

# Pulse OFFICERS'

**Coverage.**

The Hindu  
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Down to Earth

**May**  
**2020**

**CURRENT AFFAIRS  
MONTHLY**

**THE PULSE OF UPSC AT  
YOUR FINGER TIPS.**



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## SCHEMES

### 1. Pradhan Mantri Vaya Vandana Yojana

#### About the scheme:

- Pradhan Mantri Vaya Vandana Yojana (PMVVY) is a **pension Scheme exclusively for the senior citizens (aged 60 years and above)**.
- It was launched in 2017 by the **Ministry of Finance** to offer a guaranteed payout of pension to senior citizens at a specified rate for **10 years**.
- Initially an **assured rate of return of 7.40% per annum for the year 2020-21** will be provided and thereafter to be reset every year in line with the Senior Citizen Savings Scheme (SCSS).
- The scheme also allows for **premature exit** for the treatment of any critical/terminal illness of self or spouse.
- On death of the pensioner during the policy term of 10 years, the Purchase Price shall be paid to the nominee.
- The Scheme can be purchased offline as well as online through the **Life Insurance Corporation (LIC)** which has been given the sole privilege to operate this Scheme.
- **Aadhar has been made mandatory** to avail the benefit of the scheme.

#### Eligibility Conditions

- Minimum Entry Age: 60 years (completed)
- Maximum Entry Age: No limit
- Minimum Pension: Rs. 1,000/- per month

#### Other Features:

- **Mode of pension payment:** Senior citizens will have an option to get the pension in four ways — monthly, quarterly, half-yearly and yearly.
- **Loans:** Any individual can apply for loans after completion of three years. The maximum loan that can be granted shall be 75% of the purchase price.
- **Tax benefits:** The scheme is exempted from Goods and Services Tax (GST).

#### Why in News?

- The Union Cabinet has extended Pradhan Mantri Vaya Vandana Yojana for a period of three years till March 31, 2023.
- This scheme was open till March 31, 2020.

### 2. UDAN scheme

#### About the scheme

- In 2017, the **Ministry of Civil Aviation** launched the Regional Connectivity Scheme (RCS) “UDAN” (Ude Desh Ka Aam Naagrik) which aims at **providing connectivity to un-served and under-served airports** of the country through revival of existing air-strips and airports to make **flying affordable** to the common man who want to travel to and fro the Tier 2 and Tier 3 cities of the country.
- UDAN has a unique market-based model. Airline routes are allocated to operators selected through a **competitive bidding mechanism**.
- Airlines have to set aside **50% of the total aircraft capacity** for cheaper fares to be offered at the rate of **Rs 2,500 per hour of flight**, in return for which airlines are given a subsidy by the Centre and the State government concerned.
- The airport that will be renovated under this scheme will be chosen after referring to the respective State government. Together with the State government the Central government will revive the dysfunctional and unserved airports of the country.
- The **Airports Authority of India (AAI)** is designated as the Implementing Agency under this Scheme.
- The scheme is now in its **fourth phase** with focus on bringing connectivity to priority areas like North East India, Jammu and Kashmir, Ladakh, hilly states in other parts of the country, and islands.
- Recently, the 250<sup>th</sup> route was operationalised under the UDAN scheme.



#### Why in News?

- The Civil Aviation Ministry has decided to restart the regional air connectivity services under the UDAN scheme after nationwide lockdown due to COVID-19 pandemic.

### 3. Scheme for formalisation of MFP Enterprises

#### Background

- The **unorganized food processing sector** in the country comprises nearly 25 lakh food processing enterprises which are unorganized and unregistered.
- With only 7% of investment in plant & machinery and 3% of outstanding credit, the unorganized enterprises contribute to **74% of employment (a third of which are women)**, 12% of output and 27% of the value addition in the food processing sector.
- The sector faces a number of challenges including the inability of the entrepreneurs to access credit, high cost of institutional credit, lack of access to modern technology and inability to integrate with the food supply chain and compliance with the health and safety standards.
- To address these problems, Government of India has approved an all India **Centrally Sponsored Scheme** “Scheme for Formalisation of Micro food processing Enterprises (FME)”

#### Aim

- The scheme aims to

- Modernize and enhance the competitiveness of the existing individual micro enterprises and ensure their transition to formal sector
- To support FPOs/ SHGs/ Cooperatives for delivery of package of services, creation of common infrastructure along the value chain, ensure backward & forward linkages, branding & marketing, etc.

- Strengthening this segment will lead to reduction in wastage, creation of off-farm job opportunities and aid in achieving the overarching Government objective of doubling farmers' income.

#### Salient features

- Micro food enterprises will be supported with **credit linked subsidy @ 35%** of the eligible project cost with a **ceiling of Rs.10 lakh**.
- Beneficiary contribution will be minimum 10% and balance through loan.
- The scheme also supports SHGs/ FPOs/ Co-operatives in **brand building and marketing** for the micro-enterprises.
- It also envisages linkage of clusters with lead buyers.
- The Scheme would be monitored at Centre by an Inter-Ministerial Empowered Committee (IMEC) under the Chairmanship of Minister, Food Processing Industries.
- A third party evaluation and mid-term review mechanism would be built in the programme.

#### Why in News?

- The **Ministry for Food Processing** has launched the PM Formalisation of Micro Food Processing Enterprises (PM FME) scheme for the Unorganized Sector on All India basis.
- The expenditure under the scheme would be shared in a 60:40 ratio between the Central and State governments and in 90:10 ratio with North Eastern and Himalayan States.

## 4. Operation Greens scheme expanded

### About Operation Greens

- Operation Greens was launched by the **Ministry of Food Processing Industries** to stabilize the supply of Tomato, Onion and Potato (TOP) crops and to ensure availability of TOP crops throughout the country round the year without price volatility.
- **National Agricultural Cooperative Marketing Federation of India (NAFED)** acts as the nodal agency to implement price stabilisation measures under Operation Greens.

### Objectives

- Enhancing value realisation of TOP farmers by targeted interventions to strengthen TOP production clusters and their FPOs, and linking/connecting them with the market.
- Price stabilisation for producers and consumers by proper production planning in the TOP clusters and introduction of dual use varieties.
- **Reduction in post-harvest losses** by creation of farm gate infrastructure, development of suitable agro-logistics, creation of appropriate storage capacity linking consumption centres.
- Increase in **food processing capacities and value addition** in TOP value chain with firm linkages with production clusters.
- Setting up of a market intelligence network to collect and collate real time data on demand and supply and price of TOP crops.

### Strategy

- The strategy will comprise of a series of measures as decided by the Ministry which include:
- **Short term Price Stabilisation Measures:** MoFPI will provide 50% of the subsidy on the following two components:
  - Transportation of TOP Crops from production to storage;

- Hiring of appropriate storage facilities for TOP Crops;
- **Long Term Integrated value chain development projects**
  - Capacity Building of FPOs & their consortium
  - Quality production
  - Post-harvest processing facilities
  - Agri-Logistics
  - Marketing / Consumption Points
  - Creation and Management of e-platform for demand and supply management of TOP Crops.

### Why in News?

- The Ministry of Food Processing Industries has formally announced the expansion of Operation Greens scheme from tomato, onion and potato crops to **all perishable fruits and vegetables.**

## 5. Pradhan Mantri Van Dhan Yojana

### Pradhan Mantri Van Dhan Yojana

- The Van Dhan Scheme is an initiative of the **Ministry of Tribal Affairs and TRIFED.**
- It was launched in 2018 and seeks to improve tribal incomes through **value addition of tribal products.**
- The scheme envisages establishment of community owned Minor Forest Produce (MFP)-centric "**Van Dhan Vikas Kendra**" for providing skill upgradation and capacity building training and setting up of primary processing and value addition facility. They are then trained and provided with working capital to add value to the products, which they collect from the jungle.
- The Kendras would act as common facility centres for procurement cum value addition to locally available MFPs.

### Why in News?

- Many youths from the Katkaris community are being benefited and supported under the Pradhan Mantri Van Dhan Yojana (PMVDY) .

### Who are Katkari Tribes?

- Katkaris were historically **forest dwellers**. They are located primarily in **Maharashtra** and in some places of **Gujarat**.
- They are one of the 75 **Particularly Vulnerable Tribal Groups in India**.
- They serve as agricultural labourers and sell firewood and some jungle fruits.
- Poor literacy rates, health conditions and minimal livelihood opportunities are some of the issues faced by these tribal people.

#### About PVTGs

- In India, tribal population makes up for 8.6% of the total population. Tribal people live in about 15% of the geographical area of the country.
- Among them some groups are declared as Particularly Vulnerable Tribal Groups (PVTGs) based on the following criteria.
  - **A pre-agriculture level of technology;**
  - **A stagnant or declining population;**
  - **Extremely low literacy; and**
  - **A subsistence level of economy.**

#### Livelihood:

- In 1973, the **Dhebar Commission** created Primitive Tribal Groups (PTGs) as a separate category, who are less developed among the tribal groups.
- In 2006, the Government of India renamed the PTGs as Particularly Vulnerable Tribal Groups.
- **75 tribal groups** have been categorized by the **Ministry of Home Affairs** as PVTGs.
- PVTGs reside in **18 States and UT of A&N Islands**.
- Among the 75 listed PVTG's the highest number are found in **Odisha (13)**, followed by Andhra Pradesh (12).
- The Ministry of Tribal Affairs implements the Scheme of "Development of Particularly Vulnerable Tribal Groups (PVTGs)" exclusively for them.
- PVTGs depend on various livelihoods such as food gathering, Non Timber Forest Produce (NTFP), hunting, livestock rearing, shifting cultivation and artisan works. Most of their livelihoods depend on the forest.

## INITIATIVES

### 1. Khelo India Programme

#### What is it?

- Under this programme, 2,500 talented players have been selected and are being trained.
- Talented players identified in priority sports disciplines at various levels by the High-Powered Committee will be provided **annual financial assistance of INR 5 lakh per annum for 8 years.**
- The Khelo India programme has been introduced to **revive the sports culture in India at the grass-root level** by building a strong framework for all sports played in our country and establish India as a great sporting nation.
- It is under the **Minister of Youth Affairs & Sports.**

#### Why in News?

- The Minister of Youth Affairs & Sports recently furnished details on the financial assistance to athletes under the Khelo India programme.

### 2. Ek Bharat Shreshtha Bharat

#### About the initiative

- The 'Ek Bharat Shreshtha Bharat' initiative was announced by the Prime Minister Narendra Modi on 31st October, 2015 on the occasion of the 140th birth anniversary of Sardar Vallabhbhai Patel.
- The programme aims to **actively enhance interaction between people of diverse cultures** living in different States and UTs in India, with the objective of promoting greater mutual understanding amongst them.
- As per the programme, each year, every State/UT would be paired with another State/UT in India for **reciprocal interaction between the people.**
- It is envisaged through this exchange, that the knowledge of the language, culture, traditions and practices of different states will lead to an enhanced understanding and bonding between one another,

thereby strengthening the unity and integrity of India.

#### Why in News?

- Government has decided to take forward the Ek Bharat Shreshtha Bharat programme using innovative ways during the COVID 19 outbreak such as organizing webinars on Ek Bharat Shreshtha Bharat themes for their wide dissemination.

### 3. Hunar Haat

#### About:

- Hunar Haat is an **exhibition of handicrafts and traditional products** made by **artisans from the minority communities.**
- It is a flagship initiative by the **Ministry of Minority Affairs** which provides a market and opportunity to master artisans and craftspeople from remote areas of the country.
- These are organised under **USTTAD (Upgrading the Skills & Training in Traditional Arts/Crafts for Development)** scheme.

#### Why in News?

- The government announced that "Hunar Haat" will restart from September 2020 after a gap of about 5 months due to the Corona pandemic.

#### USTTAD scheme

- USTTAD scheme is an initiative of the **Ministry of Minority Affairs** which aims to preserve the heritage of traditional arts and crafts of minority communities.
- The scheme was mainly developed with the object of capacity building and updating the traditional skills of master crafts persons and artisans from minority communities.
- The trainees under the USTTAD scheme have to be from minority communities (viz. Muslims, Christians, Sikhs, Buddhists, Parsis and Jains). However, about 25% of the beneficiaries could also be from other communities who belong to the BPL (below poverty line) families.

## 4. Atmanirbhar Bharat Abhiyan

### Background

- In May 2020, Prime Minister Narendra Modi announced a Rs 20-lakh crore economic relief package titled Atmanirbhar Bharat Abhiyan (Self Reliant India Campaign) which is almost equal to 10 per cent of India's GDP to revive the economy hit by COVID-19 pandemic.

### Highlights of the package

#### MSMEs sector

##### Collateral-free loans

- The government has proposed to offer **collateral-free loans to MSMEs** which will be fully guaranteed by the Centre. A total of **Rs 3-lakh crore** has been allocated for this.
- This will act as initial seed money for these small enterprises hit by zero cash flow due to the national lockdown.
- Banks have been unwilling to lend to this category of borrowers as they fear that the money will not be repaid. Banks are now expected to be more comfortable in assisting this category of borrowers because the risk is zero (since the loans are guaranteed by the central government).

##### Formalisation of Micro Food Enterprises

- The government also allocated **Rs 10,000 crore scheme for the formalisation of Micro Food Enterprises (MFE)**. This will help nearly 2 lakh MFEs to achieve technical up-gradation to attain FSSAI food standards, build brands and marketing.
- Such units would **promote vocal for local with global outreach with a cluster-based approach**. Produces such as Makhana in Bihar, Mango in UP, Kesar in J&K, Bamboo shoots in North-East, Chilli in Andhra Pradesh, Tapioca in Tamil Nadu etc. will get support for the domestic and global market.

#### Discoms

- Power distribution companies (discoms) are in a huge liquidity crisis and unable to pay their dues to electricity generation

companies. Their cash flow and revenues have been hit due to low demand from industrial consumers for power during the lockdown.

- The government, through Power Finance Corporation and Rural Electrification Corporation (PFC-REC), will infuse liquidity of Rs 90,000 crore to discoms against their *receivables* (refers to debts owed to a company, usually from sales on credit) for which guarantees will be given by respective states.
- This emergency liquidity infusion will avert a crisis where generation and transmission companies stop supplies to discoms that are in default.

#### EPF Contribution

- In March, when the first relief package called the **Pradhan Mantri Garib Kalyan Yojana** was announced, the government offered to pay the 24% provident fund contribution (employer+employee) for those earning up to Rs 15,000 a month as salary and working in units that employ less than 100 workers for three months.
- This has now been extended for another three months up to August.
- The statutory PF contribution for those employed in the private sector (and not in the category of establishments above) has been reduced to 10% (from 12% now) for the next three months in order to increase liquidity in their hands.

#### Farm sector

- A **Rs 1-lakh crore agriculture infrastructure fund** run by the National Bank for Agriculture and Rural Development (NABARD) to help create affordable and financially viable post-harvest management infrastructure at the farm gate and aggregation points has been announced.
- It would bring better infrastructure and logistics support to fish workers, dairy and other livestock farmers, beekeepers and vegetable and medicinal plant growers.
- NABARD will extend an additional refinance support of Rs 30,000 crore for

crop loan requirement of rural cooperative banks and regional rural banks to ease credit for small farmers.

#### Fishing industry

- Finance Minister informed allocation of Rs 20,000 crore for fishermen through **Pradhan Mantri Matsya Sampada Yojana (PMMSY)** for developing fishing Harbours, cold chain, markets etc.
- A special credit facility with liquidity of up to Rs 5,000 crore has been announced for street vendors through a special scheme that will facilitate easy credit.
- In addition, the government has disallowed global companies from **participating in tenders up to Rs 200 crore**, earmarking that space exclusively for Indian companies.

#### State's borrowing limit

- The Central government has also allowed state governments to **hike their borrowing limits from 3% to 5% of Gross State Domestic Product (GSDP)**, translating into an additional borrowing space of Rs 4.28 lakh crore.
- However, the Centre has attached conditions for the increased borrowing space, permitting only 0.5 per cent of GSDP as an unconditional increase.
- Rest, 1 per cent will be in four tranches of 0.25 per cent, with each tranche linked to expenditure on 'One Nation One Ration', urban local body revenues, power distribution, ease of doing business reforms. The last 0.5 per cent to be permitted if at least three of four milestones are reached.

#### New Public Sector Enterprise Policy

- The Finance Minister said the **government will open all sectors to the private sector** including strategic sectors, and a new coherent policy in this regard will be unveiled.
- The proposed policy will notify the list of strategic sectors requiring the presence of at least one state-owned company along with the presence of the private sector. In all other sectors, the government plans to

privatise public sector enterprises depending upon the feasibility.

- Even in the strategic sectors, no more than four PSUs will be allowed, with the rest being privatised, merged or brought under holding companies.

#### Structural reforms

- The Finance Minister also announced structural reforms for several sectors, such as coal, minerals, defence production, civil aviation, power distribution in Union Territories, space research and atomic energy.

#### Coal mining

- The government would **end the monopoly of Coal India Ltd (CIL)** in coal mining by allowing private companies on a **revenue-sharing model**.
- A revenue sharing mechanism instead of the earlier fixed price per tonne will introduce competition, transparency and private sector participation in the market.
- Any party could bid for coal blocks and sell in the open market. This is against the earlier norm where only captive consumers with end-use ownership could bid.
- Nearly 50 blocks will be up for bidding, and the government will invest Rs 50,000 crore for building evacuation infrastructure.
- India has the **third-largest coal availability within its untapped mines** and yet India still **imports coal**. Because of this, the emerging sectors suffer because of lack of raw material availability.

#### Mining sector

- On non-coals, 500 mineral blocks will be auctioned and the government will **remove the distinction between captive and non-captive mines** to allow the transfer of mining leases and the sale of surplus unused minerals, leading to better efficiency in mining and production.
- Captive mining is the coal mined for a specific end-use by the mine owner, but not for open sale in the market.

- Besides, the government will also introduce a **joint auction of bauxite and coal blocks** to enhance the competitiveness of the aluminium industry. The move will help improve availability and access affordable minerals.

### Defence

- To boost the government's Make in India campaign, foreign investment limit in defence manufacturing will be hiked to **74 per cent from 49 per cent** via the automatic route while some weapons and platforms will be banned for imports.
- Items banned for imports can **only be purchased from within the country**.
- **State-owned Ordnance Factory Boards will be corporatized** for better management and will later be listed on the stock market.
- Corporatisation, however, does not mean privatisation. The aim is to make sure that almost 60 ordnance factories in India are better managed so that they can be traded publicly.
- The reforms aim to reduce India's massive defence import bill.
- According to the Stockholm International Peace Research Institute (SIPRI), the US, China and India were the world's three biggest military spenders in 2019, followed by Russia and Saudi Arabia.

### Power distribution

- Power distribution companies in Union Territories (UTs) will be **privatised** for better service and the plan would be a model for emulation by other utilities across the country.

### Airports

- Six more airports will be auctioned for private participation and an additional private investment will be invited at 12 airports.
- Steps will be taken to ease restrictions on Indian airspace, of which only 60% is currently available. This will save flying time and aviation fuel.

### Space programme

- Private companies will be allowed a role in India's space programme, including in satellites, launches, and space-based services. The companies will get to use the facilities of ISRO, the state-owned space agency.
- Future projects for planetary exploration and outer space travel would be open for the private sector.

### Research reactor

- Public-private partnerships will also be introduced in the atomic energy sector, to set up a research reactor for production of medical isotopes and irradiation facilities for food preservation.

### Other announcements

- Other announcements included changes to the Insolvency and Bankruptcy Code, to ensure that COVID-19 related debts will not be counted as defaults for the purpose of triggering insolvency proceedings. **No bankruptcy proceedings will be initiated for a year.**
- The Centre will also roll out the **PM e-Vidya programme** for multi-mode access to digital education, including e-content for school education.

### Why in News?

- The Central Government has allocated four lakh 42 thousand tonnes of foodgrains to States and Union Territories under AtmaNirbhar Bharat Package.

### Related information

#### About PMMSY

- The Pradhan Mantri Matsya Sampada Yojana aims to enhance fish production to 220 lakh metric tons by 2024-25 from 137.58 lakh metric tons in 2018-19 at an average annual growth rate of about 9%.
- Under the PMMSY, thrust will be given towards enhancement of fish production and productivity, quality, sustainability, technology infusion, post-harvest infrastructure, modernisation and strengthening of value chain, standards and traceability in fisheries sector from 'catch to consumer', establishing a robust fisheries management framework, fishers'

welfare,enhancement of fisheries export competitiveness.

- About 42% of the total estimated investment of the PMMSY is earmarked for creation and upgradation of fisheries infrastructure facilities. The scheme plans to reduce post-harvest losses from the present high of 25% to about 10% by modernizing and strengthening the value chain.
- The scheme will be established under the **Department of Fisheries** for a robust fisheries management framework.

## 5. Vande Bharat Mission & Operation Samudra Setu

### About Vande Bharat Mission

- It is India's major mission to **evacuate stranded Indians from other countries** due to the coronavirus pandemic and subsequent lockdown.
- The Mission, which is focused on the Gulf and the South Asian regions, is expected to involve 64 flights, bringing back 15,000 nationals from different parts of the world through 14 Indian airports.

### Why in News?

- The Vande Bharat Mission was extended to cover Russia, Ukraine, Germany, Spain and east Europe in the third week of May.

### Operation Samudra Setu

- In addition to this, the Navy also dispatched two ships, INS Jalashwa and INS Magar, to Maldives under Operation "Samudra Setu" to repatriate stranded Indian citizens.

## 6. One Nation One Ration Card

### PDS in India

- Under the **National Food Security Act, 2013**, about 81 crore persons are entitled to buy subsidized foodgrain — rice at Rs 3/kg, wheat at Rs 2/kg, and coarse grains at Re 1/kg — from their designated Fair Price Shops (FPS) of the **Targeted Public Distribution System (TPDS)**.

- PDS is operated under the **joint responsibility** of the Central and the State Governments.
- The Central Government, through **Food Corporation of India (FCI)**, has assumed the responsibility for procurement, storage, transportation and bulk allocation of food grains to the State Governments.
- The **operational responsibilities** including allocation within the State, identification of eligible families, issue of Ration Cards and supervision of the functioning of Fair Price Shops (FPSs) etc., rests with the State Governments.

### What is the one 'One Nation, One Ration Card' system?

- In the present system, a ration cardholder can buy food grains only from an FPS that has been assigned to her in the locality in which she lives.
- However, under the 'One Nation, One Ration Card' system, the beneficiary will be able to buy subsidised foodgrains from **any FPS across the country**.
- The biggest beneficiaries will be **migrant workers** who move to other states to seek better job opportunities.

### How will the system of ration card portability work?

- Ration card portability is aimed at providing **intra-state as well as inter-state portability** of ration cards.
- The new system, based on a technological solution, will identify a beneficiary through **biometric authentication** on electronic Point of Sale (ePoS) devices installed at the FPSs, and enable that person to purchase the quantity of foodgrains to which she is entitled under the NFSA.
- While the **Integrated Management of Public Distribution System (IM-PDS) portal** (<http://www.impds.nic.in/>) provides the technological platform for the inter-state portability of ration cards, enabling a migrant worker to buy foodgrains from any FPS across the country, the other portal

([annavitran.nic.in](http://annavitran.nic.in)) hosts the data of distribution of foodgrains through E-PoS devices within a state.

- Once the 'one nation one ration card' system takes effect in a given state, the beneficiary family **can purchase food grains from different locations**. For example, a migrant worker staying in a different state can buy his or her share of the subsidized food grains from any FPS in the state where they work while the remaining family members will be able to buy their quota of the supplies back at home.

#### Since when has the One Nation, One Ration Card System been in the works?

- Work on this ambitious project started about two years back when the government launched a scheme called Integrated Management of Public Distribution System (IM-PDS) in April 2018 to reform the public distribution system in the country.
- The PDS system was marred with inefficiency leading to leakages in the system. To plug the leakages and make the system better, the government started the reform process.
- For this purpose, it used a technological solution involving the **use of Aadhaar to identify beneficiaries**. Under the scheme, the **seeding of ration cards with Aadhaar** is being done.
- Simultaneously, **PoS machines** are being installed at all FPSs across the country. Once 100 per cent of Aadhaar seeding and 100 per cent installation of PoS devices is achieved, the national portability of ration cards will become a reality.

#### Why in News?

- Finance Minister Nirmala Sitharaman announced the national rollout of the One Nation, One Ration Card system in all states and Union Territories by March 2021.
- As of June 2020, about 20 states have joined the scheme to implement the inter-state ration card portability.

## 7. SAMARTH

#### About:

- SAMARTH, an **e-Governance platform**, is an Open Standard Open Source Architecture Automation Engine for Universities and Higher Educational Institutions.
- It caters to faculty, students and staff at a University/Higher Educational Institutions.
- It has been developed under the **National Mission of Education in Information and Communication Technology Scheme (NMEICT)** of the Ministry of Human Resource Development (HRD).
- This initiative will enhance the productivity through better information management in the institutes by seamless access to information, and its utilization for various purposes.

#### Why in News?

- NIT Kurukshetra has implemented Enterprises Resource Planning (ERP), SAMARTH to enhance productivity through better information management and automating the process in the institute.

## 8. CHAMPIONS portal

#### What's in the news?

- The **Ministry of Micro, Small Medium Enterprises (MSME)** has launched a web portal 'CHAMPIONS' ([champions.gov.in](http://champions.gov.in)), a tech-driven control room-cum-management information system, as part of its effort to support enterprises.
- CHAMPIONS stand for creation and harmonious application of modern processes for increasing the output and national strength.
- The objective of the portal is to **assist MSMEs in India to march them into the big league as national and global champions**.
- The portal is for making the smaller units big by solving their grievances, encouraging, supporting, helping and handholding.

- In addition to ICT tools, including telephone, internet and video conference, the portal is enabled by Artificial Intelligence, Data Analytics and Machine Learning.
- It is also fully integrated in real time basis with Government of India's main grievances portal **CPGRAMS** and MSME Ministry's own other web based mechanisms.
- The entire ICT-architecture is created in house with the help of **National Informatics Centre (NIC)**.

#### About CPGRAMS

- The Centralized Public Grievance Redress And Monitoring System (CPGRAMS), is an online web-enabled system developed by the **National Informatics Centre** in association with the **Department of Administrative Reforms and Public Grievances (DARPG)**.
- It has been developed with an objective of speedy redress and effective monitoring of grievances by Ministries/Departments/Organizations of Government of India.
- The CPGRAMS provides the facility to lodge a grievance online **from any geographical location**.
- It enables the citizen to track online the grievance being followed up with Departments concerned and also enables DARPG to monitor the grievance.

#### About NIC

- The National Informatics Centre was established in 1976, as an attached office under the Ministry of Electronics and Information Technology.
- The NIC provides infrastructure to help support the delivery of government IT services and the delivery of some of the initiatives of Digital India.

## 9. National Migrant Information System

### What's in the news?

- To monitor and facilitate the smooth movement of migrant workers and their contact-tracing during lockdown across the country, the **National Disaster Management Authority** has developed the online dashboard -- National Migrant Information System (NMIS).
- To collect information and facilitate movement of migrants, the portal will maintain a **central repository** and help the sending as well as receiving state and district to ask for and give their acceptance in an online format seamlessly.
- This system will help in speedy communication between states and has additional advantages like contact-tracing, which may be useful in overall COVID response work.

#### About NDMA

- NDMA is the apex authority to look after the disaster management in the country.
- It is a **statutory body** under the **Disaster Management Act, 2005**.
- It is headed by the **Prime Minister**.
- Other members: a Vice Chairman with the status of Cabinet Minister, and eight members with the status of Ministers of State.
- It is mandated to lay down the policies, plans and guidelines for Disaster Management to ensure timely and effective response to disasters.

## 10. GOAL programme

### What's in the news?

- The **Ministry of Tribal Affairs** has launched the "GOAL (Going Online As Leaders)" programme in partnership with **Facebook**.
- The GOAL programme is designed to provide **mentorship to tribal youth through digital mode** and reduce the gap between tribal and non-tribal youth.
- In this program, 5000 scheduled tribe youth will get training by experts from different disciplines and fields.

## ENVIRONMENT

### 1. Unusual heat waves in North India

#### About heat waves:

- A Heat Wave is a period of **abnormally high temperatures, more than the normal maximum temperature** that occurs during the summer season in the North-Western parts of India.
- Heat Waves typically occur **between March and June**, and in some rare cases even extend till July.
- The extreme temperatures and resultant atmospheric conditions adversely affect people living in these regions as they cause physiological stress, sometimes resulting in death.
- A heat wave spell generally lasts for a minimum of four days and on some occasions, it can extend up to seven or ten days.

#### Criteria for declaring heat waves:

- The **Indian Meteorological Department (IMD)** has given the following criteria for Heat Waves :
- Heat Wave need not be considered till the maximum temperature of a station reaches **at least 40°C for Plains and at least 30°C for Hilly regions**.
- When normal maximum temperature of a station is less than or equal to 40°C Heat Wave Departure from normal is 5°C to 6°C; Severe Heat Wave Departure from normal is 7°C or more.
- When normal maximum temperature of a station is more than 40°C Heat Wave Departure from normal is 4°C to 5°C; Severe Heat Wave Departure from normal is 6°C or more.
- When actual maximum temperature remains **45°C or more** irrespective of normal maximum temperature, heat waves should be declared.

#### Heat waves & climate change

- Higher daily peak temperatures and longer, more intense heat waves are becoming increasingly frequent globally due to **climate change**.

- India too is feeling the impact of climate change in terms of increased instances of heat waves which are more intense in nature with each passing year, and have a devastating impact on human health thereby increasing the number of heat wave casualties.

#### Why in the news?

- In May 2020, Rajasthan, Delhi, Uttar Pradesh, Madhya Pradesh, and Maharashtra experienced severe to very severe heatwave conditions.

#### Does all of India experience heatwave conditions?

- Heat waves are common over the **Core Heatwave Zone (CHZ)** — Rajasthan, Punjab, Haryana, Chandigarh, Delhi, West Madhya Pradesh, Uttar Pradesh, Chhattisgarh, Orissa, Vidarbha in Maharashtra, parts of Gangetic West Bengal, Coastal Andhra Pradesh and Telangana, as **categorised by India Meteorological Department**.
- Several recent studies indicate that CHZ experiences more than **six heatwave days per year** during these four months (between March and June).
- Many places in the northwest and cities along the southeastern coast report eight heatwave days per season.
- However, the regions in the **extreme north, northeast and southwestern India are less prone to heatwaves**.

#### Unusual heat waves

- Usually in India, when summer season peaks by May 15, the temperature across these CHZs cross above 40 degrees and remain till around 45 degrees.
- However, the temperature did not rise till May 21 this year, making the summers quite unusual.
- The Reasons for unusual heat waves in India are as follows:

#### Western disturbances

- **Continuous inflow of Western Disturbances** influenced the weather in the north till as late as April.

- When **Western Disturbances interact with weather systems heading from the two southern seas**, that is, warm winds blowing in from the Bay of Bengal or the Arabian Sea, they cause **snowfall or rainfall over the north**.
- A significant influence of Western Disturbances is experienced during December to February. However, this year, its **influence persisted till early May**.
- The recent Western Disturbances got support from **easterly winds blowing over from the Bay of Bengal**. It resulted in rainfall and thunderstorm activities over parts of Rajasthan, Punjab, Uttar Pradesh, north Madhya Pradesh and Delhi until mid-May, **keeping atmospheric conditions cooler than normal for summer standards**.

#### Cyclone Amphan

- After the devastations of cyclone Amphan ended, a sudden rise in temperature across the central and northern plains in India has been noted.
- The cyclone was successful in **dragging the maximum moisture** from the South Peninsula, Bay of Bengal and some parts of central India.
- This has triggered dry north-westerly winds to pass over Rajasthan, Madhya Pradesh, Uttar Pradesh and Maharashtra thus, leading to severe heatwave.

#### Related information

##### What are western disturbances?

- Western Disturbances are **low pressure systems, embedded in western winds (westerlies)** that flow from the west to the east.
- The low pressure typically forms over the **Mediterranean Sea** and travels over Iran, Iraq, Afghanistan and Pakistan before entering India loaded with moisture.
- These moisture laden western disturbances eventually come up against the Himalayas and get blocked, as a consequence, the moisture gets trapped and precipitation is shared in the form of

snow and rain over Northwest India and sometimes, in other parts of North India.

- They **affect the local weather of a region during its onward journey**.

## 2. Sundarbans

### About Sundarbans

- Sundarbans, the world's largest coastal mangrove forest, is about 10,000 sq km across **India and Bangladesh**, of which 40% lies in India.
- The Indian part of the Sundarbans forest constitutes the Sundarbans National Park.
- The forest of the Sundarbans is located in the **world's largest delta**, which is formed by three rivers named **Ganges, Brahmaputra and Meghna**.
- An exquisite variety of mangrove tree, one of a special kind, named '**Sundari**' is found in abundance here, which also is the reason for naming the forest as Sundarbans.
- The Sundarbans is of universal importance for globally endangered species including Ganges and Irawadi dolphins, estuarine crocodiles and the critically endangered endemic river terrapin (Batagur baska).
- It is the only mangrove habitat in the world for the Royal Bengal Tiger (*Panthera tigris tigris*).
- Sundarbans is also declared as a **World heritage site** as well as a **Ramsar site**.



### Why in the news?

- The latest estimation of tiger numbers in the Indian Sundarbans indicate an

increase in the population of big cats. According to the West Bengal Forest Department, the tiger count for the year 2019-20 rose to 96, from 88 in 2018-19.

- The increase in the number by eight was significant as it was the biggest annual jump reported from the Sunderbans.

## ORGANISATIONS

### 1. International Court of Justice

#### About ICJ

- The International Court of Justice is the principal judicial organ of the United Nations.
- It was established in June 1945 by the **Charter of the United Nations**.
- The Court's role is to settle, in accordance with international law, legal disputes submitted to it by States and to give advisory opinions on legal questions referred to it by authorized United Nations organs and specialized agencies.
- Unlike most other organs of international organizations, the Court is **not composed of representatives** of governments. Members of the Court are **independent judges**.
- The Court is composed of 15 judges, who are elected for terms of office of nine years by the United Nations General Assembly and the Security Council.
- All members of the UN are **automatic** parties to the statute, but this does not automatically give the ICJ jurisdiction over disputes involving them. The ICJ gets jurisdiction **only on the basis of consent of both parties**.

#### Difference between ICC and ICJ

S. No.	International Criminal Court (ICC)	International Court of Justice (ICJ)
1	Independent judicial body distinct from the UN	Principal judicial organ of the UN
2	Handles prosecutions of individuals	Hears disputes between sovereign states
3	Established by the Rome Statute in 2002	Established in 1945 by the San Francisco Conference, which also created the UN
4	Only those who ratified the Rome Statute are parties to ICC	All members of the UN are parties to the statute of the ICJ, and non-members may also become parties
5	The judges are elected by the Assembly of States Parties, the court's governing body.	The judges are elected by the UN General Assembly and the Security Council
6	Headquarters of both the courts are situated at The Hague, Netherlands.	

#### Why in News?

- Pakistan said that it has fully complied with the ICJ's judgment in the Kulbhushan Jadhav case, days after India asserted that it might be able to persuade Pakistan through back channel to release the Indian death-row convict.

#### Why was he arrested?

- Mr. Jadhav, a retired Indian Navy officer, was sentenced to death by a Pakistani military court on charges of "espionage and terrorism" in April 2017. Weeks later, India approached the ICJ against Pakistan

for denial of consular access to Mr. Jadhav and challenging the death sentence.

- The court ruled in July last year that Pakistan must undertake an “effective review and reconsideration” of the conviction and sentence of Mr. Jadhav and also grant consular access to India without further delay.

## 2. International Labour Organisation

### About ILO

- ILO was created in 1919, as part of the **Treaty of Versailles** that ended World War I.
- It became the **first specialized agency of the UN** in 1946.
- ILO is the **only tripartite U.N. agency** which brings together governments, employers and workers of 187 member States, to set labour standards, develop policies and devise programmes promoting decent work for all women and men.
- India is a **founder member** of the ILO.
- It is headquartered in Geneva, Switzerland.

### Background

- Recently, the Madhya Pradesh and Uttar Pradesh governments announced an exemption for establishments from the employer’s obligations under several labour laws for three years.
- Calling the move retrograde and anti-worker, several trade unions lodged a complaint with the International Labour Organisation against the changes in the labour laws.
- They allege that the changes are in violation with several ILO conventions such as the **Right to Freedom of Association [ILO Convention 87]**, **Rights to Collective Bargaining [ILO Convention 98]**, and also the internationally accepted norm of eight hour working day – espoused by core conventions of ILO.

- They also allege that the exemptions undermined the **ILO Convention 144 on tripartism** which requires ILO members to undertake effective consultations on matters pertaining to ILO activities between representatives of the government, employers and workers.

### Why in News?

- The ILO has expressed deep concern over the labour law amendments and exemptions initiated by several Indian states, and has appealed to Prime Minister Narendra Modi to intervene and give a clear message to states on international commitments.

## 3. Asian Infrastructure Investment Bank

### About AIIB

- The Asian Infrastructure Investment Bank (AIIB) is an international development bank that provides financing for infrastructure projects in Asia.
- Headquartered in **Beijing**, it began operations in 2016.
- It includes 102 members worldwide (**India** is a founder member of AIIB).
- AIIB consists of two classes of membership: **regional and non-regional members**. Regional members hold **75% of the total voting power** in the Bank.
- **China** is the largest shareholder with 26.64 per cent voting shares in the bank. **India** is the second largest shareholder with 7.6 per cent voting shares followed by **Russia** 6.0 per cent.
- India is the biggest borrower of AIIB.



### Why in News?

- The Government of India has taken a \$500 million loan from the Asian Infrastructure Investment Bank to support its emergency response to the COVID-19 pandemic and to strengthen the preparedness of the country's public health systems.
- This is part of a \$1.5 billion project being co-financed by the World Bank, which approved a \$1 billion loan for this purpose at the beginning of April.

## 4. Food Corporation of India

### About FCI

- Food Corporation of India (FCI) is a **statutory Organization** under the Ministry of Consumer Affairs, Food & Public Distribution.
- It was set up in 1965 under the Food Corporations Act 1964 with the primary duty to purchase, store, move/transport, distribute and sell foodgrains and other foodstuffs.
- The main objectives of FCI are
  - Procurement of food grains from farmers at Minimum Support Prices (MSP) announced by the Government;
  - Distribution of food grains to consumers through PDS, particularly the vulnerable sections of society at affordable prices; and

- Maintenance of buffer stock of food grains for food security and price stability.
- Thus, it is mandated to serve the interests of producers and consumers alike.

### Why in News?

- The Ministry of Consumer Affairs, Food & Public Distribution has directed the FCI to coordinate with the States to expedite the lifting of food grains to meet urgent food requirements due to nationwide lockdown.

## 5. Competition Commission of India (CCI)

### Competition Commission of India

- Competition Commission of India is a **statutory body** responsible for enforcing the **Competition Act, 2002**.
- The following are the objectives of the Commission.
  - To prevent practices having adverse effects on competition.
  - To promote and sustain competition in markets.
  - To protect the interests of consumers and
  - To ensure freedom of trade
- CCI consists of a **Chairperson and 6 Members appointed by the Central Government**.

### Why in News?

- The Competition Commission of India is looking into allegations that Alphabet Inc's Google is abusing its market position to unfairly promote its mobile payments app in the country.
- The complaint alleges google more prominently showcases its Google Pay app inside its Android app store in India, giving it an unfair advantage over apps of competitors, which hurts consumers.

### Previous instances

- This is Google's third major antitrust challenge in India. In 2018, the CCI fined Google \$21 million for "search bias", but a company appeal against that is pending.
- Last year, the CCI also started probing Google for allegedly misusing its

dominant position to reduce the ability of smartphone manufacturers to opt for

alternate versions of its Android mobile operating system.

## FLORA & FAUNA

### 1. Sal Forest tortoise

#### About:

- The sal forest tortoise is widely distributed over eastern and northern India and Southeast Asia.
- Also known as the elongated tortoise, the sal forest tortoise, is a **critically endangered species** as per IUCN.
- It is heavily hunted for food, decorative masks, and international wildlife trade.



#### Why in the news?

- A recent study by ecologists in the **Wildlife Institute of India** found that

over 90% of the potential distribution of the sal forest tortoise species falls outside the current protected area's network.

- The study points out that protected areas are designated in a largely mammal-centric way like tiger-centric. Many reptiles and amphibians which are equally threatened live outside protected areas where exploitation risk is more.

#### Wildlife Institute of India

- Wildlife Institute of India (WII) was established in 1982 as an autonomous institute of the Ministry of Environment, Forest & Climate Change (MoEF&CC).
- Its primary mandates are to:
  - carry out scientific and applied research on various issues of wildlife and biodiversity conservation,
  - build capacity in the field of wildlife management and conservation planning,
  - provide technical inputs to MoEF&CC and other stakeholders.

# AGRICULTURE

## 1. Essential Commodities Act

### About ECA

- The Essential Commodities Act (ECA) was enacted by the Central Government in 1955 to control and regulate trade and prices of commodities declared essential under the Act.
- The Act empowers the **Central and state governments** concurrently to control production, supply and distribution of certain commodities in view of rising prices and to prevent Black marketing.
- The measures that can be taken under the provisions of the Act include licensing, distribution and imposing stock limits. The governments also have the power to fix price limits, and selling the particular commodities above the limit will attract penalties.
- Most of the powers under the Act have been delegated by the Central Government to the State Governments with the direction that they shall exercise these powers.
- Some of the major commodities that are covered under the act:
  - Petroleum and its products
  - Food stuff, including edible oil and seeds, vanaspati, pulses, sugarcane
  - Drugs- prices of essential drugs
  - Fertilisers

### Why in News?

- The central government announced that it will **deregulate the sale of six types of agricultural produce**, including cereals, edible oils, oilseeds, pulses, onions and potatoes, by amending the Essential Commodities Act, 1955.
- Stock limits on these commodities will not be imposed except in times of a national calamity or a famine, and will not be imposed at all on **food processors or value chain participants**, which/who will be allowed to store as much as allowed by their installed capacity. **Exporters** will also be exempted.

### Rationale for the move

- Traders have long complained of harassment under the Act on the suspicion of hoarding, black marketing and speculation, while food processors and exporters have also pointed out that they may need to stock commodities for longer periods of time. The Act has disincentive construction of storage capacity and hindered farm exports.
- It is hoped that the amendment will bring more private investment into warehouses and post-harvest agricultural infrastructure, including processors, mills and cold chain storage.
- It could help farmers sell their produce at more competitive rates if there is no fear of government intervention to artificially suppress market prices, and is likely to give a boost to farm exports.

# ECONOMY

## 1. Directorate General of Foreign Trade

### About DGFT

- The Directorate General of Foreign Trade (DGFT) organisation is an attached office of the **Ministry of Commerce and Industry**. It is headquartered in New Delhi.
- This Directorate is responsible for formulating and implementing the **Foreign Trade Policy** with the main objective of promoting India's exports.

### Why in News?

- The Directorate General of Foreign Trade has removed the active pharmaceutical ingredient (API) of paracetamol (common fever medication) out of the 'restricted for export' list. It means the export of the API of paracetamol from the country will be resumed.
- More than two months ago, the raw material of the paracetamol as well as 12 other APIs and formulations made from them were not allowed to be exported by the government amid the COVID-19 outbreak, **fears of disruption in supplies from China and drug shortage**.

### What are active pharmaceutical ingredients?

- APIs refer to the **biologically active component** of a drug product.
- APIs are intended to furnish pharmacological activity or other direct effect in the diagnosis, cure, mitigation, treatment, or prevention of disease or to affect the structure or function of the body.
- Other ingredients of Drug products are commonly known as "**excipients**."

## 2. Definition of MSMEs

### What's in the news?

- Recently, the government decided to change the **basic definition of MSME** and also **end the difference between the manufacturing and services sector**.

- Till now, MSMEs are categorised based only on the investment in machinery or equipment. The new classification has **raised the investment limit** and included **annual turnover** as an additional criteria.
- The Central Government, hereby notifies the following criteria for classification of micro, small and medium enterprises, namely:—
  - a **micro enterprise**, where the investment in Plant and Machinery or Equipment does not exceed one crore rupees and turnover does not exceed five crore rupees;
  - a **small enterprise**, where the investment in Plant and Machinery or Equipment does not exceed ten crore rupees and turnover does not exceed fifty crore rupees;
  - a **medium enterprise**, where the investment in Plant and Machinery or Equipment does not exceed fifty crore rupees and turnover does not exceed two hundred and fifty crore rupees.

### Rationale for the move

- It has been a long-standing demand from industry to hike the investment limits, as with inflation, units often cross the threshold that will bring them benefits.
- To prevent this, they either run their operations at a reduced level or incorporate multiple units so that turnover is distributed in a way that they remain within the threshold that will give them the benefits.
- With the revised definitions of MSMEs, they will not have to worry about growing their size and can still avail benefits.
- The government has also planned to raise MSMEs' contribution to India's exports to 60% from the 48% at present and also boost the sector's contribution to the country's GDP from 29% currently to 50%.

### 3. INR-USD Derivative trading

#### What is a Derivative?

- A derivative is a contract between two parties which derives its value/price from an underlying asset. Generally stocks, bonds, currency, commodities and interest rates form the underlying asset.
- The most common types of derivatives are **futures, options, forwards and swaps.**

#### Futures and Options

- A futures contract is an agreement between two parties to buy or sell an asset at a certain time in the future at a certain price. Here, the **buyer is obliged** to buy the asset on the specified future date.
- An options contract gives the buyer the right to buy the asset at a fixed price. However, there is **no obligation on the part of the buyer** to go through with the purchase.

#### Why in News?

- Finance Minister Nirmala Sitharaman has inaugurated the rupee-dollar currency derivatives in the form of futures and options at the **India International Exchange Limited (India INX).**
- Currency derivatives are financial contracts between the buyer and seller involving the exchange of two currencies at a future date, and at a stipulated rate.
- Currency Derivatives Trading is suitable for those interested in **reducing their foreign exchange rate risk.**

#### About India INX

- The India International Exchange Limited is **India's first international stock exchange.**
- It is located at the International Financial Services Centre (IFSC), GIFT City in Gujarat. It is a **subsidiary of BSE Limited.**

### 4. Patent rights

#### What is a patent?

- It is an **exclusive right** granted for an **invention** that provides a new way of

doing something, or offers a new technical solution to a problem.

- It is a **statutory right** granted for a **limited period of time** to the person by the Government for an invention, in exchange for full disclosure of his invention and excluding others from making, processing, using, selling the patented product without his consent.
- Through this the patent owner maintains a monopoly for a limited period of time on the use and development of an invention.

#### What is the term of a patent in the Indian system?

- The term of every patent granted is **20 years** from the date of filing of application.

#### Which Act governs the patent system in India?

- The patent system in India is governed by the Patents Act, 1970 as amended by the Patents (Amendment) Act, 2005 and the Patents Rules, 2003.
- The Patent Rules are regularly amended in consonance with the changing environment, most recent being in 2016.

#### Does Indian Patent give protection worldwide?

- No. Patent protection is a territorial right and therefore it is effective only within the territory of India.
- There is **no concept of global patent.**

#### What can be patented?

- An invention relating either to a product or process that is new, involving inventive steps and capable of industrial application can be patented.
- **Criteria of patentability**
  - **Novelty:** i.e. some part of it has a new development and has not been published in India or elsewhere before the date of filing of patent application in India.
  - **Inventive Step:** If someone who was skilled in that particular field would consider the invention to be an unexpected or surprising

development on the invention date

- **Industrial Applicability:** Invention should be useful, such that it can be used in an industry.

### Patenting in India

- The **Indian Patent Office** grants patents in the country, in accordance with domestic laws and the **Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS)**, of WTO.
- The Indian Patent Office is administered by the **Office of the Controller General of Patents, Designs & TradeMarks (CGPDTM)**, under the Department for Promotion of Industry and Internal Trade (DPIIT), Ministry of Commerce and Industry.

### Why in News?

- Low-cost personal protective equipment (PPE) for healthcare workers, designed and produced by the **Indian Navy**, has received a patent.
- The patent was successfully filed by the Intellectual Property Facilitation Cell (IPFC) of the Defence Ministry in association with the National Research Development Corporation (NRDC).

### About IPFC

- The Intellectual Property Facilitation Cell was set up in 2018 within the Ministry of Defence to promote creation of Intellectual property in the defence sector.
- IPFC provides general advisory about IPRs, such as patents, trademarks, designs and copyrights and Services such as IP Protection, IP Awareness & Training and Counseling & Advisory Services.
- IPFC was set under **Mission Raksha Gyan Shakti**.
- The Mission Raksha Gyan Shakti was launched in 2018 with the objective to **inculcate IP culture in Indian defence manufacturing ecosystem**.

### About NRDC

- The National Research Development Corporation was established in **1953** by the Government of India with the primary

objective of promoting, developing and commercialising the technologies / know-how / inventions / patents / processes emanating from various national R&D institutions / Universities.

- It is presently working under the administrative control of the **Dept. of Scientific & Industrial Research, Ministry of Science & Technology**.
- NRDC has also successfully exported technologies and services to both developed as well as the developing countries.
- *Refer Pulse April edition for more details on TRIPS & Intellectual property rights.*

## 5. Toman

### What is it?

- It is the new currency of Iran

### What's in the news?

- Iran's parliament has passed a bill allowing the government to slash four zeros from the national currency Rial, after a sharp fall in the value of the currency as a result of crippling U.S. sanctions.
- The bill also changes the official Iranian currency from the Rial to the **Toman**. Each Toman will be worth 10,000 Tials under the new system.

### Rationale behind the move

- Removing zeros from the national currency will reduce the current difficulty in financial transactions and mitigate the burden of carrying loads of Rials for even the most minor purchases due to inflation.
- During the passage of the bill, the Rial's exchange rate was 156,000 to the dollar.
- The idea of removing four zeros gained strength after 2018, when U.S. President Donald Trump exited Iran's **2015 nuclear deal** and reimposed sanctions, as the Rial lost more than 60% of its value.
- Iran's weak currency and high inflation have led to sporadic street protests since late 2017.
- *Refer Pulse November edition for more details on Iran nuclear deal.*

# SCIENCE AND TECHNOLOGY

## 1. 5G technology

### What is 5G?

- 5G is **next generation wireless network technology** that's expected to change the way people live and work.
- 5G enables a new kind of network that is designed to connect virtually everyone and everything together including machines, objects, and devices.

### What are the benefits of 5G?

- The three major benefits offered by 5G are **higher speeds, higher bandwidth and lower latency**.

### Speed

- Speed is one of the most highly anticipated elements of the 5G network which is **expected to be nearly 100 times faster than 4G**.
- Such high speeds are possible because most 5G networks are to be built on **super-high-frequency airwaves**, also known as **high-band spectrum**.
- The **higher frequencies can transmit much more data**, much faster than on 4G.

### Capacity

- The 5G network is expected to have significantly more capacity than 4G.
- This is because 5G will have **greater bandwidth**, meaning it **can handle many more connected devices** than previous networks.
- It will bring in an **"internet of things"** era, filled with connected toothbrushes, kitchen appliances, street lamps and more.

### Latency

- Latency is the time it takes for devices to communicate with each other or with the server that's sending them information.
- Latency is already low with 4G, but 5G will make it **virtually zero**.
- It will be essential for technologies such as **self-driving cars** which require instant communication of huge data to ensure safety of its passengers.

### How is latency different from speed?

- A small but significant difference exists between speed and latency.
- Speed is the amount of time it takes to download the contents of a webpage.
- Latency is the time between when a text is sent to another phone and when that receiver's phone registers that it has received a new message.

### Are there drawbacks?

- The **high-band network signals don't travel very far** and struggle to move through hard surfaces.
- In order to compensate for those challenges, wireless carriers building high-band 5G networks are installing tons of small cell sites (about the size of pizza boxes) to light poles, walls or towers, often in relatively small proximity to one another.
- For that reason, most carriers are deploying 5G city by city.
- Significant adoption of 5G is going to take years — industry trade group GSMA estimates that by 2025, around half of mobile connections will be 5G (the rest will be older tech, like 4G and 3G).
- There are also concerns among regulators and others about the **security** of 5G, especially since crucial technologies such as self-driving cars and healthcare systems will be built on top of the network.

### Why in News?

- The United Kingdom is hoping to form a club of 10 nations that could develop its own 5G technology and reduce dependence on Huawei (a Chinese company).
- The U.K. is proposing a **"D10"** club of democratic partners that groups the G7 nations with Australia and the Asian technology leaders South Korea and **India**.

## 2. Darknet

### What Is the DarkNet?

- The "dark net," also known as the "**dark web**," is a network of **secret websites** built over the internet which is **encrypted**.
- These are networks that are **only available to a select group of people** and not to the general internet public, and only accessible via authorization, specific software and configurations.
- They are **not searchable by traditional means**, such as a search engine, and it's not visible through traditional web browsers.
- It needs special browsers like **TOR** (The Onion Router), **Freenet** or **I2P**.
- Darknet provides **anonymity** to the users.

#### Concerns about DarkNet

- The dark net is **most often used for illegal activities** such as black markets, illegal file sharing, and the exchanging of illegal goods or services (including stolen financial and private data).
- The anonymity of DarkNet attracted the criminal element to it such as drug-dealers, hackers, arms dealers and child pornography peddlers.
- Here they are free to conduct their business and express themselves without fear of repercussion.
- It is becoming a **huge cyber security nightmare** to governments and businesses all over the world.

#### DarkNet vs. Deep Web

- The terms "darknet" and "deep web" are occasionally used interchangeably. However, this is not correct.
- The **dark net** is **part of the greater deep web** which is **purposefully hidden** from the surface net by additional means.
- The **deep web encompasses all unindexed sites**, which are **unsearchable** that don't pop up when you do an Internet search.
- **Not all activities associated with the deep web are nefarious.**
- In most cases, these pages are not searchable through traditional channels because they are **password-protected**

and require specific tools or authorization (like a log-in) in order to access them.

- Personal email, online banking, and other similar sites are included under the umbrella of the "deep web."

#### Why in News?

- Personal details of about 2.90 crore Indian job seekers have been found dumped on the darknet, raising concerns among cyber crime agencies and experts in India over a massive data breach.

### 3. Adenovirus

#### About

- Adenoviruses are a **group of common viruses that infect the lining of eyes, airways and lungs, intestines, urinary tract, and nervous system.**
- They're common causes of fever, coughs, sore throats, diarrhea, and pink eyes.
- Infections happen in children more often than in adults. Most kids will have at least one type of adenovirus infection by the time they're 10.
- The infections usually cause only mild symptoms and get better on their own in a few days.
- But they can be more serious in people with weak immune systems, especially children.
- They're **very contagious**. They can spread through **droplets from coughs or sneezes** of the infected persons.

#### Why in News?

- A **phase-1** trial using a single dose of a vaccine (**Ad5-nCoV**) was found to be safe, well-tolerated and able to generate immune responses against the novel coronavirus.
- It uses a **recombinant adenovirus type-5** vector that carries the genetic material that codes for spike glycoprotein of SARS-CoV-2 virus.

### 4. 'FAITH' trials

#### What is it?

- It is a new combination clinical trial to examine whether early administration of

a combination of **Favipiravir** and **Umifenovir** enhances antiviral efficacy on COVID-19 patients.

#### What's in the news?

- Glenmark Pharmaceuticals Ltd., headquartered in Mumbai, is going to conduct a study to examine the combination of **Favipiravir** and **Umifenovir** in Indian Hospital setting.

#### About Favipiravir

- Favipiravir, an **antiviral** tablet, a generic version of *Avigan* that is used to **treat influenza** in Japan.
- Favipiravir has demonstrated activity against influenza viruses and has been approved in Japan for the treatment of novel influenza virus infections.
- **Phase-3 clinical trials** on Favipiravir for COVID-19 patients have been initiated in India recently.

#### About Umifenovir

- Umifenovir is a **dual-acting direct antiviral/host-targeting agent** i.e., attacks viral pathogens and also targets host proteins that interact with the virus.
- It is used for the treatment and prophylaxis (preventive care) of influenza and other respiratory infections.
- Umifenovir's ability to exert antiviral effects through multiple pathways has resulted in considerable investigation into its use for a variety of enveloped and non-enveloped RNA and DNA viruses, including Flavivirus, Zika virus, hepatitis, etc.

## 5. Cerberus - Banking Trojan malware

#### What is a Trojan?

- A Trojan horse, or Trojan, is a type of **malicious code or software** that **looks legitimate** but can take control of your computer.
- A Trojan is designed to damage, disrupt, steal, or in general inflict some other harmful action on your data or network.
- Once installed, the Trojan horse can gain access to computer files and systems.

- This type of computer program is built with a backdoor, allowing outside parties to gain access to a computer.

#### What is a Banker Trojan/ Banking Trojan?

- A Banker Trojan is a malicious computer program designed to gain access to confidential information stored or processed through online banking systems.
- Banker Trojan is a form of Trojan horse and can appear as a legitimate piece of software until it is installed on an electronic device.

#### Why in News?

- The Central Bureau of Investigation (CBI) issued a nationwide alert on banking trojan 'Cerberus' following input from the Interpol.
- The Cerberus banking trojan is primarily used to steal financial data, such as credit card numbers. This malicious software takes advantage of COVID-19 pandemic to impersonate and send SMS using the lure of COVID-19 related content to download the embedded malicious link.

## 6. Alzheimer's disease

#### About Alzheimer's disease

- Alzheimer's disease is an irreversible, progressive brain disorder that **slowly destroys memory and thinking skills** and, eventually, the ability to carry out the simplest tasks.
- In most people with the disease—those with the late-onset type—symptoms first appear in their mid-60s. Early-onset Alzheimer's occurs between a person's 30s and mid-60s and is very rare.
- Alzheimer's disease is the most common cause of **dementia** — a continuous decline in thinking, behavioural and social skills that disrupts a person's ability to function independently.
- There is **no treatment** that cures Alzheimer's disease or alters the disease process in the brain.
- In advanced stages of the disease, complications from severe loss of brain function — such as dehydration,

malnutrition or infection — result in death.

- It is caused by a combination of genetic, lifestyle and environmental factors that affect the brain over time.
- India is third behind China and the U.S. in the number of Alzheimer's patients.

#### Why in News?

- Researchers at the Indian Institute of Technology-Guwahati (IIT-G) have arrived at methods for preventing the accumulation of neurotoxic molecules in the brain, which leads to memory loss in Alzheimer's disease.

#### More in News

- The cause of Alzheimer's is the accumulation of **amyloid-beta peptides** in the brain.
- This peptide is **akin to the plaque that blocks arteries** over a period of time, affecting blood supply and leading to cardiovascular diseases.
- Its aggregation, meaning the formation of one over the other, deforms the cortex of the brain leading to Alzheimer's.
- The two methods proposed are: **use of "trojan peptides"** and **application of a low-voltage electric field** toward preventing amyloid plaques from aggregating to cause memory loss.
- The trojan peptide is roughly like the peptide in the body. But while it goes along with the other peptides, its function is contrary to aggregation.
- The use of an external electric or magnetic field modulates these molecules to pull back the possibility of Alzheimer's to a certain extent.

## 7. UV Blaster- disinfection tower by DRDO

### About DRDO

- The Defence Research and Development Organisation (DRDO) is the R&D wing of the Ministry of Defence, Government of India.
- It has a vision to empower India with cutting-edge defence technologies and a

mission to **achieve self-reliance** in critical defence technologies and systems.

- It is a network of more than 50 laboratories, headquartered in Delhi.
- DRDO was formed in **1958** from the amalgamation of the Technical Development Establishment (TDEs) of the Indian Army and the Directorate of Technical Development & Production (DTDP) with the Defence Science Organisation (DSO).
- It covers various disciplines, like aeronautics, armaments, electronics, combat vehicles, missiles, advanced computing and simulation, special materials, information systems and agriculture.

#### Why in News?

- The DRDO has developed an ultra violet (UV) disinfection tower, named UV Blaster, for rapid and chemical-free disinfection of high infection-prone areas
- The equipment is useful for high tech surfaces like **electronic equipment, computers and other gadgets** in laboratories and offices that are not suitable for disinfection with chemical methods.
- The product is also effective for areas with large flow of people such as airports, shopping malls, metros, hotels, factories and offices
- It was designed and developed by **Laser Science & Technology Centre (LASTEC)** (of DRDO) based in Delhi.

## 8. Long March-5B

### About Long March-5B

- The Long March 5B rocket is a new version of the Long March 5 launcher, **China's most powerful rocket.**
- It is designed to loft massive payloads upto **25 metric tons** into **low Earth orbit.**
- The Long March 5B version — using a **"stage-and-a-half"** launch architecture — is tailored to launch large modules for China's planned space station.

### Why in News?

- China successfully carried out the first ever launch of its largest carrier rocket, Long March-5B, which was carrying a new-generation spacecraft.

## 9. Luhman 16A - a brown dwarf

### What is a brown dwarf?

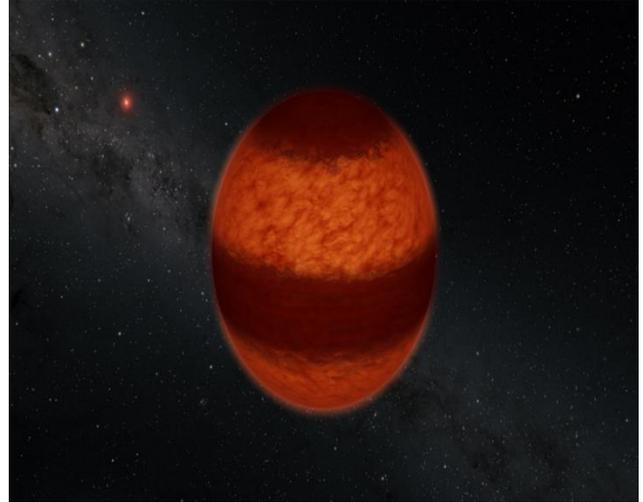
- Brown dwarfs are objects which have a size between that of a giant planet like Jupiter and that of a small star.
- Brown dwarfs are also called **failed stars**, because their masses are intermediate to the largest planets and the smallest main sequence stars.
- Their masses being too small, they are **unable to sustain fusion** of their hydrogen to produce energy.
- It is believed that some of the more massive brown dwarfs fuse deuterium or lithium and **glow faintly**.
- Starting in 1995, astronomers have been able to detect a few nearby brown dwarfs.
- All of the brown dwarfs discovered so far are parts of a **binary system**.
- A binary system is one in which two stars orbit around one another. Eg: planets of our solar system orbit our star, the Sun.

### About Luhman 16

- Luhman 16 is a binary star system, the **third closest system to the Sun** after **Alpha Centauri** and **Barnard's** star.
- At a distance of about 6.5 light years from the Sun, this pair of brown dwarfs referred to as Luhman 16A and Luhman 16B orbit each other, casting a dim light.

### Why in News?

- A group of international astrophysicists have identified cloud bands on the surface of Luhman 16A, whereas it was absent in Luhman 16B.



- The scientists used the **Very Large Telescope** at **European Southern Observatory, Chile** for the study.
- They have used an idea put forth nearly two decades ago by Indian astrophysicist **Sujan Sengupta**, who is at the Indian Institute of Astrophysics, Bengaluru, that the light emitted by a cloudy brown dwarf, or reflected off an extrasolar planet, will be polarised.
- He suggested that a polarimetric technique could serve as a potential tool to probe the environment of these objects.
- Subsequently, many astronomers detected polarisation of brown dwarfs.

### Polarization of Light

- Natural sunlight and almost every other form of artificial illumination transmits light waves whose electric field vectors vibrate in all perpendicular planes with respect to the direction of propagation.

## Light Passing Through Crossed Polarizers

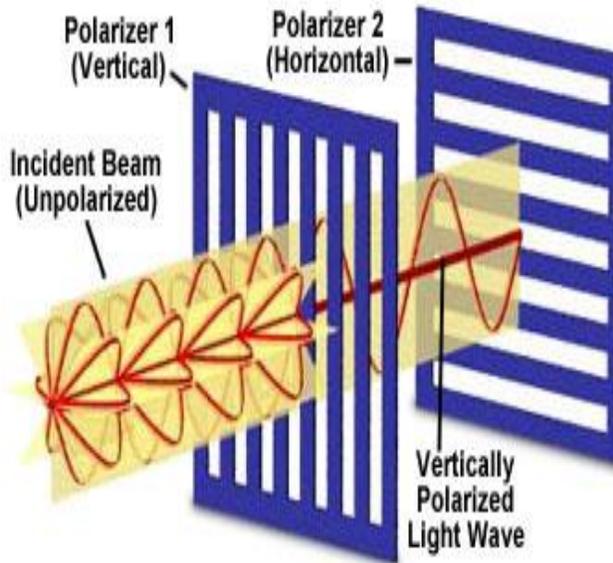


Figure 1

- When the **electric field vectors are restricted to a single plane** by filtration, then the light is said to be polarized with respect to the direction of propagation and all waves vibrate in the same plane.

## 10. ELISA test

### What is an ELISA test?

- An **Enzyme-Linked Immunosorbent Assay**, also called ELISA or EIA, is a test that detects and measures **antibodies in the blood**.
- This test can be used to **determine the presence of antibodies** related to certain infectious conditions.
- Antibodies are proteins that your body produces in response to harmful substances called antigens.
- An ELISA test may be used to diagnose: HIV (AIDS), rotavirus, Zika virus, varicella-zoster virus which causes chickenpox and shingles, etc.
- ELISA is often used as a **screening tool** before more in-depth tests are ordered.
- As ELISAs require **sophisticated equipment and skilled technicians** to perform the tests, their **use is limited** to certain circumstances.

### Why in News

- The Pune-based National Institute of Virology (NIV) has developed an ELISA test to detect antibodies that the body develops in response to infection by the SARS-CoV-2.
- The test will detect **IgG antibodies** present in blood samples.
- This is the first time India has developed an indigenous ELISA test for coronavirus.

### Better to detect past infections

- Since it detects antibodies, even people who have remained symptom-free (asymptomatic) during the entire course of the infection will test positive.
- While the RT-PCR, which detects the RNA of the coronavirus, enables detection of current infection, it will not be useful if the testing is carried out days after the infection clears as the virus will no longer be present.
- However, antibodies developed in response to the coronavirus infection will be present in the blood for a longer duration and hence the ELISA test can help detect past infection.
- The maximum time the antibodies will be present in the body is not known for coronavirus.

### Timelines to test

- It takes **one-three weeks for the antibodies to develop** in response to infection.
- So, if a person who has been recently infected by the virus is tested during the **window period** (the time taken to develop antibodies) the result will turn out to be negative (*false negative*).
- But a repeat test after a couple of weeks will indicate the true infection status.
- *Refer Pulse April edition for more details on COVID-19 Testing.*

## 11. AI based chatbot, PAi

### What's in the news?

- **National Payment Corporation of India (NPCI)** has launched an artificial intelligence (AI) based chatbot, PAi, to create awareness around its products like

FASTag, RuPay, UPI, AePS on a real time basis.

- This is yet another NPCI's initiative to improve **digital financial inclusion in India**.
- The AI virtual assistant PAi can be accessed 24/7. It will provide users information and guidance about NPCI products round the clock.
- PAi is developed by Bengaluru based startup **CoRover Private Limited**.

#### About NPCI

- NPCI was incorporated in 2008 as an umbrella organization for operating retail payments and settlement systems in India.
- It is an initiative of the RBI and Indian Banks' Association (IBA) under the provisions of the Payment and Settlement Systems Act, 2007, for creating a robust Payment & Settlement Infrastructure in India.
- It has been incorporated as a **"Not for Profit" Company** under the Companies Act 2013.
- It has changed the way payments are made in India through a bouquet of retail payment products such as **RuPay card, Immediate Payment Service (IMPS), Unified Payments Interface (UPI), Bharat Interface for Money (BHIM), BHIM Aadhaar, National Electronic Toll Collection (NETC Fastag) and Bharat BillPay**.

## 12. AI-related developments

#### National Artificial Intelligence Portal

- The government launched the National Artificial Intelligence (AI) Portal ([www.ai.gov.in](http://www.ai.gov.in)), developed jointly by the **National e-Governance Division** of the Ministry of Electronics and Information Technology (MeitY) and the **National Association of Software and Service Companies (Nasscom)**.
- The portal is meant to work as a **"one stop digital platform"** for all 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.

#### Responsible AI for Youth Programme

- The government also announced the Responsible AI for Youth Programme, which is aimed at **imparting education and skills in AI to students in government schools**.
- The programme will empower the youth to become AI ready and help **reduce the skill gap**, while enabling youth to create meaningful social impact solutions.
- It is open to students from Government Schools based in District Headquarters, in classes 8-12.
- The Program has been created and launched by the **National e-Governance Division** in collaboration with **Intel India**, with support from **Department of School Education and Literacy (DoSE&L)**, Ministry of Human Resource Development.

## REPORTS & INDICES

### 1. SRS demographic survey

#### About Sample Registration System

- The Sample Registration System (SRS) is a large-scale demographic survey for providing reliable annual estimates of Infant mortality rate, birth rate, death rate and other fertility & mortality indicators at the national and subnational levels.
- Initiated on a pilot basis by the **Registrar General of India** in a few states in 1964-65, it became fully operational during 1969-70.
- The field investigation consists of continuous enumeration of births and deaths in selected sample units by resident part time enumerators, generally anganwadi workers & teachers, and an independent survey every six months by SRS supervisors.
- The data obtained by these two independent functionaries are matched. The unmatched and partially matched events are re-verified in the field and thereafter an unduplicated count of births and deaths is obtained.

#### Why in the news?

- As per the latest Sample Registration System data, India's infant mortality rate (IMR) has **improved marginally** from 33 per 1,000 live births in 2017 to 32 in 2018.
- While India's birth rate stood at 20, the death rate was 6.2 in 2018.

#### Declining trend of IMR, BR and DR

- The IMR at an all-India level has declined from 50 to 32 in the last decade.
- There has been about an 11 per cent decline in birth rate in the last decade, from 22.5 in 2009 to 20.0 in 2018.
- In the last decade, death rate at an all-India level has declined from 7.3 to 6.2.

#### Rural urban difference

- In the last 10 years, IMR has witnessed a decline of about 35 per cent in rural areas and about 32 per cent in urban areas.

- The birth rate has continued to be **higher in rural areas** compared to urban areas in the last four decades.

#### States's count

- **Madhya Pradesh** continues to have the worst IMR in the country at 48 while **Nagaland** has the best at 4.
- Among large states, **Kerala is the best performer** with an IMR in single digits at 7, is the only state which has now achieved the United Nations' sustainable development goal for IMR reduction, which was set at 8 for the year 2020.
- **Bihar** has the highest birth rate at 26.2. **Chhattisgarh** has the highest death rate at 8.

#### Infant Mortality Rate:

- The probability that a **child born in a specific year or period will die before reaching the age of 1 year**, if subject to age-specific mortality rates of that period, expressed as a rate **per 1000 live births**.
- The infant mortality rate is, strictly speaking, not a rate (i.e. the number of deaths divided by the number of population at risk during a certain period of time) but a probability.

#### Birth rate:

- The Birth Rate is expressed as the **number of live births in a year per thousand of population**.

#### Death rate:

- The **ratio of deaths to the population of a particular area** or during a particular period of time, usually calculated as the number of deaths **per one thousand people per year**.

#### Registrar General of India

- The office of Registrar General and Census Commissioner of India was founded in 1961 by the **Ministry of Home Affairs** for arranging, conducting and analysing the results of the demographic surveys of India, including census and linguistic survey.

### 2. Energy Transition Index

### About the Index

- It is released by the **World Economic Forum (WEF)**.
- The index benchmarks 115 economies on the current performance of their energy systems across economic development and growth, environmental sustainability, and energy security and access indicators- and their readiness for transition to secure, sustainable, affordable, and inclusive energy systems.

### Why in News?

- The World Economic Forum has released its latest edition of the Energy Transition Index.

### Highlights of the Report

- The results for 2020 show that 75 per cent of countries have improved their environmental sustainability.
- India has moved up two positions to **rank 74th** on the Index with improvements on **all three dimensions of the energy triangle** -- economic development and growth, energy access and security, and environmental sustainability.
- **Sweden** has topped the Index for the third consecutive year.
- The "**emerging centres of demand**" such as India (74th) and China (78th) have made consistent efforts to improve the enabling environment, which refers to political commitments, consumer

engagement and investment, innovation and infrastructure, among others.

- For India, gains have come from a government-mandated renewable energy expansion programme, now extended to **275 GW by 2027**.
- India has also made significant strides in energy efficiency through bulk procurement of LED bulbs, smart meters, and programs for labelling of appliances.
- India is one of the few countries in the world to have made consistent year-on-year progress since 2015.
- The coronavirus pandemic risks cancelling out recent progress in transitioning to clean energy, with unprecedented falls in demand, price volatility and pressure to quickly mitigate socioeconomic costs placing the near-term trajectory of the transition in doubt.

### About WEF

- The World Economic Forum is the International Organization for Public-Private Cooperation.
- It was established in 1971 as a not-for-profit foundation and is headquartered in Geneva, Switzerland.

### Important Reports by WEF

- Global Competitiveness Report
- Global Risks Report
- Global Gender Gap Report
- Travel & Tourism Competitiveness Report

# POLITY

## 1. National Green Tribunal

### About NGT:

- The National Green Tribunal (NGT) is a **statutory body** that was established in 2010 by the National Green Tribunal Act.
- It is a **specialised judicial body** equipped with expertise solely for the purpose of adjudicating environmental cases in the country.
- The Tribunal's dedicated jurisdiction in environmental matters shall provide **speedy environmental justice** and help reduce the burden of litigation in the higher courts.
- **New Delhi** is the Principal Place of Sitting of the Tribunal and Bhopal, Pune, Kolkata and Chennai are the other four places of sitting of the Tribunal.

### Composition of Tribunal:

- The Tribunal shall consist of-
  - a full time **Chairperson**;
  - not less than ten but subject to a maximum of twenty full time **Judicial Members**;
  - not less than ten but subject to a maximum of twenty full time **Expert Members**.
- The chairperson of the panel is appointed by the central government in consultation with the chief justice of India.
- The members, judicial and expert, are picked by the government on the recommendation of a selection committee.

### Powers and Jurisdiction:

- The **Tribunal's orders are binding** and it has power to grant relief in the form of compensation and damages to affected persons.
- The Tribunal has jurisdiction **over all civil cases** involving a substantial question **relating to the environment**.
- The Tribunal is not bound by the procedure laid down under the Code of Civil Procedure 1908, but shall be **guided by principles of natural justice**.

- The Tribunal has **powers to review its own decisions**. If this fails, the decision can be challenged before the **Supreme Court within ninety days**.
- Any person seeking relief and compensation for environmental damage involving subjects in the legislations mentioned in **Schedule I of the National Green Tribunal Act, 2010** may approach the Tribunal. The statutes in Schedule I are:
  - The Water (Prevention and Control of Pollution) Act, 1974;
  - The Water (Prevention and Control of Pollution) Cess Act, 1977;
  - The Forest (Conservation) Act, 1980;
  - The Air (Prevention and Control of Pollution) Act, 1981;
  - The Environment (Protection) Act, 1986;
  - The Public Liability Insurance Act, 1991;
  - The Biological Diversity Act, 2002.

### Why in News?

- In May, **styrene gas** leaked from a chemical plant owned by the South Korean company LG Polymers India Pvt. Ltd in Gopalapatnam, Vizag which killed 11 people and sickened over a 1,000, and also affected many flora and fauna in the area.
- The National Green Tribunal (NGT) took *suo motu* cognisance of the matter and in its order, the NGT directed the application of a **strict liability principle** for damage to the people and environment.
- However, several legal experts argue that the NGT should have invoked the **principle of absolute liability**.

### Principle of strict liability

- The principle of strict liability states that a person who brings on to her land anything likely to cause harm is liable to

pay compensation when the thing escapes and causes harm.

- However, she is liable **only when there is non-natural use of land**; the principle also restricts liability when the escape is due to an act of strangers, of god, due to the person injured, when it happens with the consent of the person injured or with statutory authority.

#### Principle of absolute liability

- In 1986, Supreme Court in *MC Mehta vs Union (known as the Oleum gas leak case)* evolved its own rule of 'absolute liability'.
- It implies that whenever an enterprise is engaged in any dangerous or hazardous activity that threatens the people working in the enterprise and those living nearby, it owes an **absolute and non-delegable duty to the community** that no harm will be caused.
- If harm is indeed caused, the enterprise will have to compensate for damages, and **can't use exceptions provided in the case of strict liability**.
- The enterprise can't claim that the harm has not been caused due to negligence or that it had taken all reasonable precautions.
- Now, the tribunal and courts all over India have applied this principle in environmental matters in which human lives have been lost and the environment has been harmed.

#### What is styrene?

- Styrene is an organic compound with the formula **C<sub>8</sub>H<sub>8</sub>**. It is a **derivative of benzene (C<sub>6</sub>H<sub>6</sub>)**.
- It is **stored in factories as a liquid**, but **evaporates easily**, and has to be kept at temperatures under 20°C.

#### What is styrene used for?

- Styrene is the main raw material for synthesis of **polystyrene**.
- Polystyrene, in turn, is a **versatile plastic** that is used to make parts of various appliances such as refrigerators or micro-ovens; automotive parts; and parts of electronics such as computers; and also to manufacture disposable cups and in food packaging.
- Styrene is also used as an **intermediate to produce copolymers** — which are polymers derived from one or more species of monomers such as styrene.

#### What happens when exposed to styrene?

- **Short-term** exposure to the substance can result in **respiratory problems**, irritation in the eyes, irritation in the mucous membrane, and gastrointestinal issues.
- **Long-term** exposure could drastically affect the **central nervous system** and lead to other related problems like peripheral neuropathy.
- It could also lead to cancer and depression in some cases.

# INTERNATIONAL RELATIONS

## 1. United Nations Peacekeeping Forces

### About UN Peacekeeping Forces

- The United Nations Peacekeeping Forces are employed by the UN to maintain or re-establish peace in an area of armed conflict.
- The UN may engage in conflicts between states as well as in struggles within states. The UN acts as an impartial third party in order to prepare the ground for a settlement of the issues that have provoked armed conflict.
- The UN Peacekeeping Forces may only be employed when **both parties to a conflict accept their presence**.
- The Peacekeeping Forces are subordinate to the leadership of the United Nations. They are normally deployed as a consequence of a **UN Security Council** decision. However, on occasion, the initiative has been taken by the **General Assembly**.
- Operational control belongs to the **Secretary-General and his secretariat**.

### Two kinds

- There are two kinds of peacekeeping operations – **unarmed observer groups** and **lightly-armed military forces**. The latter are only allowed to employ their weapons for self-defence.
- The observer groups are concerned with gathering information for the UN about actual conditions prevailing in an area.
- The military forces are entrusted with more extended tasks, such as keeping the parties to a conflict apart and maintaining order in an area.
- The first UN peacekeeping mission was a team of observers deployed to the Middle East in 1948, during the **1948 Arab-Israeli War**. There are currently 13 UN peacekeeping operations deployed on three continents.
- **India** today is the **largest contributor of troops** to UN peacekeeping operations. More than 200,000 Indian troops have

served in 49 of the 71 UN peacekeeping operations deployed so far.

### Why in News?

- Major Suman Gawani of the Indian Army, who served as a peacekeeper with the United Nations Mission in South Sudan (UNMISS) in 2019, has won the prestigious United Nations Military Gender Advocate of the year Award.
- As a military observer in UNMISS from November 2018 to December 2019, Major Gawani was the principal focal point of contact for gender issues for military observers in the mission.

## 2. 'One China' policy

### China-Taiwan Relations

- Taiwan, officially known as the **Republic of China (ROC)**, is an island off the southern coast of China that has been governed independently from mainland China since 1949.
- China and Taiwan sharply disagree on the island's status. While Taiwan's government claims it is an independent country, the **People's Republic of China (PRC)** asserts that there is only **"one China"** and that Taiwan is an inalienable part of it.



Economist.com

### Background

- The China-Taiwan Relations can be traced back to 1949 and the end of the Chinese civil war.

- The defeated Nationalists, also known as the Kuomintang, retreated to Taiwan and made it their seat of government while the victorious Communists began ruling the mainland as the People's Republic of China.
- The island has since been run as a separate entity from mainland China, though Beijing never gave up its claim over Taiwan.

### 'One China' policy

- It is the diplomatic acknowledgement of China's position that there is **only one Chinese government**. It acknowledges Taiwan being part of China and the PRC as the sole legitimate government of China.
- Any country that wants diplomatic relations with mainland China **must break official ties with Taiwan**. This has resulted in Taiwan's diplomatic isolation from the international community.
- **India** is among the 179 of the 193 member states of the UN that do not maintain any diplomatic ties with Taiwan.

### Why in News?

- The U.S. has conveyed its support to confer observer status on Taiwan at the **World Health Assembly (WHA)** of the WHO.
- However, China opposed the U.S.' stance claiming Taiwan as its province with no right to its own diplomatic representation on the global stage and in international organizations, although Taiwan participated in the WHA as an observer from 2009 to 2016.
- The WHO recognised the People's Republic of China as the "one legitimate representative of China", in keeping with U.N. policy since 1971.
- **Taiwan is not a member of the WHO.**
- Taiwan's inclusion in the WHA, will require a **simple majority** from member states.

### World Health Assembly

- The World Health Assembly is the **decision-making body of WHO**. It is attended by delegations from all WHO Member States.

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

## 3. Open Skies Treaty

### About Open Skies Treaty

- The Open Skies Treaty allows countries to monitor signatories' arms development by **conducting unarmed, surveillance flights** over each other's territories.
- It entered into force in 2002 and currently has **thirty-four state parties**—the United States, Canada, Russia, Kazakhstan and thirty other countries in Europe (**India** is not a signatory to the treaty).
- For each state party or group of state parties, the treaty specifies an active quota, the number of observation overflights it may conduct per year, and a passive quota, the number of overflights it must accept.
- All of a state-party's territory can be overflown. No territory can be declared off-limits by the host nation.

### Why in News?

- The U.S. has given notice that it will exit the Open Skies Treaty alleging Russia had continuously and flagrantly violated the treaty.
- Meanwhile, Russia said it would continue to honour its commitments under the treaty as long as the treaty is in force.

### Similar treaties

#### Intermediate-Range Nuclear Forces treaty

- Signed in 1987, the Intermediate-Range Nuclear Forces (INF) treaty required the United States and the Soviet Union to eliminate all of their **nuclear and conventional ground-launched ballistic and cruise missiles** with ranges of **500 to 5,500 kilometres**.
- As a result of the treaty, both countries destroyed a total of 2,692 short-

medium-, and intermediate-range missiles.

- Last year, the **U.S. announced its formal withdrawal** from the Intermediate-Range Nuclear Forces treaty accusing Russia of breaching the terms of the deal.

#### New START

- The New Strategic Arms Reduction Treaty (New START) was signed in 2010 by **Russia and the United States** and entered into force in 2011.
- New START replaced the 1991 START I treaty, which expired in 2009, and superseded the 2002 Strategic Offensive Reductions Treaty (SORT).
- New START caps the deployed strategic nuclear warheads and bombs of the United States at Russia at 1,550 each. The Treaty includes limits on missiles, bombers, and land-based launchers for nuclear weapons.
- The Treaty also allows for verification inspections and information-sharing.
- The New Start Treaty is **due to expire next February**.

## 4. Mission Sagar

### Mission Sagar

- 'Mission Sagar' is Government of India's initiative to **assist island nations in Indian Ocean Region** amidst the ongoing COVID-19 pandemic.
- The Mission is being coordinated by the **Ministry of External Affairs and Ministry of Defence**.
- The deployment is in consonance with the Prime Minister Narendra Modi's vision of **Security and Growth for All in the Region (SAGAR)** promulgated in March 2015.
- As per SAGAR, India seeks to deepen economic and security cooperation with its maritime neighbours and assist in building their maritime security capabilities and also work to ensure a safe, secure and stable Indian Ocean Region.

- For this, India would cooperate on the exchange of information, coastal surveillance, building of infrastructure and strengthening their capabilities.



### Why in News?

- Indian Naval Ship Kesari has departed for Maldives, Mauritius, Seychelles, Madagascar and Comoros, to provide Food Items and COVID-19 related Medicines under Mission Sagar.

## 5. Artemis Accords

### What's in the news?

- **NASA** has formally announced the "Artemis Accords", a series of principles and processes whereby America and other countries would agree to a common set of principles covering **how the Moon is to be explored and its resources utilized**.
- The accords are named after **NASA's Artemis programme**. Via the Artemis program, NASA will land the first woman and the next man on the Moon by 2024.

### About the Accord

- The accord promotes **transparency and communication between nations**, requiring signatories to share their lunar plans, register any spacecraft sent to or around the moon and **release scientific data to the public**.
- Under the Accord, nations will be able to set **"safety zones"** to protect their

activities on the moon, they will have to work to mitigate the effects of debris in orbit around the moon and they will agree to provide emergency assistance to any astronauts in distress.

- At the moment, there is little practical international law governing activities on the moon. The **Outer Space Treaty of**

**1967** deals with general space exploration, while the more specific **Moon Agreement of 1984** states that “the moon and its natural resources are the common heritage of all mankind”, prohibiting the ownership of any part of the moon or any resources from the moon.

## ART & CULTURE

### 1. Purandara Dasa

#### About

- Sri Purandara Dasa was a great **devotee of Lord Krishna**, a **poet** and a **musician**.
- He was born in **1494** and was named **Srinivasa Nayaka**.
- After his renunciation, Srinivasa Nayaka became the disciple of the great saint **Vyasaraja**, who gave him the title **Purandara Vittala**, after the Lord of Pandarpur.
- Purandara Dasa is said to have composed around 475,000 songs, in **Kannada and Sanskrit** of which only about 1000 survived.
- Purandara Dasa is considered to be the **father of Carnatic Music** as he **formalized the music system** which was a blend of various traditions of South India and the musical science as explained in the Vedas.

#### Why in News?

- The Karnataka government has taken efforts to explore definitive archaeological evidence that may put an end to speculations regarding the birthplace of Purandara Dasa.
- As 'Purandara Vithala' was the pen name of his compositions, it was widely believed that the mystic poet was born in **Purandharagad, Maharashtra**.
- However, many in Malnad, Karnataka, claimed that he hailed from this region.

#### About Carnatic Music

- Carnatic music, also known as **karnataka sangītam** is one of the two styles of Indian classical music; the other is Hindustani music.
- The present form of Carnatic music is based on historical developments that can be traced to the fifteenth and sixteenth centuries C.E.
- Carnatic Music, which was based in South India, was substantially influenced by the pan-Indian **bhakti movement** which inspired the use of religious themes.

- In contrast to Hindustani music, the main emphasis in Carnatic music is on **vocal** music; most compositions are written to be sung, and even when played on instruments, they are meant to be performed in **gāyaki** (singing) style.
- Instruments include veena, rudra veena, violin, tambura, ghata, flute (venu), mridangam, nagaswara, and swarabhat.
- Carnatic songs (**kritis or kirtanas**) are varied in structure and style, but generally consist of three units: **Pallavi, Anupallavi and Charana**.
- The contemporaries **Tyagaraja** (1759-1847), **Muthuswami Dikshitar**, (1776 - 1827) and **Syama Sastri**, (1762-1827) are regarded as the **Trinity of Carnatic music**.

### 2. National School of Drama

#### About National School of Drama

- The National School of Drama is one of the foremost theatre training institutions in the world and the only drama institute in India.
- It was **set up by the Sangeet Natak Akademi** as one of its constituent units in **1959 at New Delhi**.
- In **1975**, it became an independent entity and was registered as an **autonomous organization** under the **Societies Registration Act XXI of 1860**, fully financed by the **Ministry of Culture**.

#### Why in News?

- NSD has launched a **"theatre for all" webinar series** on topics such as acting, sound and video technology for the stage and festival management for aspiring students and theatre enthusiasts.

#### Sangeet Natak Akademi

- The Sangeet Natak Akademi - India's national academy for music, dance and drama - is the **first National Academy of the arts** set-up by the Republic of India.
- It was created by a resolution of the (then) Ministry of Education, in **1952** at **New Delhi**.

- Since its inception the Akademi has been functioning as the apex body of the performing arts in the country, preserving and promoting the vast intangible heritage of India's diverse culture expressed in the forms of music, dance and drama.
- It is presently an **Autonomous Body of the Ministry of Culture** and is **fully funded by the Government** for implementation of its schemes and programmes.

### 3. Sherdukpen community of Arunachal Pradesh



#### Who are they?

- The **Buddhist Sherdukpen community** is the **last honey hunting group of Arunachal Pradesh**, whose total population is estimated to be 4,500.
- **Khiksaba** is an indigenous festival of the Sherdukpen, dedicated to appease the forest deities and other mountain spirits.
- **Rep Lapchang** is the harvest festival which is also popularly celebrated by the community.

#### Why in News?

- Filmmaker Kezang D. Thongdok's film *Chi Lupo*, about the honey-hunting skill of the Sherdukpen community, was adjudged the best documentary at the 10th Dada Saheb Phalke Film Festival Awards 2020.
- The honey-hunting skill of the Sherdukpen community and the associated indigenous craftsmanship is on

the verge of extinction with just half-a-dozen men now practicing it.

- The honey harvesting has traditionally been done twice a year.
- The bees make honey from wild flowers in June-July and primarily from **rhododendron** in October-November.

### 4. GI Tag

#### About GI Tag

- A geographical indication (GI) is a sign used on products that have a **specific geographical origin** and possess qualities or a reputation that are due to that origin. In order to function as a GI, a sign must identify a product as originating in a given place.
- It is used for **agricultural, natural and manufactured goods**. Darjeeling tea became the first GI tagged product in India.
- The registration of GI is valid for **10 years** after which it needs to be renewed.

#### Legislations

- In India, GI is given under the **Geographical Indications of Goods (Registration and Protection) Act, 1999**.
- The Act is administered by the **Controller General of Patents, Designs & TradeMarks, GI (CGPDTM-India)** under the Department for Promotion of Industry and Internal Trade, Ministry of Commerce and Industry.
- India enacted its GI legislation to comply with India's obligations under the Trade-Related Aspects of Intellectual Property Rights (**TRIPS**) agreement.
- GI registration gives to the registered proprietor and its authorized users, the legal right to the exclusive use of the GI and also the right to obtain relief in case of its infringement.
- GI is a **collective intellectual property right** and is thus owned by all the producers within the defined GI territory unlike intellectual properties like patent and trademark which are

owned by an individual or a business entity.

#### Why in News?

- The Thanjavur Netti Works, Arumbavur wood carvings from Tamilnadu, Jharkhand's Sohrai Khovar painting and Telangana's Telia Rumal have been given GI tag by the Geographical Indications Registry.

#### About Thanjavur Netti

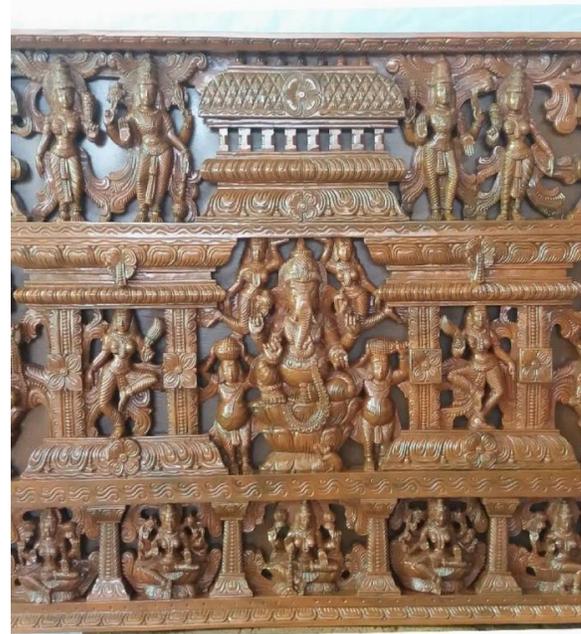
- Thanjavur Netti Works (Thanjavur Pith Work) is made from pith.
- The pith is obtained from netti, a **hydrophyte plant called as Aeschynomene aspera**.
- The artisans are skilled in this particular craft and this art is traditionally transferred from their forefathers.



- The notable works from Thanjavur Netti Works include models of the Brihadeeshwara Temple, Hindu idols, garlands, door hangings and show pieces used for decoration.

#### About Arumbavur Wood Carving

- Arumbavur Wood Carving is done at Arumbavur of Perambalur district, **Tamilnadu**.



- The wood carvings are primarily made out of wooden logs of Indian siris, mango, lingam tree, Indian ash tree, rosewood and neem tree.
- The carvings in Arambavur Wood Carvings are often inspired by architectural details.

#### About Jharkhand's Sohrai Khovar painting

- The Sohrai Khovar painting is a **traditional and ritualistic mural art** being practised by **local tribal women** during local harvest and marriage seasons.
- They are made using local, naturally available soils of different colours in the area of Hazaribagh district of **Jharkhand**.
- Traditionally painted on the walls of mud houses, they are now seen on other surfaces also.



- The style features a profusion of lines, dots, animal figures and plants, often representing religious iconography.

#### About Telangana's Telia Rumaal

- Telia Rumaal cloth involves intricate **handmade** work with **cotton loom** displaying a variety of designs and motifs in three particular colours — red, black and white.



- Telia Rumaal can only be created using the traditional handloom process and not by any other mechanical means as otherwise, the very quality of the Rumaal would be lost.
- It was patronised by **Hyderabad Nizam** and other nobles of that period.

## DEFENCE

### 1. Patriot missile systems

#### About Patriot missile system

- The Patriot missile defense system is a ground-based, mobile missile defense interceptor of the **United States**.
- The Patriot system detects, tracks, and engages UAVs, cruise missiles, and short-range or tactical ballistic missiles.



#### Why in News?

- The U.S. is removing its Patriot anti missile systems from Saudi Arabia which were deployed to the region following a series of attacks on the Saudi oil facilities last year.

### 2. Tour of Duty

#### Indian Army entry schemes

- Out of the several entry schemes for the officers in the Army, the ones that lead to a **Permanent Commission (PC)** implying a permanent incumbency till the attainment of the retirement age of the last rank served are either through the National Defence Academy (NDA) and (or) the Indian Military Academy (IMA).
- Apart from the above, there is a **Short Service Commission (SSC)** entry where the officers are inducted for a service of 10 years extendable to 14 years. Prior to achieving the superannuation age, the officers are screened for grant of PC. The ones who make the grade are offered PC, the rest leave.

- The men referred to as **Personnel below Officers Rank or PBOR** are normally recruited for an engagement period of 17 years (there are variations in this period). As the PBORs keep getting promoted in their ranks their superannuation age keeps going up.

#### Why in News?

- Recently, Indian Army has proposed 3 years of voluntary Tour of Duty (ToD) or three-year short service for civilians on a trial basis to serve in the force as both officers and other ranks.
- The proposal suggests several measures to incentivise this scheme like a tax-free income for three years and a token lump sum at the end of three years of about Rs. 5-6 lakh for officers and Rs. 2-3 lakh for PBORs.

#### Rationale behind the proposal

- The overall purpose of the ToD concept is 'internship/temporary experience'.
- So there will be no requirement of attractive severance packages, resettlement courses, professional encashment training leave, ex-Servicemen status, ex-Servicemen Contributory Health Scheme (ECHS) for the ToD officers and other ranks.
- The savings from this can be used in the **Army's modernisation**.