Transit Trade Agreement (APTTA) is a **bilateral trade agreement** between **Pakistan and Afghanistan.**
- It was signed in **2010**.
- It seeks towards **greater facilitation** in the **movement of goods amongst the two countries**.
- Expected Benefits ➔
  - o **India-Afghanistan trade** is expected to **grow**.
  - o **Boost availability of Afghan fruit** produce in India.
- Concern ➔ Pakistan is **silent** on the issue of **trade from India to Afghanistan**.

8. UNITED NATIONS ECONOMIC AND SOCIAL COUNCIL (ECOSOC)

Why in News?

- On United Nations' 75th Anniversary, PM Modi will virtually address the valedictory of high-level segment of United Nations Economic and Social Council (ECOSOC) on July 17.

About ECOSOC

- Formation ➔ The UN Charter established ECOSOC in **1945** as one of the six main organs of the United Nations.
- Members ➔ The Council consists of **54 Members States**, which are **elected yearly by the General Assembly** for overlapping three-year terms.
- Functions ➔ It is the **central platform** for **fostering debate and innovative thinking**, forging consensus on ways forward, and coordinating efforts to achieve internationally agreed goals. It is also responsible for the **follow-up to major UN conferences and summits**.
- ECOSOC's annual High-Level Segment includes ➔
  - o **High-Level Political Forum** provides political leadership, guidance and recommendations for sustainable development, and reviews progress in implementing sustainable development commitments.
  - o **Development Cooperation Forum** reviews trends and progress in development cooperation.
- Over **1600 non-governmental organisations** have been granted **consultative status** to the Council to participate in the work of the United Nations.

12. U.S.-India Strategic Energy Partnership (SEP)

Why in News?

- India and the United States have issued a joint statement on the U.S.-India Strategy Energy Partnership.

About SEP

- It was **established in 2018** to **build upon energy partnership** and set the stage for meaningful engagements through **robust government-to-government cooperation** and **industry engagement**.
- Pillars ➔ The SEP organizes inter-agency engagement on both sides across four primary pillars of cooperation: (1) **Power and Energy Efficiency**; (2) **Oil and Gas**; (3) **Renewable Energy**; and (4) **Sustainable Growth**.

  👉 **Key Takeaways**

- **Partnership to Advance Clean Energy (PACE)** ➔ It was **launched in 2009** by India and the United States to **accelerate inclusive**, **low carbon growth** by **supporting research and deployment of clean energy technologies**.
- **Hydrogen Task Force** ➔ It is a **public-private initiative** launched by **India and US** to help **scale up technologies** to **produce hydrogen from renewable energy and fossil fuel sources** and to bring down the cost of deployment for enhanced energy security and resilience.
- **Solar Decathlon** ➔ The two countries signed an **MOU** to collaborate on **India's first-ever Solar Decathlon® India in 2021** establishing a collegiate competition to prepare the next generation of building professionals to design and build high efficiency buildings powered by renewables.
- **Retrofit of Air Conditioning to Improve Air Quality for Safety and Efficiency (RAISE)** ➔ It is a joint initiative of **USAID and Energy Efficiency Services Ltd** (EESL) for **healthy and energy efficient buildings**.
- **South Asia Women in Energy (SAWIE) platform** ➔ It was launched by USAID with an aim to **promote women's empowerment and gender sensitization** in the **energy sector** in the South Asia region.
- **India Energy Modeling Forum** ➔ It was launched **jointly by USAID and NITI Aayog** to provide a platform for policy makers to **study important energy and environmental issues** and **ensure induction of modelling** and analysis in informed decision-making process.

14.Global Fund for AIDS, TB and Malaria (GFATM)

Why in News?

- Vulnerable groups such as sex workers, transpersons, HIV/AIDS have petitioned Global Fund for AIDS, TB and Malaria (GFATM) against being deprived of sources of livelihood during the pandemic.

About GFATM

- Formation ➔ It was **created in 2002** as a partnership between **governments**, **civil society**, the **private sector** and **people affected** by the diseases.
- Aim ➔ To raise, manage and invest the world's money to **end epidemics of HIV/AIDS, tuberculosis and malaria**.
- Headquarters ➔ **Geneva, Switzerland**.

👉 **Also Remember**

- Tuberculosis (TB) ➔ It is an infectious **airborne bacterial disease** caused by **Mycobacterium tuberculosis**.
- Malaria ➔ It is a disease caused by **Plasmodium parasites** that are transmitted to people through the bites of infected **female Anopheles mosquitoes**.
- HIV ➔ It is the **human immunodeficiency virus** which targets the immune system and weakens people's defense systems. AIDS is the acquired **immune deficiency syndrome**, the most advanced stage of HIV infection.
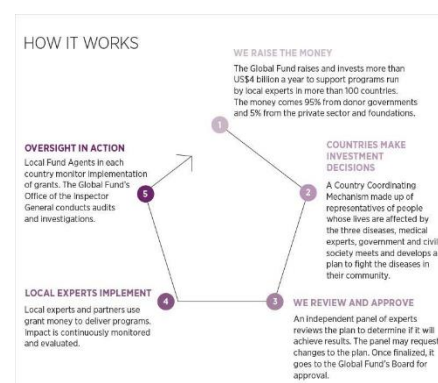
16.COVAX Alliance

Why in News?

- India has expressed its keen interest in joining the COVAX alliance.

About COVAX Alliance

- What is it? ➔ It is a facility that aims to **guarantee rapid**, **fair** **and equitable access** to COVID-19 vaccines for every country in the world.
- Bodies Involved ➔ It is **co-led** by **Global Alliance for Vaccines and Immunizations** (GAVI), Coalition for Epidemic Preparedness Innovations (**CEPI**) and **WHO**.
- The alliance also forms a key **part of the Access to COVID-19 Tools(ACT) Accelerator**.

👉 **Also Remember**

- ACT Accelerator ➔ It is a **Global Collaboration led by WHO** to speed up the development, production of COVID-19 diagnostics, therapeutics and vaccines and ensure equal access to treatments for rich and poor.
- GAVI ➔ It is a **global Vaccine Alliance** created in **2000** by bringing **together public and private sectors** with the shared goal of creating equal access to new and underused vaccines for children living in the world's poorest countries.
- CEPI ➔ It is a **global partnership between public**, **private**, **philanthropic and civil society organisations** launched in Davos in **2017** to develop vaccines against emerging infectious diseases and enable equitable access to these vaccines for people during outbreaks.

18.Istanbul Convention

Why in News?

- Poland has decided to withdraw from Istanbul Convention- a treaty aimed at preventing violence against women.

About Istanbul Convention

- It is also known as the **Council of Europe convention** on combating and preventing violence against women and domestic violence.
- When was the convention adopted? ➔ It was adopted by the Council of Europe Committee of Ministers in **2011**. It came into **force in 2014**.
- What does the convention say? ➔ The convention sets **minimum standards for governments** to meet when **tackling violence against women**. When a government ratifies the Convention, they are **legally bound** to follow it.
- Members ➔ As of March 2019, it has been **signed by 45 countries** and the **European Union**.

👉 **Council of Europe**

- What is it? ➔ It is an international organisation whose aim is to **uphold human rights**, **democracy** and the **rule of law in Europe**.
- Founded ➔ **1949**
- Members ➔ it has **47 member states**, 27 of which are members of European Union (EU).

- However, the **organisation is distinct from the EU**.

20. International Thermonuclear Experimental Reactor (ITER)

Why in News?

- The truly massive International Thermonuclear Experimental Reactor (ITER) has entered its years-long assembly phase.

About ITER

- What is it? ➔ International Thermonuclear Experimental Reactor (**ITER**) is **world's largest experimental fusion facility in France.**
- It is **most complex science project** in human history, started in **2010**.
- It will use **hydrogen fusion**, controlled by superconducting magnets, to produce massive heat energy.
- The **magnetic fusion device** has been designed to prove the **feasibility of fusion** as a large-scale and carbon-free source of energy based on the same principle that powers our Sun and stars.
- The project is funded and run by seven member entities ➔ The European Union, China, India, Japan, Russia, South Korea and the United States.
- Significance ➔ It is the **first industrial-scale fusion reactor** and it will illuminate the way to produce clean, cheap, and abundant energy for millions of years.
- It will start generating a molten mass of electrically-charged gas "**plasma" inside a core by 2025**.
- What is Fusion? ➔ Fusion is the **energy source of the Sun and stars**. In the tremendous heat and gravity at the core of these stellar bodies, **hydrogen nuclei collide, fuse into heavier helium atoms** and **release tremendous amounts of energy in the process.**

22. E-DIPLOMACY

Why in News?

- The first ever India Australia virtual summit in the wake of COVID-19 crisis has brought the concept of e-diplomacy to limelight.

About

- Globally, many nations have taken to **e diplomacy routes to keep the momentum of foreign relations** going, amid COVID-19.
- Other recent summits like Extraordinary virtual G20 Leaders' Summit, SAARC virtual summit, Non-Aligned Movement Summit have been held virtually.

About e diplomacy:

- E diplomacy is the **use of internet and communication technologies by nations to define and establish diplomatic goals and objectives** and to efficiently carry out the functions of diplomats.
- These functions include **representation and promotion of the home nation**, establishing both **bilateral and multilateral relations**, **consular services** and **social engagement.**

24. EUROPEAN UNION VIETNAM FREE TRADE AGREEMENT

Why in News?

- Vietnam's National Assembly ratified the European Union Vietnam Free Trade Agreement (EVFTA) and the EU-Vietnam Investment Protection Agreement (EVIPA) paving the way for it to take effect.

About

- EVFTA is the **second FTA between the EU and an ASEAN country**, after Singapore.
- **It would abolish 99% of customs duties**, eliminate bureaucratic hurdles by aligning regulatory standards for goods like cars and medicines, and ensure easier market access for both European and Vietnamese companies.
- This is the first FTA that has been signed after the outbreak of the global COVID-19 pandemic that has resulted in a disruption of supply chains.
- EVIPA, a part of a free trade agreement (FTA), is an agreement between EU and Vietnam, which **aims to protect investors and investments in a host country.**
- In many segments, **India is closely competing with Vietnam**.
- Since Vietnam has signed an FTA, India will have to face major impacts in those segments over a period of time.

26. Jet Zero Plan

Why in News?

- Recently, the United Kingdom (U.K.) announced a 'Jet Zero' plan to bring down its aviation emissions.

About

- Aim ➔ The Jet Zero aims to bring down greenhouse gas emissions from aviation to make carbon-free transatlantic flights possible within a generation.
- A transatlantic flight is the flight of an aircraft across the Atlantic Ocean from Europe, Africa, or the Middle East to North America, Central America, or South America, or vice versa.
- **Jet Zero Council** ➔ A group called 'Jet Zero Council' has been formed by the U.K. government by bringing together leaders from the aviation sector, environmental groups and government.
- This group has been given charge for making net zero emissions possible for future flights.
- The U.K. government is also funding **Velocys** (aviation biofuels making company) in support of its plans to **build a major jet biofuel plant in Lincolnshire**.
- **Net-zero emissions** means **doing away with fossil fuels** and other sources of emissions wherever possible. It also involves any emissions that are balanced by absorbing an equivalent amount from the atmosphere.

28. A UNIQUE TWIN SUMMIT

Why in News?

- The World Economic Forum summit in Davos January 2021, with the theme "the Great Reset".

About

- The World Economic Forum (**WEF**) will adopt a **new twin-summit format** for its **next annual Davos meeting in January 2021**, by bringing together leaders from across the globe for in-person as well as virtual dialogues with a theme of **'The Great Reset'**.
    - o The gathering of the world's rich and powerful, held every year in Davos, the Swiss ski resort town, will also open its doors virtually for everyone across the world online and through a network of more than 400 hubs globally.
    - o **'The Great Reset'** will be the **theme of this unique twin summit in January 2021**. In the run-up to the main annual meeting, the WEF will also host a virtual series, The Great Reset Dialogues.

Society

139.   Sanskritik Sadbhav Mandap

Why in News?

- Union Minister of Minority Affairs has laid the foundation stone for "Sanskritik Sadbhav Mandap" in Rampur (Uttar Pradesh).

About Sanskritik Sadbhav Mandap

- What is it? ➔ It is a **community center** which is being established by the **Ministry of Minority affairs** under Pradhan Mantri Jan Vikas Karykram (PMJVK).
- Purpose ➔ The centre will be **utilized for various socio-economic-cultural activities**, **skill development training**, **coaching**, **relief activities** during disaster such as Corona and different sports activities.

👉 **Pradhan Mantri Jan Vikas Karyakram (PMJVK)**

- Implemented by ➔ the **Ministry of Minority Affairs**
- Objective ➔ to **provide better socio economic infrastructure facilities** to the minority communities particularly in the field of education, health & skill development.
- Funding ➔ **Centrally Sponsored Scheme**.

140.   World Population Day

Why in News?

- World Population Day is observed annually on 11 July.

About

- Aim ➔ To focus attention on the **urgency and importance of population issues**.
- Origin ➔ The day was **established in 1989** as an initiative taken by the Governing Council of the United Nations Development Programme (**UNDP**).
- Theme ➔ "**How to safeguard the health and rights of women and girls now**."

👉 **United Nations Population Fund**

- What is it? ➔ It is a **subsidiary organ of the UN General Assembly** and works as a **sexual and reproductive health agency.**
- Formation ➔ It was established as a **trust fund in 1967** and began **operations in 1969**.
- In 1987, it was officially **renamed** the United Nations Population Fund but the original abbreviation, '**UNFPA'** for the **United Nations Fund for Population Activities** was retained.
- Functions ➔ UNFPA works directly to **tackle Sustainable Development Goals** on health (**SDG3**), education (**SDG4**) and gender equality (**SDG5**).
- Headquarters ➔ **New York, United States**.

- Report ➔ **State of World Population Report**.

142. ATL App Development Module

Why in News?

- NITI Aayog's Atal Innovation Mission (AIM) has launched the 'ATL App Development Module' for school children all across the country.

About

- What is it? ➔ It is a **free online course on app development** that aims to hone the skills of school students and **transform them from App users to App makers** under the Atal Tinkering Labs initiative.
- Bodies Involved ➔ It has been launched by **Atal Innovation Mission** (AIM) in collaboration with Indian homegrown **startup Plezmo**.

👉 **Atal Tinkering Labs (ATL)**

- They have been established under the Atal Innovation Mission (AIM) with an aim to **foster curiosity, creativity and imagination in young minds** and **inculcate skills** such as design mindset, computational thinking, adaptive learning, physical computing among others.
- Funding ➔ AIM will provide **grant-in-aid of Rs. 20 Lakh** to **each school** that includes a one-time establishment cost of Rs. 10 lakh and operational expenses of Rs. 10 lakh for a **maximum period of 5 years** to each ATL.
- Eligibility ➔ Schools (minimum Grade VI – X) **managed by Government**, **local body** or **private trusts/society can set up ATL.**

144. NISHTHA programme

Why in News?

- Union HRD Minister has launched the first online National Initiative for School Heads and Teachers Holistic Advancement (NISHTHA) programme for 1,200 key resources persons of Andhra Pradesh.

About NISHTHA programme

- What is it? ➔ It is an **Integrated Teacher Training Programme** at the elementary stage under Samagra Shiksha Abhiyan.
- Aim ➔ To **train teachers and school principals at the elementary stage** so that they can encourage and foster critical thinking in students.
- Coverage ➔ It aims to build capacities of around **42 lakh participants** by:
  - Covering **all teachers** and **heads of schools** at the elementary level in all Government schools,
  - **Faculty members** of State Councils of Educational Research and Training (**SCERTs**) and District Institutes of Education and Training (**DIETs**),
  - **Block Resource Coordinators** and **Cluster Resource Coordinators** in all States and UTs.

- Implementation ➔ The training will be conducted by **Key Resource Persons** (KRPs) and **State Resource Persons** (SRP) identified by the State and UTs who will in turn be trained by **120 National Resource Persons identifie**d from NCERTs among others.
- **Samagra Shiksha Abhiyan** ➔ It is a **Centrally Sponsored Scheme** launched as an integrated scheme for school education extending **from pre-school to class XII** to ensure **inclusive and equitable quality education** at all levels of school education.

146. Global Multidimensional Poverty Index

Why in News?

- The 2020 Global Multidimensional Poverty Index (MPI) has been released.

About MPI

- Released by ➔ The index has been released by **Oxford Poverty and Human Development Initiative**(OPHI) in collaboration with the **United Nations Development Programme**.
- Aim ➔ To provide a **comprehensive picture of global trends** in multidimensional poverty.
- Title of the report ➔ **Charting pathways out of multidimensional poverty**: **Achieving the SDGs**.
- Parameters ➔ The index identifies how people are being left behind across three key dimensions: **health, education** and **standard of living, comprising 10 indicators.**
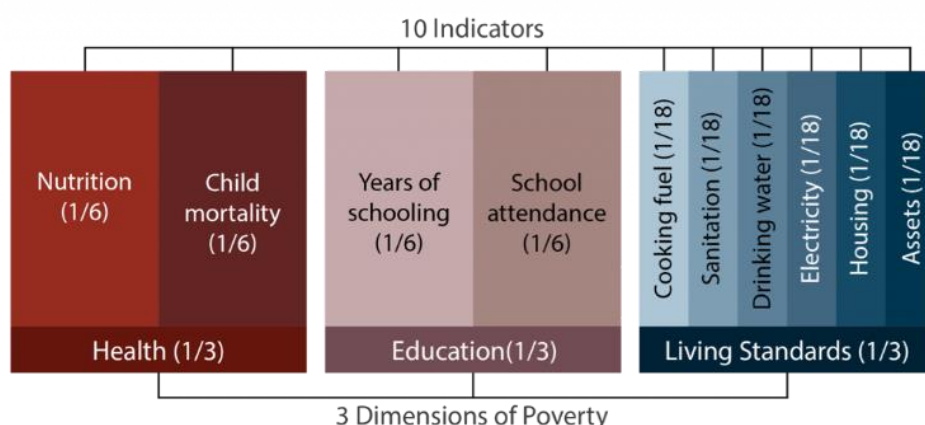
👉 **Key Takeaways**

- Around **1.3 billion people** are **still living in multidimensional poverty**. **Half** of multidimensionally poor people are children **under age 18**.
- About **84 %** of multidimensionally poor people live in **Sub-Saharan Africa and South Asia**.
- India Specific Data: During 2005-06 and 2015-16, **India was successful in lifting around 273 million people** out of multidimensional poverty.

148. YuWaah

Why in News?

- Union Ministry of Youth Affairs has recently signed a Statement of Intent with YuWaah.

About

- Aim ➔ The partnership aims to **promote volunteerism among the youth** of India as well as to help them **transition from education** and **learning to productive work**, skilling and being active citizens.

👉 **GENERATION UNLIMITED INDIA (YuWaah!)**

- Background ➔ UNICEF had launched Generation Unlimited India (YuWaah) in **2019**.
- What is it? ➔ It is a **multi-stakeholder alliance** which aims to facilitate youth to gain relevant skills for productive lives and the future of work.
- The target age group ➔ **adolescent girls and boys**.
- Mission ➔ Its key mission is to **promote among youth foundational skills**, **life skills** and **flexible learning** and identifying and scaling impactful delivery models.

150. INDSAT Exam

Why in News?

- Union Ministry of HRD conducted the first ever Indian Scholastic Assessment (Ind-SAT) Test 2020 under its 'Study in India' programme.

About INDSAT Exam

- Background ➔ It was announced in **2020-21 budget**.
- What is it? ➔ Ind-SAT is an exam for **grant of scholarships and admissions** to **foreign students** for studying in select Indian universities.
- Criteria ➔ The **scores** will serve as a criterion to shortlist the meritorious students **for undergraduate** and **post-graduate scholarships**.
- Implementing agency ➔ **EdCIL (India) Limited**, a PSU under MHRD and the implementing agency of SII handled the registrations and other aspects of the examination.
- Under Study in India is a programme of MHRD, foreign students come to study in **116 select higher education institutions** in India for **under graduate** and **post graduate programmes**.

👉 **Study in India Programme**

- What is it? ➔ It is a **flagship project** under the **Ministry of HRD**, the Govt. of India, was launched in April 2018.
- Features ➔ This program has been put together to **facilitate and encourage the global student community** to **study in India**, which offers a plethora of courses with its top-ranked institutes.
- Implementing agency ➔ **EdCIL India Limited**, a PSU under MHRD, is the **implementing agency** of the programme.

152. DP Singh Committee

Why in News?

- Ministry of Human Resources Development had constituted a committee recently for preparing guidelines and measures to ensure more and more students stay in India and study in India.

About

- **Prof. D P Singh**, Chairman of University Grant Commission (UGC) will be the head of the committee.
- The committee is also supposed to recommend a mechanism **to increase the intake in well-performing universities**.
- The Committee will **submit the report in a fortnight**.

154. Unnat Bharat Abhiyan (UBA)

Why in News?

- TRIFED Signed MoU with IIT, Delhi for Unnat Bharat Abhiyan (UBA).

About

- What is it? ➔ It is a **flagship program** of the Ministry for Human Resource Development (**MHRD**).
- Aim ➔ It aims to **link the Higher Education Institutions** with a set of at least (5) villages,so that these institutions can **contribute to the economic and social betterment** of these village communities using their knowledge base.
- Implementation ➔
  - A **National Steering Committee** (**NSC**) has been **constituted by the MHRD** for actual **implementation**, **continuous guidance** and **monitoring** of the programme at the national level.
  - **IIT Delhi** has been designated to be the **Coordinating Institute** (CI) for the Unnat Bharat Abhiyan (UBA).
- Unnat Bharat Abhiyan 2.0 (UBA 2.0) ➔ is the **upgraded version** of Unnat Bharat Abhiyan 1.0. UBA 2.0 was launched in 2018. The scheme is **extended to all educational institutes**; however under Unnat Bharat Abhiyan 2.0 participating institutes are selected based on the fulfillment of certain criteria.
- Significance of the move ➔
- With the partnership with IIT Delhi and 'Unnat Bharat Abhiyan', the tribal forest dwellers engaged in Minor Forest Produce will get **exposure to newer processing technologies**, **product innovation**, **mentorship**, **transformational digital systems** and **handholding**.

👉 **Tribal Cooperative Marketing Development Federation of India (TRIFED)**

- TRIFED is a **national-level apex organization** functioning under administrative control of **Ministry of Tribal Affairs.**
- Established ➔ August **1987**.
- Headquartered ➔ **New Delhi**.
- Objective ➔ Its core objective is to **institutionalize trade of Minor Forest Produce** (MFP) and **Surplus Agriculture Produce** (SAP) collected or cultivated by tribals as they are heavily dependent on these natural products for their livelihood.

156. URBAN POOR

Why in News?

- The disproportionate impact of COVID-19 pandemic on urban informal workers including their migration from cities to their native places brought into focus the issues of urban poor.

About

- India's urban population has **grown rapidly** over the last century **from 25 million in 1901 to 377 million in 2011 which constitute 31.2%** of the total population in the country.
- But the urban areas have **failed to meet the demands of increasing population** pressure resulting in large gaps in provisioning of basic amenities of housing, drinking water, sewerage, transportation etc.

Poverty Line in India (per-capita per month at 2011-12 prices)- *All data for 2011-12*					
Committee on Poverty Estimation	Rural Poverty Line	Urban Poverty Line	Rural Poverty Level	Urban Poverty Level	All India Poverty Level
Tendulkar committee	Rs. 816	Rs. 1000	25.4%	13.7%	21.9%
Rangarajan Committee	Rs. 972	Rs. 1407	30.9%	26.4%	29.5%

Government Interventions for Urban Poor:

- The **Ministry of Housing and Urban Poverty Alleviation (MoHUPA)** is the nodal agency at the Centre responsible for development of urban poor. There are various schemes which address various vulnerabilities of the urban poor.
- To address Housing Vulnerability ➔ The **Pradhan Mantri Awas Yojana (Urban)** Programme launched by the MoHUPA, in Mission mode envisions **provision of Housing for All by 2022**. The Mission seeks to address the housing requirement of urban poor **including slum dwellers**.
- Also, recently Government approved a scheme named Developing of **Affordable Rental Housing Complexes (ARHCs)** for urban migrants/poor.
- To address Economic Vulnerability ➔
  - MoHUPA is implementing a Centrally Sponsored Scheme **Deendayal Antyodaya Yojana-National Urban Livelihoods Mission (DAY-NULM)** for reducing the poverty and vulnerability of urban poor households since 2013. The Mission covers all the statutory towns, to be decided by the State as per local need and capability.
  - Also, the **Street Vendors (Protection of Livelihood and Regulation of Street Vending) Act, 2014** aims to protect the rights of urban street vendors and to regulate street vending activities. So far 33 States/UTs have notified the scheme. **Meghalaya has its own Street Vendors Act**.
- To address Social Vulnerability ➔ **Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY), Pradhan Mantri Suraksha Bima Yojana (PMSBY) and Atal Pension Yojana (APY)** seek to bring **unorganised sector workers** and poor across the country (**including rural areas**) under the safety net of insurance and pension. More recently, **Pradhan Mantri Shram Yogi Maan-dhan (PM-SYM) - A pension scheme for unorganised** workers was launched.

30.   North Eastern Region Community Resource and Management

Why in News?

- Union Minister for Development of North Eastern Region (DoNER) has interacted with Self Help Groups associated with North Eastern Region Community Resource and Management Program (NERCORMP).

About NERCORMP

- What is it? ➔ North Eastern Region Community Resource Management Project (NERCORMP) is a **livelihood and rural development project.**
- Aim ➔ To **transform the lives of the poor and marginalized tribal families** in **North East** (NE) India.
- Objectives ➔
- **Social mobilization, organization** and **capacity building** to tap and realize the great potential of the communities.
- **Intervene with the economic, social activities and infrastructure** with predominant thrust on income generating activities to achieve economic transformation.
- Bodies Involved ➔ It is a **joint initiative** of the North Eastern Council (**NEC**), Ministry of DoNER and International Fund for Agricultural Development (**IFAD**).
- Implementation ➔ It is operating in four states **Arunachal Pradesh, Assam, Meghalaya and Manipur**

👉 **International Fund for Agricultural Development (IFAD)**

- It is an **international financial institution** and a **specialised agency of the United Nations** that works to address poverty and hunger in rural areas of developing countries.
- Headquartered ➔ **Rome, Italy**.

Security

158.   New Defence Weapons Approved

Why in News?

- Recently, the Defence Acquisition Council (DAC) approved several proposals that will boost the combat capabilities of all three services—Army, Navy and the Air Force.

About

- Proposals ➔ It includes **buying of missile systems and additional fighter jets**.
- Cost of Proposal ➔ It will cost around **Rs. 39000 crore**. The acquisitions from Indian Industry will cost around Rs. 31,130 crore and rest acquisitions will be done from Russia.

👉 **Pinaka Ammunition**:

- What? ➔ The Pinaka weapon system is an **all-weather**, **indirect fire**, **free flight artillery rocket system**.
- Components ➔ Multi Barrel Rocket launcher, Battery Command Post, Loader cum Replenishment Vehicle, Replenishment Vehicle and Digi Cora MET Radar.
- Developed by ➔ **DRDO**.

👉 **Astra Missiles**:

- What? ➔ Astra missiles are **Beyond Visual Range** (BVR) **air-to-air missile**.
- Features ➔ It is designed to be mounted on a fighter aircraft and is also designed to engage and **destroy highly manoeuvring supersonic aircraft**.
- Range and speed ➔ It has a range of over **70 km** and can fly towards its target at a **speed of over 5,555 km per hour**.
- The missile has **all-weather day and night capability**.
- Developed by ➔ **DRDO**

👉 **MIG 29 Fighter jets**:

- What? ➔ It is a **twin-engine**, **multirole fighter jet**, developed by the **Soviet Russia** in the 1970s. It has been **upgraded since**.

👉 **Su-30 MKI Fighter jets**:

- What? ➔ The Sukhoi Su-30 is a **twin-engine**, **two-seat supermaneuverable fighter** aircraft.
- Developed by ➔ Russia's Sukhoi Aviation Corporation.
- Features ➔ It is a multirole fighter for all-weather, air-to-air and air-to-surface deep prohibition missions.

👉 **Defence Acquisition Council**

- What is it? ➔ It is the **highest decision-making body** in the Defence Ministry for deciding on new policies and capital acquisitions for the three services (Army, Navy and Air Force) and the Indian Coast Guard.
- Chairman ➔ The **Minister of Defence** is the **Chairman** of the Council.

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

160. Australia and the Malabar Exercise

Why in News?

- India to shortly take a call on Australia's inclusion in Malabar.

About Malabar Exercise

- EX-Malabar began as a bilateral naval exercise between **India and the U.S. in 1992**.
- It was expanded into a **trilateral format** with the **inclusion of Japan in 2015**.
- India did not include Australia in the exercises in 2018 and 2019, while the **bilateral AUSINDEX naval exercise expanded** in scope and complexity.

👉 **Quadrilateral Security Dialogue**

- The Quadrilateral Security Dialogue (QSD, also known as the Quad) is an **informal strategic forum** between the **USA, Japan, India and Australia**.
- It is maintained by **semi-regular summits**, information exchanges and military drills between member countries.
- The dialogue was **paralleled by joint military exercises** of an unprecedented scale, titled Exercise Malabar.
- The diplomatic and military arrangement was widely viewed as a response to **increased Chinese economic and military power**.

162. IAF Gets Apache Helicopters

Why in News?

- Boeing handed over the last of the five AH-64E Apache attack helicopters to the Indian Air Force (IAF), completing the contract for 22 Apaches.

About AH-64E Apache Attack Helicopter

- These are all-weather capable, easily maintainable helicopters and have high agility and survivability against battle damage.
- Features ➔
    - Carry out **precision attacks at standoff ranges** and **operate in hostile airspace** with threats from the ground.
    - **Transmit** and **receive battlefield pictures** through data uplinking and networking.
    - **Shoot fire and forget anti-tank guided missiles**, **air to air missiles**, **rockets** while providing the versatility to helicopter in network-centric aerial warfare.
    - Carries **fire control radar**, which has a **360° coverage** and nose-mounted sensor suite for target acquisition and night vision systems.
- Boeing's **joint venture** in Hyderabad, **Tata Boeing Aerospace Limited**, has been producing aero-structures for the AH-64 Apache helicopter for both the USA Army and international customers.

164.   National Intelligence Grid (NATGRID)

Why in News?

- The National Intelligence Grid (NATGRID) has signed a memorandum of understanding with the National Crime Records Bureau (NCRB) to access the centralised online database on FIRs and stolen vehicles.

About NATGRID

- What is it? ➔ NATGRID initially **started in 2009** is an **online database** for collating scattered pieces of information and putting them together on one platform.
- It **links intelligence and investigation agencies**.
- NATGRID is **exempted** from the **Right to Information Act, 2005** under sub-section (2) of Section 24.
- Who can access the data? ➔ At least **10 Central government agencies**, such as the **Intelligence Bureau, Research and Analysis Wing** and **others** have access to the data on a secured platform.
- Concerns ➔ NATGRID has faced opposition on charges of possible **violations of privacy** and **leakage of confidential personal information**.

👉 National Crime Records Bureau (NCRB)

- What is it? ➔ The NCRB is a government agency responsible for **collecting and analysing crime data** as defined by the **Indian Penal Code** (IPC) and **Special and Local Laws** (SLL).
- Headquartered ➔ **New Delhi** and is part of the **Ministry of Home Affairs** (MHA).
- Formation ➔ NCRB was set-up in **1986** to function as a **repository of information on crime and criminals** so as to assist the investigators in linking crime to the perpetrators.
- Mission ➔ To **Empower Indian Police with IT** and **criminal Intelligence** to enable them to uphold the law and protect people & to provide leadership and excellence in crime analysis particularly for serious and organized crime.

166.   Carmel and Arad

Why in News?

- Two new Israeli assault rifles Arad and Carmel now set to be manufactured in India.

About Carmel

- Carmel is a **multi-purpose, modular, 5.56X45mm caliber assault rifle**.
- The rifle can be **easily customised, depending on the operational needs**, military or law enforcement tasks — vehicle patrol, CQB (close-quarters combat), undercover missions, short and medium combat engagement, diverse police operations, VIP protection, and more.

👉 Arad

- Arad is an **M4-type Assault Rifle**, intended for all kinds of combat scenarios with its **ability to change calibers**.
- The rifle can be **changed to shoot two different caliber bullets** — **5.56 and 300 BLK**.

168.   Spike Missiles

Why in News?

- Indian Army is planning to place orders for more Spike anti-tank guided missiles from Israel under the emergency financial powers granted to the services.

About Spike Missiles

- What is it? ➜ Spike is an **Israeli fire-and-forget anti-tank guided missile** and **anti-personnel missile**.
- Developed and designed by ➜ the Israeli company **Rafael Advanced Defense Systems**.
- Features ➜ It is available **in man-portable, vehicle-launched**, and **helicopter-launched variants**.
- Used by ➜ **infantry soldiers, special rapid reaction forces, ground forces and helicopter aircrew**.
- It can work in **non-line-of-sight** (NLOS) **mode** allowing the gunner to operate from a covered position.

👉 Man-Portable Anti-Tank Guided Missile (MP-ATGM)

- The **MPATGM**, or **Man Portable Anti-Tank Guided Missile**, is an Indian **third-generation** fire-and-forget anti-tank guided missile derived from Nag ATGM.
- It is currently **under development** by the **DRDO**.
- It is fitted with **high-explosive anti-tank** (HEAT) **warhead**.
- The MPATGM is equipped with an **advanced imaging infrared** (IIR) **sensor and integrated avionics**.
- It reportedly **share many similarities with Spike** (ATGM).

170.   APT29

Why in News?

- Britain, the U.S. and Canada have accused Russia of trying to steal information from researchers seeking a COVID-19 vaccine.

About

- What is it? ➜ APT29 (also known as 'the Dukes' or 'Cozy Bear') is a **cyber espionage group**, almost certainly part of the Russian intelligence services.
- How? ➜ The group uses a **variety of tools** and **techniques** to **predominantly target** governmental, diplomatic, think-tank, healthcare and energy targets for intelligence gain.
- Custom malware ➜ APT29 is using **custom malware** known as '**WellMess'** and '**WellMail'** to target a number of organisations globally.
- Now, it is accused of trying to **steal vaccine data**.

172.   Trinity Nuclear Test

Why in News?

- On 16th July, exactly 75 years ago, scientists tested Gadget — the world's first atomic bomb — in what was dubbed as the 'Trinity Test'.

About

- Trinity was the **code name** of the **first detonation of a nuclear device**.

- Conducted by ➜ the **United States Army** on July 16, 1945, as part of the **Manhattan Project**.
- Location ➜ The test was conducted in the **Jornada del Muerto desert** about 56 km southeast of Socorro, **New Mexico.**
- The test was planned and directed by **Kenneth Bainbridge**.
- The test was of an implosion-design plutonium device, informally nicknamed "**The Gadget**", of the same design as the **Fat Man bomb** later **detonated over Nagasaki, Japan**, on August 9, 1945.

👉 **About Manhattan Project**

- The Manhattan Project was a research and development undertaking **during World War II** that produced the **first nuclear weapons**.
- It was **led by the United States** with the **support of the United Kingdom and Canada**.

174.   UNSC 1267 Committee

Why in News?

- United Nations Security Council (UNSC) 1267 committee has designated Tehrik-e-Taliban Pakistan (TTP) leader Noor Wali Mehsud as a global terrorist.

About

- Formation ➜ It was established as a result of resolution 1267 (**in 1999**). It is also known as the **Al Qaeda and Taliban Sanctions Committee.**
- Composition ➜ The Committee comprises **all 15 members of the UNSC** which makes its decision by consensus.
- Mandate ➜ The Committee is mandated to:
  - **oversee the implementation** of the sanctions measures
  - **designate individuals and entities** who meet the listing criteria set out in the relevant resolutions among others.
- Sanction measures ➜ If an individual or an organisation is included in the list, it leads to:
  - countries to **freeze the targeted groups or individual's assets**
  - **ban** designated individuals **from travelling** and
  - **prevent the supply of weapons**, **technology** and **other aid**.

176.   BLACKROCK MALWARE

Why in News?

- Recently, a security firm has alerted about a new malware called BlackRock which targets social, communication, and dating apps.

About

- What is it? ➜ It is a **Trojan malware** that is based on the source code of **the Xeres malware**, itself derived from malware called **LokiBot**.
- How does it work? ➜ It uses a method called '**overlays' to trick users into filling in their log-in details** and **card details** to start using a legitimate app. These overlays are **fake windows** that pop up when a user is trying to log into an app.

178. Indo-US PASSEX

Why in News?

- Indian navy conducted a Passage Exercise (PASSEX) with the U.S. Navy's USS Nimitz carrier strike group.

About

- Location ➔ It was conducted **near the Andaman and Nicobar Islands** as it is transiting the Indian Ocean.
- **Nimitz,** is the **U.S. Navy's largest aircraft carrier**, was returning from the South China Sea through the Malacca Straits.
- Front line Indian Naval Ships ➔ **Shivalik, Sahyadri, Kamorta and Rana**
- Significance ➔ The exercise comes amid a high alert in the Indian Ocean Region **due to the stand-off with China** along the border in Ladakh.
- Indian Navy had conducted similar PASSEXs with the **Japanese Navy** and the **French Navy** in the **recent past.**

180. Mine Ploughs on T-90 Tanks

Why in News?

- Recently, the Ministry of Defence has signed Rs. 557 crore contract with the BEML Limited (formerly known as the Bharat Earth Movers Limited) for the procurement of 1,512 mine ploughs for T-90 Tanks.

About T-90 Tanks

- These **Russian-origin tanks** are the **Indian Army's main battle tanks**.
- Indian Army recently deployed them in the **Galwan Valley sector of Ladakh** amid the **face-off** with **Chinese troops.**
- Mine Ploughs ➔
  - Mine ploughs help tanks to **clear minefields** and **minimize risks to men and machines**.
  - After being fitted on T-90 Tanks, they will **facilitate individual mobility** to the tanks while negotiating a minefield.
- Advantages ➔ The mobility of the tank fleet will **enhance manifolds** which in turn would extend the reach of the **armoured formations deep into enemy territory without becoming a mine casualty**.

👉 **BEML Limited**

- Formation ➔ It was underlined established in 1964 as a Public Sector Undertaking (**PSU**).
- It has **partially disinvested** and presently the **Government of India owns 54% of total equity** and the rest **46% is held by public and financial institutions**, foreign institutional investors, banks and employees.
- The company operates under three major business verticals viz. ➔ **Mining and Construction**, **Defence and Rail and Metro.**

182.   Dhruvastra (Nag)

Why in News?

- Defence Research and Development Organisation has successfully conducted flight trials of the anti-tank guided Nag Missile (HELINA) which has been named now as Dhruvastra.

About Dhruvastra (Nag)

- What is it? ➔ It is a **third-generation**, **fire-and-forget**, **anti-tank guided missile**.
- Purpose ➔ The missile has the **capability to destroy the Battle Tanks** and **other heavy armoured vehicles** from both the land and air-based platforms.
- Significance ➔ The missile has been developed under the **Integrated Guided Missile Development Programme** (IGMDP).

👉 Integrated Guided Missile Development Programme (IGMDP)

- It was conceived in **1983** by **Dr. APJ. Abdul Kalam** to enable India **attain self-sufficiency** in the field of missile technology. The missiles developed under IGMDP programme includes:
    - Prithvi ➔ Short range **surface to surface** ballistic missile.
    - Agni ➔ Intermediate Range **surface to surface** ballistic Missile
    - Trishul ➔ Short-range low-level **surface to air** missile.
    - Nag ➔ 3rd generation **anti-tank missile**.
    - Akash ➔ Medium range **surface to air missile**

FORMIDABLE ARSENAL

SURFACE-TO-SURFACE MISSILES

Short Range Ballistic Missiles

Prithvi-I	150 km	1,000 kg
Prithvi-II	250 km	500 kg
Prithvi-III	350 km	1,000 kg
Dhanush	350 km	1,000 kg
Agni-I	700 km	1,000 kg
Shaurya	700 km	1,000 kg
Prahaar	150 km	200 kg

Intermediate Range Ballistic Missiles (IRBMs)

Agni-II	2,000 km	1,000 kg
Agni-III	3,000 km	2,000-2,500 kg
Agni-IV	4,000 km	1,000 kg

Intercontinental Range Ballistic Missiles (ICBMs)

Agni –V	5,000 km	1,500 kg ((3-10 MIRV))
Agni-VI (Under Development)	6,000	1,000 kg (10 MIRV)
Surya (Under Development)	10,000 km	1,000 kg (10 MIRV)

Km denotes the range of the missile and kg is the payload

SUBMARINE LAUNCHED BALLISTIC MISSILES

K-15 Sagarika (B-05)	750 km	500 kg
K-4	3,000 km	1,000 kg

CRUISE MISSILES

Subsonic Cruise Missiles

Nirbhay	750-1,000 km	500 kg

Supersonic Cruise Missiles

BrahMos	290 km	300 kg

Hypersonic Cruise Missiles

BrahMos-II	290 km	300 kg

AIR-TO-AIR MISSILE

Astra	80-110 km	15kg

SHORT RANGE SURFACE-TO-AIR MISSILES

Trishul	9 km	5 kg
Akash	30 km	50 kg
Maitri	15 km	10 kg
Barak-8	70 km	60 kg

ANTI-TANK GUIDED MISSILES

Nag Anti-tank guided missile	7 km	8 kg
Helina (Helicopter launched Nag missile)	7 km	8 kg

ANTI-BALLISTIC MISSILES

Prithvi Air Defence Missile (Exo-atmospheric at 50-80 km altitude) 2,000 km   DM (Proximity)

Advanced Air Defence Missile (Endo-atmospheric at 15-30 km altitude) 150-200 km   DM (Hit-to-kill)

Prithvi Defence Vehicle (Exo-atmospheric at more than 120 km altitude) 2,000-3,000 km   DM (Proximity)

DM: Detonation Mechanism

Compiled by Hemant Kumar Rout

184.   Permanent Commission for Women in Army

Why in News?

- Ministry of Defence has issued a formal sanction letter to grant permanent commission to women officers in the Indian Army.

About

- Background ➔ Earlier, the male **Short Service Commission** (SSC) **officers** could opt for permanent commission **at the end of 10 years of service**, this option was **not available to women officers**.
- Thus, they were **kept out of any command appointment** and could **not qualify for government pension** which starts only after 20 years of service as an officer.
- Supreme Court's Verdict ➔ In February, 2020 Supreme Court ordered the Centre to **grant Permanent commission to women** as they cannot be denied the **right to equal opportunity** entitled under the Constitution on specious grounds such as physiology, motherhood and physical attributes.
- Implications ➔ The Government has now granted permanent commission to **Short Service Commissioned** (SSC) **Women Officers** in all **ten streams of the Indian Army**.
- This decision will allow women officers to be **eligible to occupy all the command appointments** at par with male officers which would allow promotions to **higher ranks and also grants pension benefits**.
- However, the women will **not be allowed to join main combat arms** like infantry, mechanized infantry, artillery and armoured corps in the Army.
- Remember ➔ A **permanent commission** allows officers to **serve in the army till they retire**, unlike the Short Service Commission (SSC) which is for a specific period of 10 or 14 years.

186. Dare to Dream 2.0

Why in News?

- Defence Research Development Organisation (DRDO) has launched 'Dare to Dream 2.0' on the 5th death anniversary of former President Dr. APJ Abdul Kalam.

About

- What is it? ➔ It is an **open challenge** that aims to **promote** the **individuals & startups for innovation in defence** and aerospace technologies.
- Features ➔ Under this, the winners will be decided after due evaluation by an **expert committee**. Award money of up to **Rs 10 lakh for startup** and **Rs five lakh to individual category** will be given to the winners.

188. Dassault Rafale Fighter Jets

Why in News?

- The five Rafale fighter jets that landed in Ambala will resurrect the Number 17 Golden Arrows squadron of the Indian Air Force (IAF).

About Rafale Fighter Jet

- The **state-of-the-art 4.5 Generation** Rafale jet can reach **almost double the speed of sound**, with a top speed of **1.8 Mach**.
- With its **multi-role capabilities**, including electronic warfare, air defence, ground support and in-depth strikes, the Rafale lends air superiority to the Indian Air Force.

- Purpose ➔ It can be used to **perform ground and sea attacks**, **reconnaissance**, **high-accuracy strikes** and **nuclear strike deterrence**.

👉 **Armed with modern arms**

- SCALP ➔ It is an **air-to-ground cruise missile** that has a capability of long-range deep strike missile.
- MICA ➔ It is an **air-to-air missile** that can be used for operations such as close-quarter dogfights and Beyond Visual Range (BVR).
- HAMMER ➔ It is an **air-to-ground precision guided missile** produced by French conglomerate Safran which can be used against bunker-type hardened targets within the range of 70 km.
- Meteor ➔ It is a **Beyond Visual Range Air-to-Air Missile** (BVRAAM) system developed by European firm MBDA.

190.   STALKERWARE

Why in News?

- There was a 51 per cent increase in the use of spyware and stalkerware during the lockdown period from March to June.

About

- Spy and stalkerware apps, **like viruses and other malware**, **infect devices** that are connected to the internet.
- While viruses and malware can be detected by anti-virus software, spyware and stalkerware apps **disguise themselves as useful** and **send out stolen data** to central servers without the knowledge of the users.

👉 **Spyware vs stalkerware**

- A spyware app, which can also be **installed remotely**, **accesses the data usage pattern of the device**, **gains access to photos and videos** as well as other personal information of the user, and then passes it off to a central server.
- On the other hand, in most cases, a stalkerware app can be **installed only when** someone has **physical access to the digitally connected device.**
- Though the app works in a manner similar to spyware apps, it goes a step ahead and also **gives out the location of the device** to a master device which controls the stalkerware app.

192.   "LONE WOLF" ATTACKS

Why in News?

- Recently, a lone wolf attack was carried out by an individual in London.

About Lone wolf Attacks

- These attacks involve **threat or use of violence by a single perpetrator** (or a small cell).
- A lone wolf acts **without any direct support of any other group** or other individual in the planning, preparation and execution of the attack.
- Though lone wolf prefers to act totally alone, his or her radicalization to action maybe spurred by violent media images, incendiary books, manifestos, and fatwas.

- Ranging from threatening and intimidating people to indiscriminate shootings, vehicle ramming, stabbing and suicide bombings, lone wolf terror attacks have become a grave threat.
- Long-term data reveals the proportion of lone wolf attacks, has **risen from under five per cent in the mid-1970s to above 70 per cent for the period between 2014 and 20.**

Culture

194.   Indira Gandhi National Centre for the Arts

Why in News?

- The Indira Gandhi National Centre for the Arts (IGNCA) is planning to highlight the work of artists who have been entertaining and boosting the public's morale during the Covid-19 pandemic (referred as silent Covid warriors).

About

- What is it? ➔ The Indira Gandhi National Centre for the Arts (IGNCA) an **autonomous institution** under the **Ministry of Culture**, as a centre for research, academic pursuit and dissemination in the field of the arts.
- Established ➔ **1987**.
- Trust ➔ The IGNCA has **a** <u>trust</u> (i.e. Board of Trustees), which meets regularly to give general direction about the Centre's work.
- The **Executive Committee**, drawn from among the Trustees, **functions under a Chairman**.
- It is a research unit **under Project Mausam**.
    - Project 'Mausam' is a **Ministry of Culture project** with **Archaeological Survey of India** (ASI), New Delhi as the nodal agency.
    - The central themes that hold Project 'Mausam' together are those of **cultural routes** and **maritime landscapes** that not only linked different parts of the Indian Ocean littoral, but also **connected the coastal centres to their hinterlands.**
- Vedic Heritage Portal ➔ A project on design and development of a **Vedic Heritage Portal** was initiated at IGNCA, under the **aegis of the Ministry of Culture**, Government of India. The portal **aims to communicate messages enshrined in the Vedas.**

2. Hul Divas

Why in News?

- Hul Divas celebrations in Jharkhand have been called off due to COVID-19 pandemic.

About

- Santhal rebellion ➔ The Santhal rebellion was taken place in present-day Jharkhand, **against both the British colonial authority** and **zamindari system by the Santhali people**.
- It started on **June 30, 1855** and in **1856** the movement was brutally ended by troops loyal to the British.
- The rebellion was led by the four Murmu Brothers - **Sidhu**, **Kanhu**, **Chand and Bhairav**, **at Bhognadih**.
- Bhognadih ➔ is a village in **Sahebganj district of Jharkhand** was the **main center of the Santhal Rebellion**.
- Hul Divas ➔ is celebrated to **commemorate the tribal brothers and sisters of Jharkhand** who revolted against the injustice of foreign rule.

3. Dhamma Chakra Day

Why in News?

- The President of India will inaugurate the Dhamma Chakra Day celebrations from Rashtrapati Bhavan, New Delhi on July 4, 2020.

About

- The International Buddhist Confederation (IBC) in **partnership with Ministry of Culture**, will celebrate the upcoming **Asadha Poornima** on July 4, 2020 as Dharma Chakra Day.
- The day marks **Buddha's first teaching** after attaining Enlightenment to the **first five ascetic disciples** (pañcavargika).

👉 **Asadha Poornima**

- Asadha Poornima falls on the **first full moon day** of the **month of Asadha as per Indian sun calendar**.
- It is the **second most sacred day** for **Buddhists** after the Buddha Poornima or Vesak.
- The day marks Buddha's first teaching after attaining Enlightenment to the **first five ascetic disciples** (panchavargika) on the full-moon day of Asadha at '**Deer Park**', **Risipatana** in the **Sarnath, Uttar Pradesh**.
- This teaching of Dharma chakra Pravartana or the **First Turning of Wheels** of **Dharma comprised** of the **Four Noble Truths** and **Noble Eightfold Path**.
- The day is also observed as **Guru Poornima** by both Buddhists and Hindus as a day to mark reverence to their Gurus.
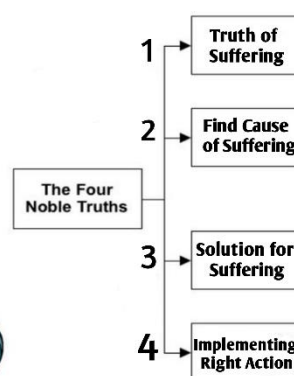
4. SINDHU DARSHAN FESTIVAL

Why in News?

- Prime Minister Narendra Modi performed Sindhu Darshan puja at Nimu, the forward brigade place in Ladakh.

About

- Where? ➔ The Sindhu Darshan festival is celebrated along the **banks of the River Indus (River Sindhu) in Ladakh**.
- When? ➔ It is celebrated every year on the day of **Guru Purnima** (full moon day), the festivities continue for three days.
- Features ➔ The celebration features such **cultural events as musical shows**, **dance performances and art exhibitions**, organised by artistes from around India.
- Significance ➔ Also called the **Singhe Kabaab Festival**, it draws focus to the Sindhu river and promotes the waterbody as a symbol of the **country's communal unity and harmony**.
- Nimu in Ladakh is **surrounded by the Zanskar range** and is on the **banks of river Indus**.

199.   Hagia Sophia Mosque

Why in News?

- Turkey's highest court this week convened to decide whether Istanbul's iconic Hagia Sophia museum can be turned into a mosque.

About

- What is it? ➔ Hagia Sophia is the **former Greek Orthodox Christian patriarchal cathedral**, later an **Ottoman imperial mosque**.
- Location ➔ It is now a museum located in **Istanbul, Turkey**.
- History ➔ Built in AD 537 (Byzantine architecture), during the reign of **Justinian - I**, the **Eastern Roman emperor**, it is famous for its **large dome**.
- In 1453, when Constantinople (capital city of the Roman Empire) fell to Sultan Mehmet II's Ottoman forces, the **Hagia Sophia was turned into a mosque**.
- In 1934, **Mustafa Kemal Ataturk**, the founder of the Republic of Turkey, **converted the mosque into a museum** in an attempt to make the country more secular.
- Significance ➔ The **1,500-year-old structure** has been listed as a **UNESCO'S World Heritage site** as of special cultural or physical significance.

201. Zardozi art

Why in News?

- The lockdown has left them with mounting losses and joblessness, with no customers even during the wedding season.

About Zardozi art

- What is it? ➔ Zari work or Zardozi, **an art** which is considered quite **popular amongst embroiders and designers**, survives in the narrow alleys of the **Old Town of Bhopal**.
- History ➔ Zardozi was introduced in India by the **Mughal invaders in the 17th century**. It came to **India from Persia.**
- Its literal translation, 'Zar' means gold and 'dozi' meaning embroidery. Thus, Zardozi come from the Persian term meaning **'embroidering with gold threads**.'
- Features ➔
    - In this embroidery, **gold coils** and **beads are tucked onto fabric** using a needle and thread.
    - **Metals** like gold and silver are **transformed into a zari** (thin thread) that is used to **adorn motifs onto rich fabrics** like silk, velvet, organza, chiffon, etc.
- Significance ➔ In 2013 the Geographical Indication Registry (GIR) accorded the Geographical Indication (GI) registration to **the Lucknow Zardozi**.

203. Bon Bibi: Sundarban

Why in News?

- A centuries-old folk theatre form and the worship of a forest goddess i.e. Bon Bibi has helped the natives of the Sundarban survive by understanding the power of nature and the limits of human needs.

About Bon Bibi

- What is it? ➜ Bon Bibi is a **deity of the Sunder ban forest, west Bengal**.
- Followers ➜ The followers of Bon Bibi are **fishermen**, **crab-collectors** and **honey-gatherers** who live in the mangroves with wild animals such as tigers and crocodiles to earn a livelihood.
- They believe that **only Bon Bibi protects them** when they enter the forest and survive in tiger dominated areas.
- Bon Bibir Palagaan ➜ People express their belief in Bon Bibi through Bon Bibir Palagaan, it is a **centuries-old folk theatre** and **dramatic storytelling form** that is enacted throughout the island.
- Traditionally, the performances are **held near Bon Bibi temples** or **villages bordering the forests**.
- Significance ➜
  - An unwritten code believed to be given by the **deity prohibits islanders from carrying guns** or **weapons into the forest.**
  - They must enter the forest only if they **absolutely need to earn a livelihood and not take more** — honey or crabs, fish or prawns — than they need.

205. Rabari, Bharvad and Charan Tribes of Gujarat

Why in News?

- The Gujarat government will constitute a commission to identify the members of Rabari, Bharvad and Charan communities who are eligible to get the benefits of Schedule Tribe (ST) status.

About Bharvad

- Who they are? ➜ The Bharwad are **tribals primarily engaged** in **herding livestock**.
- The Bharwads have **numerous subgroups** known as **ataks** or **guls** (clans) whose main purpose is to determine eligibility for marriage.
- Constrained **exogamy** is **practised between clans**.

👉 Rabari

- Who they are? ➜ The Rabari, also called the Rewari are an **indigenous tribal caste of nomadic cattle** and **camel herders** and **shepherds** that live throughout northwest India, primarily in the states of Gujarat, Punjab and Rajasthan.
- Language ➜ They speak 'Bhopa' which is a **mixture of Gujarati**, **Kachchi**, **Marwari words** and **Pharasi** (Persian) and **use Gujarati script**.
- The Rabari are known for their **distinctive art**, particularly the **mirrored** and **whitewashed mud sculpture-work** that adorns their homes and villages.

👉 Charan

- Who they are? ➜ The Charan, also called **Gadhvi**, is a **small tribe in Gujarat** and the name Charan is derived from the word '**Char'** which **means grazing**.
- Members of the caste are considered to be **divine by a large section of society**.
- **Women of the caste** are **adored** as **mother goddesses** by other major communities of this region.

207. Tangams

Why in News?

- Last week Arunachal CM released a book titled "Tangams: An Ethnolinguistic Study Of The Critically Endangered Group of Arunachal Pradesh".

About

- Tangam People ➔ Tangams are a little-known community **within the larger Adi tribe** of Arunachal Pradesh.
- Tangams are now concentrated in **only one village (Kugging)**, with 253 reported speakers.
- Tangam Language ➔
- Tangam is an **oral language** that belongs to the **Tani group**, under the greater Tibeto-Burman language family.
- It has been marked '**critically endangered**' by the UNESCO World Atlas of Endangered Languages (2009).
- Also Remember ➔ The languages of Arunachal Pradesh have been classified under the **Sino-Tibetan language family** and more specifically under the **Tibeto-Burman** and **Tai group of languages** such as **Lolo-Burmish, Bodhic**, **Sal**, **Tani**, **Mishmi**, **Hruissh** and **Tai.**

209. Tatya Tope monument

Why in News?

- The Maharasthra State government informed the Bombay High Court that more than ₹2.5 crore had already been spent on the construction of a national monument of the general Tatya Tope at Yeola in Nashik district.

About

- Also known as **Ramachandra Pandurang Tope**, he was one of the most notable Indian freedom fighters and a general in the Rebellion of 1857.
- Tatya Tope was an **intimate friend** and the **right hand of Nana Sahib**, the adopted son of Peshwa.
- In May 1857, Tatya Tope **won the battle over the Indian troops of the East India Company at Kanpur**
- He forced **General Windham** to **retreat** from the **city of Gwalior**.
- He **collaborated with Rani Lakshmi Bai** of Jhansi to seize Gwalior.
- Tatya Tope was **defeated by Sir Colin Campbell** (later Baron Clyde) on December 6, 1857. He was hanged on April 18, 1859, in General Meade's camp at Shivpuri.

211. Padmanabhaswamy temple

Why in News?

- Reversing the 2011 Kerala High Court decision, the Supreme Court upheld the right of the Travancore royal family to manage the property of deity at Sree Padmanabha Swamy Temple.

About

- The Padmanabhaswamy temple is a **Hindu temple** located in **Thiruvananthapuram, Kerala**
- History ➔ The temple is said to date back to the **8th century** but the present structure was built in the **18th century** by the then **Travancore Maharaja Marthanda Varma**.
- Structure ➔ The temple is built in the **unique Chera style of architecture**, and its main deity is **Lord Vishnu** who is found in the **Anantha Shayana posture** (reclined posture of eternal yoga) on **Adishesha** or king of all serpents.
- It is known to be one of the 108 holy temples associated with **Vaishnavism** in India.

213.   Madhubani Paintings

Why in News?

- Recently, artists from Madhubani district of Bihar became famous for making masks with hand-painted Madhubani motifs.

About Madhubani Paintings

- Origin ➔ Madhubani painting has its origins in **Mithila region of Bihar**.
- Characteristics ➔ These paintings are popular because of their **tribal motifs** and **use of bright earthy colours**.
- Traditionally the **women of the village drew** these paintings on the walls of their dwelling, as a demonstration of **their feelings**, **hopes**, **and ideas**.
- Style ➔ It includes **geometrical patterns**, **floral**, **animal** and **bird motifs**.
- Colours ➔ The colours used in paintings comprise **natural extracts from plants** and **other natural sources**.
    - The colours are applied flat with **no shading** and **no empty space is left**.
    - These paintings are not made with modern brushes but rather with **twigs, matchsticks, and fingers**.
    - But now artists **use brushes, nib-pens** and **synthetic colours** as well to paint.
- Themes ➔ It is based on the **mythological characters** which depict the life of **Hindu deities** like Krishna, Rama, Lakshmi, Shiva, Durga, and Saraswati.
    - The designs widely painted are of **Tulasi plant**, **court scenes**, **wedding scenes**, **social happenings** etc.
    - Also, heavenly bodies like the **Sun and the Moon** often form the centrepiece of paintings.
- Eminent Artists ➔ **Karpuri Devi**, **Mahalaxmi and Dulari**.
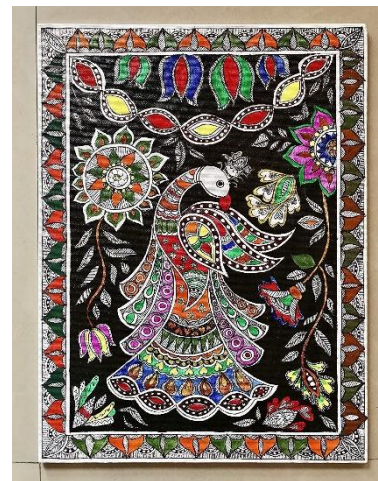
215.   Chandra Shekhar Azad

Why in News?

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

About Contribution to Freedom Movement

- Hindustan Republican Association ➔ HRA was a **revolutionary organization** of India established in 1924 in East Bengal by **Sachindra Nath Sanyal**, **Narendra Mohan Sen** and **Pratul Ganguly** as an offshoot of Anushilan Samiti.
    - Members ➔ Bhagat Singh, **Chandra Shekhar Azad**, Sukhdev, Ram Prasad Bismil, Roshan Singh, Ashfaqulla Khan, Rajendra Lahiri.
- Kakori Conspiracy ➔ Most of the **fund collection for revolutionary activities** was done through robberies of government property. In line with the same, Kakori Train Robbery near Kakori, Lucknow was **done in 1925 by HRA.**
    - The plan was **executed by Chandra Shekhar Azad**, **Ram Prasad Bismil**, **Ashfaqulla Khan**, **Rajendra Lahiri, and Manmathnath Gupta.**

- Hindustan Socialist Republican Association ➔ HRA was later reorganised as the Hindustan Socialist Republican Army (HSRA).
  - o It was established in **1928** at **Feroz Shah Kotla** in New Delhi by **Chandra Shekhar Azad**, **Ashfaqulla Khan**, **Bhagat Singh**, **Sukhdev Thapar** and **Jogesh Chandra Chatterjee**.

217.   First legislature representative for Siddi community

Why in News?

- The state government in Karnataka has nominated Shantaram Budna Siddi as a Member of the Legislative Council (MLC) recently.

About Siddi community

- Location ➔ Siddi Tribe in **Karnataka** mainly lives in **Dharwad**, **Belagavi** and **Uttar Kannada districts**.
- Status ➔ Classified under the list of **Scheduled Tribes** by the union government in 2003.
- The economically and socially backwards community is included in Centre's list of **Particularly Vulnerable Trial Groups (PVTGs).**
- Work ➔ They were dependent on **hunting and gathering traditionally**, but at present, their **main source of livelihood** is **labour** and **agriculture.**
- History ➔ Believed to be of African origin as they clearly show the **Negroid racial strain** in their **physical features.**
- Records show that **Africans came to India** as **soldiers and as slaves**.
- Many of these slaves were **freed in the 18th century** and it is **speculated** that they found their way to the **jungles** in **today's north-west Karnataka**.

219.   Joykali Matar Temple

Why in News?

- India inaugurated the reconstructed Joykali Matar temple at Natore in Bangladesh.

About

- It was built approximately **300 years back** in the early 18th century by **Shri Dayaram Roy**.
- He was an influential Dewan of **Queen Bhahani of Natore** and the **founder of Dighapatia Royal Family**.
- The MoU for the reconstruction of the temple at **Lalbazar, Natore** was **signed between India in Bangladesh** in 2016.
- The Government of India provided a **grant assistance** for the reconstruction of the historic temple under its **High Impact Community Development Project (HICDP) scheme**.

221.   HERITAGE MANAGEMENT

Why in News?

- NITI Aayog released a working group report on 'Improving Heritage Management in India'.

About

- There are roughly 5 lakh plus heritage sites and monuments across the country. It includes 3691 ASI Protected Monuments, 38 UNESCO World Heritage Sites, 6000 + State Archaeology Protected Monuments and 4 lakh plus Religious Heritage sites.

The Constitution of India has divided the jurisdiction over these monuments, cultural heritage, and archaeological sites as follows:

- **Union**: Ancient and Historical Monuments and Archaeological sites and remains, declared by Parliament to be of National Importance.
    - Under the above provision union government has enacted **Ancient Monuments and Archaeological Sites and Remains Act (AMASR Act) of 1958.**
    - **Antiquities and Art Treasures Act, 1972** was enacted to regulate the export trade in antiquities and art treasures and to provide for the prevention and smuggling of, and fraudulent dealings in, antiquities.
- State: Ancient and Historical Monuments **other than those declared by Parliament** to be of national importance through **Departments of Archaeology for the State Protected Monuments and Museums**.
- Concurrent: Besides the above, both the Union and States have concurrent jurisdiction over archaeological sites and remains other than those declared by law and Parliament to be of national importance.

NGOs in Heritage Conservation and Management in India

- **The Aga Khan Trust for Culture (AKTC)** focuses on the physical, social, cultural, and economic revitalisation of communities in the developing world.
- **Indian National Trust for Art and Cultural Heritage (INTACH)** spearheads heritage awareness and conservation in India.
- **International Council on Monuments and Sites (ICOMOS)** works for the conservation and protection of cultural heritage places. It is the **only global NGO of this kind**, which is dedicated to promoting the application of theory, methodology, and scientific techniques to the conservation of the cultural heritage.
- **World Monuments Fund** focuses on heritage conservation projects and awareness programmes in India. Established in 2015, WMF India serves as a local representative for WMF, assisting with project management and outreach.

Initiatives by the Government of India to conserver heritage:

- **HRIDAY - National Heritage City Development and Augmentation Yojana** – for **preserving and revitalizing** the unique character of the heritage cities in lndia.
- **PRASHAD**: Pilgrimage Rejuvenation and Spiritual Heritage Augmentation Drive'- for **development and beautification** of identified **pilgrimage** destinations (>40 sites).
- **Swachh Iconic Places**- under Swachh Bharat Mission to transform monuments as model '**Swachh Tourist Destination**' to enhance the experience of tourists.
- 'ADOPT A HERITAGE'- **"Apni Dharohar, Apni Pehchaan"**: To provide **world class facilities** like Red Fort (Dalmia group) by **engaging private sector**.
- Swadesh Darshan scheme by Tourism Ministry to develop **theme-based tourist circuits** & world class infrastructure
- **Incredible India 2.0 campaign**, (2018) international tourism promotion campaign
- Adarsh Smarak: ASI has identified **100 monuments to be developed as Model Monuments**.

- **Project Mausam**: to **re-connect and re-establish communications between countries of the Indian Ocean world**, which would lead to an enhanced understanding of cultural values and concerns in their regional maritime milieu.
- Related statistics: India ranked 34th **on the World Travel and Tourism Competitiveness Index 2019**, released by the **World Economic Forum**.

223. KUSHINAGAR

Why in News?

- The Union Cabinet has recently given its approval for declaration of Kushinagar Airport in Uttar Pradesh as an International Airport.

About Kushinagar

- Kushinagar is one of the important Buddhist Pilgrimages sites and is also a part of the Buddhist Circuit as Lord **Buddha attained Mahaparinirvana** here. Mahaparinirvana in Buddhism refers to the ultimate state of Nirvana (everlasting, highest peace and happiness) entered by an awakened being at the moment of physical death.
- Prominent archaeological sites in the city are the **Mahaparinirvana Stupa and temple** (the latter houses a stunning 1,500-year-old reclining Buddha) and the **Muktabandhan Stupa** (representing the Buddha's cremation site).
- The site of Kushinagar was first identified by Sir Alexander Cunningham in 1877, the first Director-General of the Archaeological Survey of India (ASI).
- Other important Buddhist sites are:
  - **Lumbini**- Buddha's Birthplace.
  - **Bodh Gaya**- where Buddha attained Enlightenment.
  - **Sarnath**- where Buddha gave his first sermon after attaining Enlightenment.
  - **Kapilvastu**- where Buddha grew up as a child.
  - **Kaushambi**- where Buddha delivered many sermons.
  - **Sankisa-**Lord Buddha is believed to have descended here after giving sermon to his mother in heaven.
  - **Sravasti-** where Buddha showed his divine prowess to impress upon the non-believers and delivered important sermons.

Miscellaneous

225.   CogX

Why in News?

- AI enabled MyGov Corona Helpdesk bagged two awards under categories (1) "Best Innovation for Covid-19 – Society" and (2) "People's Choice Covid-19 Overall Winner", at the recently held CogX 2020.

About

- CogX is one of the **world's largest events on AI**, held **annually in London** with over **15,000 participants** in attendance from the highest levels of business, government, industry, and research.
- The **Cogx Awards** are given out to the **best-of-the-best in AI** and **emerging technologies** across the world.

227.   DRUG DISCOVERY HACKATHON 2020

Why in News?

- Union HRD Minister and Health Minister jointly launched the Drug Discovery Hackathon 2020.

About

- Objective ➔ The objective of this Hackathon is to **identify drug candidates against SARS-CoV-2** by **in-silico drug discovery** through the hackathon and follow up by **chemical synthesis and biological testing**.
- Drug Discovery Hackathon is **first of its kind** national initiative for **supporting drug discovery process**.
- It is an **online competition** and anybody from anywhere in the country or world can participate.
- Nodal Bodies ➔ It is a joint initiative of **MHRD, AICTE and CSIR** and **supported by partners** like CDAC, MyGov, Schrodinger and ChemAxon.
- Strategy ➔ In this initiative, **HRD Innovation cell and AICTE** will focus on **identifying potential drug molecules** through the Hackathon while CSIR will take these identified molecules forward for synthesis and laboratory testing.

229.   PULSE

Why in News?

- NASA has invented a pendent that stops you from touching your face thus preventing spread of Coronavirus.

About

- NASA's new innovation has been named, '**PULSE**'. The app **works by alerting the wearer of the gadget to stop exposure to the risky activity.**
- When a person, wearing the gadget gets their **hand too close to the face** (knowingly or unknowingly), **PULSE triggers a beeping noise** and alerts the wearer of the same.
- The gadget, which has been **shaped like a pendant** is to be worn around the neck and works the best when placed 6 inches below the chin. **PULSE**, which is a **3D printed device** has a **tiny vibration motor in place**.

230.   Winter Diesel

Why in News?

- India's armed forces may soon be using winter diesel for operations in high altitude areas such as Ladakh where winter temperatures plummet to extremely low levels.

About Winter Diesel

- What is it? ➜ It is a specialised fuel that was introduced by **Indian Oil Corporation**(IOC) **for high altitude regions** and **low-temperature regions** such as Ladakh where ordinary diesel can become unusable.
- Why can't we use regular Diesel? ➜ The **flow characteristics of regular diesel change** at such low temperatures and using it may be **detrimental to vehicles**.
- Features of Winter Diesel ➜
  - o Winter diesel **contains additives** to **maintain lower viscosity** so that it can be used in temperatures as low as -30°C.
  - o It has **higher cetane rating** — an indicator of the combustion speed of diesel and compression needed for ignition.
  - o It has **lower sulphur content** which would lead to lower deposits in engines and better performance.

👉 **Indian Oil Corporation Limited**

- Commonly known as **Indian Oil** it is an Indian **government-owned oil and gas company** (Maharatna Status) which was **founded in 1959**.
- Headquarter ➜ New Delhi
- It is the **largest commercial oil company** in the country.
- Functions ➜ It operates in the entire hydrocarbon value-chain, including refining, pipeline transportation, marketing of petroleum products, exploration and production of crude oil, natural gas and petrochemicals.
- Subsidiaries ➜ It has **subsidiaries in Sri Lanka** (Lanka IOC), **Mauritius** [IndianOil (Mauritius) Lt]) and the **Middle East** (IOC Middle East FZE).

232.   SDG INDEX 2020

Why in News?

- Sweden is placed at the top of the latest SDG index for year 2020 with an overall score of 84.7.

About Index

- Prepared by ➜ **teams of independent experts** at the **Sustainable Development Solutions Network** (SDSN) and the **Bertelsmann Stiftung**.
- The annual report presents the **SDG index** which tracks the performance of United Nations (UN) member states on the **17 SDGs** by **measuring the distance remaining to achieve each target**.

👉 **Key Takeaways**:

- Top Countries ➜ **Sweden** has been **ranked first** followed **by Denmark and Finland**.
- India ➜ It has been **ranked at 117** with a score of 61.9 out of 100.

- South Asia ➜ Maldives is ranked at 91, **Sri Lanka at 94, Nepal at 96 Bangladesh at 109** and **Pakistan at 134.**

👉 **Sustainable Development Solutions Network (SDSN)**

- It was **set up in 2012** under the auspices of the **UN Secretary-General**.
- It **mobilizes global scientific and technological expertise** to promote practical solutions for the implementation of SDGs.

234. India's first plasma bank

Why in News?

- Recently, The Government of Delhi announced to set up a 'plasma bank' for treatment of COVID-19 patients in the national capital.

About

- It will be set up at the **Delhi government-run Institute of Liver and Biliary Sciences**(ILBS).
- It will provide plasma to **both government and private hospitals**.
- It will be the **first plasma bank** in the country for the treatment of COVID-19 patients.
- How it will work? ➜
  - The Delhi government will **set up a helpline** for potential plasma donors to **call** or **reach out through WhatsApp**.
  - The government will make **transportation arrangements** for those willing to donate their plasma.
  - The Delhi government will ensure "**full safety**" of the donors.
- Who can donate plasma? ➜
  - Those who had the disease, but have **recovered at least 14 days** before the donation can be considered.
  - People between the **ages of 18 and 60**, and **weighing not less than 50 kg are eligible**.
  - **Women** who have **given birth** are **not eligible**.
- How is plasma donation different from blood donation? ➜
  - In plasma donation, as opposed to blood donation, **only plasma is extracted** and the **other components of blood are returned to the body.**
  - Blood contains several components, including **red blood cells, platelets, white blood cells, and plasma**.
  - **500 ml of plasma** can be **donated every two weeks**, while blood can be donated once in three months.

236. SheshNaag

Why in News?

- Indian Railways (South East Central Railway zone) recently operated its longest train called SheshNaag.

About SheshNaag

- What is it? ➜ It is **2.8 km long train**.
- It had **251 wagons** (BOXN rakes) and was powered by **4 electric locomotives**.

- Expected benefits ➔ include **reduces transportation time, facilitates decongestion** of the rail route and **boosts freight transportation**.
- Super Anaconda ➔ Previously, the same railway zone operated a 177-coach freight train called **Super Anaconda**.

238.   Elyments

Why in News?

- Elyments is a social media app developed in India. It was recently launched by the Vice President.

About

- Developed by ➔ over **1,000 IT professionals** who volunteer at Sri Sri Ravi Shankar's Art of Living foundation.
- It will compete with the likes of Facebook and Instagram, comes with hosts of features that **enable users to connect with friends and family in a creative way**.
- Features ➔
- The app also has **messaging** and **group chatting capabilities**.
- It is available in **eight Indian languages**.
- It comes with features such as **end-to-end encryption**, which ensures that users' data '**remains safe from prying eyes**'.

240.   National Atlas and Thematic Mapping Organisation (NATMO)

Why in News?

- NATMO publishes 4th updated version of its COVID-19 Dashboard.

About

- Established ➔ in **1956** as the National Atlas Organisation.
- Founder-Director of this institute ➔ Professor **S.P. Chatterjee**, the doyen of Indian Geography.
- Background ➔ It was **renamed in 1978** to give it a broad-based responsibility in the field of thematic cartography and geographical research.
- Parent organization ➔ It is under the **administrative control of the Department of Science &Technology** of the Government of India.
- Headquartered ➔ **Kolkata**.
- Important functions ➔
  - **Compilation** of the National Atlas of India.
  - **Preparation** of the National Atlas maps in regional languages.
  - **Preparation of thematic maps** based on **research studies** on environmental and associated aspects and their impact on social and economic development.

242.   Himachal Pradesh: 100% LPG Connections

Why in News?

- Recently, Himachal Pradesh becomes the first State with 100% LPG Connections.

About

- Under the **Pradhan Mantri Ujjawala Yojana**, gas connections were **provided <u>free of cost to women of rural areas</u>**.
- The state government had launched **'Himachal Grihini Suvidha Yojana'**.
- It is to **<u>cover the left out families</u>** in the state, who were not covered under the Centre's scheme.

244. Global Real Estate Transparency Index

Why in News?

- Global Real Estate Transparency Index(GRETI) has been released by JLL and LaSalle, a global real estate services company.

About

- The index is **<u>released biennially</u>**. It **<u>ranks 99 countries</u>** and **<u>territories</u>** and **<u>163 cities globally</u>**.
- Parameters ➔ It assesses real estate market transparency based on over 200 individual indicators relating to: **<u>investment performance</u>**, **<u>market fundamentals</u>**, **<u>governance of listed vehicles</u>**, **<u>regulatory</u>** & **<u>legal environment</u>**, **<u>transaction process and sustainability</u>**.

👉 **Key Takeaways**

- Top Rankers ➔ **<u>United Kingdom</u>** (UK) followed by **<u>United States</u>**(US) and **<u>Australia</u>**.
- India ➔ It has been ranked at **<u>34th</u>** in the index. In 2018, India was ranked 35th.

246. F-1 and M-1 Visas

Why in News?

- Under the new rules, the United States Immigration and Customs Enforcement will not issue visas to the foreign student taking only online classes.

About

- There are two types of Educational visas in the US: **<u>The F-Visa</u>** and **<u>M-Visa</u>**.

| F-Visa:	M-Visa:
• The F-Visa deals with students interested in an Academic Course in the US. It is further classified into F1 and F2 visas.	• The M-Visa deals with students interested in a Vocational Course in the US. It is further classified into M1 and M2 visas.
• F-1 nonimmigrants are foreign students coming to the United States to pursue a full course of academic study. • An F-2 nonimmigrant is a foreign national who is the **spouse or qualifying child of an F-1 student.**	• M-1 nonimmigrants are foreign nationals pursuing a full course of study at a **vocational or other recognized nonacademic institution** (other than in language training programs) in the United States. • An M-2 nonimmigrant is a foreign national who is the **spouse or qualifying child of an M-1 student.**

248. Mongolian Kanjur

Why in News?

- The Ministry of Culture has presented the first set of five volumes of Mongolian Kanjur published under the National Mission for Manuscripts (NMM) to the President.

About

- What is it? ➔ It is a **Buddhist canonical text** in 108 volumes which is considered to be the **most important religious text in Mongolia.**
- In the Mongolian language '**Kanjur'** means '**Concise Orders'**- the words of Lord Buddha in particular.
- Significance ➔ It is held in **high esteem by the Mongolian Buddhists** and they **worship the Kanjur at temples** and recite the lines of Kanjur in daily life as a sacred ritual.
- Language ➔ The language of the Kanjur is **Classical Mongolian** and it is a source of providing a **cultural identity to Mongolia.**

250.   Cycles4Change Challenge

Why in News?

- The Smart Cities Mission (under the Ministry of Housing and Urban Affairs) has opened the registration for India Cycles4Change Challenge.

About Cycles4Change Challenge

- Aim ➔ The Challenge aims to **help cities connect with their citizens** as well as experts to develop a unified vision to **promote cycling**.
- Coverage ➔ The Challenge is open to **all cities under the Smart Cities Mission**, **capital cities of States/UTs**, and all cities with a population of more than 5 lakh population.
- In October 2020, 11 cities will be shortlisted and will **receive Rs. 1 Crore award** and **guidance** from national and international experts to further scale-up the initiatives.
- Recent cycling initiatives in India Cities ➔
    - **Kolkata** has proposed a **dedicated cycle corridor** by reclaiming parking spaces.
    - **Guwahati** is conducting a survey for citizens to vote for the best routes for bicycle lanes in the city, which will be incorporated into the Challenge.

👉 About Smart Cities Mission

- Launched Year ➔ **2015**
- Nodal Ministry ➔ **Ministry of Housing and Urban affairs**.
- Aim ➔ To develop **100 smart cities across the country by 2022** making them citizen-friendly and sustainable.
- Objective ➔ To **promote sustainable and inclusive cities** that provide **core infrastructure** and give a **decent quality of life** to its citizens a clean and sustainable environment and application of 'Smart' Solutions.

252.   INDIA GLOBAL WEEK 2020

Why in News?

- The Prime Minister addressed the inaugural session of India Global week via video conference.

About

- What is it? ➔ The India Global Week 2020 is a three-day virtual conference, being held from July 9 to July 11, themed '**Be the Revival: India and a Better New World**'
- Organized by ➔ **India Inc.,** a London based media house to re-energies and ignite optimism at global level
- It brings about an **action-oriented focus** by giving a forum to global deliberations from
  - Geopolitics to business,
  - Arts & culture to emerging technologies,
  - Banking and finance,
  - Pharma,
  - Defence and security,
  - Social impact
  - Diaspora dividend.
- Its flagship publication is known as **India Global Business**.

254.   Inauguration of six strategic bridges

Why in News?

- The Defence Minister inaugurated six strategic bridges in Jammu and Kashmir.

About

- Location ➔ The **two bridges on the Tarnah Nallah in Kathua District** and **four bridges** located on **Akhnoor-Pallanwala road in Akhnoor/Jammu district** have spans ranging **from 30 to 300 metres** and were constructed at a total cost of Rs 43 crores.
- These bridges constructed under **Project Sampark** of the **Border Roads Organization**.

TARNAH-I BRIDGE (160 m)   TARNAH-II BRIDGE (300 m)   PALWAN BRIDGE (91 m)
GHODAWALA BRIDGE(151 m)   PAHADIWALA BRIDGE (61 m)   PANYALI BRIDGE (31 m)

- Recently, a strategically important bridge at **Daporijo over the Subansiri river in Arunachal Pradesh** was also inaugurated.
- Expected Benefits ➔
  - Will facilitate the **movement of Armed Forces** in this strategically important sector.
  - Contribute towards the **overall economic growth** of **remote border areas**.
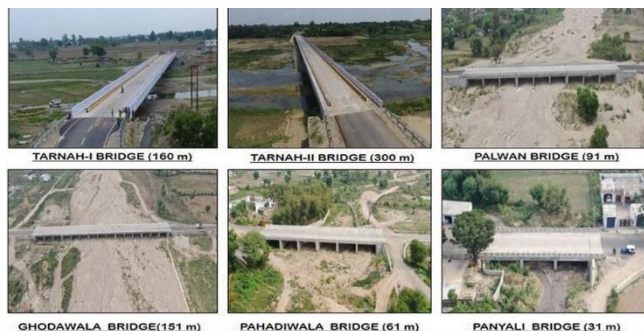
256.   Swabhiman Anchal

Why in News?

- Recently the first-ever Bus Service in history was started for the people of Swabhiman Anchal (Odisha).

About

- Swabhiman Anchal is **surrounded by water on three sides**.
- It was generally known as a **Maoist hub for decades**.
- Normalcy in the area was achieved only after the completion of the **Gurupriya Bridge** (on the Janbai River).

258. Chakr DeCoV

Why in News?

- Chakr Innovation, an IIT Delhi start-up company, has developed a decontamination device that will help disinfect and reuse N95 masks.

About

- How? ➔ It **uses ozone** to decontaminate and can do it in 90 minutes.
- Ozone is a **strong oxidizing agent** that destroys viruses by diffusing through the **protein coat**, **resulting in damage to the viral RNA.**
- Additionally, the high **penetrability of Ozone gas** ensuring **complete decontamination** of N95 masks intricate layers.

260. National Fish Farmers Day

Why in News?

- National Fish Farmers Day is celebrated on 10th July every year.

About

- Why 10th July? ➔ It is celebrated in the memory of scientists **Dr K. H. Alikunhi** and **Dr H. L. Chaudhury**.
- Both of them successfully demonstrated **Hypophysation** (technology of induced breeding) in **Indian Major Carps** (common name for several species of fish) on **10th July 1957**.
- The day aims to **recognize the accomplishments** and **contribution of fish farmers**, **aquapreneurs** (entrepreneurs in the water sector) and fisher folks in the growth of the fisheries sector in the country.

👉 Fish Cryobanks

- Background ➔ **Ministry of Fisheries, Animal Husbandry and Dairying** in association with the **National Fisheries Development Board** (NFDB) has announced establishment of **fish Cryobanks**.
- Benefits ➔ The Cryomilt technology may be helpful in the establishment of fish **cryobanks**, which will **provide good quality of fish sperm in hatcheries at any time.**
- The proposed Fish Cryobanks will be **established across the country at different phases**.
- Significance ➔ This would be the **first time in the world** when Fish Cryobanks will be established, enhancing fish production and increasing prosperity among the fish farmers.

262. Voluntary National Review

Why in News?

- NITI Aayog presented India's second Voluntary National Review (VNR) at the United Nations High-level Political Forum (HLPF) on Sustainable Development, 2020**.**

About VNR

- What is it? ➜ It is a comprehensive account of the **adoption** and **implementation of the Sustainable Development Goals (SDG) 2030 Agenda** in India.
- Title of the report ➜ **Decade of Action: Taking SDGs from Global to Local**.
- **NITI Aayog** has the mandate of **overseeing the adoption and monitoring** of SDGs at the national and sub-national level.
- The reviews are **voluntary** and **state-led** and are aimed at **facilitating the sharing of experiences**, including successes, challenges and lessons learned.
- India's VNR this year has undertaken a paradigm shift in terms of **embodying a whole-of-society approach in letter and spirit**.

👉 **United Nations High-level Political Forum on Sustainable Development (HLPF)**

- Formation ➜ It was **established in 2012** by the outcome document of the United Nations Conference on Sustainable Development (**Rio+20**).
- Purpose ➜ It is responsible for the **organization's policy on sustainable development**. It adopts **negotiated declarations, reviews commitment** and the progress of the 2030 Agenda for Sustainable Development.
- Meeting ➜ It **meets annually** since 2016 under the auspices of the UN Economic and Social Council (**ECOSOC**).

264. World Youth Skills Day

Why in News?

- Prime Minister will deliver an address to mark World Youth Skills Day.

About World Youth Skills Day

- It has been celebrated every year on **15th July since 2014**.
- Aim ➜ To **acknowledge and celebrate the importance of equipping young people** with skills for employment, decent work and entrepreneurship.
- Theme ➜ **Skills for a Resilient Youth**.
- Global Employment Trends for Youth 2020: Technology and the future of jobs ➜
  - The report has been released **by the International Labour Organization** (ILO).
  - It focuses on **shifts in job characteristics, sectors** and **skills as well as examining the impact of technological change** on inequalities in youth labour markets.

266. Corosure

Why in News?

- The Government launched World's Most Affordable COVID-19 Diagnostic Kit, Corosure.

About

- Developed by ➜ **IIT Delhi** and will be manufactured by **Newtech Medical Devices**.
- The kit is **based on RT-PCR**.
- It was developed **indigenously** and is much **cheaper** than other kits.

- It is a **probe-free** diagnostic kit.
- The kit has received **ICMR approval** with the highest score and DCGI approved with a very high sensitivity and specificity.
- Expected Benefits ➜ Provide **affordable detection kit** helping the country.

268. Indian Council of Agricultural Research

Why in News?

- Indian Council of Agricultural Research (ICAR) celebrated its 92nd foundation day on 16th July 2020**.**

About ICAR

- Formation ➜ ICAR was established on **16 July 1929** as a **registered society** under the Societies Registration Act, 1860.
- Parent Organization ➜ It is an **autonomous organisation** under the **Department of Agricultural Research and Education** (DARE), Ministry of Agriculture and Farmers Welfare, Government of India.
- Headquartered ➜ at **New Delhi**. With **102 ICAR institutes** and **71 agricultural universities** spread across the country this is one of the largest national agricultural systems in the world.
- Functions ➜ It is the apex body for **coordinating, guiding** and **managing research and education in agriculture** including horticulture, fisheries and animal sciences in the entire country.
- The ICAR has played a **pioneering role in ushering Green Revolution** and subsequent **developments in agriculture** in India through its **research** and **technology development** that has enabled the country to increase the production of foodgrains by 5.6 times, horticultural crops by 10.5 times, fish by 16.8 times, milk by 10.4 times and eggs by 52.9 times since 1950-51 to 2017-18.

270. ZyCoV-D

Why in News?

- India has started the clinical trials of Covid-19 vaccine – ZyCoV-D**.**

About ZyCoV-D

- It is a **plasmid DNA vaccine** designed and developed **by Zydus, a pharmaceutical company**.
- The vaccine comes under the **Vaccine Discovery Programme** supported by the **Department of Biotechnology** under the **National Biopharma Mission**.
- Plasmids ➜ are **circular deoxyribonucleic acid (DNA) vectors** that can be used as vaccines to prevent various types of diseases.

👉 **National Biopharma Mission (NBM)**

- What is it? ➜ It is an **Academia-Industry Collaborative Mission** for Accelerating Discovery Research to Early Development for Biopharmaceuticals.
- Launched Year ➜ It was **launched in 2017** at a total cost of **Rs 1500 crore** and is **50% co-funded by World Bank loan.**

- Objective ➜ To **enable and nurture an ecosystem for preparing India's technological development capabilities** in biopharmaceuticals including vaccines, medical devices and diagnostics to a level that will be globally competitive over the next decade.
- Implementation ➜ **Biotechnology Industry Research Assistance Council** (BIRAC).
- Innovate in India(i3) Programme ➜ Under this Mission, the Government has launched **Innovate in India**(i3) **programme** to create an enabling ecosystem to **promote entrepreneurship and indigenous manufacturing in the biopharma sector.**

272. Godhan Nyay Yojana

Why in News?

- Chhattisgarh is set to launch 'Godhan Nyay Yojana'. The scheme aims to put money in the pockets of people living in rural areas and also solve the problem of stray cattle**.**

About

- Govt to **procure cow dung at Rs 2/- per kg** from livestock owners.
- Repurposing procured cow dung into **Vermicompost** and **other eco-friendly items**.
- **Selling vermicompost at Rs 8/- per kg** to the farmers to **promote organic farming**.

274. India Ideas Summit, 2020

Why in News?

- Indian Prime Minister Narendra Modi will participate and deliver the keynote address at the India Ideas Summit scheduled to be held on 22nd July, 2020**.**

About Summit

- Hosted by ➜ the **US-India Business Council**.
- Participants ➜ It is a virtual summit featuring **high-level presence from Indian and US government policymakers**, state-level officials, and thought leaders from business and society.
- This year marks the **45th anniversary** of the formation of the Council.
- The theme for this year's India Ideas Summit ➜ '**Building a Better Future'**.
- Significance ➜ The Summit will witness discussions on areas including **India-US cooperation** and **future of the relation** between the two counties in a post pandemic world.

276. Serological Survey

Why in News?

- The Ministry of Health and Family Welfare has declared that the Serological Survey in Delhi shows antibodies in 23% participants**.**

About Serological Survey

- A Serological Survey seeks to **assess the prevalence of disease in a population** by detecting the **presence of specific antibodies** against the virus.
- It can also be conducted to check if a person has **developed immunity** to **certain diseases**.

- **IgM antibody** is usually the **first antibody** produced by the immune system **when a virus attacks**.
- When **IgM is detected**, the person may **still be infected**, or may have recently recovered from a COVID-19 infection.
- The **presence of IgG antibodies** indicate that the person **may have had COVID-19** in the **recent past** and have developed antibodies.
- The IgG antibodies develop in most patients **within 7 to 10 days** after **symptoms of COVID-19 begin**.

278.   COVID-19 Law Lab initiative

Why in News?

- The World Health Organization (WHO) has launched COVID-19 Law Lab initiative**.**

About

- What is it? ➔ It is a **database of laws** that countries have implemented in response to the pandemic.
- It includes **state of emergency declarations**, **quarantine measures**, **disease surveillance**, **legal measures relating to mask-wearing, social distancing** and access to medication and vaccines.
- Purpose ➔ This database will be **shared across the world** to **help countries establish and implement strong legal frameworks** to manage the pandemic and also ensure that laws adhere to international human rights standards.
- Bodies Involved ➔ It is a joint project of the United Nations Development Programme (**UNDP**), the World Health Organization (**WHO**), the Joint United Nations Programme on HIV/AIDS (**UNAIDS)** and **the O'Neill Institute for National and Global Health Law at Georgetown University.**

280.   World's first electrified rail tunnel

Why in News?

- The world's first electrified double-stack container tunnel has been cut through the Aravallis on the railway's Western Dedicated Freight Corridor near Haryana's Sohna**.**

About

- The **1-km-long tunnel** has been made with a plan to **ply electric goods train** with double-stack containers through it in the next 12 months.
- Engineers had to blast through 2,500 to 500 million-years-old **proterozoic rocks** to build the electrified double-stack container tunnel.
- Once operational, a double-stack container goods train will be able to run at a speed of more than 100 kmph in this tunnel.
- It **connects Mewat and Gurgaon districts of Haryana** and negotiates a steep gradient on the uphill and downhill slope of the Aravalli range.
- Implementing agency ➔ The Dedicated Freight Corridor Corporation of India Limited (**DFCCIL**) is the **implementing agency** of the project.

282.   Honey Testing Lab inaugurated in Gujarat

Why in News?

- Union Minister of Agriculture and Farmers' Welfare inaugurated the World Class State of Art Honey Testing Laboratory in Anand, Gujarat with support of National Bee Board**.**

About

- Established by ➜ **National Dairy Development Board** (NDDB) in **Anand** with support of **National Bee Board.**
- Facilities ➜ It has **all the facilities** based on the parameters notified by FSSAI and the **test methods/protocols developed**, have been accredited by National Accreditation Board for Testing and Calibration Laboratories (NABL).
- Honey is being adulterated with **high fructose corn syrup or rice, tapioca, sugarcane** and **beet syrup** that are **cheaper and resemble honey in physico-chemical properties**.
- Benefits ➜ Honey Testing Laboratory will help in **quality production of honey** and its **export to other countries.**

👉 **National Bee Board**

- The National Bee Board is **registered as a society** under the Societies Registration Act, 1860 in 2000 by Small Farmers' Agri-Business Consortium (SFAC).
- Objectives ➜ The overall development of Beekeeping by **promoting Scientific Beekeeping in India** to increase the productivity of crops through pollination.

👉 **Key Facts**

- India is among the **world's top five honey producers**.
- Compared to 2005-06 honey **production** has **risen by 242%** and **exports shot by 265%.**
- The government is **promoting Beekeeping** as part of its aim to double farmers' income by 2024.
- Government has allocated **Rs. 500 crore** towards Beekeeping under the **Atma Nirbhar Bharat Abhiyan**.

284.   Kargil Vijay Diwas

Why in News?

- Every year, since 1999, July 26 has been observed to commemorate the sacrifices made by soldiers in the Kargil war**.**

About

- Causes ➜ **Infiltration of Pakistani troops** and terrorists into Indian territory and **positioning themselves in key locations** in the **Kargil Sector**.
- They aimed to **sever the link between Ladakh and Kashmir** and also to force the Indian Armed Forces to withdraw from the Siachen Glacier.
- Outcome ➜
    - The Indian Army launched '**Operation Vijay'**. Whereas the Indian Air Force launched the '**Operation Safed Sagar'.**

- o It used air power at the height of 32,000 feet for the first time.
- o India **lost 527 soldiers**.
- o The war that **ended** on **July 26, 1999**.

286.   Lyfas App

Why in News?

- The Centre for Augmenting WAR with COVID-19 Health Crisis (CAWACH) has selected Bangalore based startup Acculi Labs to develop a COVID risk assessment profile called Lyfas COVID score.

About Lyfas App

- Lyfas is an **android application** in which, when any person keeps the index finger on the rear phone camera of a mobile phone for five minutes, it captures the **capillary pulse** and **blood volume change**.
- The technology is focused on **population screening**, **monitoring of quarantined individuals and surveillance at the community level**.

☞ **Centre for Augmenting WAR with COVID-19 Health Crisis (CAWACH)**

- It is an initiative by the **National Science & Technology Entrepreneurship Development Board** (NSTEDB), Department of Science and Technology (DST).
- Aim ➜ To **support innovations** in the **areas of diagnostics**, **devices**, **bioinformatics** or any startup ideas that addresses various challenges faced by the country due to the severe impact of COVID-19.
- Implementation ➜ **Society for Innovation and Entrepreneurship (SINE), IIT Bombay** has been selected for Implementation.

☞ **NSTEDB**

- Formation ➜ It was established in **1982** under the **Department of Science and Technology**.
- Objective ➜ promoting **gainful self-employment** amongst the **Science and Technology (S&T) manpower** in the country and to set up knowledge based and innovation driven enterprises.

288.   Operation Breathing Space

Why in News?

- Recently, an Israeli team, led by a "high ranking" research and development (R&D) defence official, arrived in Delhi with a multi-pronged mission.

About

- What is it? ➜ Operation Breathing Space is a collaboration between **India and Israel** to **jointly conduct trials to determine** the **effectiveness of advanced technologies** developed for the rapid diagnosis of coronavirus infection.
- The cooperation also includes **sharing the most effective treatment protocols** for **COVID-19 patients**.

290.   Port Louis

Why in News?

- Prime Minister Narendra Modi and his Mauritius counterpart Pravind Jugnauth jointly inaugurated the new Supreme Court built in Port Louis with Indian grant assistance.

About

- Location ➔ It is the **capital city of Mauritius**, in the Indian Ocean.
- It's known for its **French colonial architecture**.

291. Aerial Seeding

Why in News?

- The Haryana Forest Department has started Aerial Seeding across the state on a pilot basis**.**

About

- This technique will **allow plantation in sections of the Aravallis** that are either difficult to access or inaccessible altogether.
- It is a technique where seed balls, seeds covered with a mixture of clay, compost, and other components are **sprayed on the ground using aerial devices,** including planes, helicopters or drones.
- It is a **fire and forget way of plantation** where no attention is needed after the dispersal of seeds.
- A **surface** that is **loose and rough**, with **cracks** or **ample residue cover, works best**.
- With a loose and rough surface the **chances of a seed making soil contact** and **landing in areas with soil moisture is enhanced.**

293. BIMAL JULKA COMMITTEELAUNCHES PAI

About

- ◎ It is an Expert Committees on **Rationalisation, Closure or Merger of Film Media Units and Review of Autonomous Bodies** under Ministry of Information and Broadcasting.
- ◎ It suggested an umbrella configuration with 4 broad verticals: **Production, Festival, Heritage and Knowledge**.
- ◎ It also recommended creation of **Film Promotion Fund for independent filmmakers for making commercial film**.

294. GLUCOSE-6-PHOSPHATE DEHYDROGENASE (G6PD)

Why in News?

- Recently, Surat Municipal Corporation (SMC) has raised a specific COVID-19 alert for Vataliya Prajapati community whose 25% population suffers from a genetic blood disorder called G6PD deficiency**.**

About

- COVID-19 is a huge challenge for the community as due to G6PD deficiency some drugs such as **hydroxychloroquine can result in rupturing of blood vessel, brain damage in infants and kidney failure in adults**.

- The Indian Council of Medical Research (ICMR) has recommended a wider use of hydroxychloroquine (HCQ) in battle against COVID-19.

About G6PD deficiency:

- G6PD deficiency is **a genetic abnormality** that results in an inadequate amount of glucose-6-phosphate dehydrogenase (G6PD) in the blood.
- G6PD is also responsible for keeping red blood cells healthy so they can function properly and have a normal life span. Without enough of it, red blood cells break down prematurely. This **early destruction of red blood cells is known as Hemolysis**, and it can eventually lead to **Hemolytic anemia**.

Quick revision (True/False) ✅ ❌

1.	**Kholongchhu Project** is the first hydropower joint venture project signed between -> India and Nepal.	
2.	**Attorney General of India** -> appointed by the President, who is qualified to be appointed as a judge of the Supreme Court. A Attorney General is removable from his office, only on the grounds of proved misbehavior or incapacity.	
3.	**Covaxin** -> an inactivated vaccine created from a strain of the infectious SARS-CoV-2 virus.	
4.	**Gold Nanoparticles** -> can be used as a composite therapeutic agent clinical trials, especially in anti-cancer, anti-viral, antidiabetic, and cholesterol-lowering drugs.	
5.	**Pradhan Mantri Jan Vikas Karyakram (**PMJVK) is scheme related to tribals	
6.	**State of the World Population Report, 2020** was released recently by -> Population Action International.	
7	**H1N1 Influenza** -> It is a highly contagious, common respiratory infection found in humans. It is an incurable infection and there are no drugs for treatment.	
8.	**Globba Andersonii** -> classified as critically endangered and narrowly endemic. restricted mainly to Teesta River Valley region which includes the Sikkim Himalays and Darjeeling hill ranges.	
9.	**Rajaji National Park** -> Himachal Pradesh.	
10.	**United Nations Population Fund (UNFPA)** -> is the United Nations sexual and reproductive health agency. HQ: Paris, France.	
11.	**Central Zoo Authority** -> It is a statutory body constituted under Wild Life (Protection) Act 1972. It can recognize a zoo but it does not have the power to derecognize a zoo.	
12.	**Namdapha National Park** -> Assam. Hoolock Gibbons, the only 'ape' species found in India is found in this National Park.	
13.	**United Nations Convention Against Torture (UNCAT)** -> an international human rights treaty. India signed and ratify the convention in 1997.	
14.	**Ranbir Singh Committee** -> for reform in criminal law	
15.	**Astra Missiles** -> are Beyond Visual Range air-to-air missile	
16.	**Tillari Conservation Reserve** -> between the three states of Tamil Nadu, Karnataka and Kerala.	
17.	**Mali** -> Mali is in southern part of African continent	
18.	NASA has invented a pendent named pulse that stops you from touching your face thus preventing spread of Coronavirus.	
19.	**Botswana** -> in the Horn of Africa, is a rugged, landlocked country split by the Great Rift Valley.	
20.	**G Srinivasan Panel** -> to assess the suitability of the Indian insurance industry or any other sector to offer Surety Bonds for road contracts in the country.	
21.	**SINDHU DARSHAN FESTIVAL**-> Uttrakhand	

22.	**REDD+** -> To achieve climate change mitigation in developing countries by incentivizing e-Waste Recycling.	
23.	**EULOPHIA OBTUSA**'s IUCN status is Least concern.	
24.	**Zardozi** -> is a form of embroidery, native to Western Europe that came to India via British invasion.	
25.	**Saiga Antelope** -> large migratory herbivore of Central Asia found only in Kazakhstan and India. IUCN Status - Critically endangered	
26.	**CAATSA** that aims at taking punitive measures against -> Iran, Cuba, China, Russia, North Korea.	
27.	**India's largest butterfly** -> Golden Birdwing	
28.	**first state** in the country where 100% households have Liquefied Petroleum Gas (LPG) connections -> Kerala	
29.	**IDLIB** -> situated in north-western Syria, bordering Iraq	
30.	**Agriculture Infrastructure Fund**-> Centrally Sponsored Scheme.	
31.	No star has been found with high lithium content so far.	
32.	**Sitana Dharwarensis** -> Discovered from Kerala.	
33.	**Rubella** -> is a contagious, generally mild viral infection that occurs most often in children and young adults.	
34.	**National Mission for Manuscripts** -> established in 2003 by the Ministry of Tourism and Culture.	
35.	**Rewa Solar Project**-> Uttar Pradesh.	
36.	India has open sky agreements with Japan	
37.	**ASEEM Portal** -> It is an Artificial Intelligence-based platform that will be used as a match-making engine to map skilled workers with the jobs available.	
38.	**Tetrastemma Freyae** -> found along the coast of Andhra Pradesh.	
39.	**Ypthima watsoni** -> rediscovered from near a village called Phuldungsei in Jampui Hills under the North Tripura district.	
40.	**Bon Bibi** -> is a deity of the Nigiri forest, Tamil Nadu	
41.	**National Intelligence Grid (NATGRID)** -> is an advanced web-based monitoring system to efficiently manages the electricity data across India	
42.	**Itolizumab is a drug used to treat** -> severe chronic plaque Psoriasis.	
43.	**Comet** is an icy, small Solar System body	
44.	**Tangams community** -> a community within the Adi tribe of Arunachal Pradesh.	
45.	**Chabahar Port** -> located on the Gulf of Aden and is only 72 km away from the Gwadar port in Pakistan which has been developed by China.	
46.	**The country's first ever e-Lok Adalat** was recently organised in -> Kerala	
47.	India is planning to acquire Spike Anti-tank Guided Missiles. They belong to -> United States of America.	
48.	**Nagorno-Karabakh region** -> is a landlocked region in the South Africa within the mountainous range of Karabakh.	
49.	**Kris Gopalakrishnan committee** -> for data regulation	

50.	**India Energy Modelling Forum** -> examine important energy and environmental related issues in India. Bureau of Energy Efficiency will initially coordinate the activities of the forum.
51.	**India's first trans-shipment hub was developed** at -> Maharashtra.
52.	The pharmaceutical industry in India is third largest in the world, in terms of value, behind China and Italy.
53.	**NISHTHA programme** -> To train teachers and school principals at the elementary stage under Samagra Shiksha Abhiyan.
54.	**Gangetic Dolphin** -> IUCN status: Critically Endangered.
55.	**APT29** -> is a cyber espionage group.
56.	**Partnership to Advance Clean Energy (**PACE) has been launched by India and Australia
57.	**UNSC 1267 Committee** -> related to UN Peacekeeping Missions.
58.	**ASPIRE Portal** -> To enhance the technological capability of Indian automotive sector through exchange of knowledge & expertise, in order to make them self reliant.
59.	**Plea Bargaining** -> is a process whereby the accused may bargain with the prosecution for a lesser punishment. In India, Plea bargaing is allowed if offence is committed against a woman.
60.	**Global Multidimensional Poverty Index** -> released by Oxford Poverty and Human Development Initiative(OPHI) in collaboration with the United Nations Development Programme.
61.	**BLACKROCK** -> a new malware called BlackRock which targets social, communication, and dating apps.
62.	**National Financial Reporting Authority** (NFRA) -> an independent accounting and auditing regulator set up under the Chartered Accountants Act, 1949.
63.	**ZORAM MEGA FOOD PARK** (MFP) -> Tripura.
64.	**Nimitz** -> Russia Navy's largest aircraft carrier.
65.	**Consumer Protection Act, 2019** -> Consumers have to file complaints only at the location where the service or products were sold
66.	**RAISE Initiative** -> joint initiative of Energy Efficiency Services Limited (EESL) and the U.S. Agency for International Development's (USAID)
67.	**Global Fund for AIDS, TB and Malaria (GFATM)** -> Headquarters – Paris, France.
68.	**Kakrapar Atomic Power Project is located in? -> Tamil Nadu.**
69.	**Dhruvastra (Nag)** -> is a third-generation, fire-and-forget, anti-tank guided missile. developed under the Integrated Guided Missile Development Programme .
70.	**COVID-19 Law Lab initiative** -> is a database of laws that countries have implemented in response to the pandemic. Created by EU.
71.	**Study in India Programme** -> flagship project under the Ministry of External Affairs that aims to facilitate and encourage the global student community to study in India.
72.	**Once Election Schedule is notified**, Election commission cannot change it.

73.	**DP Singh Committee** -> To bring out a safety manual for the Central Public Works Department.
74.	**Siddi community** -> Haryana, included in Centre's list of Particularly Vulnerable Trial Groups (PVTGs).
75.	Governor can summon, prorogue and dissolve the House only on the aid and advice of the Council of Ministers with the Chief Minister as the head
76.	**ASTHROS Mission** -> UAE Mars Mission to explore Mars.
77.	**Kongonaphon kely** was an extremely small ancestor to dinosaurs
78.	**Pied Cuckoo** -> IUCN Status – Critically endangered
79.	**Blue poppy** -> Found only in Northeast mountain at elevations of 3,000 to 5,000 meters.
78	**Dare to Dream 2.0 Challenge** -> launched recenlty by NITI Aayog.
80.	**Global Forest Resources Assessment** (FRA) -> Released by Food and Agriculture Organization.
81.	**Istanbul Convention** -> combating and preventing violence against women and domestic violence.
82.	**Tuting-Tidding Suture Zone** -> It is a major part of Western Himalayas.
83.	**St. Petersburg Declaration** -> related with Recycling of e-waste.
84.	**Ammonia -**> is a colourless gas and is used as an industrial chemical. occurs naturally in the environment from the breakdown of organic waste matter
85.	Madhya Pradesh has the highest number of tigers at 526, closely followed by Karnataka (524) and Uttarakhand (442).
86.	**International Thermonuclear Experimental Reactor** (ITER) -> is world's largest experimental fusion facility in Canada.
87.	**HALOARCHAEA** -> are aa class of the Euryarchaeota, found in water saturated or nearly saturated with salt. high densities in the water often lead to pink or red colourations of the water.
88.	**Port louis** is capital city of Mauritius, in the Indian Ocean