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M A G A Z I N E

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Economy

1. PM Svanidhi

Why in News?

- The Ministry of Housing and Urban Affairs has launched a micro-credit facility for street vendors under the Svanidhi Scheme.

About PM Svanidhi

- What is it? → It is a **special micro-credit facility scheme** to enable **more than 50 lakh** urban/peri-urban & rural street vendors to restart their livelihoods affected due to the lockdown.
- The loans are meant to **help kick-start activity** for vendors who have been left without any income since the lockdown was implemented on March 25.
- Duration → The scheme will be **applicable till March 2022**.
- Expected beneficiaries → This loan will be given to those who run shops on the **roadside, handcart or streetcar. Fruit-vegetable, laundry, saloon and paan shops** are also included in this category.
- Features of the Scheme →
 - Under this, each of the street vendors will be given a **credit loan of Rs 10,000** which they can return as monthly installments within a year.
 - Those who repay their loans on time will get **7% annual interest as subsidy** which will be transferred in their bank accounts.
 - The loans would be **without collateral**. There will be **no penalty on early repayment** of the loan.

2. Social Stock Exchanges

Why in News?

- A working group constituted by the Securities and Exchange Board of India (SEBI) on Social Stock Exchanges (SSEs) has recommended allowing non-profit organisations to directly list on such platforms.

About SSE

- What is it? → An SSE is a platform which **allows investors to buy shares** in **social enterprises** vetted by an official exchange.
- The SSE will function as a **common platform** where **social enterprises can raise funds** from the public.
- It will **function on the lines of major stock exchanges** like BSE and NSE. However, the purpose of the Social Stock Exchange will be different – **not profit, but social welfare**.
- Under the **regulatory ambit of SEBI**, a listing of social enterprises and voluntary organizations will be undertaken so that they can **raise capital as equity, debt or as units like a mutual fund**.
- Why SSEs?** →
 - India needs **massive investments** in the coming years to be able to **meet** the **human development goals** identified by global bodies like the UN.
 - Currently, social enterprises are very active in India. However, they face challenges in raising funds.
- Benefits** →

- There is a great opportunity to **unlock funds from donors, philanthropic foundations** and **CSR spenders**, in the form of zero-coupon zero principal bonds. These **bonds will be listed on the SSE**.
- At first, the SSE could become a **repository of social enterprises** and **impact investors**.
- The registration could be done through a **standard process**.

3. Upward Definition of MSME

Why in News?

- Union Cabinet has announced policy changes for the MSME sector as part of the Atmanirbhar Bharat package.

Upward revision of MSME Definition

- It may be noted that this revision was **done after 14 years** since the MSME Development Act came into **existence in 2006**.
- It has also been decided that the **turnover** with **respect to exports** will **not be counted** in the **limits of turnover** for any category of MSME units whether micro, small or medium.
- This is yet another step towards **ease of doing business**.

Category	Old Capital	Old Turnover	New Capital	New Turnover
Micro	25 Lakh	10 Lakh	1 Crore	5 Crore
Small	5 Crore	2 Crore	10 Crore	50 Crore
Medium	10 crore	5 Crore	50 Crore	250 Crore

Importance of MSMEs

- MSMEs are the **backbone of Indian economy**.
- **More than 6 crore MSMEs** have a crucial role to play in building a stronger and self-reliant India.
- These small economic engines have a huge impact on the country's **GDP-making a contribution of 29 percent**.
- They contribute to almost **half of exports** from the country. Additionally, **more than 11 crore people are employed** in the MSME sector.

4. Moody's downgrades India's rating

Why in News?

- In Recent, the Moody's Investors Service has downgraded India's rating from 'Baa2' to 'Baa3' while maintaining the negative outlook.

About the new rating

- In specific, the agency has downgraded the Indian Government's foreign-currency and local-currency long-term issuer ratings **to Baa3 from Baa2**.

- **Baa3** → the **lowest in the investment grade** in Moody's rating implying that India is just a notch above the non-investment grade or junk grade.
- The rating agency expects the country's **GDP to contract by 4%** in the **current financial year** due to the shock from COVID-19 and the pandemic driven lockdown measures.
- There are expectations of GDP growth to pick up in the **next fiscal to 8.7% and closer to 6% growth thereafter**.
- What does "negative" outlook mean? → The negative outlook reflects dominant, **mutually-reinforcing, downside risks from deeper stresses in the economy** and financial system that could **lead to a more severe and prolonged erosion in fiscal strength**.

About Moody's:

- It is a **globally integrated risk assessment firm** that empowers organizations/governments to make better decisions based on data and analytical solutions.
- Moody's Corporation is the **holding company** that **owns Moody's Investor Services**, which rates fixed-income debt securities.

5. Real-Time Electricity Market

Why in News?

- Recently the "Real-Time Electricity Market (RTM)" has been launched by the Indian Energy Exchange on its platform.

About

- Why? → It has been launched with an intent to **help discoms to better plan their power requirements**.
- It is an endeavor by the **Central Electricity Regulatory Commission (CERC)**.
- It will facilitate the **power utilities** to **reduce dependency on deviation framework** and save on the huge penalties.
- It will **aid the grid operators** to improve the overall safety and security of the grid.
- It will help the utilities and system operators to **forecast** and **effectively schedule green energy**.
- It will make the power generators capable of **selling their unrequisioned capacity** hence ensuring the efficient use of generation capacity.

📌 Indian Energy Exchange (IEX)

- What is it? → It is the **first and largest energy exchange in India** providing a **nationwide, automated trading platform** for physical delivery of electricity, Renewable Energy Certificates and Energy Saving Certificates.
- Benefits → It enables **efficient price discovery** and **increases the accessibility** and **transparency** of the power market in India while also enhancing the speed and efficiency of trade execution.
- Public Company → It is a **publicly listed company** with National Stock Exchange (NSE) and Bombay Stock Exchange (BSE).
- Approved and regulated by → **Central Electricity Regulatory Commission (CERC)**.
- Founded → **2008**.

5. Electronics incentive schemes

Why in News?

- The government has launched three incentive schemes with a total outlay of about ₹48,000 crore to boost large-scale manufacturing of electronics in the country.

About

- These three schemes are -**
 - Production Linked Incentive
 - Scheme for Promotion of Manufacturing of Electronic Components and Semiconductors (SPECs)
 - Modified Electronics Manufacturing Clusters

👉 Production Linked Incentive

- Targeted at mobile phone manufacturing and specified electronic components. The government initially plans to **incentivise 10 firms – five global and five local**.
- This Scheme shall extend an **incentive of 4% to 6% on incremental sales** (over base year) of goods manufactured in India and covered under the target segments, to eligible companies, for a **period of five years subsequent to the base year**.

👉 Scheme for Promotion of Manufacturing of Electronic Components and Semiconductors (SPECs):

- It shall provide **financial incentive of 25% on capital expenditure for the identified list of electronic goods**, i.e., electronic components, semiconductor/ display fabrication units, Assembly, Test, Marking and Packaging (ATMP) units, specialized sub-assemblies and capital goods for manufacture of aforesaid goods.

👉 Modified Electronics Manufacturing Clusters (EMC 2.0) Scheme

- It shall provide support for creation of **world class infrastructure** along with **common facilities and amenities**, including Ready Built Factory (**RBF**) sheds / Plug and Play facilities for attracting major global electronics manufacturers, along with their supply chains.
- Significance → With the three new schemes, the government aims to manufacture electronics worth **₹8 lakh crore**, while **generating employment for about 10 lakh people in the next five years**.

7. Kisan Credit Card (KCC) scheme

Why in News?

- Recently Kisan Credit Cards has been launched for the dairy farmers belonging to milk unions and milk-producing companies within the next two months (1st June-31st July 2020).

About KCC scheme

- When? → The Kisan Credit Card (KCC) scheme was launched by the Government of India in **1998**.
- Implementation → It is being implemented by **Commercial Banks, RRBs, Small Finance Banks** and **Cooperatives**.

- Objective → To provide **adequate** and **timely credit support** from the banking system to the farmers for their cultivation and other needs as indicated below:
 - To meet the short-term credit requirements for cultivation of crops;
 - Post-harvest expenses and Produce marketing loan;
 - Consumption requirements of farmer household;
 - Working capital for maintenance of farm assets and activities allied to agriculture;
 - Investment credit requirement for agriculture and allied activities.
- Coverage → **Small farmers, marginal farmers, sharecroppers, oral lessee and tenant farmers, Self Help Groups** (SHGs) or Joint Liability Groups (JLGs) are eligible for availing benefits under the scheme.

8. Global Economic Prospects (GEP) 2020 report

Why in News?

- The World Bank has released its Global Economic Prospects (GEP) 2020 report.

About GEP Report

- What is it? → GEP is a **World Bank Group flagship report** that **examines global economic developments and prospects**, with a special focus on emerging market and developing economies.
- It is issued **twice a year, in January and June**.
- The **January edition** includes **in-depth analyses of topical policy** challenges while the **June edition** contains **shorter analytical pieces**.

👉 Key Points

1. On poverty →
 - a. Current estimates show that **60 million people** could be **pushed into extreme poverty in 2020**.
2. Policy choices →
 - a. Policy choices made today — include **greater debt transparency** to **invite new investment, foster advances in digital connectivity**, and a major expansion of cash safety nets for the poor.
 - b. The **financing** and **building** of **productive infrastructure** are among the **hardest-to-solve** development challenges in the post-pandemic recovery.
3. Emerging Market and Developing Economies (EMDEs) →
 - EMDEs face **health crises, restrictions and external shocks** like falling trade, tourism and commodity prices, as well as capital outflows.
 - These countries are expected to have a **3-8% output loss** in the **short term**, based on studies of previous pandemics, as per the analysis.

9. SWADES Initiative

Why in News?

- The Government of India has launched a new initiative SWADES to conduct a skill mapping exercise of the returning citizens under the Vande Bharat Mission.

About SWADES Initiative

- Objective → To create a **database of qualified citizens based on their skill sets** and experience and fulfil demand of Indian and foreign companies.
- SWADES stands for **Skilled Workers Arrival Database for Employment Support**.
- Bodies Involved → This is a joint initiative of the **Ministry of Skill Development & Entrepreneurship**, the **Ministry of Civil Aviation** and the **Ministry of External Affairs**.
- Implementation → MSDE's implementation arm **National Skill Development Corporation** (NSDC) is supporting the **implementation** of the project.
- The collected information will be **shared with the companies** for suitable placement opportunities in the country.
- SWADES Skills Card → The **returning citizens** are required to fill up an online **SWADES Skills Card**.
- The card will **facilitate the returning citizens** with **suitable employment opportunities** through discussions with key stakeholders including State Governments, Industry Associations and Employers.

📁 **National Skill Development Corporation**

- Status → NSDC is a **not-for-profit public limited company** incorporated under section 25 of the Companies Act, 1956 (corresponding to section 8 of the Companies Act, 2013).
- It was set up by the Ministry of Finance as a **Public Private Partnership (PPP) model**.
- Share capital → The Government of India through the Ministry of Skill Development & Entrepreneurship (**MSDE**) **holds 49%** of the share capital of NSDC, while the **private sector has the balance 51% of the share capital**.
- Functions → It aims to **promote skill development** by catalyzing creation of large, quality and for-profit vocational institutions.

10. Empowered Group of Secretaries & Project Development Cell

Why in News?

- The Cabinet has recently given its approval for setting up of an EGoS and Project Development Cells (PDCs) in Ministries/Departments of the Central Government for attracting investments in India.

About Empowered Group of Secretaries (EGoS)

- It will reinforce India's vision of becoming a **\$5 trillion economy by 2024-2025**.
- It aims to take advantage of these **opportunities from the global economic situation**, considering the Covid-19 crisis, to make India among the **most significant players** in the **global value chain**, an official statement said.
- Composition →
 - The Empowered Group of Secretaries (EGoS) has the **Cabinet Secretary as the Chairperson**
 - **Secretary**, Department for Promotion of Industry, and Internal Trade as the **Member Convener**.
 - **Secretaries of the Department of Commerce, Department of Revenue**, and Department of Economic Affairs, and the **CEO, Niti Aayog**, are the Members of this committee.
 - The **Secretary of Department concerned where investment** is coming in to be co-opted in the committee.

📁 **Project Development Cell**

- A Project Development Cell (PDC) is also approved for the **development of investible projects** in **coordination** between the Central Government and State Governments.
- It helps to **grow the pipeline of investible projects in India** and **turn increase Foreign Direct Investment inflows**.
- In-charge of Project Development Cell →
 - Under the guidance of the **Secretary**, an **officer not below the rank of Joint Secretary** of each relevant central line Ministry, who will be in **charge of the PDC**.
 - He will be tasked to **conceptualise, strategise, implement, and disseminate details concerning investible projects**.

11. '#iComamit' initiative

Why in News?

- Recently, the iCommit initiative was launched on the occasion of the World Environment day (5th June).

About

- Aim → To call upon **all stakeholders and individuals** to continue **moving towards energy efficiency, renewable energy and sustainability** to create a robust and resilient energy system for India in the future.
- Nodal agency → The initiative is driven by **Energy Efficiency Services Limited** (EESL), under the administration of the **Ministry of Power**, Government of India.
- Significance →
 - A healthy power sector can help the nation in meeting the **objective of energy access and security for all**.
 - It seeks to **bring together** a **diverse spectrum of government** and **private players** to build a new energy future for India.

12. Payments Infrastructure Development Fund (PIDF)

Why in News?

- Recently, the Reserve Bank of India (RBI) has announced the creation of a Rs. 500-crore Payments Infrastructure Development Fund (PIDF).

About PIDF

- Objective → This fund has been created to **encourage acquirers to deploy point of sale (PoS) infrastructure**, both physical and digital, in **tier-3 to tier-6 centres and north eastern states**.
- Governance → The fund will be governed through an **advisory council** but it will be managed and administered by the **RBI**.
- Corpus → It has a corpus of **Rs. 500 crore** in which the **RBI** has made an **initial contribution of Rs. 250 crore**. The remaining will come from the **card-issuing banks** and **card networks operating** in the country.
- Recurring contributions → The PIDF will also receive **recurring contributions** to **cover operational expenses** from **card-issuing banks** and **card networks**. **RBI** will also **contribute to yearly shortfalls**, if necessary.

- Need → Most of the PoS terminals in the country are **concentrated in tier 1 and 2 cities** because of the **high cost of merchant acquisition** and **merchant terminalisation**.
- Benefit →
 - It will give a **push to digital payments** across India.
 - **Reduce demand for cash** over time.

13. Coal India Arm Western Coalfields

Why in News?

- Recently Coal India Subsidiary Western Coalfields Ltd (WCL) opened 3 new coal mines in Maharashtra and Madhya Pradesh.

About

- The three mines which WCL has opened are
 1. **Adasa Mine**, an underground to open cast mine, in Nagpur Area of Maharashtra,
 2. **Sharda underground Mine** in Kanhan Area and
 3. **Dhankasa underground mine** in Pench Area of Madhya Pradesh.

📌 Coal India Subsidiary Western Coalfields Ltd launches

WCL EYE →

- It will **monitor operations** of 15 major mines of the Company round the clock that account for 70% of the Company's coal production.
- It will also help **monitor coal stocks and availability of coal at sidings**, keep a tab on the placement of rakes and loading at railway sidings and ensure accountability.

SAMVAAD app →

- It is a **Mobile and Desktop App** for employees & stakeholders, which will provide a **virtual platform for suggestion/feedback/experience sharing**.
- **Quick Response Teams** will respond to the queries and feedbacks in 7 days mandated period.

📌 Western Coalfield Limited (WCL)

- Parent Organization → It is **one of the eight Subsidiary Companies of Coal India Limited** (CIL) which is under the administrative control of **Ministry of Coal**.
- The Company incorporated under the **Companies Act, 1956**.
- Status → WCL has been conferred "**Miniratna**" status on 15th March'2007.

14. Turant Customs

Why in News?

- Central Board of Indirect Taxes and Customs launches its flagship programme 'Turant Customs' at Bengaluru & Chennai.

About

- What is it? → It is a giant leap forward to **leverage technology** for **faster Customs clearance of imported goods**.
- Importers will now get their goods cleared from Customs after a **faceless assessment** is **done remotely** by the Customs officers located outside the port of import.
- Now, the goods imported at Chennai may be assessed by the Customs officers located at Bengaluru and vice versa, as assigned by the **Customs' automated system**.
- Turant Customs is a mega reform for the **ease of doing business**.
- The start of Turant Customs at Bengaluru and Chennai will be the **first phase** of the **All India roll out** which would get **completed by 31st December this year**.
- The first phase will cover **imports of Mechanical, Electrical and Electronics machineries at the ports, airports and ICDs** of Bengaluru and Chennai.
- Benefits → Turant Customs will benefit the importers by **eliminating routine interface** with the Customs officers and providing uniformity in assessment across the country.

👉 Central Board of Indirect Taxes and Customs

- Parent Organization → Central Board of Indirect Taxes and Customs is a **subsidiary** of the **Department of Revenue under the Ministry of Finance**.
- Tasks → It deals with the tasks of **formulation of policy** concerning **levy and collection of Customs, Central Excise duties, Central Goods & Services Tax and IGST**, and it also works for the prevention of smuggling and administration.
- administrative authority → The Board is the **administrative authority for its subordinate organizations**, including Custom Houses, Central Excise and Central GST Commissionerates and the Central Revenues Control Laboratory.

15. FOREX RESERVES

Why in News?

- India's foreign exchange reserves are rising and are slated to hit the \$500 billion mark soon.

About FOREX RESERVES

- What is it? → Foreign-exchange reserves (also called forex reserves or FX reserves) are **reserve assets held by a central bank** in **foreign currencies**, used to back liabilities on their own issued currency as well as to **influence monetary policy**.
- Reserves are denominated and expressed in the **US dollar**, which is the international numeraire for the purpose.
- Components: India's foreign exchange reserves comprise
 1. **Foreign currency assets (FCAs)** → These are maintained in currencies like US dollar, euro, pound sterling, Australian dollar and Japanese yen.
 2. **Gold**
 3. **SDR (special drawing rights) in IMF** → This is the reserve CURRENCY with IMF
 4. **RTP (reserve tranche position) in IMF** → This is the reserve CAPITAL with IMF
- Governance → India's FOREX is governed by **RBI** under RBI act,1934. The level of foreign exchange reserves is largely the outcome of the **RBI's intervention in the foreign exchange market**.

- Importance of Forex →
 - Reserves are held for **maintaining liquidity** and allowing time to **absorb shocks in situations** where access to borrowing is curtailed or are very costly.
 - It provides **confidence** that the authorities are committed to the **timely discharge of external obligations** and to supporting the value of the local currency.
 - It is an **important component of the Balance of Payment** and an essential element in the analysis of an economy's external position.

16. Border Adjustment tax

Why in News?

- A NITI Aayog member has favoured imposing a border adjustment tax (BAT) on imports to provide a level-playing field to domestic industries.

About BAT

- What is it? → BAT is a **duty** that is proposed to be **imposed on imported goods** in addition to the **customs levy** that gets **charged at the port of entry**.
- BAT is a fiscal measure that **imposes a charge on goods or services** in accordance with the destination principle of taxation.
- Generally, BAT seeks to promote "**equal conditions of competition**" for foreign and domestic companies supplying products or services within a taxing jurisdiction.

Why needs BAT? →

- The Indian industry has been **complaining** to the government about **domestic taxes** like electricity duty, duties on fuel, clean energy cess, mandi tax, royalties, biodiversity fees that **get charged on domestically produced goods** as these duties get **embedded into the product**.
- But **many imported goods** do **not get loaded with such levies** in their respective country of origin and this gives such products **price advantage in the Indian market**.

17. P K MOHANTY COMMITTEE

Why in News?

- The Reserve Bank of India (RBI) has constituted a five-member Internal Working Group to review extant ownership guidelines and corporate structure for 'Indian Private Sector Banks.

About

- RBI Central Board Director **P K Mohanty** will head the committee, which will submit its report by 30th September, 2020.
- Terms of Reference of the Committee are →
 - To **review the extant licensing guidelines and regulations** relating to ownership and control in Indian private sector banks and suggest appropriate norms;
 - To **examine** and **review the eligibility criteria** for individuals/ entities to apply for banking license;

- To study the **current regulations on holding of financial subsidiaries** through non-operative financial holding company (NOFHC) and suggest the manner of migrating all banks to a uniform regulation in the matter; and
- To examine the **norms for promoter shareholding at the initial/licensing stage** and subsequently, along with the timelines for dilution of the shareholding.

18. Sahakar Mitra Scheme

Why in News?

- Union Minister for Agriculture & Farmers Welfare has launched Sahakar Mitra: Scheme on Internship Programme for young professionals.

About Sahakar Mitra Scheme

- Nodal Agency → Sahakar Mitra Scheme is an initiative of **National Cooperative Development Corporation (NCDC)**.
- Aim → It aims to **help cooperative institutions access innovative ideas of young professionals** while the interns will gain experience of working in the field to be self-reliant.
- Eligibility → **Professional graduates in disciplines** such as Agriculture and allied areas, IT etc and also who are **pursuing** or **have completed their MBA degrees** in Agri-business, Cooperation, Finance, International Trade etc will also be eligible.
- Financial Support → Each intern will get **financial support over a 4 months** internship period.
- Significance → The scheme is expected to **assist cooperative institutions to access new and innovative ideas** of young professionals while the interns gain experience of working in the field giving the confidence to be self-reliant.

👉 National Cooperative Development Corporation

- Formation → NCDC was established by an **Act of Parliament in 1963** as a statutory Corporation **under the Ministry of Agriculture & Farmers' Welfare**.
- Headquarters → Head Office at **New Delhi** and **multiple Regional Offices**.
- Objectives →
- The objectives of NCDC are **planning and promoting programmes** for production, processing, marketing, storage, export and import of agricultural produce, foodstuffs, industrial goods, livestock and certain other notified commodities and services on cooperative principles.
- It is a major financial institution for cooperatives, and has recently started **Mission Sahakar 22**, which **aims to double farmers' income by 2022**.

19. Indian Gas Exchange (IGX)

Why in News?

- Recently, India launched its first gas exchange which has been named as the Indian Gas Exchange (IGX).

About

- What is it? → The IGX is a **digital trading platform** that will **allow buyers** and **sellers of natural gas to trade** both in the **spot market** and in the **forward market** for imported natural gas.
- Features → It will **allow trading across three hubs** – Dahej and Hazira in Gujarat, and Kakinada in Andhra Pradesh.
- Imported Liquefied Natural Gas (LNG) will be **regassified** and **sold to buyers through the exchange**, removing the requirement for buyers and sellers to find each other.
- The exchange also allows **much shorter contracts** – for delivery on the next day, and up to a month – while ordinary contracts for natural gas supply are as long as six months to a year.
- This will mean that buyers do **not have to contact multiple dealers** to **ensure** they **find a fair price**.
- Benefits → IGX is expected to facilitate **transparent price discovery** in natural gas, and **facilitate the growth of the share of natural gas** in India's **energy basket**. It removes the requirement for buyers and sellers to find each other to **ensure a fair price deal**.

20. World Investment Report

Why in News?

- The World Investment Report 2020 has been released by the UN Conference on Trade and Development (UNCTAD).

About World Investment Report

- The World Investment Report has been published **annually since 1991**.
- It covers the **latest trends in foreign direct investment** around the world.

📌 Key Points

- India's Investment Scenario → India was the **world's 9th largest recipient** of foreign direct investments (FDI) in **2019** with **\$51 billion** in foreign investment.
- In **2018**, India was the **world's 12th largest** recipient with **\$42 billion foreign investment**.
- Global Scenario → Global FDI flows are forecast to **decrease by up to 40% in 2020** from their 2019 value of \$1.54 trillion. This would bring **FDI below \$1 trillion** for the first time **since 2005**.

📌 About United Nations Conference on Trade and Development (UNCTAD)

- UNCTAD is a **permanent intergovernmental body** established by the United Nations General Assembly in **1964**.
- It is **part of the UN Secretariat**.
- It **reports to** the UN General Assembly and the Economic and Social Council, but has its **own membership, leadership, and budget**.
- It is also a **part of the United Nations Development Group**.
- Objectives and roles → It **supports developing countries** to access the benefits of a globalized economy more fairly and effectively. Along with other UN departments and agencies, it also **measures the progress** made in the **Sustainable Development Goals**, as set out in Agenda 2030.
- Headquartered → **Geneva, Switzerland**.

- Reports → a) **The Trade and Development Report** b) **Technology and Innovation Report** c) **Digital Economy Report among others.**

21. Housing Finance Companies

Why in News?

- The Reserve Bank of India (RBI) has proposed stringent norms for housing finance companies.

About Housing Finance Companies

- It means **financing for purchase, construction** or **repair of residential dwelling units** and some other activities including giving loans to corporates and government agencies for **employee housing projects.**
- Qualification for HFC's → To qualify as a housing finance company, **50% of net assets** should be to **real estate lending** of which at **least 75%** should be **towards individual housing loans.**
- Classification → RBI has classified housing finance companies (HFC) as **systemically important** and **non-systemically important:**
 - **Non-deposit** taking HFCs with **asset size of ₹500 crore and above** and all deposit taking HFCs irrespective of asset size will be treated as **systemically important HFCs.**
 - **HFCs** with asset size **below ₹500 crore** will be **treated** as **non-systemically important HFCs.**
- Minimum Net Owned Fund → RBI has proposed to **double** the **minimum net owned fund**(NOF) requirement for housing finance companies **to Rs 20 crore.**
- Lending → HFCs can **either** lend to the **group company in real estate business** or **lend to retail individual homebuyers** in the projects of group entities but **not to both.**

22. NEERA

Why in News?

- The Khadi and Village Industries Commission (KVIC) has rolled out a unique project to produce Neera and Palm jaggery which has huge potential to create employment.

About

- Aim → The project that aims at **promoting Neera as a substitute to soft drinks** while also creating self-employment to Adivasis and traditional trappers was launched at **Dahanu in Palghar district of Maharashtra.**

👉 About Neera

- Neera, **extracted from palm trees before sunrise,** is a **nutrient-rich health drink** consumed in many states. However, due to **lack of institutionalized market technique,** the commercial production and large-scale marketing of Neera has **not commenced yet.**
- There are about **10 crore palm trees** across the country and a **wide range of products** like candies, milk chocolates, palm cola, ice-cream and traditional sweets can be produced from neera if **properly marketed.**
- India has an abundance of palm fields in states like **Maharashtra, Gujarat, Goa, Daman & Diu, Dadra and Nagar Haveli, Tamil Nadu, Uttar Pradesh and Bihar** that can make India a leading producer of Neera globally.

👉 The Khadi and Village Industries Commission (KVIC)

- It is a **statutory body** established under Khadi and Village Industries Commission Act, 1956.
- Ministry → It is an apex organisation under the **Ministry of Micro, Small and Medium Enterprises**.
- Functions → seeks to – “plan, promote, facilitate, organise and assist in the establishment and development of khadi and village industries in the rural areas in coordination with other agencies engaged in rural development wherever necessary.”

23. National Institute of Public Finance and Policy

Why in News?

- Urjit Patel has been appointed chairman of the National Institute of Public Finance and Policy (NIPFP). He will succeed Vijay Laxman Kelkar.

About

- What is it? → NIPFP is an **autonomous body set up jointly by** the Ministry of Finance, the erstwhile Planning Commission, and several state governments.
- It is registered under the **Societies Registration Act, 1860**.
- Formation → It was **founded in 1976**.
- Functions →
 - It **undertakes research, policy advocacy and capacity building** in areas related to public economics.
 - One of the major mandates of the institute is to **assist the Central, State and Local governments in formulating and reforming public policies** by providing an analytical base.
- Funding → It receives an **annual grant from the Ministry of Finance** and **various State governments**. However, it maintains an independent non-government character.
- Location → **New Delhi**.
- Governing Body →
 - It includes the **Revenue Secretary, Economic Affairs Secretary and the Chief Economic Advisor** from the Union Finance Ministry and **representatives from NITI Aayog, RBI and three state governments**.
 - It also includes three **distinguished economists, members of sponsoring agencies and other invitees**.
 - It is involved in **appointing the Chairman and the Director**.
 - The usual tenure of a chairman is **four years, which can be extended**.

24. COVID-19 Active Response and Expenditure Support Programme

Why in News?

- Government of India and Asian Infrastructure Investment Bank (AIIB) has signed a \$750 million “COVID-19 Active Response and Expenditure Support Programme”.

About Programme

- Aim → To **assist India to strengthen its response** to the adverse impacts of the COVID-19 pandemic on poor and vulnerable households.
- Programme Beneficiaries → **Families below poverty line, farmers, healthcare workers, women, widows, people with disabilities, senior citizens, construction workers and vulnerable groups.**
- Funding → It is financed under the COVID-19 Crisis Recovery Facility of the **AIIB** and **co-financed by the Asian Development Bank** (ADB).
- Implementation → It will be executed by the **Department of Economic Affairs**, Ministry of Finance.

📌 About AIIB

- The Asian Infrastructure Investment Bank (AIIB) is a **multilateral development bank** with a mission to improve social and economic outcomes in Asia.
- HQ → **Beijing, China.**
- It is established by a multilateral treaty - **AIIB Articles of Agreement.**
- **India joined AIIB in 2016** as a regional member of the Bank.
- Members → Further, 14 of the G-20 nations are AIIB members including France, Germany, Italy and the United Kingdom.
- **China** is the **largest shareholder** in AIIB with a **26.06% voting power**, followed by **India with a 7.62% voting power.**
- Significance of AIIB → The United Nations has addressed the launch of AIIB as having potential for “**scaling up financing for sustainable development**” for the concern of global economic governance. The capital of the bank is **\$100 billion, equivalent to 2/3** of the **capital of the Asian Development Bank** and about **half that of the World Bank.**

25. DISTRESSED ASSETS FUND–SUB-ORDINATE DEBT FOR MSMEs

Why in News?

- Minister of MSME launched the Credit Guarantee Scheme for Sub-ordinate Debt (CGSSD) which is also called “Distressed Assets Fund–Sub-ordinate Debt for MSMEs”.

About

- Aim → To **extend support to the promoters of the operational MSMEs** which are stressed and have become NPA as on 30th April, 2020.
- Guarantee → It provides a **guarantee cover worth Rs. 20,000 crores** to the promoters who can take debt from the banks to further invest in their stressed MSMEs **as equity.**
- Features of the Scheme →
 - Promoter(s) of the MSMEs will be given **credit equal to 15% of their stake** (equity plus debt) or Rs. 75 lakh whichever is lower.
 - Promoter(s) in turn will **infuse this amount in the MSME unit** as **equity** and thereby **enhance the liquidity** and **maintain debt-equity ratio.**
 - **90% guarantee coverage** for this **sub-debt** will be given under the Scheme and 10% would come from the concerned promoters.
- Duration → There will be a **moratorium of 7 years** on payment of principal whereas **maximum tenure** for repayment will be **10 years.**

- Implementation → The scheme will be operationalised through **Credit Guarantee Fund Trust for MSEs** (CGTMSE).

26. Animal Husbandry Infrastructure Development Fund

Why in News?

- Cabinet Committee on Economic Affairs has given its nod to set up a Rs.15,000 crore Animal Husbandry Infrastructure Development Fund.

About Fund

- Aim → To **facilitate incentivisation of investments** in the establishment of infrastructure in the animal husbandry sector.
- The fund had been proposed as **part of the Aatmanirbhar Bharat**.
- Beneficiaries → Farmer Producer Organizations (**FPOs**), **MSMEs**, **Section 8 Companies**, **Private Companies** and **individual entrepreneurs with minimum 10% margin money** contribution by them.
- The **balance 90%** would be the **loan component** to be made available by **scheduled banks**.
- Interest Subventions → The government will provide **4% interest subvention** to eligible beneficiaries from the **Aspirational Districts** and **3% for beneficiaries from other Districts**.
- Duration → There will be a **2 years moratorium period** for repayment of loan with **6 years repayment period** thereafter.

27. Skills Build Reignite

Why in News?

- MSDE-IBM Partnership has unveiled Free Digital Learning Platform “Skills Build Reignite” to reach more job seekers & provide new resources to business owners in India.

About Skills Build Reignite

- What is it? → The SkillsBuild Reignite tends to **provide job seekers and entrepreneurs**, with access to **free online coursework** and **mentoring support** designed to help them reinvent their careers and businesses.
- It is a **long term institutional training** to the nation’s youth through its network of training institutes and infrastructure.
- Strategy → IBM will provide **multifaceted digital skill training** in the area of **Cloud Computing and Artificial Intelligence** (AI) to students & trainers across the nation in the National Skill Training Institutes (**NSTIs**) and **ITIs**.
- Implementation → Directorate General of Training (DGT) under the aegis of the **Ministry of Skill Development & Entrepreneurship (MSDE)** is responsible for implementing the program.
- **Job seekers, individual business owners, entrepreneurs** and **any individual** with learning aspirations can now tap into host of **industry-relevant content** on topics including AI, Cloud, Data analytics etc.
- Features → Its special feature is the **personalized coaching for entrepreneurs**, seeking advice to **help establish or restart their small businesses** as they begin to focus on recovery to emerge out of the COVID 19 pandemic.
- Courses for small business owners include, for example, **financial management, business strategy, digital strategy, legal support and more**.

- Plus, **IBM volunteers** will **serve as mentors** to some of the **30,000 SkillsBuild users in 100 communities** in at least five major regions worldwide to help reinvigorate local communities.

28. Pradhan Mantri Mudra Yojana (PMMY)

Why in News?

- Government has approved a 2% interest subsidy for Shishu loan account holders under the Pradhan Mantri Mudra Yojana (PMMY) for a period of 12 months to eligible borrowers.

About

- Background → It was launched by the Prime Minister in **2015**.
- Aim → To provide **loans up to 10 lakh** to the **non-corporate, non-farm small/micro enterprises**.
- Lending Institutions → **Commercial Banks, RRBs, Small Finance Banks, MFIs and NBFCs**.
- Categories of Loans: MUDRA has created three products as per the stage of growth and funding needs of the beneficiary micro unit:
 1. **Shishu**: Covering loans up to Rs. 50,000.
 2. **Kishore**: Covering loans above Rs. 50,000 and up to Rs. 5 lakhs
 3. **Tarun**: Covering loans above Rs. 5 lakh and up to Rs. 10 lakhs.
- Loans under this scheme are **collateral-free loans**.

29. NATIONAL PRODUCTIVITY COUNCIL (NPC)

Why in News?

- The 49th Governing Council Meeting of National Productivity Council (NPC) was held under the Chairmanship of Commerce and Industry Minister Piyush Goyal.

About NPC

- Parent body → NPC is an **autonomous body** under Department for Promotion of Industry & Internal Trade (DPIIT), **Ministry of Commerce & Industry**, Government of India.
- Objective → NPC is a national level organization to **promote productivity culture in India**.
- Established in → **1958**.
- Status → It is an **autonomous, multipartite, non-profit organization** and has been **registered as a Society** under the Societies Registration Act XXI of 1860.
- NPC is a constituent of the **Tokyo-based Asian Productivity Organisation (APO)**, an Inter-Governmental Body, of which the Government of India is a founder member.

30. TRIPS FLEXIBILITIES

Why in News?

- India has asked the G20 members to work on an agreement that would enable countries to use the flexibilities under TRIPS.

About

- TRIPS flexibilities are '**policy spaces**' for countries to **mitigate the impact of patents** (i.e., the excessively high price of patented medicines due to lack of competition).
- TRIPS agreement and subsequent **Doha Declaration** on TRIPS and Public Health of 2001 provide some flexibilities in this regard.
- Flexibilities aim to **permit developing and least-developed countries to use TRIPS-compatible norms** in a manner that enables them to pursue o their own public policies, either in specific fields like access to pharmaceutical products or protection of their biodiversity, in establishing macroeconomic, institutional conditions that support economic development.

👉 **Some major flexibilities under TRIPs are:**

- **Compulsory Licensing:** Compulsory licensing enables a competent government authority to license the use of a patented invention to a third party or government agency without the consent of the patent-holder.
- **Parallel importation:** It is importation without the consent of the patent-holder of a patented product marketed in another country either by the patent holder or with the patent-holder's consent.
- It enables **access to affordable medicines** because there are **substantial price differences** between the same pharmaceutical product sold in different markets.

👉 **About TRIPS Agreement**

- The TRIPS Agreement, which **came into effect in 1995**, is the most comprehensive multilateral agreement **on intellectual property**.
- It was negotiated between 1986 and 1994 during the Uruguay Round of the General Agreement on Tariffs and Trade (GATT), which led to the establishment of the World Trade Organization (WTO).
- It sets out the minimum standards of protection to be provided by each Member.
- Agreement is **in line with the main conventions** of the **WIPO**, the **Paris Convention for the Protection of Industrial Property** (Paris Convention) and the **Berne Convention** for the Protection of Literary and Artistic Works.
- The areas of intellectual property that it covers are:
 - copyright and related rights,
 - trademarks,
 - geographical indications,
 - industrial designs,
 - new varieties of plants;
 - layout-designs of integrated circuit,
 - trade secrets and test data.
- Membership in the WTO includes an obligation to comply with the TRIPS Agreement.

31. SUGAR INDUSTRY IN INDIA

Why in News?

- Recently, a NITI Aayog task force on sugarcane and sugar industry submitted its report to the government.

About News

- This task force was constituted on the sugar industry to find a **long-term solution** to the problems faced by the sector so as to **rationalise their dependence on states' assistance**.
- Its mandate included recommendations on **crop diversification** to reduce adverse impact on ground water and **aligning sugar industry with global markets**.

👉 Sugarcane pricing in India

- The pricing of sugarcane is governed by the statutory provisions of the **Sugarcane (Control) Order**, 1966 issued under the **Essential Commodities Act (ECA), 1955**.
- Fair and Remunerative Price (FRP) → It is the cane price announced by the Central Government on the basis of the **recommendations of the Commission for Agricultural Costs and Prices (CACP)** after consulting the State Governments and associations of sugar industry.
- **FRP is minimum price paid by mills to farmers**.
- It **replaced** the erstwhile Statutory Minimum Price.
- Under the FRP system, the farmers are not required to wait till the end of the season or for any announcement of the profits by sugar mills or the Government.
- It assures margins on account of profit and risk to farmers, **irrespective of the fact whether sugar mills generate profit or not** and is not dependent on the performance of any individual sugar mill.
- It is based on the following parameters-
 - Cost of production of sugarcane.
 - Return to the growers from alternative crops and the general trend of prices of agricultural commodities.
 - Availability of sugar to consumers at a fair price.
 - Price at which sugar produced from sugarcane is sold by sugar producers
 - Recovery of sugar from sugarcane.
 - The realization made from sale of by-products viz. molasses, bagasse and press mud or their imputed value.
 - Reasonable margins for the growers of sugarcane on account of risk and profits.
- **State Advised Price (SAP)**- Citing differences in cost of production, productivity levels and also as a result of pressure from farmers' groups, some states declare state specific sugarcane prices called State Advised Prices (SAP), **usually higher than the FRP**.

32. RICE EXPORT PROMOTION FORUM

Why in News?

- Recently, government set up Rice Export Promotion Forum (REPF) under the aegis of the Agricultural and Processed Foods Export Promotion Development Authority (APEDA).

About REPF

- Its objective is to **identify, document particulars and reach out to stakeholders across the entire production/ supply chain of export of rice** for increasing these exports significantly to the global market.
- It will monitor, identify and anticipate developments pertaining to rice production and exports and recommend necessary policy measures.

👉 About APEDA:

- APEDA was established under the **Agricultural and Processed Food Products Export Development Authority Act, 1985**.
- It is under **Ministry of Commerce and Industry**.
- It is mandated with the responsibility of export promotion and development of products such as Fruits, Vegetables, Meat, Poultry, Dairy Products, Floriculture, Alcoholic and Non-Alcoholic Beverages etc.
- Under 'Agriculture Export Promotion Scheme of APEDA', **APEDA provides financial assistance to the registered exporters** under sub-components of the Scheme - Market Development, Infrastructure Development, Quality Development and Transport Assistance.
- APEDA has also been entrusted with the **responsibility to monitor the import of sugar as well**.

Rice production in India:

- India is the **second largest producer of rice in the world** and has been the largest exporter of rice after the shipments of the non-basmati were allowed from 2011.
- Major share of rice is cultivated **during Kharif** season while a **small share of rice is grown in rabi** /summer season with assured irrigation.
- India's rice production has grown from around 96 million tonnes in 2010-11 to 117.47 million tonnes in 2019-20 (22% increase), per Second Advance Estimates.

Environment

1. Band-tail Scorpionfish

Why in News?

- Recently, researchers at the Central Marine Fisheries Research Institute (CMFRI) have found a rare Scorpionfish from Sethukarai coast in the Gulf of Mannar. This was the first time that the particular species was found alive in Indian waters.

About Band-tail Scorpionfish

- Scientific name → **Scorpaenospsis neglecta**.
- The band-tail scorpionfish (*Scorpaenospsis neglecta*) **camouflages within the seagrass meadows**.
- It is well-known for its **stinging venomous spines** and **ability to change colour**.
- The fish has the **ability to change colour** and **blend with its surrounding environment** to escape from predators and while preying.
- The fish is called '**scorpionfish**' because its spines contain neurotoxic venom.

📌 Gulf of Mannar

- The Gulf of Mannar is a **large shallow bay** forming part of the **Laccadive Sea in the Indian Ocean**.
- It lies between the west **coast of Sri Lanka** and the **south-eastern tip of India**, in the Coromandel Coast region.
- The chain of low islands and reefs known as **Ramsethu** (or Adam's Bridge) which includes **Mannar Island**, **separates the Gulf of Mannar from Palk Bay**, which lies to the north between Sri Lanka and India.

📌 The Central Marine Fisheries Research Institute

- Established by → the Government of India in **1947**.
- Parent Organization → under the Ministry of Agriculture and Farmers Welfare and later it **joined the Indian Council of Agricultural Research (ICAR) family in 1967**.
- Status → It is a leading **tropical marine fisheries research institute** in the world.
- Headquartered → **Kochi, Kerala**.
- Objectives:
 - Marine Fishery Resource Assessment.
 - Productivity and Production Enhancement through Mariculture.
 - Conservation of Marine Biodiversity.
 - Transfer of Technology, Training and Consultancy.

2. Nagar Van Scheme

Why in News?

- Union government has announced implementation of the Nagar Van Scheme on the occasion of the World Environment Day (5th June).

About Nagar Van Scheme

- Aim → To **increase forest cover** in urban areas by developing **200 Urban Forests** across the country in **next five years**.
- Implementation → It will be implemented with **people's participation** and **collaboration** between the **Forest Department, Municipal bodies, NGOs and corporates**.
- Funding → The finances for the scheme will be paid for by the **CAMPA (Compensatory Afforestation Fund (CAF) Act, 2016) funds**.
- **Warje Urban Forest** in Pune (Maharashtra) will be considered as a **role model for the Scheme**.
- Significance → This Urban Forest project is now helping **maintain ecological balance, serving both environmental and social needs**.
- Warje Urban Forest or Smriti Van → It is a **Public Private partnership project** of Pune that has been successful in **converting 16.8 hectare of barren Warje hill into green forests**.

3. “Healthy and Energy Efficient Buildings” Initiative

Why in News?

- The Energy Efficiency Services Limited (EESL) has launched the “Healthy and Energy Efficient Buildings” initiative that will pioneer ways to make workplaces healthier and greener.

About the Initiative

- Nodal agency → The initiative has been launched **by EESL in partnership with the U.S. Agency for International Development's** (USAID) MAITREE program.
- As part of this initiative, **EESL** has **taken the leadership** by being the first to implement this framework in its own offices.
- This initiative addresses the challenges of **retrofitting existing buildings** and **air conditioning systems** so that they are both healthy and energy-efficient.
- It will pave the way for other buildings to take **appropriate steps** to be **healthy** and **energy-efficient**.

👉 MAITREE program

- What is it? → The Market Integration and Transformation Program for Energy Efficiency (MAITREE) is a **part of the US-India bilateral Partnership** 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.
- Significance of the initiative →
- **Poor air quality** has been a **concern in India** for quite some time and has become **more important in light of the COVID pandemic**.
- As **people return to their offices and public spaces, maintaining good indoor air quality** is essential for occupant comfort, well-being, productivity and the overall public health.
- Most buildings in India are **not equipped to establish** and **maintain healthy indoor air quality** and **need to be upgraded**.

👉 Energy Efficiency Services Limited

- What is it? → Energy Efficiency Services Limited (EESL), is a **joint venture** of four National Public Sector Enterprises– **NTPC Limited**, Power Finance Corporation Ltd (PFC), **REC** and **POWERGRID**, and was set up **under Ministry of Power**.
- Aim → It aims to **create market access for efficient and future-ready transformative solutions** that create a win-win situation for every stakeholder.
- It is working towards **mainstreaming energy efficiency** and is **implementing the world’s largest energy efficiency portfolio** in the country.
- It helps in **implementing** programmes such as **UnnatJyoti by Affordable LED for All (UJALA)**, **Smart Meters**, etc.

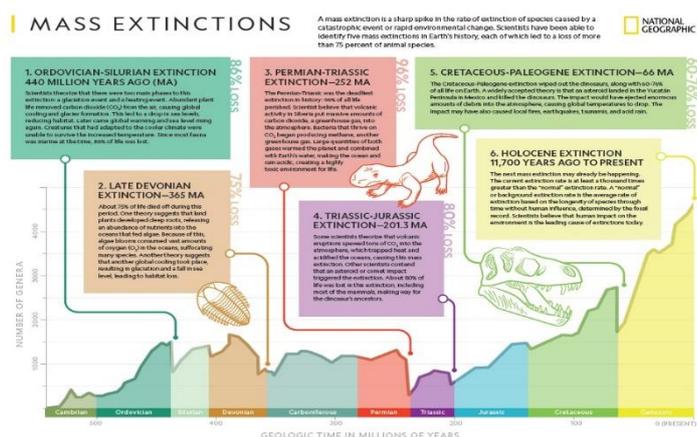
4. Sixth mass extinction

Why in News

- According to researchers at National Academy of Sciences of the United States of America(PNAS), the ongoing sixth mass extinction may be one of the most serious environmental threats to the persistence of civilisation.

About

- What is Mass extinction? → It refers to a **substantial increase in the degree of extinction** or when the **Earth loses more than three-quarters of its species** in a geologically short period of time.
- Earlier Extinctions → There have been **five mass extinctions** that have taken place in the **last 450 million years**. This have led to the destruction of 70%-95% of the species of plants, animals and microorganisms that existed earlier.
 - These extinctions were **caused by catastrophic alterations** to the environment such as: Massive volcanic eruptions, Depletion of oceanic oxygen, Collision with an asteroid among others.
- Sixth Extinction → The sixth mass extinction which is ongoing is referred to as the **Anthropocene extinction** or **Holocene extinction**.
 - The research has claimed that this extinction is **human-caused** and is more immediate than climate destruction. The rate of extinction of species is also estimated at 100 to 1,000 times higher than natural background rates.



5. Environmental performance index

Why in News?

- 12th edition of the biennial Environment Performance Index (EPI Index 2020) has been released.

About Index

- Released by → **Yale and Columbia universities** in collaboration with the World Economic Forum (**WEF**).

- The index is **released biennially** (once every two years).
- The EPI measures the environmental performance of **180 countries**.
- Indicators → It considers **32 indicators** of environmental performance, giving a snapshot of the **10-year trends in environmental performance** at the **national and global levels**.

📌 Key Takeaways

- Top ranks → **Denmark was ranked first** followed by Luxembourg and Switzerland.
- Performance of India → **India secured 168th rank**. The country scored 27.6 out of 100 in the 2020 index.
- India's rank was 177 (with a score of 27.6 out of 100) in 2018.
- All South Asian countries **except Afghanistan** are **ahead of India in the ranking**.
- Remarks for India →
 - The report indicated that **black carbon, carbon dioxide emissions** and **greenhouse emissions per capita increased in 10 years**.
 - India needs to **re-double national sustainability efforts** on all fronts, according to the index.
 - It needs to focus on a **wide spectrum of sustainability issues**, with a high-priority to critical issues such as air and water quality, biodiversity and climate change.

6. India's first online waste exchange platform

Why in News?

- Andhra Pradesh (AP) government has launched country's first online Waste Exchange Platform for industrial waste.

About

- Purpose → To ensure **safe disposal of toxic wastes** with the help of **monitoring, scrutinizing and auditing of the waste**.
- Besides, the platform will also **encourage proper utilisation of waste and promote 6Rs** – reduce, reuse, recycle, refurbish, redesign and re-manufacturing of waste items.
- Implementation → It will be implemented by **Andhra Pradesh Environment Management Corporation (EMC)**.

7. Haldwani Bio-Diversity Park

Why in News?

- Uttarakhand opened its biggest biodiversity park in Haldwani on the World Environment Day (5th June).

About Bio-Diversity Park

- Inside the Park, there are **thematic gardens, a soil museum, species of plants, lichens, mosses and algae from the Jurassic era**, a vermicomposting unit, an interpretation center, and a state-of-the-art weather station.
- The Park has **40 unique sections** having **479 rare plant species of cactus, medicinal herbs, different types of trees, etc.**

- The various species of plants have been brought to the park **from diverse terrains** like **Niti Mana Valley** and even **from some glaciers around Kedarnath**.
- Niti Mana Valley is located **near the India Tibetan Border in Chamoli district of Uttarakhand**.
- The plant species in the biodiversity park is **divided into spiritual & religious, scientific, human health, and aesthetic value sections**.
- The spiritual section has trees that find mention in holy scriptures like **Guru Granth Sahib, Quran, Bible, and others**.
- It showcases the different kinds of soil found in various topographies of Uttarakhand – **alpine, bhabhar, sub-mountainous, mountainous, tertiary, loam, terai**.

8. Green colour band for BS-VI 4W vehicles

Why in News?

- The Ministry of Road Transport and Highways (MoRTH) has issued an order mandating a coloured strip to identify four-wheeled BSVI vehicle.

About News

- The order mandates a strip of green colour of **1 cm width** on top of the existing sticker carrying details of **registration for BS-VI vehicles** of any fuel type i.e. for petrol or CNG which have a light blue colour sticker and a diesel vehicle which is of orange colour.
- These stickers will now have a green strip of 1 cm on top for BS VI, **as mandated**.

👉 Bharat Stage (BS) norms

- These are standards instituted by the Government of India **in 2000** to **regulate emission of air pollutants from motor vehicles**. They are based on the **European (EURO) emission standards**.
- Implementation → The standards and the timeline for implementation are set by the **Central Pollution Control Board (CPCB)** under the Ministry of Environment, Forest and Climate Change.
- The **BS-VI emission standards**, which have been mandated w.e.f. **1st April, 2020**, provide for stricter and cleaner emission norms.
- Benefits of BS-VI Standards →
 - Particulate matter (PM) → BS-VI norms brings down the emission of particulate matter by **almost 80% in case of petrol as well as diesel power plants**.
 - Sulphur content → Sulphur traces in BS-VI fuel is **five times lower** (10 ppm) **as compared to sulphur traces in BS-IV fuel** (50 ppm).
 - Nitrogen Oxide Content → Nitrogen oxide level for BS-VI diesel engines and petrol engines will be brought **down by 70% and 25% respectively**.

9. International Convention for the Prevention of Pollution from Ships

Why in News?

- The Ministry of Shipping has informed about the steps taken for prevention and control of pollution arising from ships in the sea and in the inland waterways under the MARPOL Convention.

About MARPOL

- What is it? → MARPOL is the main international convention aimed at the **prevention of pollution from ships caused by operational or accidental causes**.
- Timeline → The **Protocol of 1978** was adopted in response to a number of **tanker accidents in 1976–1977**.
- It is one of the **most important** international marine environmental conventions.
- Objective → It was **developed by the IMO** with an objective to **minimize pollution of the oceans and seas**, including dumping, oil and air pollution.
- India Status → **India is a signatory** to MARPOL.
- Functions → The Convention includes **regulations aimed at preventing and minimizing pollution from ships** – both accidental pollution and that from routine operations – and currently includes **six technical Annexes**.
- It has six annexes (I to VI) and it deals with prevention of (1) **Pollution from ships by Oil**, (2) **Noxious liquid substances**, (3) **Dangerous goods in packaged form**, (4) **Sewage**, (5) **Garbage** and (6) **Air pollution from ships** respectively.

10. ASIATIC LION

Why in News?

- According to June 5, 2020 census, the number of Asiatic lions have now risen by 29% over five years to an estimated 674 in the Gir forest region and other revenue areas of coastal Saurashtra.

About

- Scientific Name → **Panthera Leo Persica**.
- Characteristics → Asiatic lions are **slightly smaller than African lions**.
- The most striking morphological character is a **longitudinal fold of skin running along belly of Asiatic Lions**.
- Habitat and Distribution → At present **Gir National Park** and **Wildlife Sanctuary in Gujarat** is the only abode of the Asiatic lion. They live in a compact tract of **dry deciduous forest** and **open grassy scrublands** in southwestern part of **Saurashtra region of Gujarat**.
- Status → Listed in **Schedule I** of Wildlife (Protection) Act 1972, in **Appendix I of CITES** and as **Endangered** on IUCN Red List.

11. Coral Triangle Day

Why in News?

- The Coral Triangle Day 2020 was observed on June 9.

About

- What is it? → The Coral Triangle Day is an **annual event** started by Coral Triangle Initiative (CTI) **since 2012** in conjunction with the World Oceans Day on June 8.



- Aim → To celebrate and **raise awareness** of the **ocean conservation** and **protection especially of the Coral Triangle**.
- Coral Triangle Initiative (CTI) → It is a **multilateral partnership** of **six countries** (Indonesia, Malaysia, Philippines, Papua New Guinea, Solomon Islands, Timor-Leste).
- Coral Triangle → It is a **vast ocean expanse** that **geographically spreads across 6 countries** in Asia and the Pacific: Indonesia, Malaysia, Philippines, Papua New Guinea, Solomon Islands, and Timor Leste.

12. Brown Rock Chat

Why in News?

- Recently the Brown Rock Chat has almost disappeared from the heart of the National Capital, visible only on the outskirts.

About Brown Rock Chat

- It is also called as Indian Chat which is a bird species of the **family Muscicapidae**.
- Distribution → It is nearly **endemic to India**, distributed **north of the Narmada, west to Gujarat** and **east to Bengal** bordered on the north by the Himalayas. It is commonly found in **agricultural fields, in buildings, and suburban areas**.
- Conservation status →
 - It is protected under **Schedule IV** of the Wildlife Protection Act, 1972.
 - It is listed as '**Least Concern**' as per IUCN Red List of Threatened Species.



13. NATURE INDEX, 2020

Why in News?

- In the recently-released Nature Index table 2020, India is placed twelfth globally in science research output.

About Index

- What is it? → The Nature Index is a **database of author affiliation information collated from research articles** published in an independently selected group of 82 high-quality science journals.
- The Nature Index is **updated monthly** and also **releases annual** tables of country.
- Compiled by → The database is compiled by **Nature Research**, a division of the international scientific publishing company Springer Nature that publishes **academic journals**. Nature Research's **flagship publication is Nature**, a weekly multidisciplinary journal **first published in 1869**.
- Significance → The Nature Index provides a **close to real-time proxy** of **high-quality research output** and **collaboration at the institutional, national and regional level**.

📁 Key findings of Nature Index, 2020 on India:

- Globally the top-rated Indian institutions in this list are **Council of Scientific and Industrial Research (CSIR)**, a group of 39 institutions at the **160th** position and **Indian Institute of Science (IISc) Bangalore** at the **184th** position.

- Three of the **autonomous institutions** of the **Department of Science & Technology**, Government of India have found their place **among top 30 Indian Institutions** as per Nature Index 2020 ratings. These are
- the Indian Association for the Cultivation of Science (IACS), Kolkata
- Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR), Bangalore
- N. Bose National Centre for Basic Sciences, Kolkata.

14. Indian Gaur

Why in News?

- The first population estimation exercise of the Indian gaur carried out in the Nilgiris Forest Division has revealed that more than an estimated 2,000 Indian gaurs inhabit the entire division.

About Indian Gaur

- The Indian Gaur also called the Indian bison is one of the **largest extant bovines** found in India.
- Geographic range → **Native to South and South-East Asia.**
- Distribution → In India, the population was estimated to be **12,000–22,000** in the **mid-1990s**. The Western Ghats and their outflanking hills in southern India constitute one of the most extensive extant strongholds of gaur, in particular in the **Wayanad – Nagarhole – Mudumalai – Bandipur complex**.
- Conservation Status →
 - IUCN Status: **Vulnerable**
 - Wildlife Protection Act, 1972: **Schedule I**
- Threats → a) **Habitat Fragmentation** b) **Hunting for consumption** and c) **contract diseases transmitted by domestic cattle.**
- Significance → It is the **State animal of Goa.**

15. Lonar Lake colour changes to pink

Why in News?

- The colour of water in Maharashtra's Lonar Lake, formed after a meteorite hit the Earth some 50,000 years ago, has changed to glaring.

About Lonar Lake

- Location → Lonar Lake, also known as **Lonar crater**, is a notified **National Geo-heritage Monument**, saline (pH of 10.5), Soda Lake, located at **Lonar in Buldhana district, Maharashtra.**
- Created by → an **asteroid collision** with earth impact during the **Pleistocene Epoch.**
- It is one of the four known, **hyper-velocity, impact craters in basaltic rock** anywhere on Earth.
- It sits inside the Deccan Plateau—a massive plain of volcanic basalt rock created by **eruptions some 65 million years ago.**
- Its location in this basalt field suggested to some geologists that it was a **volcanic crater.**



👉 Why there's a color change?

- The **salinity** and **algae** can be responsible for this change.
- There is **no oxygen below one meter** of the lake's water surface.
- There is an example of a **lake in Iran**, where **water becomes reddish** due to increase in salinity.
- The **level of water** in the Lonar Lake is currently **low as compared to the few past years** and there is **no rain** to pour fresh water in it.
- The low level of water may lead to **increased salinity** and **change in the behaviour of algae** because of atmospheric changes.

16. Guidelines for Import of Exotic Species

Why in News?

- The Ministry of Environment Forest and Climate Change (MOEFCC) has issued an advisory saying people importing "exotic live species" will have to make a voluntary disclosure.

About new Advisory

- According to the advisory, the phrase "**exotic live species**" includes "**animals named under the Appendices I, II and III of the Convention of International Trade in Endangered Species of Wild Fauna and Flora**".
- It does **not** include **species from the Schedules of the Wildlife (Protection) Act 1972**.
- This will create a process where **all imports will be screened**.
- As of now, the imports are being made through the **Director-General of Foreign Trade and State Forest departments** are **not kept in the loop**.
- For new "**exotic live species**", the importer should obtain a **no-objection certificate** from the Chief Wildlife Warden (**CWLW**) **of the State**.
- For existing species, **stocks** shall be **declared by the owner/ holder** (stock, as on 1 January 2020) to the Chief Wildlife Warden (**CWLW**) **of the concerned State or UT**.
- Significance →
- The move comes as the outbreak of coronavirus (COVID-19) has **raised global concern** about **illegal wildlife trade and zoonotic diseases**.
- Issues with guidelines →
 - Matters such as the **spread of invasive species** as well as **zoonotic diseases** had **not** been **taken care** of in the advisory.
 - There is a **growing domestic trade** in **exotic species of wildlife** that is **unfortunately not listed** under the various appendices of CITES (such as sugar gliders, corn snakes).

17. Malabar Gliding Frog

Why in News?

- Recently, a rare amphibian, Malabar Gliding Frog (*Rhacophorus malabaricus*) was spotted in Pullad, Kerala.

About Malabar Gliding Frog

- Scientific name → **Rhacophorus malabaricus**.

- It is **endemic** to the rain forests of Western Ghats.
- Features → It is a green frog with **slender body, webbed feet, unusual body positions, very well camouflaged and gliding in the air.**
- Males are **smaller than females.**
- IUCN Conservation status → **Least Concern.**
- Threats → The Malabar gliding frog population is declining due to **deforestation, climate change, developmental activities, and toxic chemicals.**

18. Sharavathi Monkey Park

Why in News?

- Karnataka government has decided to develop a monkey park in Shivamogga district.

About Sharavathi Monkey Park

- Location → The monkey park will be established on the **uninhabited islands** in the **Sharavathi backwaters region.**
- The park will be the first such in the state and will be set up on **100 acres of land** at the **Nagavalli forest in Hosanagara taluk, Shivamogga district.**
- Features → The proposed 100-acre monkey park will have **fruit-bearing trees, water sources, and solar fence** will be put up around the area to avoid monkeys venturing outside the park premises.
- Need → The idea came up following a spike in the cases of **monkeys raiding agricultural and plantation crops in Malnad region** in recent times and several protests by farmers.
- Concern → In **Himachal Pradesh**, there are **state-of-the-art monkey sterilization** and **rehabilitation centers** to address the monkey menace, however it has **failed to attain its objective.**

19. Pangolin

Why in News?

- China has accorded the pangolin the highest level of protection and removed the scales of the Pangolin from its list of approved traditional medicines.

About Pangolin

- They are **scaly anteater mammals** of the **order Pholidota.**
- They have **large, protective keratin scales covering their skin** and they are the only known mammals with this feature.
- Habitat → Out of the eight species of pangolin, the **Indian Pangolin** and the **Chinese Pangolin** are **found in India:**
 - Indian Pangolin → It is **widely distributed in India, except the arid region, high Himalayas and the North-East.** The species is also found in Bangladesh, Pakistan, Nepal and Sri Lanka.
 - Chinese Pangolin → It is found in **Himalayan foothills in Eastern Nepal, Bhutan, Northern India, North-East Bangladesh,** through Southern China and **Taiwan.**
- IUCN Conservation Status →
 - Indian pangolin – **Endangered**



- Chinese pangolin – **Critically Endangered**
- Threats → a) **Hunted for its meat** across the northeastern States and in central India. and b) **Smuggled for scales** especially in China as it is believed that scales possess magic or charms and have medicinal properties.

20. SCHIZOTHORAX SIKUSIRUMENSIS

Why in News?

- A new species of fish has been discovered in Arunachal Pradesh. The fish species is named as Schizothorax sikusirumensis.

About

- The fish species belongs to **genus Schizothorax**.
- The name of this fish species has been **derived from the name of the rivers** where it was found.
- This fish was collected from the junction of **River Siku** and **Sirum** near Gakang area under Mebo circle of East Siang District.
- The fish inhabits the **water logged area** of **torrential river drainage**.



21.. Hilsa Fish

Why in News?

- Fishermen in West Bengal are in for a pleasant surprise amid the COVID-19 gloom as they have exuded hope of a bumper yield of Hilsa, known as “maacher rani” (queen of fish).

About Hilsa Fish

- The Hilsa is a species of fish related to the **herring**, in the **family Clupeidae**.
- It is a **very popular** and **sought-after food fish** in the Indian Subcontinent.
- It is the **national fish of Bangladesh** and **state symbol** in the Indian states of **West Bengal and Tripura**.
- IUCN status → **Least Concerned**
- What’s so special about Hilsa? →
 - Hilsa has a **history of migrating** to **Allahabad in the Ganga river system from Bangladesh**.
 - Though it’s a **saltwater fish**, it **migrates to sweet waters** of the Ganges from the Bay of Bengal.
 - It **travels upstream of the river** during the **mating seasons** and returns to its natural abode after spawning.

22. World Day to Combat Desertification and Drought

Why in News?

- World Day to Combat Desertification and Drought is being observed on June 17.

About

- Why June 17? → This day was proclaimed **by the United Nations General Assembly resolution in 1995**, after the day when United Nations Convention to Combat Desertification was drafted.

- Aim → To spread **awareness among people about the cooperation** required to combat desertification and the effects of drought.
- Theme → **Food. Feed. Fibre. – the links between consumption and land.**
- Desertification → It is the degradation of land in arid, semi-arid and dry sub-humid areas. It is caused primarily by human activities and climatic variations.

👉 About UNCCD

- It is the **sole legally binding international agreement** linking environment and development to sustainable land management.
- Established → **1994**.
- It is the only convention stemming from a direct recommendation of the **Rio Conference's Agenda 21**.
- To help publicise the Convention, **2006** was declared "**International Year of Deserts and Desertification**".
- Focus areas → The Convention addresses specifically the **arid, semi-arid and dry sub-humid areas**, known as the **drylands**, where some of the most vulnerable ecosystems and peoples can be found.
- Aim → Its **197 Parties aim, through partnerships, to implement the Convention** and **achieve the Sustainable Development Goals**. The end goal is to protect land from over-use and drought, so it can continue to provide food, water and energy.
- The **Ministry of Environment, Forest and Climate Change** is the **nodal Ministry** for this Convention.
- Other Facts →
 - **Goal 15** of the 2030 Agenda for Sustainable Development states our resolve to halt and reverse land degradation.
 - Bonn Challenge → It is a **voluntary global effort** to bring **150 million hectares of deforested and degraded** land into **restoration by 2020 and 350 million hectares by 2030**.
 - **India** has pledged to bring into **restoration 13 million hectares of degraded** and deforested land by the year 2020 and additional 8 million hectares by 2030.

23. Olms in Postojna Cave of Slovenia

Why in News?

- Recently, three Olms have been put on display in Slovenia's Postojna Cave, where they hatched in 2016 in a rare successful breeding.

About Asian Koel

- The Olms are **eyeless** (skin covered eyes) **pink salamanders** also known as the "**baby dragon**" and "**human fish**" for its pale skin-like colour.
- They **feed on detritus** and **endemic cave vertebrates** and **hide in crevices** or bottom sediment when disturbed. They can **survive without food for up to 10 years**.

- A **long-lived species** that only matures to a sexual stage after the age of 12-15 years and **reproduces very slowly**.
- It can **live a century and breeds only once** a decade usually in laboratories throughout Europe or deep in caves away from people.
- They have a **powerful sensory system** of **smell, taste, hearing and electro sensitivity**.
- Habitat →
 - They are found in **large subterranean aquatic karst systems** formed in **limestone and dolomite rocks**, and may be found in cave entrances.
 - They are an **entirely aquatic species** and prefer **waters ranging from 5-15°C**.
 - Found in **Bosnia and Herzegovina, Croatia, Italy, Slovenia and France**.
- Threats → The olm **requires clean water**, and is therefore **vulnerable to water pollution**.



24. World Crocodile Day

Why in News?

- World Crocodile Day is being celebrated on the 17th June.

About Crocodile species found in India

Mugger or Marsh Crocodile:

- Habitat → It is a **freshwater crocodile** native to **southern Iran to the Indian subcontinent**. It is extinct in Bhutan and Myanmar.
- IUCN Status → **Vulnerable**
- CITES → **Appendix I**
- Threats → a) **Habitat destruction** b) **Entanglement and drowning** in fishing equipment and c) **Increasing incidents of conflict with humans**.

Estuarine or Saltwater Crocodile:

- It is considered as the **Earth's largest** living crocodile species native to **saltwater habitats and brackish wetlands**.
- Habitat → It is found throughout the **east coast of India, Southeast Asia** and **northern Australia**.
- IUCN Status → **Least Concern**
- Threats: a) **Illegal hunting** b) **habitat loss** and c) **antipathy toward the species** because of its reputation as a man-eater.

Gharial:

- Distribution → It was once found across Bangladesh, Bhutan, India, Myanmar, Nepal and Pakistan. However, currently it survives in several **severely fragmented populations** in **India** and **Nepal**.
- Protected areas → **National Chambal Sanctuary** and **Katarniaghat Wildlife Sanctuary**.

- IUCN Status → **Critically Endangered**
- Wild Life (Protection) Act,1972 → **Schedule I**
- CITES → **Appendix I**
- Threats → **Construction of Dam, barrages, and water abstraction**, entanglement in fishing nets, River bed cultivation and sand mining.

25. GOLDEN LANGURS

Why in News?

- Primatologists have observed that the Gee's golden langur (*Trachypithecus geei*), endemic to the semi-evergreen and mixed-deciduous forests straddling India and Bhutan, induce stillbirth of babies killed inside the womb of females, besides practising infanticide.

About

- Scientific Name → **Trachypithecus geei**.
- Distribution → The geographic range of golden langurs is limited to **Assam, India and neighboring Bhutan** where they live year-round.
- Habitat → Golden langurs occupy **moist evergreen** and **tropical deciduous forests** as well as some **riverine areas and savannas** in Assam and Bhutan.
- Colour → Their **hair** ranges from **dark golden to creamy buff** and their **faces are black** and hairless except for a long pale beard. It has been noted that their **fur changes colors** according to the seasons.
- Conservation Status →
 - **Endangered** by the IUCN Red List
 - Listed as **Appendix I** on the CITES website.
- Threats → The main reason for low numbers of golden langurs is because of their **localized habitat** and the **rapid loss of this habitat** due to deforestation.
- Chakrashila sanctuary → Chakrashila is **India's first wildlife sanctuary** with **golden langur** as the primary species. Chakrashila has about 600 golden langurs whose population is scattered across **western Assam** and the **foothills of Bhutan**.



26. Horseshoe Crab

Why in News?

- Horseshoe crabs face an uncertain future in Odisha, their largest habitat in India, even as the world gets ready to celebrate the first-ever 'International Horseshoe Crab Day' on June 20, 2020.

About

- Horseshoe crabs are **marine and brackish water arthropods**. They are not true crabs, which are **crustaceans**.
- The crabs are represented by **four extant species** in the world. Out of the four, **two species** are distributed along the **northeast coast of India**.
- Only **T gigas species of the horseshoe crab** is found along **Balasore coast of Odisha**.

- Conservation → The crab was included on September 9, 2009, in the **Schedule IV** of the Wild (Life) Protection Act, 1972, under which, the catching and killing of a horseshoe crab is an offence.
- Their significance →
 - The horseshoe crab is one of the **oldest marine living fossils** whose origin date back to **445 million years before the dinosaurs existed**.
 - One of their ecological functions is to **lay millions of eggs** on beaches to **feed shorebirds, fish and other wildlife**.
- Threats → Poachers **kill them for their meat** that is popularly believed to have **aphrodisiac qualities**.



27. MACAWS

Why in News?

- The Directorate of Revenue Intelligence (DRI) has busted a wildlife smuggling syndicate with seizure of a consignment of exotic macaws which had been smuggled from Bangladesh to Kolkata.

About MACAWS

- Scientific Name → **Psittacidae**.
- Distribution → Macaws are **native to Central America and North America** (only Mexico), **South America**, and formerly the Caribbean. Most species are associated with forests, especially **rainforests**, but **others prefer woodland or savannah-like habitats**.
- Family → Macaws are **beautiful, brilliantly colored members of the parrot family**.
- Species → There are **at least 17 species** of macaws, and several are **endangered**. The **glaucous macaw** and **Spix's macaw** may **already be extinct in the wild**.
- Conservation → The macaws are **protected under** the Convention on International Trade in Endangered Species of Wild Fauna and Flora (**CITES**), with **Hyacinth macaw** being accorded the **highest protection**.



28. 'Decarbonizing Transport in India (DTI)' Project

Why in News?

- NITI Aayog in collaboration with International Transport Forum (ITF) will launch the "Decarbonising Transport in India".

About DTI Project

- What is it? → It is a **tailor-made transport emissions assessment framework** for India.
- Features → It will provide the government with a **detailed understanding of current** and **future transport activity** and the **related CO2 emissions** as a basis for their decision-making.
- The project is a **part of the Decarbonising Transport in Emerging Economies** (DTEE).

👉 **DTEE**

- What is it? → It is an **International Transport Forum** (ITF) project in **collaboration with Wuppertal Institute** (WI) and supported by the International Climate Initiative (**IKI**) of the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (**BMU**).
- Aim → To help governments of emerging nations to **identify ways to reduce their transport CO2 emissions** and meet their climate goals.
- Participating Countries → **Argentina, Azerbaijan, India and Morocco**.

👉 International Transport Forum (ITF)

- What is it? → It is an **inter-governmental organisation within the OECD** (Organisation for Economic Co-operation and Development) system.
- Functions → It acts as a **think tank for transport policy issues** and organises the annual global summit of transport ministers.
- Member Countries → **60. India has been a member** since 2008.
- Headquarters → **Paris, France**.
- The ITF's motto is "**Global dialogue for better transport**".

👉 OECD

- What is it? → The Organisation for Economic Co-operation and Development (OECD) is an **intergovernmental economic organisation** with **36 member countries**
- Formation → It was **founded in 1961** to stimulate economic progress and world trade.
- Headquarters → **Paris, France**.
- Functions → It works to **build better policies for better lives**. Its goal is also to shape policies that foster prosperity, equality, opportunity and well-being for all.
- **India is not a member of OECD** but has been a key economic partner.

29. Compressed Bio-Gas

Why in News?

- Union Government is in the process of including Compressed Bio-Gas under Priority Sector Lending.

About Biogas

- Biogas is a **renewable**, as well as a **clean, source of energy**.
- The gas generated through **bio-digestion** is **non-polluting** and it reduces greenhouse emissions.
- After purification, it is compressed and called CBG, which has **pure methane content of over 95%**.
- Compressed Bio-Gas is exactly **similar to the commercially available natural gas** in its composition and energy potential.
- With **calorific value (~52,000 KJ/kg)** and **other properties similar to CNG**, Compressed Bio-Gas can be used as an alternative, **renewable automotive fuel**.

👉 SATAT Scheme

- Background → **Sustainable Alternative towards Affordable Transportation** (SATAT) scheme on Compressed Bio Gas was **launched in 2018**.

- Target → It envisages targeting production of **15 MMT of CBG from 5000 plants by 2023**.
- Strategy →
- The Government of India has taken **various enabling steps** to ensure the success of the SATAT scheme.
- **Oil Marketing Companies** have **offered long term pricing** on CBG to make projects bankable and have agreed to execute long term agreements on CBG.
- Under SATAT scheme, **IOT Biogas Limited** (Namakkal, Tamil Nadu) decided to **divert part/full biogas production to Compressed Biogas (CBG) generation**.
- The Compressed Biogas procured from IOT Biogas plant shall be **sold through Retail Outlets** (ROs) and **Institutional Business** (IB).
- This is the **first time** an **alternative to natural gas** is being sold by Oil Marketing Companies.

30. Fishing Cats

Why in News?

- The Odisha Government has started a two-year conservation project for Fishing Cats in Bhitarkanika National Park.

About Fishing Cats

- Scientific Name → **Prionailurus viverrinus**.
- Habitat → In India, fishing cats are mainly found in the **mangrove forests of the Sundarbans**, on the **foothills of the Himalayas along the Ganga** and **Brahmaputra river valleys** and in the **Western Ghats**.
- Description →
 - It is **twice the size of a house cat**.
 - The fishing cat is **nocturnal** (active at night) and **apart from fish also preys on frogs**, crustaceans, snakes, birds, and scavenges on carcasses of larger animals.
- Protection Status →
 - IUCN Red List: **Vulnerable**.
 - CITES: **Appendix II**
 - Indian Wildlife Protection Act, 1972: **Schedule I**
- Threats → **Habitat Destruction, Shrimp Farming, Hunting, Ritual Practices, Poaching, Poisoning**.
- Conservation Efforts →
 - The **Fishing Cat Project**, launched in **2010** started **raising awareness** about the **Cat in West Bengal**.
 - In 2012, the **West Bengal** government officially declared the **Fishing Cat as the State Animal** and the **Calcutta Zoo** has two big enclosures dedicated to them.
 - In Odisha, **many NGOs** and **wildlife conservation Societies** are **involved** in Fishing Cat research and conservation work.

31. Coccolithophores: The Ancient Algae

Why in News?

- A study of microscopic ancient marine algae (Coccolithophores) has found that there is a decrease in the concentration of oceanic calcium carbonate (CaCO₃) in the Southern Indian Ocean.

About Coccolithophores

- What is it? → Coccolithophores are **single-celled algae living** in the upper layers of the world's oceans.
- They have been playing a **key role in marine ecosystems** and the **global carbon cycle** for millions of years.
- They **calcify marine phytoplankton** that produces up to **40% of open ocean calcium carbonate** and responsible for **20% of the global net marine primary productivity**.
- They build **exoskeletons** from individual CaCO₃ plates consisting of **chalk** and **seashells building** the tiny plates on their exterior.

Role as a carbon sink →

- Though carbon dioxide is produced during the formation of these plates, coccolithophores **help in removing it from the atmosphere** and **ocean** by **consuming it** during photosynthesis.
- At **equilibrium**, they **absorb more carbon dioxide than they produce**, which is beneficial for the ocean ecosystem.
- These investigations are **important for future intervention** to bring **positive changes** in the marine ecosystem and the global carbon cycle.
- Threats → The reduction of coccolithophores is due to an **increase in the presence of diatom algae**, which occurs after sea ice breakdown with **climate change** and **ocean acidification**, and **increases the silicate concentration** in the waters of the Southern Ocean.

32. Anthropause

Why in News?

- Researchers in the UK are set to study Anthropause, a term they have coined to refer to the coronavirus-induced lockdown period and its impact on other species.

About

- Anthropause refers specifically to a considerable **global slowing of modern human activities**, notably travel.
- The **unprecedented curbs** imposed on millions of people around the world, mainly due to restrictions in travel, led to **reports of unusual animal behaviour**.
- Significance →
- They believe studying this period will provide **valuable insights** into the relationship between **human-wildlife interactions in the 21st century**.
- The insights may be useful in **preserving global biodiversity**, **maintaining the integrity of ecosystems** and **predicting global zoonoses** and environmental changes.

33. Gynandromorphism

Why in News?

- Recently, a rare biological phenomenon i.e. Gynandromorphism has been spotted in a dragonfly, the Scarlet Skimmer (*Crocothemis servilia*), which is found in the Kole wetlands, Kerala.

About Gynandromorphism

- What is it? → Gynandromorphism is a characteristic of an organism that **contains both male and female tissues and characteristics**. Such organisms are also called gynandromorphs.
- The term is derived from the **Greek words** (gyne = woman; aner = man and morphe = form).
- The phenomenon has been **documented in birds, crustaceans and butterflies**.
- Reason →
 - Gynandromorphs are usually **born due genetic aberration**.
 - Genetic aberrations are **chromosomal disorder or mutation** which is due to a missing, extra, or irregular portion of chromosomal DNA.
- Importance of the Study of gynandromorphism →
 - It helps in **finding the genetic diversity** in related species which further contributes to the conservation and preservation.
 - It also aids in **discovery of disease and other changes in the specific species** due to factors like climate change and ecological evolutions.

About Kole Wetlands

- Location → It is spread over **Thrissur and Malappuram districts of Kerala**.
- It is situated in the **Central Asian Flyway of migratory birds**.
- It contains **subterranean habitats** that are important habitats for some fresh water fish species which are endemic to southern Western Ghats.
- **37 species of dragonflies and damselflies** have been reported from the wetlands so far.

34. UN DECADE ON ECOSYSTEM RESTORATION

Why in News?

- The United Nations General Assembly (UNGA) proclaimed 2021–2030 as the Decade on Ecosystem Restoration.

About UN Decade on Ecosystem Restoration

- The UN Decade on Ecosystem Restoration aims to **massively scale up the restoration of degraded and destroyed ecosystems** as a proven measure to fight the climate crisis and enhance food security, water supply and biodiversity.
- It seeks to: Showcase successful government-led and private initiatives to halt ecosystem degradation and restore degraded ecosystems.
- **Enhance knowledge exchange** to implement restoration at scale.
- Connect initiatives working in the same landscape, region, or topic, to increase efficiency and impact.
- Create links between ecosystem restoration and businesses interested in sustainable production and impact investment.
- Bring a wider spectrum of actors on board, especially from **non-traditional sectors**, by demonstrating the importance of environmental and socio-economic benefits of ecosystem restoration.
- Ecosystems addressed include **forests, grasslands, croplands, wetlands, savannahs, inland water, coastal and marine ecosystems, and even urban environments**.

What is Ecosystem Restoration (ER)?

- It is the process of **assisting the recovery of an ecosystem** that has been degraded, damaged or destroyed.

- An ecosystem is a functional unit of nature, where living organisms interact among themselves and also with the surrounding physical environment.
- Restoration activities may be designed to replicate a **pre-disturbance ecosystem** or to create a new ecosystem where it had not previously occurred.
- It involves practices such as **restoring vegetation, planting native trees, clearing invasive species, regenerative (perennial) agriculture, agroforestry** etc.

International Decades:

- The United Nations (UN) designates specific days, weeks, years and decades as occasions **to mark particular events or topics in order to promote, through awareness and action**, the objectives of the Organization.
- Some decades ending in 2020 are-
 - United Nations Decade on Biodiversity
 - Decade of Action for Road Safety
 - United Nations Decade for Deserts and the Fight against Desertification.

35. SUPER YEAR FOR BIODIVERSITY

Why in News?

- The year 2020 is the “Super Year For Biodiversity”, as the Strategic Plan for Biodiversity with 20 global Aichi targets adopted in 2010 ends in 2020.

About Strategic Plan for Biodiversity 2011-2020 (SPB 2011-2020)

- **SPB 2011-2020 was adopted by the parties to the CBD**, during the tenth meeting of the Conference of the Parties (**COP10**) in 2010 in Nagoya, Japan, with the purpose of inspiring broad-based action in support of biodiversity over the next decade by all countries and stakeholders.
- The Strategic Plan is comprised of a shared vision, a mission and **20 targets organized** under **5 strategic goals**, collectively known as the **Aichi Biodiversity Targets (ABTs)**.

India's efforts towards SPB 2011-2020:

- India prepared its first National Biodiversity Action Plan (NBAP) entitled **“National Policy and Macro Level Action Strategy on Biodiversity” in 1999** which was revised and updated into NBAP, 2008 to bring the biodiversity agenda in alignment with the **National Environment Policy (NEP), 2006**.
- According to India's **6th National Report**, India is on track to achieve 9 out of its 12 NBTs and exceed 1 of them (NBT 6), but is moving towards 2 of the targets (NBT 4 and 12) at an insufficient rate.
- **Operationalising the Nagoya Protocol on access and benefit sharing (ABS)**: After publishing the first internationally recognized certificate of compliance (IRCC) under the Nagoya Protocol in India has since then **published 997 IRCCs on the ABS Clearing House (highest among all parties)**.
- Developing an extensive policy and legislative framework: to achieve its NBTs.
- **Major policies**- National Forest Policy, 1988, National Environment Policy, 2006 National Policy on Marine Fisheries (NPMF), 2017, National Intellectual Property Right Policy, 2016 etc.
- **Major acts**- Biological Diversity Act, 2002, Indian Forest Act, 1927, Environment Protection Act, 1986, Wetlands (Conservation and Management) Rules, 2017, Wildlife Protection Act, 1972 etc.

Science and Technology

1. Banana Covid: A Novel Fungal Strain

Why in News?

- Fusarium Wilt TR4 dubbed as Banana Covid is setting up new hotspots and threatening the output of Banana Cultivation in India.

About Tropical Race 4 (TR4)

- What is it? → It is a **novel fungus strain** that causes **Fusarium wilt** (aka Panama disease) in banana plants.
- Origin → It was first **identified in Taiwan** and has **jumped from Asia to the Middle East** and **Africa** reaching as far as **Latin America**.
- Threat → It cripples plantations by first **attacking the leaves** which **turn yellow** from their trailing edges before wilting away.
- Treatment → There is **no effective remedy yet**. Hence, scientists recommend biosecurity measures including **plant quarantine** to slow its spread.

👉 About Banana

Being a **tropical crop banana** grows well under the following conditions:

Temperature: **15°C – 35°C**

Rainfall: an average rainfall of **650-750 mm**

Regional variation: **Humid tropics to dry mild subtropics**

Soil: **Deep, rich loamy soil** is most preferred for banana cultivation

Nutrients: It has several nutrients like **calories, protein, carbohydrate, potassium** and **trace quantities of vitamin C and B6**.

2. RESPONSIBLE AI FOR YOUTH

Why in News?

- The Union Minister for Electronics and IT launched a National Program for the youth called “Responsible AI for Youth”.

About

- Objective → To **empower the youth to become AI ready** and **help reduce the skill gap**, while enabling youth to create meaningful social impact solutions.
- Coverage → The National Programme is open to students of **classes 8 - 12** from **Central and State government-run schools** (including KVS, NVS, JNV) from across the country.
- Bodies involved → The Program has been created and launched by the **National e-Governance Division**, Ministry of Electronics & IT in collaboration with Intel India, with support from **Department of School Education and Literacy** (DoSE&L), **Ministry of HRD**.
- Strategy →
 - The identified students will attend **online training sessions on AI** who will submit their ideas through a **60 seconds video** explaining a **proposed AI enabled solution**.
 - From the submitted ideas, **top 100 ideas** will be **shortlisted** and these students will be **invited to attend sessions**. Post the sessions, these students will be asked to **create real time projects** and **submit their final project in a video format** on the website.

3. Ebola virus disease(EVD)

Why in News?

- Democratic Republic of Congo has declared a new Ebola epidemic in the western city of Mbandaka.

About

- What is it? → EVD formerly known as **Ebola haemorrhagic fever** is a severe often fatal illness in humans.
- Origin → Ebola virus was first discovered in **1976** near the **Ebola River** in what is now the Democratic Republic of Congo.
- Transmission → It is transmitted to **people from wild animals** and then spreads in the human population through **human-to-human transmission**.
- Symptoms → **Sudden fever, intense weakness, muscle pain and a sore throat**. It progresses to **vomiting, diarrhoea and both internal and external bleeding**.
- Treatment → There is **no proven treatment** for Ebola but **interventions early** on includes rehydration with fluids and body salts and treatment of specific symptoms such as low blood pressure, vomiting, diarrhea and infections.
- Vaccine → An investigational vaccine called **rVSV-ZEBOV** has shown to be safe and protective against the Ebola virus.

4. Clade I or A3i coronavirus

Why in News?

- Recently, the researchers at various CSIR laboratories have identified a coronavirus type called 'Clade I or A3i coronavirus.

About A3i coronavirus

- Where is the A3i found? → It was found in **41 per cent of the genome sequences** done on the virus collected from **Indian patients**.
- Globally, only 3.5 per cent** of all the genome sequences done on this virus has this particular trait.
- What is it? → A '**clade**' is a **taxonomic group of organisms** that are classified together on the basis of **homologous features** that are traced to a **common ancestor**.
- The researchers, who sequenced 64 genomes (the complete set of genetic material) **linked the Clade I/A3i cluster** to the predominant SARS-CoV-2 strain circulating in **Tamil Nadu, Telangana, Maharashtra, and Delhi**.
- Classifications → The genomes isolated from India were classified under **five clusters are Clades A2a, A3, A3i, B, and B4**.
- Significance → Such classifications are **useful in establishing** whether certain strains are **particularly virulent, spread more easily**, how they are likely to **evolve over time** and whether some could be less vulnerable to certain kinds of vaccines.

5. Near-Earth Object (NEO) 163348

Why in News?

- According to an announcement made by NASA, a giant Near Earth Asteroid called as 163348 (2002 NN4), is expected to pass Earth on 6th June 2020.

About

- It was **discovered in July 2002** and is expected to approach the **earth in June 2020**.
- The asteroid is estimated to be between **250-570 meters in diameter**.
- The asteroid is a **Near-Earth Object** and **classified as a Potentially Hazardous Asteroid** (PHA).

👉 About NEOs

- What is it? → NASA defines NEOs as **comets** and **asteroids nudged by the gravitational attraction** of nearby planets into orbits which allows them to enter the Earth's neighbourhood.
- Composition → These objects are composed mostly of **water ice with embedded dust particles**.
- NEOs **occasionally approach close to the Earth** as they orbit the Sun.
- NASA's Center for Near-Earth Object Study (**CNEOS**) **determines the times and distances** of these objects as and when their approach to the Earth is close.
- Significances of NEOs →
 - The scientific interest in comets and asteroids is largely due to their **status as relatively unchanged remnant debris** from the solar system formation process over **4.6 billion years ago**.
 - Therefore, these **NEOs offer scientists** clues about the **chemical mixture from the planets formed**.

6. LiDAR- Light Detection and Ranging

Why in News?

- Archaeologists are using LiDAR data to continue their researches amid global pandemic.

About LiDAR

- It is a **remote sensing method** that uses light in the form of a pulsed laser **to measure ranges (variable distances) to the Earth**.
- These **light pulses—combined with other data recorded by the airborne system**— generate precise, **three-dimensional information** about the shape of the Earth and its surface characteristics.
- How it works? →
 - A lidar instrument principally consists of a **laser, a scanner, and a specialized GPS receiver**.
 - **Airplanes** and **helicopters** are the **most commonly used platforms** for acquiring lidar data over broad areas.
 - LiDAR follows a simple principle — **throw laser light at an object** on the earth surface and **calculate the time** it takes to **return to the LiDAR source**. Given the speed at which the light travels (approximately 186,000 miles per second), the process of measuring the exact distance through LiDAR appears to be incredibly fast.
- Applications →
 - LiDAR is used **for agriculture, hydrology and water management systems**
 - and **geology-related applications**.
 - It is also **used in archaeology**.

- Challenges with LiDAR →
 - **Can't perform** well in **fog, rain, snow and dusty weather**.
 - **Struggles to detect a glass wall or door**, which is why smartphone manufacturers and self-driving cars makers use LiDAR along with secondary cameras and sensors.

7. Unmanned Aircraft System (UAS) Rules of 2020

Why in News?

- Recently, the Ministry of Civil Aviation has notified the draft Unmanned Aircraft System (UAS) Rules, 2020.

About

- Objective → These rules seek to **regulate the production, import, trade, ownership and operation** of unmanned aircraft systems or drones.
- They also create a **framework** for their use by businesses.
- Who can sell drones? → **Only authorised entities**.
- Who can own or operate? → Entities **authorised by the Director General of Civil Aviation**.
- Permits for flying these also have to be **sought online** and **a log** has to be **shared after the flight**.
- Applicability → The norms apply **to all existing drones as well**.
- Exception → Nano-drones **weighing 250 grams or less** can be **operated without a drone pilot license**.
- Insurance → **No unmanned aircraft (UA) system** shall be operated in India unless there is in existence a **valid third-party insurance policy** to **cover the liability** that may arise on account of a mishap.
- No payload → no unmanned aircraft shall carry any payload, **unless specified by the Director General of DGCA**.
- No droppings → Neither shall a person “**drop or project or cause or permit to be dropped or projected from a UAS (unmanned aircraft system) in motion anything**,” except when specified.
- Eligibility →
 - For owning and using a drone, one has to be at **least 18 years old**.
 - In the case of **companies**, the requirement is that their main place of business has to be **in India** and the **chairman** and **at least two thirds of directors have to be Indian citizens**.
 - Also, businesses operating drones have to be substantially owned and **effectively controlled by Indian nationals**.

8. Magneto-caloric material

Why in News?

- Indian scientists have developed a rare-earth-based magnetocaloric material that can be effectively used for cancer treatment.

About Magneto-caloric material

- What is it? → Magnetocaloric effect (MCE) is a **phenomenon** where the application and removal of a magnetic field **cause certain materials** to **get warmer and cooler**, respectively.

- This effect normally **occurs near its Curie temperature** where the application of the field makes the material **to warm up** and **cools up when the field is removed**.

Issue of hyperthermia in cancer treatment →

- Advancements in magnetic materials led to the development of **magnetic hyperthermia** to try to **address the issues of side effects of cancer treatment** like **chemotherapy**.
- In magnetic hyperthermia, magnetic nanoparticles are subjected to **alternating magnetic fields of few Gauss**, which produce heat due to magnetic relaxation losses.
- Usually, the **temperature** required to **kill the tumour cells is between 40 and 45°C**.
- However, the drawback in magnetic hyperthermia is the **lack of control of temperature**, which may damage the healthy cells in the body and also have side effects like increased BP, hair losses etc.

Here comes in, Magnetocaloric materials →

- These problems can be **avoided by using magnetocaloric materials**, as it can provide **controlled heating**.
- The advantage of magnetocaloric materials which heat up or cool down with the application and removal of the magnetic field, respectively is that **as soon as the magnetic field is removed, cooling effect is generated**, unlike in magnetic nanoparticles where overheating persists, even after removal of the magnetic field.

9. ANANYA

Why in News?

- Defence Institute of Advanced Technology (DIAT), a Deemed University, Pune has developed a Nano-technology based disinfectant spray to combat COVID-19 by disinfecting all types of surfaces.

About

- What is it? → It has been named "**ANANYA**". This can be **used by anyone**, from a common man to a healthcare worker, **for individual** as well as **large scale use**.
- This spray can be **used on masks, PPEs, hospital linens**, as well as other likely **contaminated surfaces** such as medical instruments, elevator buttons, door knobs, corridors and rooms.
- This Nano-technology assisted formulation will **not only stop the novel coronavirus** from entering human body, but it will **also kill the virus** when the virus comes in contact with this formulation layer on masks and PPEs.
- This is a **water based spray** and will be **effective for more than 24 hours after spray**.

10. LUNAR POLAR EXPLORATION (LPE) MISSION

Why in News?

- Japan and India will be launching a joint lunar mission called the Lunar Polar Exploration (LPE).

About LPE Mission

- Aim → The mission aims to **put a lander and rover on Moon's surface**.
- Launch year → The mission will be **launched after 2023**.

- Japanese space agency **JAXA** would be **building the overall landing module** and the **rover**, while **ISRO** would **develop the lander system**.
- The mission will be **launched from Japan**, and the designated launch vehicle is the **H3 rocket**, manufactured by Mitsubishi Heavy Industries.
- Significance → Observational data suggests the **existence of water in the polar regions of Moon**. The mission intends to obtain data on the quantity and forms of water resources present, in order to **determine the feasibility of utilizing such resources for sustainable space exploration activities in the future**.

11. Amoebiasis or amoebic dysentery

Why in News?

- A team of researchers from the Jawaharlal Nehru University (JNU) has developed new drug molecules against the protozoa that causes amoebiasis.

About Amoebiasis

- What is it? → It is a **parasitic infection** of the colon with the amoeba *Entamoeba histolytica*.
- According to WHO, *Entamoeba histolytica* is the **third-leading cause of morbidity and mortality** due to parasitic disease in humans.
- This protozoan is **anaerobic** or **micro-aerophilic in nature** such that it **cannot survive high concentrations of oxygen**.
- However, during infection, it **faces a high surge of oxygen** inside the human body. The organism synthesizes large amounts of cysteine to counter oxidative stress.
- Spread of the disease → It spreads **through drinking** or **eating uncooked food**, such as fruit, that may have been washed in contaminated local water.
- Symptoms →
 - Pain areas: **in the abdomen**
 - Gastrointestinal: **blood in stool, diarrhoea, or flatulence**
 - Whole body: **fatigue, fever, or loss of appetite**
 - Also common: **weight loss**
- Treatment → Treatment consists of **self-care** and **antiparasitics**.

12. BOSE-EINSTEIN CONDENSATES (BECs)

Why in News?

- Scientists have observed the fifth state of matter in space for the first time, offering unprecedented insight that could help solve some of the quantum universe's most intractable conundrums.

About BOSE-EINSTEIN CONDENSATES

- It is the **fifth state of matter** whose existence was **predicted by Albert Einstein** and Indian mathematician **Satyendra Nath Bose** in the early 1920s.
- **Gases, liquids, solids and plasmas** are the other four matters.
- How are they formed → They are formed when atoms of certain elements are **cooled to near absolute zero** (0 Kelvin/-273.15 Celsius).

- At this point, atoms become a **single entity** with **quantum properties** wherein each particle also functions as a **wave of matter**.
- Features → They are **extremely fragile** and **slightest interaction with the external world warms them** past their condensation threshold. This makes their **study nearly impossible on Earth** where gravity interferes with magnetic fields required to hold them in place for observation.
- Significance → Scientists believe **BECs** contain **vital clues** to **mysterious phenomena** such as **dark energy** – the unknown energy thought to be behind the **Universe's accelerating expansion**.

13. NASA's Gateway Lunar Orbit outpost

Why in News?

- NASA has finalised the contract for the initial crew module called habitation and logistics (HALO) support for Gateway lunar orbiting outpost.

About HALO

- What is it? → It refers to the pressurised **living quarters** where **astronauts will spend their time** while visiting the Gateway lunar orbiting outpost.
- These quarters will be about the **size of a small apartment** and will provide **augmented life support** in tandem with NASA's Orion spacecraft.

👉 What is NASA's Gateway Lunar Orbit outpost?

- It is a **small spaceship** that will **orbit around the Moon** meant for astronaut missions to the Moon and later for **expeditions to Mars**.
- Purpose → It will act as a **temporary office for astronauts** by providing **living quarters for astronauts**, a **lab for science and research**, ports for visiting spacecraft among others.
- The unique feature of the Gateway is that it can be **moved to other orbits** around the Moon to **conduct more research**.
- Developed by → It is led by **NASA in collaboration with** commercial and international partners: **Canada** (CSA), **Europe** (ESA), and **Japan** (JAXA).
- Significance → It is expected to play a major role in **NASA's Artemis program after 2024**.

👉 What is Artemis?

- Artemis– Acceleration, Reconnection, Turbulence and Electrodynamics of Moon's Interaction with the Sun. It is **NASA's next mission to the Moon**.
- Objective → To **measure what happens when the Sun's radiation hits our rocky moon**, where there is **no magnetic field to protect it**.
- Artemis was the twin sister of Apollo and goddess of the Moon in Greek mythology.

14. Dexamethasone

Why in News?

- NASA has finalised the contract for the initial crew module called habitation and logistics (HALO) support for Gateway lunar orbiting outpost.

About Dexamethasone

- Dexamethasone is a **generic steroid** widely used in other diseases **to reduce inflammation**.
- The **drug helps stop** some of the **damage** that can happen when the **body's immune system** goes into overdrive as it **tries to fight off coronavirus**.
- It is used to treat a range of diseases, including **rheumatism, asthma, allergies**, and even to **help cancer patients better handle nausea triggered by chemotherapy**.
- It is the **world's first coronavirus treatment** proven to **reduce the risk of death** among severely ill patients.
- According to scientists, the drug has been proven to **reduce the risk of death significantly** in COVID-19 patients on **ventilation by as much as 35%** and **patients on oxygen by 20%**.

👉 Steroids

- Steroids are a **man-made version of chemicals**, known as **hormones** that are **made naturally** in the human body.
- Steroids are designed to act like these hormones to **reduce inflammation** known **as corticosteroids**.
- There are also **anabolic steroids used by bodybuilders and athletes**.

Also Remember

- The drug -Dexamethasone is **banned in-competition by the World Anti-Doping Agency (WADA)** but its usage is allowed out-of-competition if athletes have the requisite Therapeutic Usage Exemption (TUE).

15. Micius-Quantum Satellite of China

Why in News?

- China's quantum satellite Micius enables first totally secure long-range messages.

About Micius

- Micius is the **world's first quantum communications satellite** launched by china in 2016.
- The satellite serves as the **source of pairs of entangled photons, twinned light particles** whose properties remain intertwined no matter how far apart they are.
- If **manipulation of one of the photons occurs**, the **other will be similarly affected** at the very same moment.
- It is this property that lies in the heart of the **most secure forms of quantum cryptography**, the entanglement-based **Quantum Key Distribution (QKD)**.
- If you use one of the entangled particles to create a key for encoding messages, **only the person with the other particle can decode them**.

Cryptography is the study of techniques for secure communication in presence of third parties called adversaries.

Quantum Key Distribution (QKD)

QKD provides a way of distributing and sharing **secret keys** that are necessary for encrypting and decrypting of messages.

The importance here is in ensuring that they remain private, i.e. between the communicating parties.

16. Foldscope

Why in News?

- Recently, some doctors have explored and validated the clinical utility of foldscope in the diagnosis of diseases using various patient samples.

About Foldscope

- It is an **affordable microscope** that can be made from simple components, including a **sheet of paper** and a **lens**. It cost **less than a Rs. 100** to make a Foldscope.
- Upon assembly, the device can **hold a specimen slide for observation**, and this specimen can be viewed **via a mobile phone camera** attached to it.
- It is **portable** and **durable**, and **performs on par with conventional microscopes**.
- It was **developed by Manu Prakash** and is part of the "**frugal science**" movement which aims to **make cheap and easy tools** available for scientific use in the developing world.
- Significance →
 - Foldscope can be **used to diagnose diseases** like oral health, urinary tract infection (UTI), leishmaniasis, schistosomiasis, and **monitor kidney stones**.
 - It can be **employed in public healthcare centres** for **primary diagnosis** or as personal health monitoring devices.
 - Apart from the medical field it can also be **used in agriculture**, to **detect various types of microorganisms** which affect the crops and animals.

17. Detection of Fluorine in hot Extreme Helium (EHe) Stars

Why in News?

- A study by the Indian Institute of Astrophysics (IIA) has detected the presence of singly ionized fluorine for the first time in the atmospheres of hot Extreme Helium Stars.

About EHe stars

- What is it? → An extreme helium star or EHe is a **low-mass supergiant** that is almost **devoid of hydrogen**, the most common chemical element of the universe.
- There are **21 of them detected** so far in our galaxy.
- The **origin and evolution** of these **Hydrogen deficient objects** have been **shrouded in mystery**.
- Why is the study significant? →
 - Their severe chemical peculiarities **challenge the theory of well-accepted stellar evolution** as the observed chemical composition of these stars do not match with that predicted for low mass evolved stars.
 - This discovery makes a strong case that the main formation of these objects involves a **merger of a carbon-oxygen (CO) and a Helium (He) white dwarf**.

👉 White Dwarf

- A white dwarf is what stars like the **Sun become after they have exhausted their nuclear fuel**.
- Near the end of its nuclear burning stage, this type of **star expels most of its outer material**, creating a **planetary nebula**. Only the hot core of the star remains
- This **core** becomes a **very hot white dwarf**, with a temperature **exceeding 100,000 Kelvin**.
- Unless it is accreting matter from a **nearby star** (see Cataclysmic Variables), the white dwarf cools down over the next billion years or so.
- A typical white dwarf is **half as massive as the Sun**, yet **only slightly bigger than Earth**.

18. Beidou Navigation Satellite System

Why in News?

- China launched the final satellite in its Beidou constellation on board Long March-3 rocket.

About Beidou

- What is it? → It is a **Chinese satellite navigation system**.
- Type → **Military and commercial**
- Coverage → **Global**
- Total satellites → The full constellation is scheduled to **comprise 35 satellites**. (2020)
- What are the various Global Navigation Satellite System? →
- The four global GNSS systems are – **GPS (US), GLONASS (Russia), Galileo (EU), BeiDou (China)**. Additionally, there are two regional systems – **QZSS (Japan) and IRNSS or NavIC (India)**.

19. IN-SPACE

Why in News?

- Union Government has given approval to Indian National Space Promotion and Authorization Centre (IN-SPACE).

About IN-SPACE

- What is it? → It will be the nodal national entity **under the Department of Space**.
- It is expected to be **functional within six months**, will **assess the needs and demands of private players**, including educational and research institutions, and, explore ways to accommodate these requirements in consultation with ISRO.
- Existing ISRO infrastructure, both ground- and space-based, scientific and technical resources, and even data are planned to be **made accessible to interested parties** to enable them to carry out their space-related activities.
- Its role has been mainly that **of suppliers of components and subsystems**.
- Indian industries do **not have the resources** or the **technology to undertake independent space projects** of the kind that US companies such as **SpaceX** have been doing, or **provide space-based services**.

👉 **New Space India Limited (NSIL)**

- What is it? → New Space India Limited (NSIL) is a **Central Public Sector Enterprise** of Government of India.
- Headquartered → **Bangalore**.
- Formation → It was established on **March 2019** under the administrative control of **Department of Space (DOS)**, India.
- Objective → The main objective is to **scale up industry participation in Indian space programs**.
- NSIL will endeavor to re-orient space activities from a '**supply driven**' model to a '**demand driven**' model, thereby ensuring **optimum utilization of our space assets**.

👉 **ANTRIX**

- What is it? → Antrix Corporation Limited (ACL), **Bengaluru** is a **wholly-owned Government of India Company** under the administrative control of the Department of Space.

- Functions → It is as a **marketing arm of ISRO** for promotion and commercial exploitation of space products, technical consultancy services and transfer of technologies developed by ISRO.
- Antrix is engaged in **providing Space products** and **services to international customers worldwide**.

20. Leishmaniasis

Why in News?

- Recently, a team of researchers from the National Centre for Cell Science (NCCS), Pune have found new biomolecules to fight drug resistance in Kala- azar (visceral leishmaniasis).

About Leishmaniasis

- What is it? → Leishmaniasis is a **neglected tropical disease** affecting almost 100 countries including India.
- Spread → It is caused by a parasite called **Leishmania**, which is transmitted through the **bite of sand flies**.
- There are three types of leishmaniasis →
 1. **Visceral leishmaniasis**, which affects multiple organs and is the most serious form of the disease.
 2. **Cutaneous leishmaniasis**, which causes skin sores and is the most common form.
 3. **Mucocutaneous leishmaniasis**, which causes skin and mucosal lesions.

👉 About Kala-azar

- What is it? → **Visceral leishmaniasis** (VL), also known as **kala-azar**, **black fever**, and **Dumdum fever**, is the most severe form of leishmaniasis and, without proper diagnosis and treatment, is associated with **high fatality**.
- Spread → Caused by **protozoan parasites** of the **Leishmania genus**, migrates to the internal organs such as the **liver**, **spleen** (hence “visceral”), and **bone marrow**.
- Signs and symptoms → include **fever**, **weight loss**, **fatigue**, **anemia**, and **substantial swelling** of the liver and spleen.

21. Scheme for Promotion of academic and Research Collaboration

Why in News?

- Researchers from the Indian Institute of Technology Madras are collaborating with their counterparts in Germany to develop new materials for green energy solutions.

About

- What is it? → This project has been taken up under the **Scheme for Promotion of academic and Research Collaboration or SPARC**.
- Aim → It aims at developing **alternative technologies** to **produce green hydrogen** in anticipation of transition to hydrogen-based economy.

👉 About SPARC

- It is an initiative of the **Ministry of Human Resource Development**.

- Aim → The scheme aims at **improving the research ecosystem** of India's **higher educational institutions** by facilitating academic and research collaborations between Indian Institutions and the best institutions in the world.
- Strategy → Under this Scheme, **600 joint research proposals** will be **awarded for 2 years** to facilitate strong research collaboration between Indian research groups with the best in class faculty and renowned research groups in the leading universities of the world, in areas that are at the **cutting edge of science** or with **direct social relevance to the mankind, specifically India**.
- National Coordinator → **Indian Institute of Technology Kharagpur** is the National Coordinating Institute to implement the SPARC programme.

22. Dhruva Chip

Why in News?

- IIT-Bombay develops chip Dhruva to be used in smartphones and navigation devices to find locations.

About

- Developed by → **IIT-Bombay**.
- Uses → It can be **used in smartphones** and **navigation devices** to find locations and routes within the country.
- How? → It will receive signals from **India's NAVIC group** of navigation satellites as well as the **US GPS-based satellites** to determine these accurately under all weather conditions.
- It can receive in **multiple frequency bands** and **handle weak signals**.
- Such signals can be **converted into digital bits** and processed by any standard digital signal processor (DSP) to determine one's location precisely.
- It will **help receive and clean up the signals received from NAVIC**, which are 36,000 km above from the earth's surface.
- Funding → This Project was funded by the **Ministry of Electronics and Information Technology** (MeitY).
- Nodal agency → SAMEER (Society for Applied Microwave Electronics Engineering and Research) is the **nodal agency**.
- NAVIC - Navigation with Indian Constellation is India's geo-positioning system with **9 satellites designed by ISRO** to provide **accurate positioning within the country**.

23. BLOCKCHAIN BILL OF RIGHTS

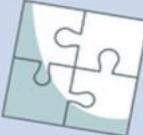
Why in News?

- World Economic Forum Global Blockchain Council launched Presidio Principles: the foundational values for a decentralized future which is also called as Blockchain Bill of Rights.

About

- It aims to establish a **global baseline** for developers, corporates and governments building blockchain applications.

- It will help in creating “**the foundational values for a decentralized future**” which will help unlock the potential of a technology that is poised to massively transform multiple sectors.
- It contains **sixteen principles which aim to protect users and preserve the values** of the technology so that all can benefit.
- 16 principles have been set out in four categories.

<h3>Transparency & Accessibility</h3>  <p>The right to information about the system.</p> <p>A participant should have access to information that would enable them to:</p> <ol style="list-style-type: none"> 1. Understand how a service is operated, including potential risks of the service, availability of source code, and the rules and standards upon which it is based. 2. Understand the potential risks and benefits of a service’s use of blockchain technology. 3. Understand system performance expectations and where the responsibility for service delivery lies. 4. Understand the rights and obligations of different participants in the system. 	<h3>Agency & Interoperability</h3>  <p>The right for participants to own and manage their data.</p> <p>A participant should be able to:</p> <ol style="list-style-type: none"> 5. Create, manage, and independently store cryptographic keys. 6. Manage consent of data stored in third-party systems. 7. Port data between interoperable systems or parts of a system. 8. Revoke consent for future data collection system. 9. Have access to information sufficient to facilitate system interoperability.
<h3>Privacy & Security</h3>  <p>The right to data protection.</p> <p>A participant should be able to:</p> <ol style="list-style-type: none"> 10. Assess if their data is at risk through appropriate disclosure procedures, which may include, but are not limited to, an examination of audit results, certifications, or source code. 11. Have their data protected in accordance with internationally recognized technical security standards. 12. Limit data collection to that which is necessary and data use to the purpose for which it was provided. 13. Verify – through third-party or self-created tools – that operations have been completed and confirmed in accordance with the system’s rules. 	<h3>Accountability & Governance</h3>  <p>The right for participants to understand available recourse.</p> <p>A participant should be able to:</p> <ol style="list-style-type: none"> 14. Access information needed to: (a) understand the system’s governance and rules and (b) pursue effective recourse mechanisms. 15. Opt-out of using applications that don’t treat data in accordance with internationally recognized governance and data protection standards. 16. Rectify demonstrably false, inaccurate, or incomplete data when necessary.

👉 Blockchain technology

- **Blockchain is a series of data linked together.** Every single transaction is linked to the chain using **cryptographic principles in batches**, making blocks.
- The blocks are connected to each other and have **unique identifier codes (called hashes)** that connect them to the previous and the subsequent blocks.
- This forms a blockchain, usually in the form of a **continuous ledger of transactions**.

Geography

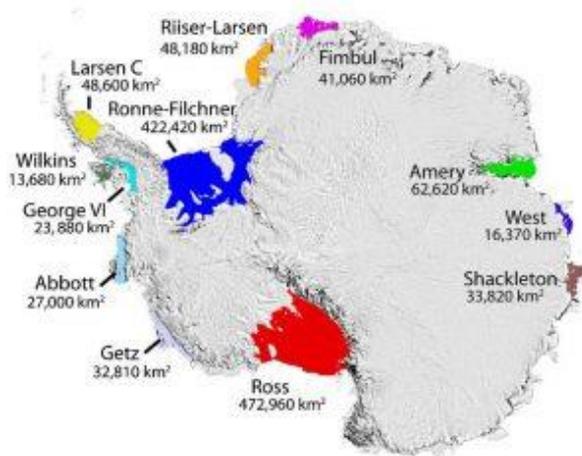
1. Expansion of the Amery Ice Shelf

Why in News?

- The National Centre for Polar and Ocean Research has predicted an increase in the expansion of the Amery Ice Shelf boundaries in Antarctica.

About Amery Ice Shelf (AIS)

- What is it? → The Amery Ice Shelf is a **broad ice shelf in Antarctica** at the **head of Prydz Bay** between the Lars Christensen Coast and Ingrid Christensen Coast.
- It is **part of Mac. Robertson Land**.
- The name "**Cape Amery**" was applied to a **coastal angle mapped** on February 11, 1931.
- The AIS is one of the **largest glacier drainage basins in the world**, located on the **east coast of Antarctica**, at about **70°S Latitude, 70°E Longitude**.
- The AIS dynamics and mass balance help in **understanding the changes in the global climate scenario**.
- Significance of the study → The study clearly demonstrated the **future dynamism of ocean heat fluctuation and Antarctic Amery ice shelf mass shifting-extent**.



👉 Ice Shelves

- The **floating sheets of ice** called 'ice shelves' play a **multi-faceted role** in maintaining the stability of a glacier. Ice shelves **connect a glacier to the landmass**.
- The ice sheet mass balance, sea stratification, and bottom water formation are important **parameters for the balancing of a glacier**.
- Latent** and **sensible heat processes** do play important roles here.
- The insulation of ice shelves from atmospheric forcing is **dependent on a temperature gradient** that the ocean cavity beneath the ice shelves provides.
- It is the **pressure exerted by the ice shelves upon the ocean cavity** that determines this temperature gradient.

2. Amaltas or Indian Laburnum

Why in News?

- The Amaltas or Indian laburnum has begun blooming this summer.

About

- Where? → The Amaltas (*Cassia fistula* linn), native to **South-East Asia** is one of the most widespread trees in **India** and **South-East Asia**, with their presence both in cities as well as in **moist** and **dry forests**.
- It has drooping clusters of **bright fragrant yellow flowers** with five petals and characteristic **cylindrical fruits**.
- The Amaltas is known **by so many names** – Indian Laburnum, Golden Shower, Purging Fistula, Pudding-pipe tree, Girmala, Rajbrikh, Alash, Kiar, Kirwara, Ali – showing us how common and loved it is.
- **State flower of Kerala.**
- Features of Amaltas →
 - This middle-sized deciduous tree is **leafless** only for a **brief time**, between **March and May**.
 - The new leaves are **glossy**, a trait that they **lose on maturing**, and are **mostly bright green**, though sometimes a **rich copper** too.
 - It **flowers from April to June**
- Significance → The tree is mostly known to be **ornamental** and few know of its benefits as a **medicinal plant**, and one that's **loved by some mammals, bees**, and **butterflies**.

3. NISARGA

Why in News?

- On the western coast of India, Cyclone Nisarga is headed towards the coastline of north Maharashtra and south Gujarat.

About

- In strength and intensity, Cyclone Nisarga would be **much weaker than Cyclone Amphan** that struck on May 20 and passed through West Bengal on its way to Bangladesh.
- Cyclones formed in the **Bay of Bengal side** of the north Indian Ocean are **more frequent** and **stronger** than those on the Arabian Sea side.
- The relatively **cold waters of the Arabian Sea discourage** the kind of very strong cyclones that are formed on the Bay of Bengal side; Odisha and Andhra Pradesh face the brunt of these cyclones every year.

4. Depsang Plain near LAC

Why in News?

- Reports of a heavy Chinese presence at Depsang, an area at a crucial dip (called the Bulge) on the Line of Actual Control (LAC).

About

- What is it? → The “Depsang Plain” is one of the few places in the **Western Sector** where **light armour (vehicles)** would have **ease of manoeuvre**, so any **Chinese buildup** there is a **cause for concern**.
- The buildup invokes **memories of both the 1962 war**, when Chinese troops had occupied all of the Depsang plains.



- Who controls what? → **India controls** the **western portion** of the plains as **part of Ladakh**, whereas the **eastern portion is part of the Aksai Chin region**, which is controlled by China and claimed by India.
- More recently in **April 2013**, the **PLA crossed the LAC** and **pitched tents** on the Indian side for three weeks, before they agreed to pull out.

5. Kohala Hydropower Project

Why in News?

- China under the multi-billion-dollar CPEC will set up a 1,124-megawatt power project in Pakistan-occupied Kashmir despite India's objection.

About

- What is it? → China under the **multi-billion-dollar CPEC** will set up the Kohala hydropower project, a **1,124-megawatt power project** in Pakistan-occupied Kashmir.
- A **tripartite agreement** has been finalised among **China's Three Gorges Corporation**, the authorities in Pakistan-occupied Kashmir (**PoK**) and the Private Power and Infrastructure Board (**PPIB**) to implement this project under the **CPEC framework**.
- The project will be **built on the Jhelum River** and aims at annually providing more than five billion units of clean and low-cost electricity for consumers in Pakistan.
- **India had protested Pakistan's plans** to build a dam in Gilgit-Baltistan, saying such projects in territories under Pakistan's illegal occupation was not proper.

6. Ambarnaya River Oil spill in Russia

Why in News?

- Russia has declared a state of emergency after a power plant fuel leak in its Arctic region caused 20,000 tonnes of diesel oil to escape into a local river, turning its surface crimson red.

About the spillage

- What is it? → The **Ambarnaya River**, into which the **oil has been discharged**, is part of a network that flows into the **environmentally sensitive Arctic Ocean**.
- Emergency measures were announced within **Russia's Krasnoyarsk Region**, located in the **vast** and **sparsely populated Siberian peninsula**.
- How did the leak happen? → The thermoelectric power plant at Norilsk is **built on permafrost**, which has **weakened over the years** owing to **climate change**. The power plant is located near the **Region's Norilsk city**, around 3000 km northeast of Moscow.

Permafrost

- The ground that **remains frozen for two or more consecutive years** is considered permafrost.
- Permafrost is **composed of rock, soil, sediments** and **varying amounts of ice** that bind elements together.
- Some permafrost is **frozen for tens, hundreds or even thousands of years**.

- What has Russia done so far? → **Boom obstacles were placed** in the river, but they were unable to contain the oil **because of shallow waters**. The **state of emergency declared** would bring in extra forces and federal resources for the clean-up efforts.
- What is the extent of the damage? →
 - Environmentalists have said the river would be **difficult to clean**, given its shallow waters and remote location, as well as the magnitude of the spill.
 - The **clean-up effort** could take **between 5-10 years**.

7. Daulat Beg Oldie

Why in News?

- In the reporting on the LAC stand-off, the Darbuk-Shyok-Daulat Beg Oldie (DSDBO) road has often appeared in news.

About Daulat Beg Oldie

- Location → The road from **Darbuk traverses** at an **altitude of 14,000 feet** and **reaches Shyok**, the last Indian village in the region, **between Shyok and Karakoram Pass** (that divides Ladakh from China's Xinjiang province) lies **DBO**, a plateau at an altitude of over **16,000 feet** and the location of an **Advanced Landing Ground (ALG)** used by the air force to drop supplies.
- DBO is **India's northernmost corner**, which in army parlance is called **Sub-Sector North** and building a road till here has been of vital importance to India.
- DBO is located **only 9 km away** from the **Line of Actual Control** with China.
- Timeline → The construction of the DSDBO first started in **2000** and was to be **completed by 2012**. The road, which was being **monitored by the PMO**, was aligned with the **Shyok riverbed** that was damaged every summer during flooding. Later, major portions of the road were realigned, keeping them away from the river to avoid the annual damage.
- Colonel Chewang Rinchen bridge → In October, defence minister Rajnath Singh inaugurated the **430-m Colonel Chewang Rinchen bridge** that **joins Durbuk to DBO**. India has decided to not stop road construction on its side of the LAC despite the border confrontations.
- Significance →
 - The road will **help manage the border** and the **areas adjoining Aksai Chin, Chip Chap River and Jiwan Nalla**.
 - It will also ensure **faster deployment of troops** in the area. Before the laying of the road, the only way to reach the area was via the ALG, where heavy-lift aircraft, such as the C-130J, can land.



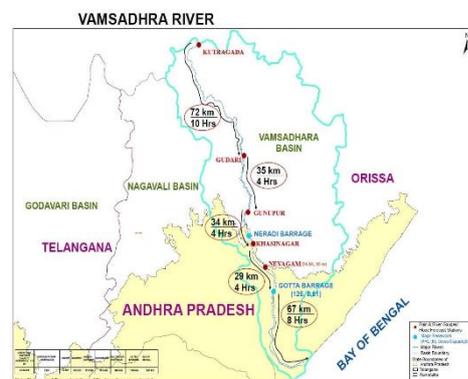
8. Vamsadhara River Water Dispute

Why in News?

- Andhra Pradesh and Odisha CM recently held talks to iron out all differences with regard to the sharing of Vamsadhara River waters.

About Vamsadhara River

- Location → River Vamsadhara is an important **east-flowing river between Rushikulya and Godavari**, in **Odisha and Andhra Pradesh**.
- Origin → The river originates in the border of **Thuamul Rampur in the Kalahandi district** and **Kalyansinghpur in Rayagada district of Odisha**.
- It runs for a distance of about **254 kilometres**, where it **joins the Bay of Bengal at Kalingapatnam, Andhra Pradesh**.
- The total catchment area of the river basin → **10,830 square kilometres**.
- The dispute →
 - Andhra Pradesh wants to build the **Neradi bridge** across the river which will be possible **only after Odisha's consent**.
 - Odisha argues that the **flood flow canal** would result in **drying up the existing river bed** and consequent shifting of the river affecting the groundwater table.



👉 Interstate River Water Disputes

- River waters use/harnessing is included in **states jurisdiction**. However, **article 262** of the Constitution provides for the **adjudication of inter-state water disputes**.
- Under this, **Parliament may by law** provide for the adjudication of any dispute or complaint with respect to the **use, distribution and control of waters of any inter-state river and river valley**.
- The President of India may also establish an **interstate council as per Article 263** to inquire and recommend on the dispute that has arisen between the states
- The Parliament has enacted the two laws, the **River Boards Act (1956)** and the **Inter-State Water Disputes Act (1956)**.

9. Challenger Deep: the deepest spot in the ocean

Why in News?

- Kathy Sullivan, known as the first American woman to walk in space has also become the first woman to reach a Challenger Deep.

About Challenger Deep

- Location → It is the **deepest known point** in the Earth's oceans with a depth of around **10,984m**.
- It is located in the **Western Pacific Ocean** at the **southern end** of the **Mariana Trench** near the Mariana Islands group.
- Significance of Deep Ocean Areas →
 - Finding out about the deep ocean areas can **potentially reveal new sources** for medical drugs, food, energy resources and other products.

- It can also help to **predict earthquakes and tsunamis** and help us understand how we are affecting and getting affected by the Earth's environment.

10. IFLOWS-Mumbai: Flood Warning System

Why in News?

- Recently, an integrated flood warning system - known as IFLOWS-Mumbai was launched making Mumbai the second city in India after Chennai to have such a system.

About IFLOWS-Mumbai

- What is it? → It is an **Integrated Flood Warning system** to enhance the resilience of Mumbai by **providing early warning** for flooding specially during **high rainfall events and cyclones**.
- The system also has provisions to **capture the urban drainage** within the city and predict the areas of flooding.
- Developed by → **Ministry of Earth Sciences** using in-house expertise and in close **coordination with Municipal Corporation of Greater Mumbai**.
- Significance → **Mumbai** will be the **second city to get** such a warning system in India after Chennai.
- Working/Features → The IFLOWS-Mumbai comprises **seven modules**, namely **data assimilation, flood, inundation, vulnerability, risk, dissemination and decision support system**.

11. Ukai Dam

Why in News?

- Recently, the water level of Ukai Dam has stood at 319.86 feet after 46 years.

About Ukai Dam

- It is the **second-largest reservoir in Gujarat** after Sardar Sarovar Dam which is s built on Tapi River.
- It is also known as **Vallabh Sagar**.
- It is an **earth-cum-masonry dam** which was constructed in 1972.

📍 Tapi River

- It is one of the three peninsular Rivers in India that **flow in an east to the west itinerary** and the other two rivers are the Mahi River and Narmada River.
- Origin →
 - It originates in the **eastern portion of the Satpura Mountain Ranges** in south Madhya Pradesh.
 - It pours into the **Gulf of Cambay in the Arabian Sea** in the district of Surat in Gujarat.
- Tributaries → **Girna River, Purna River, Panzara River, Bori River, Waghur River and Aner River** are the major tributaries of the river.

12. Arctic Sea

Why in News?

- The National Centre of Polar and Ocean Research (NCPOR) found the largest decline in the Arctic Sea ice in the last 41 years due to global warming.

About the observation

- According to recent observations in the last 40 years (1979-2018), the sea ice has been **declining at 4.7% per decade**, while the current declining rate was found to be **13% in July 2019**.
- Thus, it has been noted that the volume of ice formation during winters is **unable to keep pace with the volume of ice loss during summers**.
- It has been predicted that if this trend continues, there would be **no ice left in the Arctic Sea by 2050**.



📌 About National Centre of Polar and Ocean Research

- It was established as an **autonomous Research and Development Institution** of the **Ministry of Earth Sciences** which is located in Goa.
- Founded → 25 May 1998.
- It is earlier known as **National Centre for Antarctic and Ocean Research (NCAOR)** which is India's premier R&D institution responsible for the country's research activities in the Polar and Southern Ocean realms.
- Functions → It is the **nodal agency for planning, promotion, coordination and execution** of the **entire gamut of polar and Southern Ocean scientific research** in the country as well as for the associated logistics activities.

13. SOCOTRA ISLAND

Why in News?

- Southern separatists have seized control of Yemen's island of Socotra in the Arabian Sea, deposing its governor and driving out forces of the Saudi-backed government.

About

- Socotra or Soqatra, located **between the Guardafui Channel and the Arabian Sea**, is the largest of four islands in the **Socotra Archipelago**.
- The island of Socotra constitutes around **95% of the landmass of the Socotra archipelago**.
- The territory is officially part of It sits at the mouth of the **Gulf of Aden** and lies some 240 kilometres **east of the coast of Somalia** and 380 kilometres south of the **Arabian Peninsula**.
- In 2008 Socotra was recognised as a **UNESCO World Heritage Site**.



14. SENKAKU ISLANDS

Why in News?

- Japan has approved a plan to change the name of the area covering the Tokyo-controlled Senkaku Islands — known by Taiwan and China as the Diaoyus — from “Tonoshiro” to “Tonoshiro Senkaku”.

About SENKAKU ISLANDS

- Location → The Senkaku Islands are a **group of uninhabited islands** in the **East China Sea**.
- They are located **east of Mainland China, northeast of Taiwan, west of Okinawa Island, and north of the southwestern end of the Ryukyu Islands**.
- Names → They are also known as the **Diaoyu Islands in Mainland China**, the **Diaoyutai Islands in Taiwan** and the **Pinnacle Islands** by other observers.
- Dispute → The islands are the focus of a **territorial dispute** between **Japan and China** and between Japan and Taiwan.
- Administration → **Japan administers** and **controls the Senkaku islands** as part of the city of Ishigaki in Okinawa Prefecture.



15. Mt. Merapi of Indonesia

Why in News?

- Mount Merapi, an active volcano in Indonesia, erupted twice on 21st June, 2020.

About

- Merapi (Mountain of Fire) is the **most active of Indonesia's 130 active volcanoes**.
- It **rises to 2,911 metres** and has **steep slopes** with dense vegetation on its lower sides.
- It is located near the **centre of the island of Java** and **Indonesia's cultural capital, Yogyakarta**.
- Mt Merapi's last **significant eruption** was in **2010**. At that time, **more than 300 people were killed** and some 2,80,000 residents were forced to evacuate the surrounding areas.



16. Seabed 2030 Project

Why in News?

- Recently, it was announced that mapping of nearly one-fifth of the world's ocean floor had been finished under the Seabed 2030 Project.

About Seabed 2030 Project

- Involved Bodies → Seabed 2030 is a **collaborative project** between the **Nippon Foundation of Japan** and the **General Bathymetric Chart of the Oceans** (GEBCO).
- Timeline → It was launched at the **United Nations Ocean Conference** in **June 2017** and is aligned with the UN's Sustainable Development Goal (**SDG**) **14** to conserve and sustainably use the oceans, seas and marine resources.
- Aim → The project aims to bring together all available **bathymetric data** to **produce the definitive map of the world ocean floor by 2030** and make it available to all.
 - **Bathymetry** is the measurement of the shape and depth of the ocean floor.
- In the past, satellites and planes carrying altimeter instruments have been able to provide large swathes of data about the ocean floor.
- However, the Seabed 2030 Project aims to **obtain higher quality information** that has a **minimum resolution of 100 metres** at all spots, using equipment such as **deepwater hull-mounted sonar systems**, and **Autonomous Underwater Vehicles** (AUVs).
- Importance of the Study of the Ocean Floor →
 - Helps in **understanding several natural phenomena**, including ocean circulation, tides and biological hotspots.
 - Ensure a better **understanding of climate change**.

📌 General Bathymetric Chart of the Oceans

- GEBCO is the only **intergovernmental organisation** with a mandate to **map the entire ocean floor**.
- Formation → It traces its origins to the GEBCO chart series **initiated in 1903 by Prince Albert I of Monaco**.
- Aim → It aims to **provide the most authoritative publicly-available bathymetry** of the world's oceans.
- Involved Bodies → It operates under the joint auspices of the **International Hydrographic Organization** (IHO) and the **Intergovernmental Oceanographic Commission** (IOC) (of UNESCO).
 - The IHO is an **intergovernmental organization** that works to ensure all the world's seas, oceans and navigable waters are **surveyed and charted**. It was **established in 1921**.
 - **India is its member**.
 - The IHO Secretariat is hosted by the **Principality of Monaco**.

17. Athirappally Waterfalls

Why in News?

- The Kerala government recently gave the go-ahead for the proposed 163-megawatt (MW) Athirappally Hydroelectric Project.

About Athirappally Waterfalls

- Location → The famous Athirappally Waterfalls is located **on the Chalakudy River in Thrissur district of Kerala**.
- Origin → It originates from the upper reaches of the **Western Ghats at the entrance to the Sholayar ranges**.
- Significance → It is the **largest waterfall in Kerala**, which stands tall at 80 feet and is nicknamed "**The Niagara of India**".

- Controversy → Controversy about a **state-proposed hydroelectric dam** on the Chalakudy River above the waterfalls began in the **1990s** and continued through **2021**.
- Issues with the Hydel project →
- A number of families belonging to the **Kadar tribal group** are facing **displacement** here.
- The falls and its surroundings are part of a **crucial biodiversity-rich region** coming under the **Ecologically Sensitive Zone 1** of the Western Ghats.

👉 Waterfalls in India

- **Vajrai Falls** (560m) → Satara, Maharashtra
- **Kunchikal Falls** (455m) → Shimoga, Karnataka
- **Barehipani Falls** (390m) → Odisha
- **Nohkalikai Falls** (340m) → East Khasi, Meghalaya
- **Dudhsagar Falls** (310m) → Karnataka, Goa

Polity

1. Article 1 of the Indian Constitution

Why in News?

- The Supreme Court has ordered that a plea to change India's name exclusively to 'Bharat' be converted into a representation and forwarded to the Union government for an appropriate decision.

About Article 1

- Article 1 in the **Constitution states that India**, that is Bharat, shall be a **Union of States**.
- The territory of India shall consist of: **The territories of the states, The Union territories and Any territory that may be acquired in future.**

👉 Article 2

- Article 2 states that the parliament may, **by law, admit new states into the Union of India** or establish new states on **terms and conditions it deems fit**.
- For e.g. the addition of the State of Sikkim by the 35th (1974).

👉 Article 3

- Article 3 empowers the parliament to **form a new state by separation of a part of the territory of an established state** or to unite two or more states or parts of states or by uniting any territory to a part of any state.
- This article provides that **area of any state can reduced or increased** and **alter the boundaries or change the name of a state**.

👉 Article 4

- This article specifies that the laws provided in article 2 and 3, admission/establishment of new states and alteration of names, areas and boundaries etc. of established states, are **not to be considered amendments of the Constitution under article 368**.
- It means these can be passed without resorting to any special procedure and **by a simple majority**.

2. CENTRAL ADMINISTRATIVE TRIBUNAL (CAT)

Why in News?

- Union Minister of Personnel & Public Grievances inaugurated the 18th Bench of Central Administrative Tribunal (CAT) for the Union Territories of Jammu and Kashmir and Ladakh.

About CAT

- Constitutional backing → The CAT had been established under **Article 323** - A of the Constitution.
- Composition → The Tribunal is **headed by the Chairman and 65 Members**, 33 from Judicial (including Chairman) and 33 from the Administrative stream. The **Chairman** is normally a **retired Chief Justice of a High Court**.

- Mandate → To **adjudicate disputes** and **complaints with respect to recruitment and conditions of service** of persons appointed to public services and posts in connection with the affairs of the Union or other authorities under the control of the Government.
- Under Section 17 of the Administrative Tribunal Act, 1985, the Tribunal has been conferred with the power to exercise the **same jurisdiction and authority** in respect of contempt of **itself as a High Court**.
- The Tribunal is guided by the **principles of natural justice** in deciding cases and is not bound by the procedure, prescribed by the Civil Procedure Code.
- **Salaries and Allowances** and **Conditions of Service** of the officers and other employees of the Tribunal are **specified by the Central Government**.

3. Civil Services Board

Why in News?

- The Punjab government, last week, constituted a three-member civil services board to decide on IAS transfers and postings in the state.

About CSB

- Background → To insulate the bureaucracy from political interference and to put an end to frequent transfers of civil servants by political bosses, the **Supreme Court had in 2013 directed the Centre and the states to set up a civil services board** to consider transfers and postings of bureaucrats among others.
- As per rules, **all states** should have a **civil services board** to decide on transfers and postings of the bureaucrats.
- Functions →
 - The board is mandated to decide on the **transfer of a civil servant before completion of his or her fixed tenure**.
 - The rules mandate the civil services board to submit an **annual report** on January 1 **to the central government** about the date of the meetings held by them.
- Composition →
 - The civil services board is **headed by chief secretary of a state**.
 - It has **senior most additional chief secretary** or **chairman, Board of Revenue, Financial Commissioner** or an officer of equivalent rank and status as member.
 - In addition, it will have **Principal Secretary or Secretary, Department of Personnel** in the state government as member secretary.

How do they see the board to be lending officer's supremacy over them?

- If any officer is to be transferred before completing his minimum tenure, the board will **record the reasons** for the transfer.
- It will **seek views from the concerned officer** and then **give a judgement** on whether the tenure of the officer is to be ended mid-way.
- The **final authority** will be the **CM**.

4. Rule of Law Index

Why in News?

- The Supreme Court has asked the government to decide on the plea for setting up expert panels to boost India's prospects in the Rule of Law Index.

About Index

- What is it? → It is a **quantitative assessment tool** designed to offer a detailed and **comprehensive picture** of the extent to which countries adhere to the rule of law in practice.
- Published by → **World Justice Project**- an independent organisation.
- Parameters → It measures rule of law performance across eight factors: 1) **Constraints on Government Powers** 2) **Absence of Corruption**, 3) **Open Government** 4) **Fundamental Rights** 5) **Order and Security** 6) **Regulatory Enforcement** 7) **Civil Justice** and 8) **Criminal Justice**.
- Top Performers in 2020 → The index has been **topped by Denmark** followed by **Norway and Finland**.
- India Position → It has been **ranked at 69**. India has never been ranked among the top 50 in the Index.

5. Secret Ballot

Why in News?

- The Supreme Court has held in a judgment that Secrecy of ballot is the cornerstone of free and fair elections.

About Secret Ballot

- What is it? → The secret ballot, also known as **Australian ballot**, is a **voting method** in which a voter's choices in an election or a referendum are **anonymous**.
- Aims → It aims for **forestalling attempts** to **influence the voter** by intimidation, blackmailing, and potential vote-buying.
- Significance → The system is one means of **achieving the goal of political privacy**.

👉 What did the Supreme Court rule?

- The principle of secrecy of ballots is an **important postulate of constitutional democracy**, the court said.
- Justice Khanna, who wrote the judgment, referred to **Section 94** of the **Representation of People Act**, which upholds the **privilege of the voter** to **maintain confidentiality** about her choice of vote.
- It is the policy of the law to **protect the right of voters** to the secrecy of the ballot.
- Even a remote or distinct possibility that a voter can be forced to disclose for whom she has voted would act as a **positive constraint** and a **check on the freedom to exercise of the franchise**.

6. SAANSAD ADARSH GRAM YOJANA (SAGY)

Why in News?

- Recently, a study by the Ministry of Rural Development has observed that the Saansad Adarsh Gram Yojana (SAGY) has not been able to achieve the desired objectives and failed to make a significant impact.

About SAGY

- SAGY is a **village development project** which was launched on 11th October, 2014 on the **birth anniversary of Jai Prakash Narayan**.

- Goal → Under the Yojana, **Members of Parliament** (MPs) are responsible for developing the socio-economic and physical infrastructure of **three villages each by 2019**, and a **total of eight villages each by 2024**.
- Objectives → To substantially **improve the standard of living** and **quality of life of all sections of the population** through Improved basic amenities, higher productivity and better livelihood opportunities.
- Implementation →
- Gram Panchayat: The **basic unit for development**.
 - Lok Sabha MP: Chooses a Gram Panchayat from **within his/her constituency**.
 - Rajya Sabha MP: Chooses Gram Panchayat from the rural area of a district of **his/her choice in the State from** which he/she is elected.
 - Nominated MPs: Choose a Gram Panchayat from the rural area of **any district in the country**.
- The MPs **engage with the community**, **facilitate the Village Development Plan** and **mobilise** the necessary resources particularly from Corporate Social Responsibility (**CSR**) and **philanthropies**.
- MPs also **fill up critical gaps** in the plan using the Member of Parliament Local Area Development Scheme (**MPLADs funds**).

7. Section 309 (Indian Penal Code)

Why in News?

- Section 309 of the Indian Penal Code, continues to exist in the statute book, contrary to the popular perception that it has been repealed.

About Section 309 IPC

- Under Section 309 of the Indian Penal Code, an attempt to **commit suicide is punishable** with **simple imprisonment** up to **one year and/or a fine**.
- Although section 309 is **still in effect**, the **Mental Healthcare Act, 2017** (enacted July 2018) has **restricted its application**.
- This law was brought in **by the British in the 19th century**, reflected the thinking of the time when killing or attempting to kill oneself was **considered a crime against the state**, as well as **against religion** and **only 24 countries** around the world have a section such as this in their laws.

Was Section 309 repealed a few years back?

- The section continues to **remain in the IPC** and **The Mental Healthcare Act (MHCA), 2017** has **significantly reduced the scope** for the use of Section 309 IPC and made the **attempt to commit suicide punishable only as an exception**.
- Supreme Court in **Gian Kaur case(1996)** overturned the 1994 decision which brought Section 309 back to life and made **'right to die' unconstitutional**. The Court held that the right to life under Article 21 does not include the right to die.
- Recently, **Rajasthan High Court** ruled that the **Jain practise of Santhara** would henceforth be **treated as "suicide"** and made **punishable under Section 309** (attempt to commit suicide) and **Section 306** (abetment of suicide) of the Indian Penal Code (IPC) but later **Supreme Court has overruled the HC's judgement**.

8. Justice G. Rohini commission

Why in News?

- The Union Cabinet has approved a six-month extension to the commission as it needs more time as its work has been affected by the pandemic.

About

- The commission is headed by **Justice (Retd.) G Rohini**.
- Mandate → It had been constituted to complete the task of **sub-categorising 5000-odd castes in the central OBC list** so as to ensure more equitable distribution of opportunities in central government jobs and educational institutions.
- Background → It was constituted under **Article 340 of the Constitution** with the approval of the President on 2nd October 2017.

Article 340 →

- Article 340 deals with the **appointment of a commission** to **investigate the conditions of backward classes**.
- It shall investigate the matters referred them and present a **report to the President**.
- The President shall **cause a copy of the report** so presented together with a memorandum explaining the action taken thereon to be laid before each House of Parliament.

IR

1. The Group of 7

Why in News?

- Calling the existing Group of Seven (G-7) club a “very outdated group of countries”, US Prez. Trump said that he wanted to include India, Russia, South Korea, and Australia in the group.

About G - 7

- What is it? → It is an **intergovernmental organisation** that was formed in **1975** by the top economies of the time as an informal forum to discuss pressing world issues.
- Members → The G-7 or ‘Group of Seven’ includes **Canada, France, Germany, Italy, Japan, the United Kingdom, and the United States.**
- Initially, it was formed as an effort by the US and its allies to discuss economic issues.
- Functions → The G-7 forum now discusses several challenges such as **oil prices** and **many pressing issues** such as **financial crises, terrorism, arms control, and drug trafficking.**
- It does **not have a formal constitution** or a **fixed headquarters.** The decisions taken by leaders during **annual summits** are **non-binding.**
- Canada joined the group in 1976, and the European Union began attending in 1977.
- Why G7 needs a revival? → The **rise of India, China, and Brazil** over the past few decades has **reduced the G-7’s relevance,** whose share in global GDP has now fallen to around 40%.

2. G7 ARTIFICIAL INTELLIGENCE GROUP

Why in News?

- The US has joined G7 artificial intelligence group, an international panel for setting ethical guidelines for the use of artificial intelligence. The Trump administration had earlier dismissed the idea.

About

- What is it? → This Global Partnership on AI setup by the **Group of Seven** will guide the responsible adoption of AI based on shared principles of “**human rights, inclusion, diversity, innovation and economic growth.**”
- G7-Global Partnership on AI launched recently **through a virtual meeting** between **national technology ministers.**
- Significance → US involvement is important because of the large role that **American tech firms play globally** and its **historic advocacy for human rights.**

3. The 5G Club ‘D10’

Why in News?

- Britain said that it was pushing the U.S. to form a club of 10 nations that could develop its own 5G technology and reduce dependence on Huawei.

About

- What is it? → The Britain is proposing a 'D10' club of democratic partners that groups the G7 nations **with Australia** and the **Asian technology leaders South Korea and India**.
- Members → It would include G7 countries – **UK, US, Italy, Germany, France, Japan and Canada** – plus **Australia, South Korea and India**.
- Aim → It is aimed for **channelling investments** into **existing telecommunication companies** within the 10 member states.
- The group aim to create **alternative suppliers of 5G equipment** and other technologies **to avoid relying on China**.
- Ruling out Huawei →
 - **Britain has allowed** the **Chinese global leader in 5G technology** to build up to **35% of the infrastructure necessary** to roll out its new speedy data network.
 - But their PM Boris Johnson was reported to have instructed officials to **draw up plans** to **cut Huawei out of the network by 2023** as relations with China sour.

4. Global Vaccine Summit

Why in News?

- Recently, the Prime Minister of India addressed the virtual Global Vaccine Summit.

About

- Host Country → The Summit was hosted by the **United Kingdom** (UK).
- Participants → Almost **50 countries** including the business leaders, UN agencies, civil society, government ministers, Heads of State and country leaders participated in the Summit.
- Purpose → The Summit was intended to **urge nations** around the world to **pledge funding for vaccinations** to protect the world from future outbreaks of infectious diseases.
- Aim → The Summit was aimed at **raising USD 7.4 million** to immunize a further **300 million children in the world's poorest countries by 2025**.
- **India** has pledged **USD 15-million as India's contribution** to the Global Alliance for Vaccines and Immunizations (**GAVI**).

5. INDIA - AUSTRALIA LEADERS' VIRTUAL SUMMIT

Why in News?

- First ever India-Australia Virtual Summit was held between PM Modi and his Australian counterpart Scott Morrison.

About outcomes

- Comprehensive Strategic Partnership (CSP) → Elevated the **2009** bilateral Strategic Partnership to a **Comprehensive Strategic Partnership** (CSP).
- 2+2 Dialogue: **Upgraded the existing 2+2 dialogue** between their Foreign and Defence Secretaries to the **Ministerial level**.

- Mutual Logistics Support arrangement → Signed the Mutual Logistics Support agreement (MLSA) which will facilitate **reciprocal access to military logistics facilities**, allow **more complex joint military exercise** and **improve interoperability** between the security forces.
 - India has such agreements with the US, France, Singapore and South Korea.
- Declaration on the Indo-Pacific region → Reached an understanding on **enhancing cooperation** between their navies and **strengthening maritime domain awareness** in the **Indo-Pacific region**.
- Other Agreements → Framework arrangement on cyber and cyber-enabled critical technology cooperation
- Memorandum of understanding (MoU) on cooperation in mining and processing of critical and strategic minerals among others.

6. Inter-Parliamentary Alliance on China (IPAC)

Why in News?

- Senior lawmakers from eight democracies including the US have united to counter Communist China. They have launched the Inter-Parliamentary Alliance on China (IPAC).

About IPAC

- What is it? → IPAC is a new **cross-parliamentary alliance to help counter** what the threat posed by China's growing influence on global trade, security and human rights.
- Participating Countries → The participating nations include the **US, Germany, UK, Japan, Australia, Canada, Sweden, Norway**, as well as members of the **European parliament**.
- It is an international cross-party group of legislators working towards **reform on how democratic countries approach China**.
- Comprised of legislators from eight democracies it will be led by a **group of co-chairs** who are senior politicians drawn from a representative cross-section of the world's major political parties.
- The group aims to "**construct appropriate and coordinated responses, and to help craft a proactive and strategic approach on issues related to China.**"

7. India's Campaign Brochure for UNSC Seat

Why in News?

- Recently, India has released a campaign brochure ahead of the vote for the non-permanent member of the United Nations Security Council (UNSC) in 2021-22.

About UNSC

- What is it? → The UNSC is **one of the six principal organs of the United Nations** and is charged with the **maintenance of international peace and security**.
- Powers → Its powers include the establishment of **peacekeeping operations**, the establishment of **international sanctions**, and the **authorization of military action** through Security Council resolutions.
- It is the only UN body with the authority to issue **binding resolutions** to member states.
- Members →

- The Security Council consists of **fifteen members**. Russia, the United Kingdom, France, China, and the United States—serve as the body's **five permanent members**.
- These permanent members **can veto** any substantive Security Council resolution, including those on the admission of new member states or candidates for Secretary-General.
- The Security Council also has **10 non-permanent members**, elected on a regional basis to **serve two-year terms**. The body's **presidency rotates monthly among its members**.

8. Global Partnership on Artificial Intelligence (GPAI)

Why in News?

- India joins Global Partnership on Artificial Intelligence (GPAI) as a founding member to support the responsible and human-centric development and use of AI.

About GPAI

- What is it? → It is an **international and multi-stakeholder initiative** to guide the responsible development and use of AI, grounded in human rights, inclusion, diversity, innovation, and economic growth.
- This is also a **first initiative of its type**.
- Secretariat → GPAI will be **supported by a Secretariat**, to be **hosted by** Organization for Economic Cooperation and Development (**OECD**) in Paris, as well as by two Centers of Expertise- one each in **Montreal and Paris**.
- Founding members → **Australia, Canada, France, Germany, India, Italy, Japan, Mexico, New Zealand, the Republic of Korea, Singapore, Slovenia, the United Kingdom, the United States of America, and the European Union**.
- Objectives → In **collaboration with partners** and **international organizations**, GPAI will **bring together leading experts** from industry, civil society, governments, and academia to collaborate to promote responsible evolution of AI.
- How this helps for India? → By joining GPAI as a founding member, India will **actively participate in the global development of Artificial Intelligence, leveraging upon its experience** around use of digital technologies for inclusive growth.

9. International Atomic Energy Agency (IAEA)

Why in News?

- The International Atomic Energy Agency (IAEA) has expressed “serious concern” about Iran’s failure to cooperate with its probe into undeclared nuclear material in the country.

About IAEA

- It seeks to **promote peaceful use of nuclear energy**, and to prohibit its use for any military purpose, including manufacturing of nuclear weapons.
- Established → **1957**.
- HQ → **Vienna, Austria**.
- It **reports to the UNGA** and the **UNSC** (although it is an independent body)
- Functions →

- Works with its Member States and multiple partners worldwide to **promote the safe, secure and peaceful use of nuclear technologies.**
- Seeks to **promote the peaceful use of nuclear energy,** and to inhibit its use for any military purpose, including nuclear weapons.
- Board of Governors →
 - **22 member states** (must represent a stipulated geographic diversity) – elected by the General Conference (11 members every year) – **2-year term.**
 - At **least 10 member states** – **nominated by the outgoing Board.**
 - Board members each **receive one vote.**

10. Indian officials attend virtual EAG plenary meet

Why in News?

- Indian officials have attended the virtual 32nd plenary meeting of Eurasian Group on Combating Money Laundering and Financing of Terrorism (EAG).

About

- What is it? → It is a **regional body** established in **2004.** Currently, it is an associate member of the Financial Action Task Force (FATF).
- Members → It comprises **nine countries** namely India, Russia, China, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan and Belarus.
- Purpose → To **ensure cooperation and integration of EAG member-states** into the international system of anti-money laundering and combating financing of terrorism in accordance with the recommendations of FATF.

👉 Financial Action Task Force

- It is an **inter-governmental body** established in **1989** during the G7 Summit in Paris.
- Secretariat → It is located at the Organisation for Economic Cooperation and Development (OECD) **headquarters in Paris.**
- Objectives →
 - **set standards and promote effective implementation** of legal, regulatory and operational measures
 - for **combating money laundering** and terrorist financing and
 - other related threats to the **integrity of the international financial system.**
- Members → It comprises **37 member** jurisdictions and **2 regional organisations** representing most major financial centres in all parts of the globe.
 - **India is one of the members.**
- The **FATF Plenary** is the **decision-making body** of the FATF. It meets **three times per year.**

11. World Food Programme (WFP)

Why in News?

- Global emergency aid delivery could end next month the World Food Programme warned.

About WFP

- What is it? → World Food Programme (WFP) is the UN agency **focused on hunger alleviation and food security**.
- Formation → It was **established in 1961** after the 1960 Food and Agricultural Organization (FAO) Conference.
- Headquarters → **Rome (Italy)**.
- Functions → It works closely with its two Rome-based sister organizations, the **Food and Agriculture Organization of the United Nations** and the **International Fund for Agricultural Development**.
- It is a member of the United Nations Development Group (**UNDG**) and **part of its Executive Committee**.
- WFP has been **working in India since 1963**.

12. International Comparison Program

Why in News?

- The World Bank has released new Purchasing Power Parities (PPPs) for reference year 2017, under International Comparison Program (ICP), that adjust for differences in the cost of living across economies of the World.

About ICP

- What is it? → International Comparison Program (ICP) is the **largest worldwide data-collection initiative**, under the guidance of **UN Statistical Commission** (UNSC).
- Objective → The goal is of producing **Purchasing Power Parities** (PPPs) which are vital for **converting measures of economic activities** to be **comparable** across economies.
- Along with the PPPs, the ICP also produces **Price Level Indices** (PLI) and **other regionally comparable aggregates of GDP expenditure**.
- The next ICP comparison will be conducted for reference **year 2021**.

📌 India and the ICP

- India has participated in almost all ICP rounds **since its inception in 1970**.
- The **Ministry of Statistics and Programme Implementation** is **National Implementing Agency** (NIA) for India, which has the responsibility of planning, coordinating and implementing national ICP activities.
- India has also been a **co-Chair of the ICP Governing Board** along with **Statistics Austria** for the ICP 2017 cycle.

13. Association of Southeast Asian Nations (ASEAN) Summit

Why in News?

- The 36th Association of Southeast Asian Nations(ASEAN) Summit was held via video conference.

About ASEAN Summit

- Chaired by → The Summit was **chaired by Vietnam** which is holding the chairmanship of ASEAN currently.
- Theme → **“Cohesive and Responsive ASEAN”**
- ASEAN Covid-19 response funds → The fund was established with a **reserve for medical supplies to meet urgent needs during epidemics**.

👉 About ASEAN

- What is it? → It is a **regional grouping** which was **established in 1967** with the signing of the **Bangkok Declaration**.
- Members → **Indonesia, Thailand, Singapore, Malaysia, The Philippines, Vietnam, Myanmar, Cambodia, Brunei, and Laos**.
- Headquarters → **Jakarta, Indonesia**.
- Chairmanship → It **rotates annually** based on the **alphabetical order** of the English names of Member States.
- Significance of the grouping → **3rd largest market in the world** – larger than EU and North American markets. 6th largest economy in the world, 3rd in Asia. **Fourth most popular investment destination globally**.

8th August is observed as ASEAN Day.

- **ASEAN Regional Forum (ARF)** → Launched in 1993, the twenty-seven-member multilateral grouping was developed to facilitate cooperation on political and security issues to contribute to regional confidence-building and preventive diplomacy.
- **ASEAN Plus Three** → The consultative group initiated in 1997 brings together ASEAN 's ten members, China, Japan, and South Korea.
- **East Asia Summit (EAS)** → First held in 2005, the summit seeks to promote security and prosperity in the region and is usually attended by the heads of state from ASEAN, Australia, China, India, Japan, New Zealand, Russia, South Korea, and the United States. ASEAN plays a central role as the agenda-setter.

Society

1. The Urban Learning Internship Program (TULIP)

Why in News?

- The govt. has launched the TULIP program for providing internship opportunities to fresh Graduates in all ULBs & Smart Cities.

About TULIP

- What is it? → It is a dedicated programme offering **internships to fresh graduates** in all urban local bodies (ULBs) and smart cities across the country in the **domain of urban governance**.
- Bodies involved → TULIP is a portal jointly developed by the **Ministry of HRD, Ministry of Housing & Urban Affairs, and All India Council for Technical Education (AICTE)**.
- Eligibility → Applicants must be **Indian citizens** who have completed their final year of college within the last 18 months and have a **degree of B. Tech, B planning, B. Arch, BA, BSc, B. Com, LLB**.
- Duration → Internship durations can range from **eight weeks to one year**.
- Committee → **Steering Committee** under the Chairmanship of Secretary, HUA including Chairman AICTE and other officials has been constituted to **review the progress of the program on a periodic basis**.
- Significance →
 - It would help **enhance** the **value-to-market of India's graduates** and help create a **potential talent pool in diverse fields** like urban planning, transport engineering, environment, municipal finance etc.
 - It will further the Government's endeavours to **boost community partnership** and **government-academia-industry-civil society linkages**.
 - This launch is also an important stepping stone for the fulfillment of MHRD and AICTE's goal of **1 crore successful internships by the year 2025**.

🏠 Smart Cities Mission

- Launched Year → **2015**
- Financing → It is a **Centrally Sponsored Scheme**.
- 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.

2. JAYA JAITLEY TASK FORCE

Why in News?

- The Women and Child Development Ministry has constituted a task force to examine issues related to age of motherhood, lowering Maternal Mortality Rate and improvement of nutritional levels.

About

- Objective → The task force will be **headed by Jaya Jaitly** and it will submit its report by 31st July of next month.
- The Terms of Reference
 - To **examine the issues related to** Infant Mortality Rate, Maternal Mortality Rate, Total Fertility Rate, Sex Ratio at Birth, Child Sex Ratio (CSR) and any other issues pertaining to health and nutrition.
 - To **suggest measures** for promoting higher education among women.
 - To **suggest suitable legislations** and **amendments** in existing laws and also chalk out a detailed roll-out plan with timelines to implement these recommendations.

3. QS World University rankings 2021

Why in News?

- 17th edition of the QS World University rankings has been released.

About

- Published by → They are **published annually** by global higher education consultancy **Quacquarelli Symonds**.
- Parameters → It is based on **six indicators**: academic reputation, employer reputation, citations per faculty, faculty/student ratio, international faculty ratio and international student ratio.
- It rates the **worlds top 1000 universities**.

👉 Key Takeaways

- **Massachusetts Institute of Technology** (MIT) is ranked as the world's best university followed by **Stanford University** and **Harvard University**.
- **IIT Bombay** is ranked **172nd** while **IISc is 185th** and **IIT Delhi is at 193rd** place. A total of 21 Indian higher education institutions are in the top 1000.

4. NIRF Ranking 2020 released

Why in News?

- Union HRD Ministry has recently carried out various amendments in Prime Minister's Research Fellowship Scheme to boost research in the country.

About

- Background → National Institutional Ranking Framework (NIRF) was started by the **Ministry of Human Resource and Development** (HRD) in **2015**.
- Parameters → a) **Teaching** b) **Learning and Resources** c) **Research and Professional Practices** d) **Graduation Outcomes** e) **Outreach and Inclusivity** and f) **Perception**.

👉 Key Takeaways

- Top Institutes in overall category → 1) **IIT-Madras** 2) **IISc Bangalore** and 3) **IIT-Delhi**

- Top Universities in India → 1) **Indian Institute of Science (IISc)** 2) **Jawaharlal Nehru University** and 3) **Banaras Hindu University**.
- Top engineering institutes in India → 1) **IIT-Madras** 2) **IIT-Delhi** and 3) **IIT-Bombay**.
- Top College → **Miranda House**, Delhi.
- Top Dental College → **Maulana Azad Institute of Dental Sciences, Delhi**. The Dental category was included for the first time in NIRF Rankings.

5. WORLD DAY AGAINST CHILD LABOUR

Why in News?

- The World Day Against Child Labour (WDACL) is being observed on 12 June, focussing on the impact of coronavirus crisis on child labour.

About

- Nodal agency → It is an **International Labour Organization (ILO)**-sanctioned holiday aiming to **raise awareness and activism to prevent child labour**.
- Date of observance → The Day is observed every year on **June 12**.
- Background → It was first launched in It was spurred by ratifications of **ILO Convention No. 138** on the minimum age for employment and **ILO Convention No. 182** on the worst forms of child labour.
- Theme → **“COVID-19: Protect children from child labour, now more than ever”**.
- **Target 8.7** of the UN Sustainable Development Goals calls for an end to child labour in all its forms by 2025.

6. Assistance to Disabled Persons (ADIP) Scheme

Why in News?

- First ever distribution of assistive aids & devices to divyangjan through virtual platform under ADIP Scheme of M/O Social Justice & Empowerment in Ferozpur, Punjab.

About ADIP Scheme

- Being implemented by the **Ministry of Social Justice & Empowerment**.
- Objective → to **assist the needy disabled persons** in procuring durable, sophisticated and scientifically manufactured, modern, standard aids and appliances that can **promote their physical, social and psychological rehabilitation**, by reducing the effects of disabilities and enhance their economic potential.
- Implementation → The scheme is implemented through implementing agencies such as **NGOs, National Institutes under the Ministry of Social Justice & Empowerment** and **ALIMCO** (a PSU that manufactures artificial limbs).
- Eligibility →
- A person satisfying all the following conditions are eligible:
 - Indian citizen of any age
 - Has 40% disability or more (must have the requisite certificate)
 - Monthly income, not more than Rs.20000.
 - In the case of dependents, income of parents/guardians should not exceed Rs.20000 per month.

- Must not have received assistance during the last 3 years for the same purpose from any source.

7. Garib Kalyan Rojgar Abhiyaan

Why in News?

- The Government of India has decided to launch a massive rural public works scheme named 'Garib Kalyan Rojgar Abhiyan'.

About Garib Kalyan Rojgar Abhiyaan

- Aim → To empower and provide livelihood opportunities to the **returnee migrant workers** and **rural citizens**.
- Coverage → It will be implemented across **116 districts in the six States** namely Bihar, Uttar Pradesh, Madhya Pradesh, Rajasthan, Jharkhand and Odisha.
- Duration and Outlay → This campaign will work in mission mode for **125 days** with an **outlay of Rs. 50,000 crore**.
- Features → It will involve **25 different types of works** to provide employment to the migrant workers on one hand and **create infrastructure in the rural regions** of the country on the other hand.
- Implementation → It will be operationalised through the **Common Service Centres** and **Krishi Vigyan Kendras**.
- Ministerial Involved → It will be a coordinated effort between **12 different Ministries/Departments**, namely Rural Development, Panchayati Raj, Road Transport & Highways, Mines, Drinking Water & Sanitation, Environment, Railways, Petroleum & Natural Gas, New & Renewable Energy, Border Roads, Telecom and Agriculture.

👉 Common Service Centres

- Background → Common Services Centres are a **strategic cornerstone** of the **National e-Governance Plan (NeGP)**.
- It was approved in **May 2006** to introduce e-governance on a massive scale under the **National Common Minimum Programme**.
- Aim → It aims to provide **high quality** and **cost-effective video, voice and data content and services**, in the areas of e-governance, education, health, telemedicine, entertainment as well as other private services.
- Features → A highlight of the CSCs is that it offers **web-enabled e-governance services in rural areas**, including application forms, certificates and utility payments such as electricity, telephone and water bills.

👉 Krishi Vigyan Kendras

- It is an integral part of the **National Agricultural Research System (NARS)**.
- Composition → It consists of **scientists, technical staff, administration support staff** and **auxiliary staff**.
- Established → The first KVK was established in **1974** at Puducherry.
- Functions → KVKs also produce **quality technological products** (seed, planting material, bio-agents, and livestock) and make it **available to farmers**.
- Funding → The KVK scheme is **100% financed by the Government of India**.

8. Global Education Monitoring Report 2020

Why in News?

- UNESCO has released a report titled “Global Education Monitoring Report 2020”.

About report

- Theme → “**Inclusion and education: All means all**”.
- Aim → To **monitor progress towards** Sustainable Development Goal 4 (**SDG 4**) on education as well as **other education-related points in the SDG Agenda**.

👉 Key Finding

- **COVID-19 pandemic** has **increased inequalities in education systems** across the world.
- About **40% of low- and lower-middle-income countries** have **not supported learners** at risk of exclusion during this crisis.
- In **April 2020**, almost **91% of students** around the world were **out of school**.
- **Poor, linguistic minorities** and **learners with disabilities** were **affected more** as resources for such persons may not be available outside schools.
- For poor students who depend on school for free meals or even free sanitary napkins, closures have been a **major blow**.

👉 United Nations Educational, Scientific and Cultural Organization (UNESCO)

- It is a **specialized agency of the United Nations** (UN) based in **Paris**.
- Formation → **1945**.
- Members → It has **195 member states** and ten associate members.
- **India was a founder member** of the Organization.
- Objective → Its declared purpose is to **contribute to peace and security by promoting international collaboration** through educational, scientific, and cultural reforms in order to increase universal respect for justice, the rule of law, and human rights along with fundamental freedom proclaimed in the United Nations Charter.

👉 Also Remember

- Incheon declaration → It is a **declaration on education** adopted at the **World Education Forum** in Incheon, South Korea in 2015.
- Qingdao Declaration → It provides **UN Member States** with policy recommendations for using ICT to **address educational challenges** and to **ensure equitable education** and lifelong opportunities for all.

9. Behaviour Change Campaign

Why in News?

- NITI Aayog has launched a behaviour change campaign called ‘Navigating the New Normal’.

About

- Involved Bodies → The campaign has been launched in partnership with Bill and Melinda Gates Foundation (**BMGF**), Centre for Social and Behavioural Change (**CSBC**), **Ashoka University** and the **Ministries of Health and Women and child development**.
- Aim → To develop an appropriate **COVID safe behavior** in the country such as by making people **adapt to wearing masks as a part of their daily routine**.
- Features → The campaign has two parts:
 - The first is a **web portal** containing **resources informed** by behavioural science and the use of **nudge and social norms theory** related to Covid-safe behavioural norms during the ongoing Unlock phase and
 - The second is a **media campaign** focused on the wearing of masks.

10. World Drug Report 2020

Why in News?

- United Nations Office of Drugs and Crimes (UNODC) has released the World Drug Report 2020 on the occasion of International Day Against Drug Abuse and Illicit Trafficking.

About Programme

- Around **269 million people used** drugs worldwide in **2018**, which is 30 per cent more than in 2009.
- **Rising unemployment** and **reduced opportunities** caused by the **pandemic** are also likely to **disproportionately affect** the poorest, making them more vulnerable to drug use and also to drug trafficking and cultivation in order to earn money.
- Over **35 million** people suffer from **drug use disorders**.
- Most used substance in 2018 → **Cannabis**. Cannabis also remains the main drug that brings people into contact with the criminal justice system.
- Most harmful → **Opioids**.
- Who use them? → **Adolescents and young adults** account for the **largest share** of those using drugs, while young people are also the most vulnerable to the effects of drugs because they use the most and their brains are still developing.

👉 United Nations Office on Drugs and Crime (UNODC)

- Formation → 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**.
- Funding → UNODC relies on **voluntary contributions**, mainly from Governments, for 90% of its budget.

👉 International Day Against Drug Abuse and Illicit Trafficking

- Observed on → **26 June**.
- Theme → **“Better Knowledge for Better Care”**.
- Why June 26th? → The date June 26 is to commemorate **Lin Zexu’s dismantling of the opium trade in Humen**, Guangdong, ending in June 25 1839, just before the **First Opium War in China**.

11. Strengthening Teaching-Learning and Results for States Program

Why in News?

- The World Bank has approved an assistance of \$500 million under 'Strengthening Teaching-Learning and Results for States Program (STARS)' for India.

About Program

- Aim → To **improve quality and governance of school education** in six Indian states.
- Coverage → Six states included in the project are **Himachal Pradesh, Kerala, Madhya Pradesh, Maharashtra, Odisha and Rajasthan**.
- Implementation → The project will be implemented through the **Samagra Shiksha Abhiyan**, the flagship scheme of India.
- Features of the **programme** →
 - Focusing directly on the delivery of education services at the state, district and sub district levels by providing **customized local-level solutions** towards school improvement.
 - Addressing demands from stakeholders especially parents for **greater accountability and inclusion**.
 - **Equipping teachers** to manage this transformation by recognizing that teachers are central to achieving better learning outcomes.
- 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.
- It **subsumes the three Schemes** of Sarva Shiksha Abhiyan (**SSA**), Rashtriya Madhyamik Shiksha Abhiyan (**RMSA**) and Teacher Education (**TE**).

12. Nasha Mukta Bharat: Annual Action Plan (2020-21)

Why in News?

- Minister of State for Social Justice and Empowerment has launched the Nasha Mukta Bharat: Annual Action Plan (2020-21).

About

- Strategy → It would focus on **272 most affected districts** and launch a three-pronged attack **combining efforts** of Narcotics Bureau, Outreach/Awareness by Social Justice and Treatment through the **Health Dept**.
- **De-addiction Facilities** would be set up.
- **Drop-in-centres for addicts** will be set up and also on peer-led community-based outreach programmes for high risk populations – particularly the youth- will be launched.
- **Integrated Rehabilitation Centre for Addicts (IRCA)** would reach out to communities to help those affected by drug addiction.
 - The Action Plan has the following **components**:
 - Awareness generation programmes
 - Focus on Higher Educational institutions
 - University Campuses and Schools

- Community outreach and identification of dependent population;
- Focus on Treatment facilities in Hospital settings and
- Capacity Building Programmes for Service Providers.

📌 **Narcotics Control Bureau**

- It is the **nodal drug law enforcement and intelligence agency** of India.
- Parent Organization → It functions under the **Ministry of Home Affairs**.
- Established → **1986** under the **NDPS Act,1985**.
- Headquartered → **New Delhi**.

Security

1. Missile Park 'AGNEEPRASTHA'

Why in News?

- Foundation Stone for a Missile Park "AGNEEPRASTHA" was recently laid at INS Kalinga, Vizag.

About Missile Park 'AGNEEPRASTHA'

- Aims → to **capture glimpses of Missile History of INS Kalinga** since 1981 till date.
- The Missile Park has been set up with a **replica of missiles** and **Ground Support Equipment (GSE)** that showcase the evolution of missiles handled by the unit.
- The exhibits have been created from **scrap / obsolete inventory** which have been reconditioned in-house.
- P-70 'Ametist' → The main attraction is **P-70 'Ametist'**, an underwater launched anti-ship missile from the arsenal of the old '**Chakra**' (Charlie-1 submarine) which was in service with IN during 1988-91.
- Significant → It will also provide a **one-stop arena for motivation** and **stimulation of inquisitive minds** regarding the missiles and related technologies, from school children to naval personnel and their families.

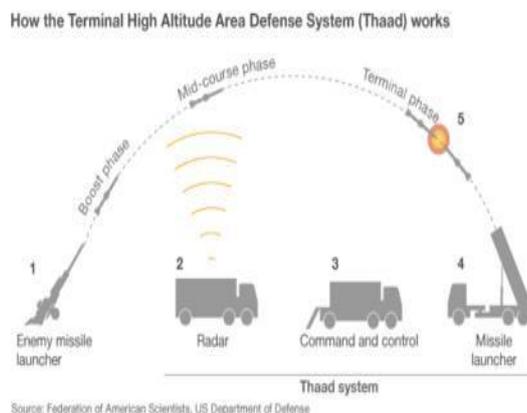
2. THAAD defence system

Why in News?

- China has been objecting to the presence of the US THAAD missile defence system in South Korea.

About THAAD

- Name → THAAD is an acronym for **Terminal High Altitude Area Defense, a transportable, ground-based missile defence system.**
- Functions → It is **coupled with space-based** and **ground-based surveillance stations**, which transfer data about the incoming missile and informs the THAAD interceptor missile of the threat type classification.
- THAAD is **alarmed about incoming missiles** by space-based satellites with infrared sensors.
- Designed and manufactured by → This anti-ballistic missile defence system has been designed and manufactured **by the US company Lockheed Martin.**
- South Korea is not the only country with the THAAD missile defence system.
- Previously deployed in → **UAE, Guam, Israel and Romania.**



3. Malabar Naval Exercise to include Australia

Why in News?

- India is prepared to expand the Malabar trilateral naval exercise involving India, the U.S. and Japan, to permanently include Australia.

About Ex. Malabar

- What is it? → Exercise Malabar is a trilateral naval exercise involving the **United States, Japan and India as permanent partners**.
- Timeline → Originally begun in **1992** as a bilateral exercise between India and the United States, **Japan became a permanent partner in 2015**.
- Past non-permanent participants → **Australia and Singapore**.
- The **annual Malabar series** and includes **diverse activities**, ranging from fighter combat operations from aircraft carriers through Maritime Interdiction Operations Exercises.
- Significance of Australia's inclusion →
 - Now both look forward to the cooperation in the '**Indo-Pacific**' and the **strengthening of defence ties**.
 - This has led to a **convergence of mutual interest** in many areas for a better understanding of **regional and global issues**.

4. Operation Desert Chase

Why in News?

- Under operation named Desert Chase, Rajasthan Police arrested two civil defence employees in Jaipur based on Military Intelligence (MI) inputs that they had been passing on sensitive information to Pakistan's spy agency ISI.

About the Operation

- Involved bodies → The operation was jointly carried out by the **Army, UP ATS, and Rajasthan Police**, and was named Operation '**Desert Chase**'.
- Background → The work on the "**operation**" began in **August 2019**, when the **MI Lucknow**, through its sleuths, learnt about an **espionage agent near Sri Ganganagar** who was passing military information to his handlers in Pakistan.
- **Both were arrested** under relevant sections of the **Official Secrets Act, 1923**.

📌 About Official Secrets Act

- Timeline → It was **enacted in 1923** and was **retained after Independence**.
- Applicability → This law is applicable to **government servants** and **citizens** and **provides the framework** for dealing with espionage, sedition, and other potential threats to the integrity of the nation.
- The law makes spying, sharing 'secret' information, unauthorised use of uniforms, withholding information, interference with the armed forces in prohibited/restricted areas etc. **punishable offences**. If **proven guilty**, a person may **get up to 14 years' imprisonment** or a **fine, or both**.
- The other countries that use Official Secrets Act include **Hong Kong, UK, Myanmar, Singapore and Malaysia**. The act was in practice in **New Zealand** and **Canada**.

5. Defence Testing Infrastructure Scheme (DTIS)

Why in News?

- The Deep Submergence Rescue Vehicle (DSRV) Complex was inaugurated at Visakhapatnam.

About DSRV Complex

- What is it? → The DSRV Complex is designed to **accommodate the newly inducted Submarine Rescue System** with state-of-the-art facilities to store the DSRV assets in a **Rescue-Ready state**.
- The DSRV system can be **rapidly mobilised by air** or **road to facilitate submarine rescue operations** even at distant locations.
- Components → The DSRV system consists of a **Submarine Rescue Vessel**, a **Remote Operations Vehicle**, **Side Scan Sonar** and **associated equipment**. It also has **Diver Decompression Chambers** and **hyperbaric medical equipment** to decompress submariners after being rescued from a sunken submarine.
- The **Indian Navy** has **inducted two such systems** which will provide rescue cover to submarines on the West and East coast of India respectively.
- Currently, there are about **40 nations** that **operate submarines** in the world out of which only a few have any form of submarine rescue capability.

6. Naval liaisons at RMIFC and EMASOH

Why in News?

- India is looking to post Navy Liaison Officers at the RMIFC in Madagascar and also at the European maritime surveillance initiative in the Strait of Hormuz for improved MDA.

About Regional Maritime Information Fusion Centre (RMIFC)

- It functions **under the aegis of the Indian Ocean Commission** (IOC) and is **based in Madagascar**.
- It is designed to **deepen maritime domain awareness** by **monitoring** maritime activities and **promoting information sharing and exchange**.

📌 The European maritime surveillance initiative in the Strait of Hormuz (EMASOH)

- It is composed of **Belgium, Denmark, Netherlands and French officers** and based at the French naval **base in Abu Dhabi**.
- The aim is to **monitor maritime activity and guarantee freedom** of navigation in the Persian Gulf and the Strait of Hormuz.
- How this will help India? →
- This will be in the overall realm of **improving linkages** of the Navy's Information Fusion Centre for Indian Ocean Region (**IFC-IOR**) **in Gurugram** with other IFCs and become the **repository for all maritime data in the IOR**.

📌 Indian Ocean Commission (IOC):

- It is an **intergovernmental organization** that was **created in 1982** at Port Louis, Mauritius and institutionalized in 1984 by the **Victoria Agreement in Seychelles**.
- Member States → **Comoros, Madagascar, Mauritius, Réunion** (an overseas region of France) and **Seychelles**.
- Observer States → **China, Malta, European Union, International Organisation of La Francophonie (OIF) and now India**.
- Secretariat → **located in Mauritius**.

- Objectives of IOC → **Political and diplomatic cooperation, Economic and commercial cooperation, Sustainable development** in a globalisation context, cooperation in the field of agriculture.

📌 Information Fusion Centre – Indian Ocean Region (IFC-IOR):

- Established → in **2018 at Gurugram, Haryana**.
- Aims → to **advance Maritime Safety** and **Security in the Indian Ocean Region** through information sharing with partner nations and agencies.
- It is jointly administered by the **Indian Navy and Indian Coast Guard**.

7. SIPRI Report on Nuclear Stockpiles

Why in News?

- A new yearbook released by the Stockholm International Peace Research Institute (SIPRI). The yearbook “assesses the current state of armaments, disarmament and international security”.

About SIPRI

- What is it? → Stockholm International Peace Research Institute (SIPRI) is an **international institute** based in Sweden, dedicated to **research into conflict, armaments, arms control and disarmament**.
- Established → **1966**.
- Functions → The Stockholm based SIPRI **provides data, analysis and recommendations, based on open sources, to policymakers, researchers, media and the interested public**.

📌 Key Points from Report

- India and its neighbours →
- All nations that have nuclear weapons continue to **modernise their nuclear arsenals**, while **India and China increased their nuclear warheads** in the last one year.
- China** is in the **middle of a significant modernisation** of its **nuclear arsenal**. China’s nuclear arsenal had gone up from **290 warheads in 2019 to 320 in 2020**.
- China** is developing a so-called **nuclear triad** for the **first time**, made up of new land and sea-based missiles and nuclear-capable aircraft.
- India’s nuclear arsenal** went up **from 130-140 in 2019 to 150 in 2020**.
- Pakistan**, too, is **slowly increasing** the size and diversity of the nuclear forces. It has **reached 160 in 2020**.
- Both **China and Pakistan** continue to **have larger nuclear arsenals than India**.

8. United Nations (UN) Arms Trade Treaty

Why in News?

- China has decided to join the United Nations (UN) Arms Trade Treaty that has been rejected by the United States.

About INS Sunayna

- History → The UN Arms Trade Treaty entered into **force in 2014**.
- Objective → To **regulate the international trade in conventional arms** (from small arms to battle tanks, combat aircraft and warships).
- What does the treaty do? →

- It requires member countries to **keep records of international transfers of weapons** and to **prohibit cross-border shipments** that can be used in human rights violations or attacks on civilians.
- It establishes **common standards** for the **international trade of conventional weapons** and seeks to reduce the illicit arms trade.
- What it doesn't? → The treaty does **not regulate the domestic sale or use of weapons** in any country. It also recognizes the legitimacy of the arms trade to enable states to provide for their own security.
- Present status → **105 states have ratified the treaty** and a further 32 states have signed but not ratified it
- Why is India against this treaty? → **India has not signed** the treaty as it has said that it has **strong and effective national export controls on military hardware to ensure they don't fall into the wrong hands.**

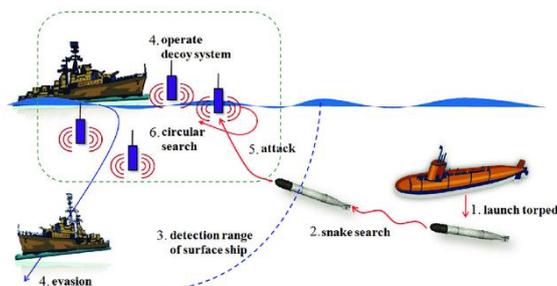
9. Advanced Torpedo Decoy System: Maareech

Why in News?

- Indian Navy has inducted an Indigenously developed Advanced Torpedo Decoy System named Maareech.

About

- What is it? → It is a **torpedo detection and countermeasure system** to be used by the Indian Navy.
- Developed by → It has been designed and developed **indigenously by the DRDO labs** – Naval Science and Technological Laboratory (NSTL) and Naval Physical & Oceanographic Laboratory (NPOL).
- Significance → It is **capable of detecting, locating** and **neutralizing** incoming torpedoes and to apply countermeasures to protect naval platforms against torpedo attack.
- How does it work? → The ATDS **first detects** and then **confuse and divert the torpedo attack on ships** from under the water. By diverting torpedoes' original course, it forces it to **lose its energy** thus preventing it from being effective on target.



Culture

1. SPIC MACAY

Why in News?

- Recently, the Prime Minister of India addressed the SPIC MACAY's International Convention via video conference.

About SPIC MACAY

- What is it? → Society for the Promotion of Indian Classical Music And Culture Amongst Youth (SPIC MACAY) is a **voluntary youth movement** which **promotes intangible aspects** of Indian cultural heritage.
- It does this by **promoting** Indian classical music, classical dance, folk music, yoga, meditation, crafts and other aspects of Indian culture.
- It is a movement with chapters in **over 300 towns all over the world**.
- Established by → **Dr. Kiran Seth in 1977 at IIT Delhi**.
- It is a participatory student movement registered **under the Societies Registration Act, 1860**.

2. Changpa Tribes

Why in News?

- The Chinese Army's intrusion in Chumur and Demchok has left Ladakh's nomadic herding Changpa community cut off from large parts of summer pastures.

About Changpa Tribes

- Who? → The Changpa of Ladakh is **high altitude pastoralists**, raising mainly yaks and goats.
- Among the Ladakh Changpa, those who are **still nomadic** are known as **Phalpa**, and they take their **herds** from in the **Hanley Valley to the village of Lato**.
- Habitat → Hanley is home to **six isolated settlements**, where the **sedentary Changpa, the Fangpa reside**.
- Despite their **different lifestyles**, both these **groups intermarry**.
- Language → The Changpa speak **Changskhat**, a dialect of Tibetan, and practice Tibetan Buddhism.

👉 About Changthangi or Pashmina goat

- Where? → It is a special breed of goat indigenous to the high-altitude **regions of Ladakh in Jammu and Kashmir**.
- Pashmina → They are raised for **ultra-fine cashmere wool**, known as **Pashmina** once woven.
- These goats are generally **domesticated and reared by nomadic communities** called the **Changpa** in the Changthang region of Greater Ladakh.
- Significance → The Changthangi goats have revitalized the economy of **Changthang, Leh and Ladakh region**.

3. Buddhist Rock Carvings of Gilgit-Baltistan

Why in News?

- India has reacted strongly to reports of vandalism and defacement of ancient Buddhist rock carvings in Gilgit-Baltistan under Pakistan's control.

About Rock of Hunza

- What is it? → The Sacred Rock of Hunza is **carved rock** as well as a **cultural heritage site** in Gilgit-Baltistan in Pakistan occupied Kashmir.
- History → The carvings on the rock **dates back to the 1st Millennium AD.**
- The rock is on the top of a hill which **lies east to the Hunza River.**
- The Sacred Rock is divided into **two portions, an upper portion and a lower one.**
- Both the portions **carry carvings** on them which are **basically inscriptions** and **images from the Prehistoric era.**
- The site had **many Buddhist shelter caves** in ancient times which later collapsed or fell over the time.
- The rock carvings and engravings in areas were **part of the Buddhist circle covering Ladakh and Tibet.**

👉 What is the issue?

- The Buddhist sites in Hunza in Gilgit-Baltistan have been **desecrated by Islamists**, who **Painted Pakistani flags and slogans** on the rock-cut art.
- The Buddhist residents, who found the paintings to be fresh, said that the **vandalism by the Islamists** was in retaliation to the recent protests against the **Diamer Bhasha dam project**, a joint Pakistan-China project.

3. NAIMISHA 2020

Why in News?

- The National Gallery of Modern Art (NGMA), New Delhi will organize online NAIMISHA 2020- Summer Art Program from 8th June 2020 to 3rd July 2020, to reach its audiences during the Covid-19 outbreak.

About

- What is it? → It is an initiative to provide a chance to participants and art enthusiasts **to create and learn from practicing artists.**
- Activities → The programme includes **online workshops sessions on painting, sculpture, printmaking and indrajaal** (an interdisciplinary creative workshop).
- The exhibition of selected artworks from the program will be **displayed on So'ham**, the cultural media platform of NGMA.

👉 So'ham

- It is the **first cultural media platform of India**, under the banner of **NGMA.**
- Aim → The platform aims to **develop a dialogue between NGMA, artists and art enthusiasts.**
- It is inspired by the **Vedic philosophy of So'ham**, which stands for one's identity and its connection to the universe.

👉 National Gallery of Modern Art

- Established → NGMA was **established in 1954**, at the Jaipur House, New Delhi.
- Parent Organization → It is run and administered as a **subordinate office to the Ministry of Culture**, Government of India.

- The NGMA has **two branches**, one at Mumbai and the other at Bengaluru.
- Objective → One of its objectives is to **acquire and preserve works of modern art from the 1850s onward**.

4. Aguada Fenix

Why in News?

- Recently Scientists using an aerial remote-sensing (LiDAR) method have discovered the largest and oldest known structure built by the ancient Maya civilization.

About

- Location → The temple site is called **Aguada Fenix in Mexico**.
- Structure → It is **4,600 feet long** and up to **50 feet high**, making it the **ancient civilisation's oldest and largest monument**.
- Timeline → It was built between **800 BC and 1,000 BC**.
- One of the most remarkable revelations from the find was the **complete lack of stone sculptures** related to rulers and elites, such as colossal heads and thrones, that are **commonly seen in other Mayan temples**.
- This suggests that the people who built it were **more egalitarian than later generations of Mayans**.



5. Sikkim- Tibet Convention of 1890

Why in News?

- The historical Sikkim-Tibet Convention of 1890 is a proof of India's ownership of the territory Naku La.

About Convention

- The treaty was formalised **between Britain and Chinese kingdom**.
- It was signed at **Calcutta Convention in 1890**. Of the eight Articles mentioned in the treaty, **Article 1 is of critical significance**.
- As per Article (1), it was agreed that the **boundary of Sikkim and Tibet** shall be the **crest of the mountain range** separating the waters flowing into the **Sikkim Teesta and its affluents**, from the waters flowing into the **Tibetan Mochu and northwards into other rivers of Tibet**.
- The line commences at **Mount Gipmochi**, on the **Bhutan frontier**, and follows the above-mentioned water-parting to the point where it meets **Nepal territory**. However, **Tibet refused to recognise** the validity of Convention of 1890 and further **refused to carry into effect the provisions** of the said Convention.
- In **1904**, a treaty known as a **Convention between Great Britain and Tibet was signed at Lhasa**.
- As per the Convention, **Tibet agreed to respect the Convention of 1890** and to recognise the frontier between Sikkim and Tibet, as defined in **Article (1)** of the said Convention.
- On April 27, 1906, a treaty was **signed between Great Britain and China** at Peking, which confirmed the **Convention of 1904** between Great Britain and Tibet.

6. Magallanodon baikashkenke

Why in News?

- Chilean and Argentine researchers have unearthed teeth of a species called Magallanodon baikashkenk in far-flung Patagonia belonging to a mammal that lived 74 million years ago.

About

- It is the **oldest such remains** yet discovered in the South American country.
- Location → It is found in a dig near **Torres del Paine National Park**, a remote area of Patagonia famous for its **glacier-capped Andean spires** and **frigid ocean waters**.
- The small mammal would have lived in **southern Patagonia** during the late **Cretaceous era**, alongside dinosaurs, crocodiles, turtles and birds, according to an article published in the bulletin of the Natural History Museum of Chile.
- It is the **southernmost record of Gondwanatheria**, a group of long-extinct early mammals that co-existed with dinosaurs.
- It is found to be **egg-laying mammal**, like the platypus and marsupial mammals, and the beast was not a rodent but had evolved "**rodent-like chewing teeth**."
- Gondwanatheria remains from the Cretaceous era are **extremely rare**, particularly in this **part of southern South America**, according to the **Chilean Antarctic Institute**.

7. RAJA PARBA FESTIVAL

Why in News?

- The Prime Minister has extended his greetings to the people of Odisha for the unique Raja Parba festival.

About RAJA PARBA FESTIVAL

- Why is it celebrated? → Raja Parba is Odisha's **three-day unique festival** celebrating the **onset of monsoon** and the **earth's womanhood**.
- It is believed that during this time the **Mother Earth or Bhudevi undergoes menstruation**.
- How is it celebrated? →
 - As a mark of **respect towards the earth** during her menstruation days, all **agricultural works**, like ploughing, sowing are **suspended for the three days**.
 - As it is a celebration of womanhood, a lot of the **focus is on young women**, who **wear new clothes**, apply '**Alata**' on their feet and **enjoy folk songs** while swinging on decorated rope swings.
- When is it celebrated? → **Raja Sankranti** is the first day of the **Ashara month**. It is celebrated on the day **prior to the Sankranti**, (Pahili Raja), the day of Sankranti, and the day after, known as **Bhu Daha** or '**Basi Raja**'.

8. Talamaddale Art

Why in News?

- The traditional art of Talamaddale, a variant of Yakshagana theatre was streamed live on social media recently.

About Talamaddale Art

- Talamaddale is an **ancient form of performance dialogue** or **debate** performance in Southern India in the **Karavali and Malnad regions of Karnataka and Kerala**.
- It is a **derived form of Yakshagana**—a classical dance or musical form of art from the same region.
- How is it different from Yakshagana? →
- Unlike the Yakshagana performance, in the conventional ‘talamaddale,’ the **artists sit across in a place without any costumes** and **engage in testing** their oratory skills based on the episode chosen.
- The music is common for both **Yakshagana performance** and ‘**talamaddale**’, the latter has **only spoken word** without any dance or costumes.
- Hence it is an **art form minus dance, costumes and stage conventions**.

9. India’s Assistance for Pashupatinath Temple

Why in News?

- Recently, a Memorandum of Understanding (MoU) was signed under Nepal-Bharat Maitri: Development Partnership, for the construction of a sanitation facility at the Pashupatinath Temple, Kathmandu.

About

- The facility will be constructed under the **Nepal-Bharat Maitri: Development Partnership** as a high impact community development scheme by India.
- Financial Assistance → India has pledged to extend financial assistance amounting to **Rs. 2.33 crore**.
- Implemented by → **Kathmandu Metropolitan City**.
- Norms and Completion → Norms to be **laid out by the Government of Nepal** and **completion within 15 months**.
- Earlier in 2018, **Nepal-Bharat Maitri Pashupati Dharmashala** was also inaugurated in Kathmandu, Nepal.
- Significance → This initiative is another milestone in **strengthening cultural ties** and **people-to-people contacts** between the two countries.

👉 Pashupatinath Temple

- Dedicated to **Lord Shiva**, **Pashupatinath** is one of the **most important religious sites** in **Asia** for **devotees of Shiva**.
- It is the **largest temple complex in Nepal** and stretches on both sides of the **Bagmati River**.
- Temples dedicated to **several other Hindu** and **Buddhist deities** surround the temple of Pashupatinath.
- **Only Hindus** are allowed through the gates of the main temple.
- It was conferred the **status of a World Heritage Site in 1979** by the United Nations Educational, Scientific and Cultural Organization (UNESCO).

10. KODUMANAL EXCAVATION

Why in News?

- The excavations at Kodumanal village have thrown light on burial rituals and the concept of afterlife in megalithic culture.

About KODUMANAL EXCAVATION

- The researchers have identified **250 cairn-circles at the village in Erode district**.
- **Earlier excavations** revealed that the site served as a **trade-cum-industrial centre** from **5th century BCE to 1st century BCE**.
- The **rectangular chambered cists**, each **two metres long** and **six metres wide**, are made of **stone slabs**, and the entire grave is **surrounded by boulders** that **form a circle**.
- The grave could be of a **village head** or the **head of the community** as the size of two boulders, each facing east and west, are bigger than other boulders.
- Believing that the deceased person will get a **new life after death**, **pots** and **bowls filled with grains** were placed outside the chambers.



👉 Megaliths Culture

- Megaliths refer to **large stone structures** that were constructed either as **burial sites** or as **commemorative sites**.
- The burial sites are the sites with **actual burial remains**, such as **dolmenoid cists** (box-shaped stone burial chambers), **cairn circles** (stone circles with defined peripheries), and **capstones** (distinctive mushroom-shaped burial chambers found mainly in Kerala).
- The megalithic culture lasted from the **Neolithic Stone Age to the early Historical Period** (2500 BCE to CE 200) across the world.
- In India, the majority of the megaliths are of the **Iron Age (1500 BC to 500 BC)**,
- Megaliths are **spread across peninsular India**, concentrated in the states of Maharashtra (mainly in Vidarbha), Karnataka, Tamil Nadu, Kerala, Andhra Pradesh and Telangana.
- The chambers containing the **mortal remains** were usually **made of terracotta**.

👉 Kodumanal

- It is a village located in the **Erode district in the southern Indian state of Tamil Nadu**.
- The place is an **important archaeological site**.
- It is located on the northern **banks of Noyyal River**, a tributary of the Cauvery.

11. Sukapha: The founder of Ahom kingdom

Why in News?

- Recently, Assam CM ordered the arrest of a political commentator who had described Chaolung Sukapha as a “Chinese invader”.

About Chaolung Sukapha

- Who was Chaolung Sukapha? → Sukapha was a **13th-century** ruler who **founded the Ahom kingdom** that ruled Assam for six centuries. Contemporary scholars trace his **roots to Burma**.
- He reached **Brahmaputra valley in Assam** from upper Burma in the 13th century with around **9,000 followers**.

- Sukapha is said to have left a place called **Maulung** (in Yunnan, China) in **AD 1215** with **eight nobles** and **9,000 men, women and children** — **mostly men**.
- In 1235, Sukapha and his people settled in **Charaideo in upper Assam** after wandering about for years, **defeating** those who protested his advance and temporarily staying at different locations.
- It was in **Charaideo** (in Assam) that Sukapha established his **first small principality, sowing the seeds of further expansion of the Ahom kingdom**.

👉 Who are the Ahoms today?

- The founders of the Ahom kingdom had their **own language** and **followed their own religion**.
- Over the centuries, the Ahoms **accepted the Hindu religion** and the **Assamese language**, scholars say.
- The Ahoms embraced the language, religion and rituals of the communities living here — they did **not impose theirs on those living here**.

👉 Why is Sukapha important in Assamese culture?

- Sukapha's significance — especially in today's Assam — lies in his successful efforts towards the **assimilation of different communities and tribes**.
- He developed **very amicable relationships with the tribal communities living here** — especially the **Sutias**, the **Morans** and the **Kacharis**.
- **Intermarriage** also increased assimilation processes. He is widely referred to as the architect of "**Bor Asom**" or "**greater Assam**".

12. 100 Years of Malabar Rebellion

Why in News?

- With the 1921 Malabar Rebellion turning 100 next year, several movies have been announced back-to-back.

About Malabar Rebellion

- The Malabar Rebellion in **1921** started as **resistance against the British colonial rule** and the **feudal system** in southern Malabar but **ended in communal violence** between Hindus and Muslims.
- There were a **series of clashes** between Mappila peasantry and their landlords, supported by the British, throughout the **19th and early 20th centuries**.
- It began as a reaction against a **heavy-handed crackdown on the Khilafat Movement**, a campaign **in defence of the Ottoman Caliphate** by the British authorities in the Eranad and Valluvanad taluks of Malabar.
- The **Mappilas attacked** and **took control of police stations**, British government offices, courts and government treasuries.
- Moplahs → The Moplahs are a **band of fanatic Muslims** who have **descended from the Arabs** who settled in the Malabar Coast in about the 8th or 9th century A.D.

👉 Variyankunna Kunjahammed Haji

- He was one of the **leaders of the Malabar Rebellion of 1921**.

- He **raised 75000 natives**, seized control of large territory from the British rule and set up a **parallel government**.
- In January 1922, under the **guise of a treaty**, the **British betrayed Haji** through his close friend **Unyan Musaliyar**, arresting him from his hideout and producing him before a British judge.
- He was **sentenced to death** along with his compatriots.

13. Syama Prasad Mukherjee

Why in News?

- Prime Minister has paid tributes to Dr. Syama Prasad Mukherjee on his Punya Tithi.

About Syama Prasad Mukherjee

- Syama Prasad Mukherjee was an **Indian politician, barrister and academician**, who served as the Minister for Industry and Supply in Prime Minister Jawaharlal Nehru's cabinet.
- He became a **member of the Bengal Legislative Council in 1929**, and was the **youngest Vice-Chancellor of the University of Calcutta** from 1934 to 1938.
- Later, he became the **finance minister of the Province of Bengal**, and was subsequently elected the national **president of the All India Hindu Mahasabha**, the **Mahabodhi Society** and the **Royal Asiatic Society**.
- Mukherjee was **also a member of the Constituent Assembly**.
- In the first general election, he was **elected** to the **Lok Sabha from South Calcutta**.
- Role in Jammu & Kashmir (J &K) → He **fully supported** the satyagraha of the **Praja Parishad**, which aimed to make J&K an integral part of India and he raised a strong slogan: **“Two flags in one country, two legislations in one country, two heads in one country, unacceptable, unacceptable”**.

14. Pune NGO aims to revive spirit of ‘Lal-Bal-Pal’

Why in News?

- The Pune-based non-governmental organisation Sarhad will launch a series of literary and cultural programmes to strengthen connections between Maharashtra and West Bengal.

About

- It will be a **two-year-long event** and is named **‘Maharashtra-Bengal friendship chapter’**.
- It will commence on **Tilak's death centenary** (August 1, 1920-August 1, 2020) and will go on till August 15, 2022 to mark the 150th birth anniversary of the great philosopher, Sri Aurobindo Ghosh.
- It is envisioned as a people's cultural revivalist movement in these two States.

👉 Contributions of Lal-Bal-Pal

- The **triumvirate had played a stellar role in the second phase of the Swadeshi movement** which gathered momentum after the partition of Bengal by Lord Curzon in 1905, and which called for the boycott of all imported items and the use of Indian-made goods.
- Lal-Bal-Pal **mobilized Indians across the country against the Bengal partition**, and the demonstrations, strikes and boycotts of British goods that began in Bengal soon spread to other regions in a broader protest against the Raj.

- The nationalist movement **gradually faded** with the arrest of Lal-Bal-Pal.

👉 **Also Remember**

- In 1895, **Lal** started the **Punjab National Bank**—the first Indian bank to begin solely with Indian capital, and that continues to function till date.
- In 1917, **Lal** founded the **Indian Home Rule League of America** there.
- In 1884, **Tilak** founded the **Deccan Education Society in Pune**, and under the banner, opened the New English School for primary studies and Fergusson College for higher education.
- **Bipin Chandra Pal** was of a strong opinion that **a mass reliance on Swadeshi goods would help people get rid of their poverty.**

Miscellaneous

1. Herbal roads project

Why in News?

- The Uttar Pradesh government has decided to develop 800 km roads as Herbal belt with medicinal and herbal trees along both sides of the road.

About

- These **800-kilometre roads** will be along National and State highways **passing through the state** and the **herbal garden** along with them will **keep airborne, bacterial and other diseases at bay**.
- PWD Department will also make arrangement for **rainwater recharging system** on these herbal roads.
- These herbal roads will have trees like Peepal, Neem, Sehjan along with other herb varieties like Brahmi, Ashvagandha and Jatropha.
- Significance →
 - These plants will provide the **raw material for the medicines** and will also help in **curbing the erosion of land**.
 - This scheme will help **both development** and **beautification** along with promoting biodiversity.

2. National AI Portal

Why in News?

- Union Ministry for Electronics and IT, has launched India's national Artificial Intelligence Portal called www.ai.gov.in.

About National AI Portal

- Developed by → This portal has been jointly developed by the **Ministry of Electronics and IT and IT Industry**.
- Who will run this portal? → **National e-Governance Division** of Ministry of Electronics and **IT** and **NASSCOM** from the IT industry will jointly run this portal.
- Functions → This portal shall work as a **one stop digital platform for AI related developments** in India, sharing of resources such as articles, startups, investment funds in AI, resources, companies and educational institutions related to AI in India.
- The portal will also **share documents, case studies, research reports etc.**
- It has section about **learning** and **new job roles related to AI**.

3. “My Life – My Yoga” contest

Why in News?

- Prime Minister of India announced the “My Life – My Yoga”(also called “Jeevan Yoga”) Video Blogging Contest.

About

- Run by → The contest is a joint effort by the **Ministry of AYUSH** and the **Indian Council for Cultural Relations** (ICCR).
- Aim → to **inspire people to become active participants** in the observation of the sixth International Day of Yoga (**IDY**) coming up on **21st June 2020**.
- Who can participate? → This contest is **open to all participants** across the world. The contest has gone **live on the social media handles** of the **Ministry of AYUSH** today, 31 May 2020.
- Process → To enter into the contest the participants are required to upload a **3 minutes duration video of 3 Yogic practices** (kriya, asana, pranayama, bandha or mudra), including a description on **how the said Yogic practices influenced their life**.
- Prizes → For the India contestants, prizes worth **Rs. 1 lakh, 50K and 25K for 1st, 2nd and 3rd ranking** within **6 categories** have been announced. Details of the global prizes will be announced shortly on the Yoga Portal of Ministry of AYUSH.

4. Antifa

Why in News?

- As massive protests following the death of George Floyd continued to rock the United States, President Donald Trump has announced that the far-left group Antifa would be designated as a terrorist organisation by his government.

About

- What is it? → Short for "**anti-fascists**," antifa is not a single organization but rather an **umbrella term for far-left-leaning movements** that confront or **resist neo-Nazis** and **white supremacists** at demonstrations.
- History → Antifa has been around for several decades, with some dating it as far **back as Nazi Germany**.
- Membership → Antifa does **not have a formal organisational structure**. It draws its members from other movements such as Black Lives Matter and the Occupy movement.
- Functioning → Antifa members typically **dress in black and often wear a mask** at their demonstrations, and follow **far-left ideologies** such as **anti-capitalism**. They take up causes such as **LGBTQ** and **indigenous rights**. What makes them **stand out is the violence**.
- Global presence → While the movement has had a presence in **several European countries** and has **now** come into focus in the **United States** following the election of President Trump in 2016, with violence marking some of its protests and demonstrations.

5. Ultra Swachh

Why in News?

- Defence Research and Development Organization (DRDO) has developed a disinfection unit named Ultra Swachh.

About Ultra Swachh

- Objective → To **disinfect a wide range of materials**, including Personal Protective Equipment (PPEs), electronics items, fabrics and others.
- Agencies Involved → Developed by **Institute of Nuclear Medicine and Allied Sciences**, laboratory of DRDO with industry partner **Gel Craft Health care Private Ltd**.

- Working → It uses an **advanced oxidative process** consisting of multiple barrier disruption approaches using **Ozonated Space Technology for disinfection**.
- It is **double layered** with specialised Ozone sealant technology assuring trapping of ozone for the **necessary disinfection cycle**. It also has a **catalytic converter** to ensure environment friendly exhaust i.e. only oxygen and water.
- Types → It comes in two variants namely **Ozonated Space** and **Trinetra Technology**. Trinetra technology is the combination of Ozonated space and radical dispenser.

6. WeTransfer

Why in News?

- Recently, the Union Government has ordered India's internet service providers to block 'WeTransfer' website.

About

- What is it? → It is a **Netherlands internet-based computer file transfer service**.
- It was founded in **Amsterdam by Bas Beerens and Nalden**.
- Uses → It allows users to **upload** and **share file of up to 2GB for free** at one time and paying users can share files of up to 20 GB per transfer.
- In October 2018, WeTransfer re-launched its app with the name "**Collect by WeTransfer**".

7. Arsenicum album 30

Why in News?

- A homoeopathic drug, Arsenicum album 30, has become a subject of debate after several states and AYUSH Ministry recommended it for prophylactic (preventive) use against Covid-19.

About Arsenicum album 30

- How is it made? → Arsenicum album is made by **heating arsenic with distilled water**, a process **repeated several times over three days**.
- The health hazards of **arsenic contamination** in water are well known, long-term exposure to the metal can **cause skin cancer, pulmonary and cardiovascular diseases**.
- The homoeopath drug has **less than 1% arsenic** and Arsenicum Album is considered to **correct inflammation in the body**.
- Its uses → Arsenicum album is used commonly by homoeopaths to **treat anxiety, restlessness, cold, ulcerations and burning pains**.
- Significance in the Context of COVID 19 → The Ministry of Ayush recommended taking a **three-day dose on an empty stomach** of Arsenicum album 30 as a prophylactic medicine against COVID 19 infections.
- Concerns → The **WHO neither has any guidelines nor any effective evidence** on using Arsenicum album as a Covid-19 treatment.

8. Pharmacopoeia Commission for Indian Medicine & Homoeopathy

Why in News?

- Cabinet approves establishment of Pharmacopoeia Commission for Indian Medicine & Homoeopathy (PCIM&H) as Subordinate Office under Ministry of AYUSH.

About

- How is it done? → This is being **done by merging** into it the Pharmacopoeia Laboratory for Indian Medicine (**PLIM**) and Homoeopathic Pharmacopoeia Laboratory (**HPL**) – the **two central laboratories** established at **Ghaziabad, Uttar Pradesh since 1975**.
- Presently, PCIM&H is an **autonomous body** under the aegis of **Ministry of AYUSH**, established **since 2010**.
- The Commission serves as an **umbrella organization** for →
 - Ayurvedic Pharmacopoeia Committee (**APC**),
 - Siddha Pharmacopoeia Committee (**SPC**),
 - Unani Pharmacopoeia Committee (**UPC**) and
 - Homoeopathic Pharmacopoeia Committee (**HPC**).
- Benefits → The merger is aimed at **optimising the use of resources** of the three organizations for **enhancing the standardisation outcomes** of Ayurveda, Siddha, Unani and Homoeopathy drugs towards their **effective regulation and quality control**.
- It is also intended to accord **legal status** to the merged structure of PCIM&H and its laboratory by virtue of making amendments in the **Drugs & Cosmetics Rules, 1945**.

9. Visiting Forces Agreement (VFA)

Why in News?

- The government of Philippines has suspended plans to cancel the Visiting Forces Agreement (VFA), a deal that is important to Washington's moves to counter Beijing's rising regional power.

About

- What is it? → A visiting force agreement (VFA) is an **agreement between a country and a foreign nation** having **military forces visiting in that country**.
- VFA spells out the **rules, guidelines** and **legal status of the U.S. military** when operating in the Philippines.
- The VFA also affirms the **1951 Mutual Defense Treaty** as well as the **2014 Enhanced Defense Cooperation Agreement** – agreements that enable the U.S. military to conduct joint exercises and operations in the Philippines.
- The **Philippine Senate ratified** the VFA in **1999**.

10. World Environment Day

Why in News?

- World Environment Day is being observed on June 5, 2020.

About

- Background → It was **established by the UN General Assembly in 1972** on the first day of the **Stockholm Conference** on the Human Environment.
- Aim → To **spread awareness** and **encourage people** to take steps to **protect the environment**.

- Host Country → It will be hosted by **Colombia in partnership with Germany**.
- Theme → **Celebrate Biodiversity**.

11. World Oceans Day

Why in News?

- The United Nations celebrates World Oceans Day every year on 8 June.

About

- Date → Celebrated on **June 8, 2020**.
- Theme → **“Innovation for a Sustainable Ocean.”**
- History → The concept was originally **proposed in 1992** by Canada’s International Centre for Ocean Development (ICOD) and the Ocean Institute of Canada (OIC) at the **Earth Summit** – UN Conference on Environment and Development (UNCED) in **Rio de Janeiro, Brazil**.
- World Oceans Day was **officially recognised by the United Nations in 2008**.

12. Aditya shortlisted for Gustave Trouvé Award

Why in News?

- India’s first solar-powered ferry ‘Aditya’ is among 12 such ferries around the globe that have been shortlisted for the Gustave Trouvé Award.

About Aditya

- What is it? → The **electric ferry boat** is operated by the Kerala State Water Transport Department and **built by Naval Solar and Electric Boats**, Kochi.
- As a **public transport solar-electric ferry**, it has proven its performance by **transporting 11 lakh passengers** and clocking a **distance of 70,000 km**, without a single drop of fossil fuel.
- The **zero-pollution vehicle** resulted in saving over 1 lakh litres of diesel and thus reducing carbon emission.
- The per km energy cost of Aditya is **low**, and the ferry normally **operates 22 trips a day**, covering a **total of 66 km**, carrying 75 passengers per trip.
- It needs just **₹180 per day in energy cost**, compared to about ₹8,000 for a diesel-run ferry of similar size.

👉 Gustave Trouvé Award

- The Gussies electric boat award is a **global award** instituted after **Gustave Trouvé**, a French electrical engineer and pioneer in electric cars and boats.
- Gustave Trouvé was a **prolific inventor with over 75 patents**.
- This is the inaugural edition of the award in the **remembrance of the inventor & aimed to promote innovative excellence with electric boats**.

13. COVID BEEP App

Why in News?

- Union Minister Jitendra Singh launched COVID BEEP, India's first physiological parameters monitoring system for COVID-19 patients.

About

- What is it? → COVID BEEP (Continuous Oxygenation & Vital Information Detection Biomed ECIL ESIC Pod) is **India's first indigenous, cost effective, wireless physiological parameters monitoring system** for COVID-19 patients.
- Developed by → **ESIC Medical College Hyderabad** in collaboration with **IIT Hyderabad and Department Of Atomic Energy**.
- Benefits → COVID BEEP would emerge as an **effective antidote to the original COVID**. COVID BEEP will greatly **reduce the transmission risk** as well as **help save resources** like PPEs.

14. Airborne Rescue Pod for Isolated Transportation (ARPIT)

Why in News?

- The Indian Air Force has developed and inducted an Airborne Rescue Pod for Isolated Transportation (ARPIT).

About ARPIT

- What is it? → ARPIT is a **lightweight isolation system** made from aviation certified material.
- It has a **transparent** and **durable cast Perspex** for enhanced patient visibility which is larger, higher and wider than the existing models.
- The isolation system caters for the suitable number of **air exchanges, integration of medical monitoring instruments, and ventilation to an intubated patient**.
- In addition, it generates **high constant negative pressure** in the isolation chamber for **prevention of infection risk to aircrew, ground crew and health care workers** involved in air transportation.
- It utilizes **High-Efficiency Particulate Air (HEPA) H-13 class filters** and supports invasive ventilation using Transport Ventilator.
- It's utility → This pod will be utilized for the **evacuation of critical patients with infectious diseases** including COVID-19 from high altitude area, isolated and remote places.

15. World Accreditation Day

Why in News?

- Recently, World Accreditation Day (WAD) is celebrated to highlight and to promote the role of accreditation in trade & economy.

About

- Date of Observance → It is celebrated on **9th June every year**.
- Theme for WAD 2020 → "**Accreditation: Improving Food Safety**", as decided by the International Accreditation Forum (IAF) and the International Laboratory Accreditation Cooperation (ILAC).

- National Accreditation Board for Certification Bodies (**NABCB**) and National Accreditation Board for Testing and Calibration Laboratories (**NABL**), the two accreditation boards of the Quality Council of India (**QCI**), organised a **Webinar to commemorate the event.**
- Significance → Accreditation is an important tool to **help improve quality**, but the ultimate goal is to **improve the quality of product and services** in the **food sector as well as other areas.**

👉 Quality Council of India

- The Quality Council of India (QCI) is an **autonomous body** attached to the **Department of Industrial Policy & Promotion, Ministry of Commerce and Industry.**
- Set up in → **1997.**
- Chairman → The **Chairman** of QCI is **appointed by the Prime Minister** on recommendation of the industry to the government.
- Mandate → Its mandate is to establish and operate the **National Accreditation Structure (NAS)** for **conformity assessment bodies** and providing accreditation in the field of health, education and quality promotion.
- Two accreditation boards → National Accreditation Board for Certification Bodies (**NABCB**) and National Accreditation Board for Testing and Calibration Laboratories (**NABL**) are the **two accreditation boards** of the QCI.
- Ductions → These two bodies work closely to **support the Government** and **regulators** to ensure that the **data provided by accredited conformity assessment bodies is robust, reliable, trustworthy** in terms of decision making, compliance testing and standards setting.
- Indian industry is represented in QCI by **three premier industry associations** namely **ASSOCHAM; CII; and FICCI.**

16. CAPTAIN ARJUN

Why in News?

- Railway Protection Force, Pune, under the Central Railways, has launched a Robotic 'CAPTAIN ARJUN' (Always be Responsible and Just Use to be Nice) to intensify the screening and surveillance.

About

- Purpose → This Robot is launched **to screen passengers** while they board trains and keep a **watch on anti-social elements.**
- Uses → It can be deployed for **multiple uses** and it is an effective element in **station access control** and will **augment the station security plan.**
- Component → It is equipped with a **motion sensor, one PTZ camera and one Dome Camera.**
- The Cameras use **Artificial Intelligence algorithms** to track suspicious and antisocial activity.
- It also has an **inbuilt siren, motion activated spotlight**, with an **in-built internal storage** for recording in case there is a network failure.
- It does **thermal screening** and **records the temperature** in a **digital display panel.**

17. World Food Prize 2020

Why in News?

- Indian-American soil scientist - Dr. Rattan Lal - has been declared the winner of the World Food Prize 2020.

About

- Objective → The World Food Prize is the foremost international honor recognizing the achievements of individuals who have **advanced human development** by **improving the quality, quantity or availability of food in the world**.
- Eligibility → It is **open for any individual** without regard to race, religion, nationality or political beliefs.
- Field Covered → It is an annual award that recognizes **contributions in any field involved in the world food supply** including plant, animal and soil science; food science and technology; nutrition, rural development, etc.
- Cash Prize → In addition to the **cash award of \$2,50,000**, the laureate receives a sculpture designed by the noted artist and designer, Saul Bass.
- Presentation of the Award →
 - The Prize is presented each October on or around **UN World Food Day** (16th October).
 - It is presented **by the World Food Prize Foundation** which has **over 80 companies, individuals, etc.** as donors.
 - The World Food Prize Foundation is **located in Des Moines, USA**.

18. FSSAI Food Safety Index for 2019-20

Why in News?

- The Food Safety and Standards Authority of India (FSSAI) has recently released its Food Safety report for 2019-20.

About Index

- Five parameters of food safety → **human resources and institutional data, compliance, food testing facility, training and capacity building besides consumer empowerment**.
- This is the second index on food safety, which FSSAI released on the occasion of **World Food Safety Day** with the theme "**Food Safety is everyone's business**".
- It was dedicated to those in the supply chain who have ensured the **uninterrupted availability of safe food** during this COVID-19 pandemic.

👉 Highlights of the report

- **Gujarat, Tamil Nadu and Maharashtra** have **topped an index** that ranked states ensuring food safety in 2019-20.
- Among the **smaller states, Goa came first** followed by **Manipur and Meghalaya**.
- Among UTs, **Chandigarh, Delhi and the Andaman Islands** secured top ranks.

👉 Food Safety and Standards Authority of India (FSSAI)

- Parent organization → The FSSAI is an **autonomous body** established under the **Ministry of Health & Family Welfare**, Government of India.
- It has been established under the **Food Safety and Standards Act, 2006** which is a consolidating statute related to food safety and regulation in India.

- Role → It is responsible for **protecting and promoting public health** through the regulation and supervision of food safety.
- Composition → It is headed by a **non-executive Chairperson**, appointed by the Central Government, either holding or has held the position of not below the rank of Secretary to the Government of India.

19. AarogyaPath

Why in News?

- AarogyaPath, a CSIR National Healthcare Supply Chain Portal that aims to provide real-time availability of critical healthcare supplies has been launched.

About AarogyaPath

- It is an **integrated public platform** that provides **single-point availability** of key healthcare goods such as medical equipment, drugs, apparel, etc.
- Vision → To set up an **information management** and **forecasting database platform** at national level to capture demand and supply scenarios for key healthcare needs items.
- Beneficiaries → **Hospitals, Pathology laboratories, Research institutes, Medical colleges and Individual patients**. It will also create **opportunities for business expansion** due to an expanded network of buyers and visibility of new requirements for products.
- Importance in Situations like a Pandemic (Covid-19) →
 - **Anticipated shortages can be addressed** and met at national level.
 - **Opportunistic Pricing, hoarding** and **over-forecasting** can be **checked**.
 - **Over-production can be avoided**. This would help to reduce wastage of resources.

👉 Council of Scientific & Industrial Research

- Established → **September 1942** as an **autonomous body**.
- Parent Organization → It comes under the **Ministry of Science & Technology**.
- Functions → It is known for its **cutting-edge research and development knowledge base** in diverse science and technology areas.
- It has been ranked first in the **Nature Ranking Index-2020**.
- The Nature Index provides close to a **real-time proxy of high-quality research output** and collaboration at the institutional, national and regional level.

20. India Mobile Payments Market Report 2020

Why in News?

- India Mobile Payments Market Report 2020 has been released by S&P Global Market Intelligence recently.

Key Finding

- As per the report, the **Mobile payments and card transactions exceeded cash withdrawals** from automated teller machines (ATMs) for the **first time in 2019**.
- This indicates that the **country's push towards digital payments** is bearing fruit.

- **Google Pay** and **PhonePe** led the **UPI payment space** as the two handled more than 7 billion transactions in total, representing **more than two-thirds of UPI transactions in 2019**.

21. Axone

Why in News?

- A movie named Axone — also spelt akhuni — soya bean dish of Nagaland has been recently released.

About

- Axone — also spelt akhuni — is a **fermented soya bean of Nagaland**, known for its **distinctive flavour and smell**.
- As much an ingredient as it is a condiment, Axone used to **make pickles** and **chutneys**, or **curries of pork, fish, chicken, beef etc**.
- While it is called 'axone' in **parts of Nagaland**, fermented soya bean is cooked with, eaten and **known by different names** in **different parts of Northeast India**, including Meghalaya and Mizoram, Sikkim, Manipur as well in other South, Southeast and East Asian countries.
- Axone is **prepared** and **eaten across Nagaland** but is particularly popular among the **Sumi (also Sema) tribe**. They **use it in every meal**.

22. I-LAB (INFECTIOUS DISEASE DIAGNOSTIC LAB)

Why in News?

- The Minister for Science & Technology inaugurated and flagged off India's first I-Lab (Infectious disease diagnostic lab) for Covid testing in rural and inaccessible areas of India.

About the DBT-AMTZ COMManD

- The **Department of Biotechnology** (DBT) under the Ministry of Science and Technology along with the **Andhra Pradesh Med-tech Zone** (AMTZ) has initiated **DBT-AMTZ COMManD** (COVID-19 Medtech Manufacturing Development).
- It helps to **address the shortage of critical healthcare technologies in India** and move progressively towards a stage of **self-sufficiency**.
- AMTZ is **Asia's first medical equipment manufacturing ecosystem** uniquely dedicated to **medical technology** and **supported by various ministries**.

📍 Infectious Disease Diagnostic laboratory (I-lab)

- What is it? → It is a **mobile testing laboratory** that will be used for **collecting samples** and **testing for Covid-19** across **inaccessible areas** in the country.
- Nodal Bodies → The lab is supported by the **Department of Biotechnology**, Ministry of Science and Technology under the **COVID Command strategy**.
- The I-lab is a BSL-2 facility with **on-site ELISA, RT-PCR, Bio chemistry analysers**.

23. SATYABHAMA Portal

Why in News?

- Union Minister for Mines has launched SATYABHAMA (Science and Technology Yojana for Atma Nirbhar Bharat in Mining Advancement) Portal.

About

- The portal has been designed, developed and will be implemented by the **National Informatics Centre (NIC), Mines Informatics Division**.
- Purpose → To **promote research and development in the mining and minerals sector** by providing online submission of project proposals along with monitoring of the same and utilisation of funds.
- The portal has also been **integrated with the NITI Aayog portal- NGO Darpan**.
- The SATYABHAMA Portal can be accessed at **research.mines.gov.in**.
- NGO Darpan → It is a platform that provides space for **interface between VOs/NGOs and key Government Ministries** / Departments / Government Bodies.is managed at present by NITI Aayog.

24. International Yoga Day 2020

Why in News?

- International Yoga Day 2020 is being celebrated on June 21.

About

- It has been celebrated **annually since 2015** following its inception in the United Nations General Assembly in 2014.
- Theme → **Yoga for Health – Yoga at Home**
- The World Health Organization mentions yoga as a means to improve health in its Global Action Plan on Physical Activity 2018–2030: More active people for a healthier world.
- Yoga is inscribed in the list of **UNESCO Intangible Cultural Heritage of Humanity** of India in 2016.
- International yoga day also **coincides with the summer solstice**.

Summer Solstice (June 21)

It is the longest day of the year in the Northern Hemisphere as the Earth's North Pole is tilted closest to the sun.

25. Jal Jeevan Mission

Why in News?

- The Ministry of Jal Shakti has asked for additional funds of ₹82,000 crore from the 15th Finance Commission for the Jal Jeevan mission as only 18% of households are currently covered.

About Jal Jeevan Mission

- Aim → **provide safe and adequate drinking water** through individual household tap connections (**HarGharJal**) to all rural households by 2024.
- Implementing Agency → It is being **implemented by the Department of Drinking Water and Sanitation under the Jal Shakti Ministry**.
- Launched Year → **2019**.
- Funding → The fund sharing pattern between the Centre and states is **90:10 for Himalayan and North-Eastern States, 50:50 for other states, and 100% for Union Territories**.
- Features →
 - It focuses on **integrated demand and supply-side management** of water at the local level.

- It will **converge with other Central and State Government Schemes** to achieve its objectives of **sustainable water supply management** across India.
- It seeks to generate **maximum community participation** in the form of '**jan andolan**' to achieve the target of functional household tap connection by 2024.

26. National Disaster Relief Fund (NDRF)

Why in News?

- The Finance Ministry has given approval to a proposal to allow individuals and institutions to contribute directly to the National Disaster Relief Fund (NDRF).

About NDRF

- Background → The NDRF was set up in accordance with **Section 46 of the Disaster Management Act, 2005**.
- Purpose → It is meant to "**meet the expenses for emergency response, relief and rehabilitation**" for any threatening disaster situation.
- It is located in the "**Public Accounts**" of Government of India under "**Reserve Funds not bearing interest**".
- Monitoring → **Department of Agriculture** and **Cooperation under Ministry of Agriculture** (MoA) monitors relief activities for calamities associated with drought, hailstorms, pest attacks and cold wave /frost. **Rest of the natural calamities are monitored by Ministry of Home Affairs** (MHA).
- Financing → It is financed through the **levy of a cess** on certain items, chargeable to excise and customs duty, and approved annually through the Finance Bill. **Section 46** also includes a **clause regarding grants made by any person or institution**, however, provisions for such donations had not been made.

27. Virtual Healthcare and Hygiene EXPO 2020

Why in News?

- Union Ministry for Chemicals and Fertilizers inaugurated one of India's largest and first Virtual Healthcare and Hygiene EXPO 2020.

About

- Organized by → **FICCI**.
- Aim → It aims to **give a boost to health and hygiene endeavors**.
- Due to COVID-19 in India an ecosystem is being **built for a self-reliant India**, which will help in **ramping up domestic production** in Pharmaceutical, Health and Hygiene Sector.
- During the five-day event, the focus will also be on → (i) **Health Infrastructure such as medical devices, ventilators**, etc, (ii) **Benefits of AYUSH** (Ayurveda, Yoga, Unani, Siddha, and Homeopathy) and (iii) On **Medical Textiles & Consumables**.

28. YUKTI 2.0

Why in News?

- Union Minister of Human Resource Development (MHRD) has launched 'YUKTI 2.0' (Young India Combating COVID with Knowledge, Technology and Innovation) Portal.

About

- What is it? → It is an **online portal** that aims to **bring together technologies from students, faculties and startups** from higher education institutions so that they can be **showcased to the investor community** such as **businessmen, farmers and industrialists**.
- However, preliminary innovations won't be showcased on YUKTI 2.0 but only those which have **commercialization potential**.
- The portal is an **improvement on the existing YUKTI portal** which was launched with an aim to **monitor and record the initiatives of MHRD** which have been taken in the wake of COVID-19.
- Significance → It is to **help systematically assimilate technologies** having **commercial potential** and information related to incubated startups in higher education institutions.

29. VIVEKANANDA YOGA UNIVERSITY (VaYU)

Why in News?

- The Vivekananda yoga University (VaYU) was launched by the state of External Affairs minister V Muraleedharan through a virtual event. The virtual event was held in New York.

About

- Where? → The first Yoga University outside India was launched in **Los Angeles**.
- The launch of the university was a part of the **sixth International Yoga Day commemorations**.
- The University will offer **online master programme in Yoga**. The classes in the university is to begin in august, 2020.
- The VaYU **faculty** has been **recruited from SVYASA** (Swami Vivekananda Yoga Anusandhana Samsthana).

30. Domestication of Chicken

Why in News?

- A recent study by scientists has revealed new details about the earliest domestication of chicken.

About

- The **DNA sequencing of 863 genomes** has showed the first domestication of chicken occurred in **south-western China, northern Thailand and Myanmar**.
- According to **Charles Darwin**, chickens were domesticated around **4,000 B.C.** from a single ancestor, **Red Jungle Fowl in the Indus Valley**.
- The recent study involved sequencing of genomes from all four species of the **genus Gallus**, five sub-species of **Red Jungle Fowl** and **various domestic chicken breeds collected worldwide**.
- It revealed single domestication from Red Jungle Fowl sub-species **Gallus gallus spadiceus**.
- It **contradicted the earlier claim** that chickens were domesticated in northern China and the Indus Valley.

31. Wheat Production

Why in News?

- Madhya Pradesh in 2020 has surpassed Punjab to become the number one contributor of wheat.

About

- **Punjab**, however, is **still a way ahead** from MP as far as **per hectare productivity** of wheat is concerned, which is around **52 % more (per hectare) than MP**.
- Of the total wheat area in the country, **MP's share was 31 %**, while **Punjab cultivated wheat on 10.6 %** of the total national area.

32. SANKALP PARVA

Why in News?

- On the call of Prime Minister, Union Culture Ministry will celebrate "Sankalp Parva" to plant trees from 28th June to 12 July 2020.

About SANKALP PARVA

- This initiative has been launched following the call of Prime Minister of India Shri Narendra Modi to **plant at least five trees either in Office campus** or wherever it is possible in order to ensure **clean and healthy environment of the country**.
- Ministry of Culture has recommended planting 5 trees: **Bargad, Awla, PePAL, Ashok and Bel**. These 5 trees represent the **herbal heritage of the country**.

33. Statistics day

Why in News?

- This year, the Statistics Day (29th June) will be celebrated virtually, in view of the travel and safety advisories on account of the global Covid-19 pandemic.

About

- Celebrated on → **29th June every year**.
- Why on 29th June? → Observed in recognition of the **notable contributions** made by Late Professor Prasanta **Chandra Mahalanobis** in the **fields of statistics, statistical system and economic planning**.
- Theme → This year's Theme is "**SDG- 3** (Ensure healthy lives and promote well-being for all at all ages) & **SDG- 5** (Achieve gender equality and empower all women and girls)".

👉 Contribution of PC Mahalanobis to Statistics

- He is referred to as the **chief architect of Indian statistical system** as well as **father of statistical science** in India.
- He established the **Indian Statistical Institute** (ISI) in 1931 in Kolkata.
- The institute founded the **journal Sankhya**, along the lines of Karl Pearson's Biometrika.
- In 1959 it was made an **autonomous body** of **Ministry of Statistics & Programme Implementation**.
- He also helped in the establishment of **Central Statistical Organisation** (CSO), the **National Sample Survey** (NSS) and the **Annual Survey of Industries** (ASI).
- He introduced three key concepts to the theory and practice of sample surveys which are: **Pilot surveys, Optimum survey design and Inter Penetrating Network of sub-samples technique (IPNS)**.
- He also served as the **Chairman** of the **United Nations Sub-Commission** on Statistical Sampling.

34. VENUSIAN ATMOSPHERE ROTATES FASTER THAN THE PLANET ITSELF

About

- **Venus takes 243 Earth days to rotate once around its axis.** Despite this very slow rotation, Venus's atmosphere rotates westward **60 times faster than its planetary rotation.** This phenomenon, called **superrotation**, was first discovered in the 1960s.
- Venus atmosphere is thick and full of clouds of **sulfuric acid.** Its atmosphere heats so much making it **hottest planet in solar system.**
- Sun heats planet's dayside, creating atmospheric tidal waves due to temperature difference with nightside. These thermal tides push atmosphere around planet, making it rotate quickly.

123. GOVERNMENT RESPONSE STRINGENCY INDEX

About

- It is **created by Oxford University** showing how strict a **country's measures were in imposing lockdown, and at what stage of the spread it enforced these.**
- It is composite measure based on **nine response indicators** including school closures, workplace closures, and travel bans, rescaled to a value from 0 to 100 (100 =strictest response).
- According to it, **India had one of the strongest lockdown measures in the world.** India called its strict lockdown at a much earlier point on its case and death curves.

124. NATIONAL PAYMENT CORPORATION OF INDIA (NPCI)

About

- **Pai is an artificial intelligence (AI) based chatbot**, to create awareness around NPCI's products like FASTag, RuPay, UPI, AePS on a real time basis.
- It was **developed by Bengaluru based startup CoRover Private Limited.**
- NPCI is umbrella organisation for operating retail payments and settlement systems in India.
- It is an initiative of **RBI and Indian Banks' Association** under Payment and Settlement Systems Act, 2007.