

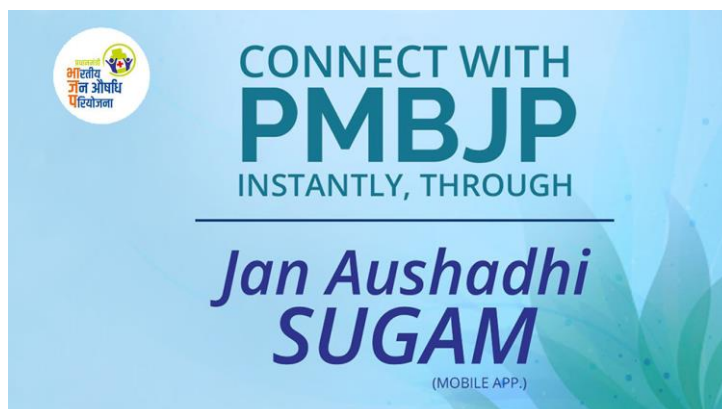
# UPSC EPFO Monthly Current Affairs May 2020

## Polity and Governance

### **“Janaushadhi Sugam” Mobile App**

#### **Why in the news?**

- Amid nationwide lockdown, due to the COVID-19 crisis, Janaushadhi Sugam Mobile App is helping people in a big way to locate their nearest Pradhan Mantri Bharatiya Janaushadhi Kendra.



#### **About Janaushadhi Sugam” Mobile App**

- This mobile application has been developed by the Bureau of Pharma PSUs of India (BPPI) under the Department of Pharmaceuticals, Ministry of Chemicals and Fertilizers, Government of India.
- The app will facilitate the general public by providing a digital platform at the tip of their fingers, under which:
  - i. they can avail a host of user-friendly options like locating nearby Janaushadhi Kendra
  - ii. direction guided through Google Map for the location of the Janaushadhi Kendra, search Janaushadhi generic medicines
  - iii. analyze product comparison of Generic and Branded medicine in the form of MRP & overall Savings, etc.

#### **About Pradhan Mantri Bhartiya Janaushadhi Pariyojana**

- It is a campaign launched by the Department of Pharmaceuticals to provide quality medicines at affordable prices to the masses through special Kendra’s known as Pradhan Mantri Bhartiya Jan Aushadhi Kendra.
- Pradhan Mantri Bhartiya Jan Aushadhi Kendra has been set up to provide generic drugs, which are available at lesser prices but are equivalent in quality and efficacy as expensive branded drugs.

#### **Implementing agency**

- Bureau of Pharma PSUs of India (BPPI) is the implementing agency of PMBJP.
- BPPI (Bureau of Pharma Public Sector Undertakings of India) has been established under the Department of Pharmaceuticals.

#### **Salient Features of the scheme:**

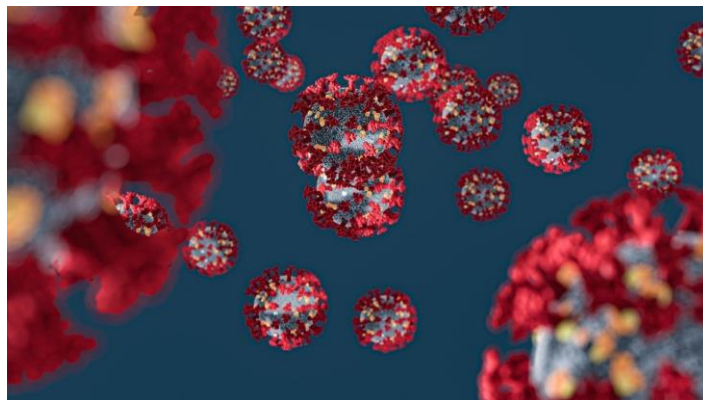
- Ensure access to quality medicines.
- Extend coverage of quality generic medicines to reduce the out of pocket expenditure on medicines and thereby redefine the unit cost of treatment per person.
- Create awareness about generic medicines through education and publicity so that quality is not synonymous with an only high price.

- A **public program** involving Government, PSUs, Private Sector, NGO, Societies, Co-operative Bodies, and other Institutions.
- Create **demand for generic medicines** by **improving access to better healthcare** through **low treatment costs** and easy availability wherever needed in all **therapeutic categories**.

### **Mathematical Research Impact Centric Support (MATRICS) Scheme**

#### **Why in the News?**

- Recently the **Science and Engineering Research Board (SERB)** has **approved funding for 11 projects** under **MATRICES scheme** for studying Mathematical modelling and computational aspects to tackle the **COVID 19 pandemic**.



#### **About Mathematical Research Impact Centric Support (MATRICS) Scheme**

- It was **launched in 2017** by **Science and Engineering Research Board (SERB)**.
- It **aims to provide fixed grant** support to **active researchers** with **good credentials in Mathematical Sciences**.
- The **main attribute of this scheme** would be the **submission of a simple one or two-page mathematical proposal** along with **curriculum vitae**.

#### **Eligibility**

- The **applicant should be an active researcher** in the field of
  - a. **Mathematical Sciences** and allied areas.
  - b. **Science and Engineering** (excluding mathematical sciences) or
  - c. **Social Sciences** involving **quantitative analysis using mathematical, statistical, and computational techniques**.
- The applicant should hold a **Ph.D. or M.D. / M.S. / M.D.S. / M.V. Sc degree** and must be **working regularly in academic institutions/national labs or any other recognized R&D institutions**.
- The **applicant should have at least four years of service** remaining before **superannuation** as on the **date of submission of the proposal**.

#### **About the Science and Engineering Research Board (SERB)**

- It is a **statutory body** under the **Department of Science & Technology**.
- It was established under the **Science and Engineering Research Board Act, 2008**.

#### **Objective**

- Its objective is to **promote basic research in Science and Engineering** and to **provide financial assistance to persons engaged in such research, academic institutions, research and development laboratories, etc.**

- It aims to **build up the best management systems** which would match the **best global practices** in the area of **promotion and funding of basic research**.

### **Kisan Sabha App: To Connect Farmers to Supply Chain and Freight Transportation**

#### **Why in the news?**

- **CSIR-Central Road Research Institute (CSIR-CRRI), New Delhi**, has recently **developed the Kisan Sabha App**, which **connects farmers to the supply chain and freight transportation management system**.



#### **About the Kisan Sabha App**

- **Kisan Sabha aims to provide the most economical and timely logistics support** to the farmers.
- The **goal of the app** is to **increase farmers' profit margins** by **minimizing the interference of middlemen** and **directly connecting with the institutional buyers**.

#### **Function**

- It **acts as a single stop** for every entity related to **agriculture**, be they a **farmer who needs better price for the crops** or **mandi dealer** who wants to **connect to more farmers or truckers** who invariably go empty from the mandis.
- It will also help in **providing the best market rates of crops** by comparing the **nearest mandis, booking of freight vehicles at the cheapest cost**.

#### **Kisan Sabha has six major modules taking care of:**

- Farmers
- Mandi Dealers
- Transporters
- Mandi Board Members
- Service Providers
- Consumers

### **Centre to expand Jal Shakti Abhiyan activities during the upcoming monsoon**

#### **Why in the news?**

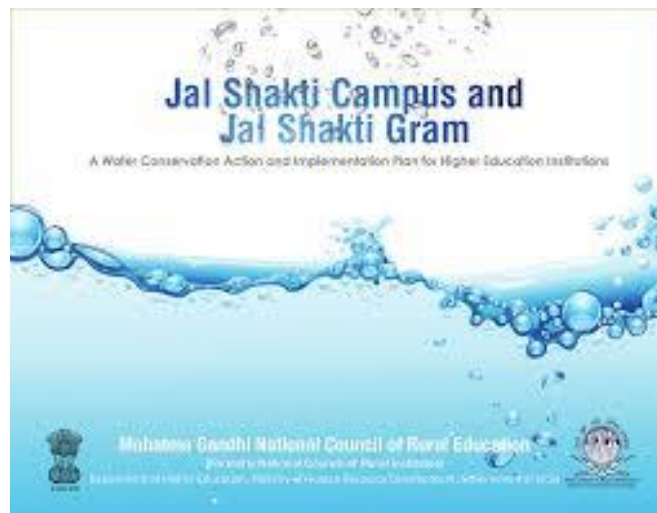
- The **Centre** has recently **decided to utilize the forthcoming monsoon season** to **expand its water conservation efforts** under the **National Jal Shakti Abhiyan**.

#### **About Jal Shakti Abhiyan**

- It was **launched in 2019**.



- It is a time-bound **campaign with a mission mode approach** intended to **improve water availability including groundwater conditions** in the **water-stressed blocks of 256 districts in India**



### Objective

- To make **water conservation** and **promotion of irrigation efficiency**, a **Jan Andolan (public campaign)** through **asset creation and communication campaigns** in rural India.

### Implementation

- It is a **collaborative effort** of various **Ministries of the Government of India and State Governments** being **coordinated by the Department of Drinking Water and Sanitation, Ministry of Jal Shakti**.

### Intervention areas

- a. **Water conservation** and rainwater harvesting
- b. **Renovation of water bodies**
- c. **Renovation of bore well** recharge structures
- d. **Watershed development** and
- e. **Intensive afforestation**

### “The Saras Collection”

#### Why in the news?

- The **Union Minister for Rural Development and Panchayati Raj and Agriculture and Farmers’ Welfare** has launched **“The Saras Collection”** on the **Government e-Marketplace (GeM) portal**.



### About the Saras Collection



- It is a unique initiative of **GeM and the DeenDayalAntyodaya Yojana-National Rural Livelihoods Mission (DAY-NRLM)**, Ministry of Rural Development, the **Saras Collection** showcases **daily utility products** made by **rural self-help groups (SHGs)**.
- It aims to **provide SHGs in rural areas with market access to Central and State Government buyers**.

Under this initiative, the **SHG sellers** will be able to list their products in **5 product categories**, namely

- a. **handicrafts**,
- b. **handloom and textiles**,
- c. **office accessories grocery and pantry**
- d. **personal care and hygiene**.

**About Deen Dayal Antyodaya Yojana-National Rural Livelihoods Mission (DAY-NRLM)**

- It was launched by the **Ministry of Rural Development (MoRD)**, Government of India, in **June 2011** with the name **Aajeevika - National Rural Livelihoods Mission (NRLM)**.
- In **November 2015**, the program was renamed **Deendayal Antyodaya Yojana (DAY-NRLM)**
- It aims to **reduce poverty** through the **promotion of diversified and gainful self-employment** while **creating skilled wage employment opportunities**.
- The scheme **supports building social capital** and **ensuring financial linkages** to **alleviate poverty** and **enhance the quality of the life** of rural poor women.
- It has **ambitious plans on innovations for alternate channels of financial inclusion** like **digital finance**, creating **value chains around rural products** and **improving market access**, **rural enterprise**, and **strengthening community institutions**.

**About Government e-Marketplace (GeM)**

- It is a **100 percent Government owned Section 8 Company** set up as the **National Public Procurement Portal** for **procurement of goods and services** required by **Central and State Government organizations**.
- **GeM provides an online, end to end solution for procurement of goods and services** for all **Central Government and State Government Ministries**, Departments, Public Sector Enterprises (PSEs), local bodies and autonomous organizations.
- The **platform reduces human interventions in procurement and enables transparency, cost savings, inclusiveness, and efficiency of faceless standardized public procurement**.

### **Non-Aligned Movement Summit**

**Why in the news?**

- **Prime Minister** has recently participated in the **Virtual Non-Aligned Movement (NAM) Summit** through **Video Conferencing on May 4, 2020**.
- The **summit will discuss the enhanced coordination of the member states in their fight against the coronavirus pandemic**.



### About the Non-Aligned Movement

- It is a **forum of 120 developing world states** that are not formally aligned with or against any major power bloc.
- NAM represents the **most significant grouping of countries outside the United Nations, comprising 120 developing countries from Asia, Africa, and Latin America.**
- It was drawing on the principles agreed at the **Bandung Conference in 1955.**
- The **Movement of Non-Aligned Countries** was founded on a **wider geographical basis** at the **First Summit Conference of Belgrade**, which was held on **September 1-6, 1961.**
- **India** is one of the founding members of the **Non-Aligned Movement (NAM)**, which was **established in 1961 with 29 members.**

### On what Principles does NAM work?

- **J.L. Nehru** has described the **five pillars** to be used as a **guide for Sino-Indian relations** called **Panchsheel (five restraints)**, these principles would later serve as the basis of the **Non-Aligned Movement.**

The five principles were:

- a. **Mutual respect** for each other's territorial integrity and sovereignty
- b. **Mutual non-aggression**
- c. **Mutual non-interference** in domestic affairs
- d. **Equality and mutual benefit**
- e. **Peaceful co-existence**

### Jharkhand launches schemes for job creation

#### Why in the news?

- Faced with the possibility of a steep rise in the rate of unemployment in villages **following the arrival of large-scale stranded migrant workers** from other States, the **Jharkhand government** has **launched three labour intensive programs** to **restore the rural economy.**

These schemes are:

- a. **Birsa Harit Gram Yojana (BHGY)**
- b. **Neelambar Pitambar JAL Sammridhi Yojana (NPJSY)**
- c. **Veer Sahid Poto Ho Khel Vikas Scheme (VSPHKVS)**



### About Birsa Harit Gram Yojana

- The BHGY is envisaged at bringing over two lakh acres of unused government fallow land under the afforestation program
- About five lakh families will be provided 100 fruit-bearing plants.
- The initial plantation, maintenance, land work, and afforestation will be taken up through MNRGA.

### About Neelambar Pitambar JAL Sammriddhi Yojana

- As per NPJSY, the government is aiming at creating agro-water storage units by arresting rainwater and runaway groundwater.
- About Veer Sahid Poto Ho Khel Vikas Scheme (VSPHKVS)
- Under VSPHKVS, as many as 5,000 sports grounds will be developed across the State.
- The government hopes to generate one crore person days through the scheme in the current financial year.

### Operation Samudra Setu

#### Why in the news?

- Recently Indian Navy has launched Operation “Samudra Setu” - meaning “Sea Bridge,” as a part of national effort to repatriate Indian citizens from overseas.



### About Operation Samudra Setu

- This operation is being progressed in close coordination with Ministries of Defence, External Affairs, Home Affairs, Health, and various other agencies of the Government of India and State governments. Indian



Naval Ships **Jalashwa and Magar** are presently en-route to the **port of Malè, the Republic of Maldives**, to commence evacuation operations.

- In view of the **unique challenges associated with COVID-19 stringent protocols** have also been stipulated.
- The evacuated personnel will be **disembarked at Kochi, Kerala**, and entrusted to the care of State authorities.
- The **Indian Mission in the Republic of Maldives** is preparing a list of Indian nationals to be **evacuated by naval ships** and will facilitate their embarkation after the requisite medical screening.

## **SUPRA and IRHPA Programme**

### **Why in the news?**

- **Recently Professor Ashutosh Sharma** said on the occasion of its **50th Foundation Day of Department of Science and Technology**, spoke about **Intensification of Research in High Priority Areas (IRHPA)** and **Scientific and Useful Profound Research and Advancement (SUPRA)** program.

### **About Intensification of Research in High Priority Areas (IRHPA)**

- It is a program of **Science and Engineering Research Board (SERB)**. It supports proposals in **high priority areas** where **multi-disciplinary/multi-institutional expertise** is required, which will put our nation in **an international science map** in that particular discipline.
- It is **designed to provide major conscious support** to very few selected areas of research that have **high priority** from the viewpoint of **advances in fundamental science**, and that can be of great significance for **scientific and technological development of the country**.
- Under the **IRHPA scheme**, a **unit or core group** having **super specialization** in the relevant **areas of science** will be developed and further nurtured.
- **Scientists from Universities**, their **affiliated Colleges, IITs, IISc.**, and other **Autonomous Research Institutions**, along with **scientists working in the industrial R&D sector in India**, can submit a proposal under this scheme.

### **About Scientific and Useful Profound Research and Advancement**

- It is also a **program of Science and Engineering Research Board (SERB)**.
- **SERB-SUPRA** is a scheme beyond normal core grants and purposefully designed for high-quality proposals consisting of **new hypothesis or challenge existing ones** and provide **'out-of-box' solutions**.
- **Transformative and disruptive research** concepts based on **innovative and unproven hypotheses**, possessing a **high degree of uncertainty**, yet having the conviction to produce a lasting impact across **discipline boundaries qualify for support under SERB-SUPRA**.
- The **submissions under SERB-SUPRA** can only be made **against the call for proposals**, with a **public announcement through the SERB online portal** and social media.

### **Funding**

- The funding will be **provided generally for a period of three years**, which could be **extended to 2 years (5 years total)** as assessed by an **expert committee**.

### **About the Department of Science and Technology (India)**

- The **Department of Science and Technology (DST)** is a department within the **Ministry of Science and Technology in India**.
- It was **established in May 1971** to promote **new areas of science and technology** and to **play the role of a nodal department** for organizing, coordinating, and promoting **Scientific and Technological activities** in the country.



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- It gives **funds to various approved scientific projects** in India.
- It also **supports various researchers in India** to attend conferences abroad and to go for experimental works.
- DST **supports open access to scientific knowledge**, originated from the public-funded research in India.
- In December 2014, the **DST and the Department of Biotechnology (DBT)**, Government of India, had **jointly adopted their Open Access Policy**.

### **GARUD portal**

#### **Why in the news?**

- **Civil Aviation Ministry and DGCA** have recently launched the **GARUD portal** for providing **fast track conditional exemptions** to government agencies for COVID-19 related drone operations.



#### **About the Garud Portal**

- **GARUD** is an acronym for '**Government Authorisation for Relief Using Drones**'.
- It is designed and developed by the **Directorate General of Civil Aviation (DGCA)**. It is launched for **providing fast track conditional exemptions** to government agencies for **COVID-19 related drone operations**.

### **Vande Bharat Mission**

#### **Why in the news?**

- **The government of India** has launched the **Vande Bharat Mission** to bring back **Indian nationals stranded abroad** due to the coronavirus lockdown.



### About Vande Bharat Mission

- It is a **multi-agency mission** that will see the **operation of 64 flights** to bring back **Indian nationals from Gulf countries, the US, the UK**, among other nations.

#### Note:

- Once completed, it may turn out to be the **largest evacuation operation** since the 1990 **airlift of 1.7 lakh people from Kuwait**.

### Other Mission

- **Operation Samudra Setu (Sea Bridge)**
- It is an **operation of the Indian Navy** to repatriate **Indian citizens from overseas** with the coordination between the **Ministries of Defence, External Affairs, Home Affairs, Health**, and **various other agencies of the Government of India and State governments**.
- **Indian Naval Ships (INS) Jalashwa and Magar** are presently **en route to the Maldives** to commence **evacuation operations as part of Phase-1**.

### 'AYUSH Sanjivani' App

#### Why in the news?

- **Union Health & Family Welfare Minister** has recently launched the **'AYUSH Sanjivani' App** through **Video Conferencing from Goa**.



### About the 'AYUSH Sanjivani' App

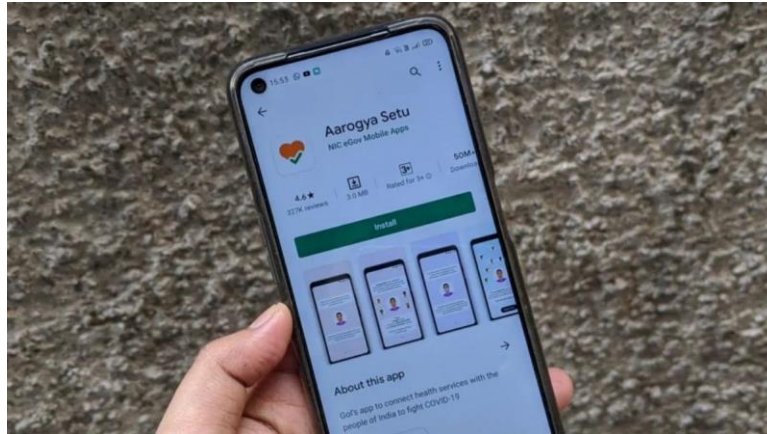
- It is **developed by the Ministry of AYUSH and Electronics and Information Technology Ministry (MeitY)**.
- It will **help to generate data** on acceptance and usage of AYUSH advocacies and measures among the population and its **impact on the prevention of COVID 19**.
- It has provided a **potent platform for an alliance between MoHFW, MoAYUSH**, and technology organizations such as **CSIR, ICMR, and UGC** to not only **develop AYUSH interventions and solutions**.
- It also helps in **promoting AYUSH knowledge** for the larger good of the **global community**.

### Aarogya Setu IVRS services

#### Why in the news?

Recently, the **Ministry of Health & Family Welfare** has launched the **'Aarogya Setu Interactive Voice Response System' (IVRS)**.





### About Aarogya Setu Interactive Voice Response System.

- It has been **implemented to include those citizens** who are having **feature phones and landline connections**.
- It is a **toll-free service, available across the country**, wherein citizens can give a missed call to the **number '1921,'** and they will get a **call back requesting for inputs regarding their health**.
- The **questions asked** are aligned with **Aarogya Setu App**, and based on the **responses given**, citizens will also get an **SMS indicating their health status** and further **alerts for improving their health**.
- The **toll-free service** is implemented in **11 regional languages**, similar to the **mobile application**.

### About the Aarogya Setu Mobile App

- It is **developed by the Ministry of Electronics and Information Technology**.
- It **enables people to assess themselves the risk of their catching the Corona Virus infection**.
- It will **calculate this based on their interaction with others**, using **cutting edge Bluetooth technology, algorithms, and artificial intelligence**.
- This is designed to keep a user informed, in case she/he crosses paths with someone who has tested positive.

### Modifications in PMRF Scheme

#### Why in the news?

- Recently, the **Union Minister of Human Resource Department (HRD)** has announced **various amendments** under **Prime Minister's Research Fellows (PMRF) Scheme** to **boost research in the country**.





### What are those amendments?

- The Minister informed that now there will be **two channels of entries, one direct entry, and lateral entry.**

#### a. Application through Direct Entry channel

In the **preceding three years**, the candidate should have either:

- **Completed or be pursuing the final year of Bachelor or Master's degree in Science and Technology** streams from any of the **Institute/University recognized in India** with **CGPA of 8.0 or above** and **GATE score of 650 or above** in the relevant subject.
- **Qualified GATE** and completed or **be pursuing M.Tech./MS by research** at one of the **PMRF Granting Institutes** having a **minimum CGPA of 8.0 or above** at the end of the **first semester with a minimum of four courses.**
- The **PMRF granting institute**, which has **admitted the student in the Ph.D. program** through the **regular selection process (interview)**, makes a **strong recommendation** for the award of PMRF in view of his/her merit.

#### b. Application through Lateral Entry Channel

To apply for PMRF through this channel, the candidate must satisfy all of the following criteria:

- The **candidate should be pursuing a Ph.D.** in one of the **PMRF granting institutions.**
- Further, he/she should have **completed at most 12 months in the Ph.D. program** if he/she joined the program with a **Master's degree**; and should have completed at most **24 months in the Ph.D. program** if he/she joined the **Ph.D. program with a Bachelor's degree.**
- He/she should have completed at least four courses in the **Ph.D. program with CGPA / CPI of 8.5 or above.**
- The **PMRF Granting Institute**, in which the student is enrolled, makes a strong recommendation for the candidate and uploads the relevant information on the **PMRF web-portal**, in view of his/her **merit demonstrated** during the first **12-24 months (as relevant) of the program;**
- The metrics on which the **candidates will be judged** include (but not restricted to) a **strong research proposal, publications record, and grades**

#### About Prime Minister's Research Fellows (PMRF) Scheme

- It was announced in the **Budget 2018-19.**
- It has been **designed for improving the quality of research** in various **higher educational institutions** in the country.
- It seeks to attract the best **talent into research**, thereby realizing the **vision of development through innovation.**

#### Note:

- The **PMRF granting institutes** are **IISc. Bengaluru, All IISERs, All IITs, Jawaharlal Nehru University, Banaras Hindu University, University of Hyderabad, Aligarh Muslim University, Jamia Millia Islamia, University of Delhi and National Institute of Technology, Tiruchirappalli.**

### **The safeguards available against chemical disasters in India**

#### Why in the news?

- A gas leak from LG Polymers factory situated on the outskirts of Visakhapatnam, Andhra Pradesh, recently killed at least 11 people.
- The laws aiming to protect the victims of such chemical disasters in India are as follows:

#### a. Bhopal Gas Leak (Processing of Claims) Act, 1985



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- It gives powers to the central government to secure the claims arising out of or connected with the Bhopal gas tragedy.
  - Under the provisions of this Act, such claims are dealt with speedily and equitably.
- b. The Environment Protection Act, 1986**
- This act powers to the central government to undertake measures for improving the environment and set standards and inspect industrial units.
- c. The Public Liability Insurance Act, 1991**
- This Act is an insurance meant to provide relief to persons affected by accidents that occur while handling hazardous substances.
- d. The National Environment Appellate Authority Act, 1997**
- Under this Act, the National Environment Appellate Authority can hear appeals regarding the restriction of areas in which any industries, operations or processes or class of industries, operations or processes shall not be carried out or shall be carried out subject to certain safeguards under the Environment (Protection) Act, 1986.
- e. National Green Tribunal, 2010**
- It provides for the establishment of a National Green Tribunal for effective and expeditious disposal of cases related to environmental protection and conservation of forests.

### Sample Registration System (SRS) bulletin

#### Why in the news?

- The **Registrar General of India** has recently released its **Sample Registration System (SRS) bulletin** based on **data collected for 2018**.



#### About Sample Registration System (SRS) bulletin

- It was 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**.
- It is a **demographic survey** for **providing reliable annual estimates** at the national and sub-national levels of:

a. **infant mortality rate**

b. **birth rate**

c. **death rate**

d. Other fertility and mortality indicators **Key findings of the bulletin**

#### Infant mortality rate (IMR)

- The **national IMR in 2018** stood at **32 per one thousand** of the population.
- The **IMR at an all-India level** has **declined from 50 to 32** in the **last decade**.

- **Mizoram** has registered a **10 per cent drop** in **Infant Mortality Rate (IMR)** in **2019-20 fiscal**, making it to the **second spot** in the country after **Nagaland**.
- **Madhya Pradesh** has an **IMR of 48** and **Nagaland 4**.

#### **Birth rate**

- The **birth rate** is a **crude measure of fertility** of a population and a **crucial determinant** of population growth.
- The rates are **calculated per one thousand of the population**.
- The **national birth rate in 2018** stood at **20 per one thousand of the population**.
- Bihar has the **highest birth rate at 26.2**, whereas the **Andaman and Nicobar Islands** are at the **bottom with a birth rate of 11.2**.
- At an **all-India level**, the **birth rate is higher in rural areas (21.6)** compared to **urban areas (16.7)**.

#### **Death Rate**

- The **national death rate in 2018** stood at **6.2 per one thousand** of the population.
- The **death rate of India** has witnessed a **significant decline** over the **last four decades** from **14.9 in 1971** to **6.2 in 2018**.
- The **decline** has been **steeper in rural areas**.
- The corresponding **decline in rural areas** is **7.8 to 6.7** and in **urban areas, 5.8 to 5.1**.
- **Chhattisgarh** has the **highest death rate at eight**, whereas **Delhi** has a rate of **3.3**, indicating **better healthcare facilities**.

#### **Migrants Welfare**

##### **Why in the news?**

- Recently **activists are demanding strict implementation** of the **Inter-State Migrant Workmen (Regulation of Employment and Conditions of Service) Act, 1979**, to **ensure the welfare of inter-State migrants** who are suffering due to the nationwide lockdown.

##### **About Inter-State Migrant Workmen Act, 1979**

- The **Act seeks to regulate the employment of inter-State migrants** and their conditions of service.
- It is **applicable to every establishment that employs five or more migrant workmen from other States**; or if it had **employed five or more** such workmen on any day in the **preceding 12 months**.
- It is also **applicable to contractors who employed a similar number of inter-State workmen**.
- The **Act would apply regardless** of whether the **five or more workmen** were in addition to **others employed** in the establishment or by the contractors.
- It **envisages a system of registration** of such establishments.
- The **principal employer is prohibited from employing inter-State workmen** without a **certificate of registration** from the **relevant authority**.
- The law also **lies down that every contractor who recruits workmen from one State for deployment in another State** should **obtain a license** to do so.

##### **About Occupational Safety, Health and Working Conditions Code, 2019**

- The **bill has been introduced in Parliament** called the **Occupational Safety, Health and Working Conditions Code, 2019**.
- The proposed **code seeks to merge 13 labour laws** into a **single piece of legislation**.
- The **Inter-State Migrant Workmen (Regulation of Employment and Conditions of Service) Act, 1979**, is one of them.



- Activists fear that **specific safeguards given to migrant workers may be lost** as a result of this consolidation.

## **Mission Sagar**

### **Why in the news?**

- Recently India launched Mission Sagar as a part of the government's outreach initiative towards five Island nations in the Indian Ocean amidst the ongoing COVID-19 pandemic.
- These five islands are Maldives, Mauritius, Seychelles, Madagascar, and Comoros,



### **About the Mission Sagar**

- Its aim to provide Food Items, COVID related Medicines including HCQ Tablets and Special Ayurvedic Medicines with Medical Assistance Teams embarked.
- Indian Naval Ship (INS) Kesari has been deployed under this mission.

### **Agency involved**

- The operation is being progressed in close coordination with the Ministries of Defence and External Affairs, and other agencies of the Government of India.

### **Significance**

- The deployment is in consonance with the Prime Ministers' vision of Security and Growth for All in the Region 'SAGAR' promulgated in March 2015.
- SAGAR highlights the importance accorded by India to relations with her neighboring countries and further strengthens the existing bond.

## **Ministry of MSME Launches CHAMPIONS Portal**

### **Why in news?**

- Union Ministry of MSME has recently launched the CHAMPIONS portal ([Champions.gov.in](http://Champions.gov.in)).

### **About CHAMPIONS Portal**

- The CHAMPIONS stands here for the Creation and Harmonious Application of Modern Processes for Increasing the Output and National Strength. Accordingly, the name of the system is CHAMPIONS.
- It is a Technology driven Control Room-Cum-Management Information System.
- The system utilises modern ICT tools that are aimed at assisting Indian MSMEs march into the big league as National and Global CHAMPIONS.
- The portal is basically for making the smaller units big by solving their grievances, encouraging, supporting, helping, and handholding.
- It is a real one-stop-shop solution of MSME Ministry.





## BiPAP Non-Invasive Ventilator

### Why in the news?

- Recently the **National Aerospace Laboratories (CSIR)** has developed its **version of BiPAP**, a **non-invasive breathing support device**, for the use of **non-critical non-ICU cases of COVID-19**.



### About BiPAP Non-invasive Ventilator

- These ventilators are also named as **SwasthVayu**.

#### Features:

- It is a **microcontroller-based precise closed-loop adaptive control system** with a **built-in biocompatible “3D printed manifold & coupler”** with **HEPA filter (Highly Efficient Particulate Air Filter)**.
- These **unique features** help to **alleviate the fear of the virus spread**.
- It has features like **Spontaneous, CPAP, Timed, AUTO BIPAP modes** with provision to connect **Oxygen concentrator or Enrichment unit externally**.
- The major advantage of this machine is that it is simple to use **without any specialized nursing, cost-effective, compact, and configured** with the majority of indigenous components.
- This is ideal for **treating COVID -19 patients in Wards, Makeshift Hospitals, dispensaries, and home in the current Indian COVID 19 scenario**.

## ‘Suraksha Store initiative.’

### Why in the news?

- The **Department of Consumer Affairs** has recently partnered with **tech startups Safejob and Seekify** to use **technology to power the Suraksha Store Initiative**.



### About the Suraksha Store initiative

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- It is designed for the **health and safety of the citizens** during and **after the lockdown**, as **per the companies' joint release**.

#### Objective

- The **primary objective** of this project is to **educate Kirana store owners** across the country about the **Covid-19 safety guidelines and protocols** required to be followed while **running their businesses**.
- The **protocols were decided by the Food Safety and Standards Authority of India (FSSAI)** and the **Ministry of Home Affairs (MHA)**.

#### About Suraksha Store

- It is a **store (Kirana, pharmacy, consumer touchpoint)** that follows **100% Suraksha safety norms**.
- These stores shall be **educated, certified, and validated** to follow all **common minimum health standards** as well as **safety checklists**.

#### About the Food Safety and Standards Authority of India

- It is an **autonomous body established under the Ministry of Health & Family Welfare, Government of India**.
- The **FSSAI has been established under the Food Safety and Standards Act, 2006**, which is a **consolidating statute related to food safety and regulation in India**.
- It is **responsible for protecting and promoting public health** through the **regulation and supervision of food safety**.
- **The FSSAI has its headquarters in New Delhi**.
- The authority also has **six regional offices located in Delhi, Guwahati, Mumbai, Kolkata, Cochin, and Chennai**.

#### Covid-Jagratha Portal

##### Why in the news?

- Recently, **Kerala government** has made it **compulsory for passengers travelling by special trains to apply for digital passes** on the '**Covid-Jagratha portal**'.

##### About Covid-Jagratha Portal

- It is a **comprehensive solution for effective daily monitoring of the quarantine and health status** of the people under surveillance.
- It also has a **provision of health service** through **teleconsultation and referral** based on the reports available in the system.
- It is designed for **disseminating information related to Covid-19** for public and provisions for accessing emergency services for the public.



- It can be used to **generate a simplified daily report on welfare measures** initiated by the **District Administration for the public** who are **provided with support during lockdown** like **support to elderly people, migrant labourers and Public Distribution system.**

### **India State-Level Disease Burden Initiative**

#### **Why in the news?**

- Recently, under the **India State-Level Disease Burden Initiative**, data has been released related to **the Under-5 mortality rate in India.**

#### **Key point of the data**

- The Under-5 Mortality Rate in India has **dropped by 49% since 2000.** There is a **six-fold variation** in the **Under-5 Mortality Rate** between states and an **11-fold variation** between various districts.
- **Neonatal Mortality Rate (NMR)** dropped by **38% since 2000**, but there is a **five-fold variation** in the rate between the states and eight-fold variation between the districts of India.
- **Nearly 68% of under-5 deaths** in India are attributable to **the child and maternal malnutrition.**
- The largest contributors of **under-5 deaths in India** are **low birth weight and short gestation (46%)** and **child growth failure (21%).**
- **Nearly 11% of under-5 deaths** are attributable to **unsafe water and sanitation, and 9% to air pollution** and **83% of the neonatal deaths** are attributable to low birth weight and shorter gestation.
- The **leading causes of under-5 deaths in India** are **lower respiratory infections (17.9%), preterm birth (15.6%), diarrhoeal diseases (9.9%), and birth asphyxia and trauma (8.1%).**

#### **About India State-Level Disease Burden Initiative**

- It is a **collaboration between the Indian Council of Medical Research (ICMR), the Public Health Foundation of India (PHFI), Institute for Health Metrics and Evaluation (IHME),** and senior experts and stakeholders.
- It was **launched in 2015** to report an **unprecedentedly comprehensive assessment** of the diseases **causing the most premature deaths and ill-health** in each state of the country.

### **Jal Jeevan Mission**

#### **Why in the news?**

Recently, the **Union Territory of Jammu & Kashmir** has planned to **provide tap water connection to all rural households** by **December 2022** under the **Jal Jeevan Mission.**



### About Jal Jeevan Mission

- It is the **government envisages** renewed efforts to provide **water supply to every household by 2024**.
- The **Jal Jeevan Mission** is set to be based on **various water conservation efforts** like **point recharge, desilting of minor irrigation tanks, use of greywater for agriculture and source sustainability**.
- The aim of 'Jal Jeevan Mission' (JJM) is to **provide every rural household in the country a Functional Household Tap Connections for drinking water in adequate quantity of prescribed quality on a regular and long-term basis at affordable service delivery charges** leading to improvement in their living standards.
- Under this mission, the **creation of local infrastructure for source sustainability** measures as mandatory elements, like **rainwater harvesting, groundwater recharge and management of household wastewater for reuse**, would be undertaken.

### Funding pattern

- The fund sharing pattern between the **Centre and states is 90:10 for Himalayan and North-Eastern States, 50:50 for other states, and 100% for Union Territories**.

### Following institutional arrangement has been proposed for the implementation of JJM.

- a. National Jal Jeevan Mission at the Central level.
- b. State Water and Sanitation Mission (SWSM) at State level.
- c. District Water and Sanitation Mission (DWSM) at the district level; and
- d. Gram Panchayat and/ or its sub-committees, i.e. Village Water Sanitation Committee (VWSC)/ Paani Samiti at village Level.

### National Disaster Management Authority

#### Why in the news?

- In the wake of the **gas leak at a factory in Visakhapatnam**, the **National Disaster Management Authority (NDMA)** has recently issued **detailed guidelines for restarting industries after the lockdown**.





### About the National Disaster Management Authority

- It is the **apex statutory body** for disaster management in India.
- The NDMA was formally **constituted on 27th September 2006**, in accordance with the **Disaster Management Act, 2005**.

### Composition

- The **Prime Minister is the ex-officio chairperson** of the National Disaster Management Authority who chairs a **9-member board**.

### Primary Function

- Its **primary purpose** is to **coordinate the response to natural or man-made disasters** and for **capacity-building in disaster resiliency and crisis response**.
- It is also the **apex body to lay down policies, plans and guidelines for Disaster Management** to ensure a **timely and effective response to disasters**.

### Vision

- To build a **safer and disaster resilient India** by a **holistic, proactive, technology-driven and sustainable development strategy** that involves all stakeholders and fosters a **culture of prevention, preparedness and mitigation**.

### **'GOAL' programme to discover tribal youth talent**

#### Why in the news?

- Recently the **tribal minister has launched the "GOAL - Going Online As Leaders - a programme** of his Ministry in partnership with Facebook at a **Webinar in New Delhi**.

#### About the GOAL programme

- It is a **digitally enabled programme envisages to act as a catalyst to explore the hidden talents of the tribal youth**.



## Objectives

- The program aims to **enable Scheduled Tribe youth in remote areas to use digital platforms** for sharing their **aspirations, dreams and talent with their mentors**.
- It is designed to provide **mentorship to tribal youth through digital mode**.

## How will it work?

- In this program, **5000 scheduled tribe youth** (to be called as 'Mentees') will get an **excellent opportunity** to get training by experts from **different disciplines and fields** (to be called as 'Mentors').
- There will be **one mentor for two mentees**.
- The selected mentees will remain engaged in the program for **nine months or 36 weeks** comprising **28 weeks of mentorship** followed by eight weeks of internship.
- The program will focus on three core areas – **Digital Literacy, Life Skills and Leadership** and Entrepreneurship, and on sectors such as Agriculture, Art & Culture, Handicrafts & Textiles, Health, Nutrition, among others.

## National Migrant Information System

### Why is in the news?

- **National Disaster Management Authority** has recently developed the **National Migrant Information System** to track the **movement of migrant labourers** amid the coronavirus lockdown.



### About the National Migrant Information System

- The **portal is based on a central repository on migrant workers** to ease their movements towards their native places.
- The **NMIS** is based on the **existing National Disaster Management Authority (NDMA)'s GIS portal**.

### Features of NMIS

- The **NMIS aims to capture the information** regarding the **movement of migrants and facilitate the smooth movement of stranded persons across States**.
- The **key data pertaining to the persons migrating** has been standardized for uploading such as name, age, mobile number, originating and destination district, date of travel, etc., which states are already collecting.
- States will be able to **visualize how many people** are going out from where and how many are **reaching destination states**.

- The mobile numbers of people can be used for contact tracing and **movement monitoring during COVID-19.**
- A **unique ID is generated for each migrant**, which can be used for all transactions.

### **Union Finance Minister announces several initiatives to boost Education Sector**

#### **Why in the news?**

- Recently the **Union Finance & Corporate Affairs Minister** has announced **several initiatives to boost the education sector.**

#### **These initiatives are:**

##### **a. One nation, one digital platform” and “one class one channel.”**

- This will ensure that **quality education material** will reach the **students present in the farthest areas of the country.** The initiatives will **boost the access and equity in education** and **improve the gross enrolment ratio** in the times to come.
- Under the initiative, due consideration is being given to the Divyang children also, and the measures will usher in a new paradigm in the creation of New India.

##### **b. PM e-VIDYA**

- It is a **comprehensive initiative** which unifies all efforts related to **digital/online/on-air education** which will **enable multi-mode access to education** and includes:

- ✓ **DIKSHA (one nation-one digital platform)**

It will now become the **nation’s digital infrastructure** for providing **quality e-content in school education** for all the **states/UTs**

- ✓ **TV (one class-one channel)** where **one dedicated channel** per grade for each of the **classes 1 to 12** will provide **access to quality educational material.**

- ✓ **SWAYAM** online courses in **MOOCS** format for **school and higher education.**

- ✓ **IITPAL** for **IITJEE/NEET preparation.**

The study material for the differently-abled developed on **Digitally Accessible Information System (DAISY)** and in **sign language on NIOS website/YouTube.**

##### **c. Manodarpan initiative**

- It is being **launched to provide** such **support through a website, a toll-free helpline, national directory of counsellors, interactive chat platform, etc.**
- This **initiative will benefit all school-going children** in the country, along with their parents, teachers and the community of stakeholders in school education.

##### **d. National Foundational Literacy and Numeracy Mission**

- It will be launched, for **ensuring that every child** in the country **necessarily attains foundational literacy and numeracy in Grade 3 by 202.**
- This mission will cover the **learning needs of nearly 4 crore children** in the **age group of 3 to 11 years.**

### **Shekatkar Committee**

#### **Why in the news?**

- Government has recently **accepted and implemented three important recommendations of the Committee of Experts (CoE)** under the **Chairmanship of Lt General D B Shekatkar (Retd)** relating to **border infrastructure.**





**These accepted Recommendations are:**

- a. To outsource **road construction work** beyond the optimal **capacity of Border Roads Organisation (BRO)**.
- b. It has been made mandatory to **adopt Engineering Procurement Contract (EPC)** mode for **execution of all works** costing more than **Rs 100 crore**.
- c. The other **recommendation relating to the introduction of modern construction plants**, equipment and machinery, has been **implemented by delegating enhanced procurement powers** from **Rs 7.5 crore to Rs 100 crore** to BRO, for **domestic and foreign procurements**.
- d. Border Roads has recently inducted **Hot-Mix Plant 20/30 TPH** for the speedier laying of roads, **remotely operated hydraulic Rock Drills DC-400 R** for hard rock cutting, a range of **F-90 series of self-propelled snow-cutters/blowers** for **speedier snow clearance**.

### **J&K defines rules for domicile certificates**

**Why is in the news?**

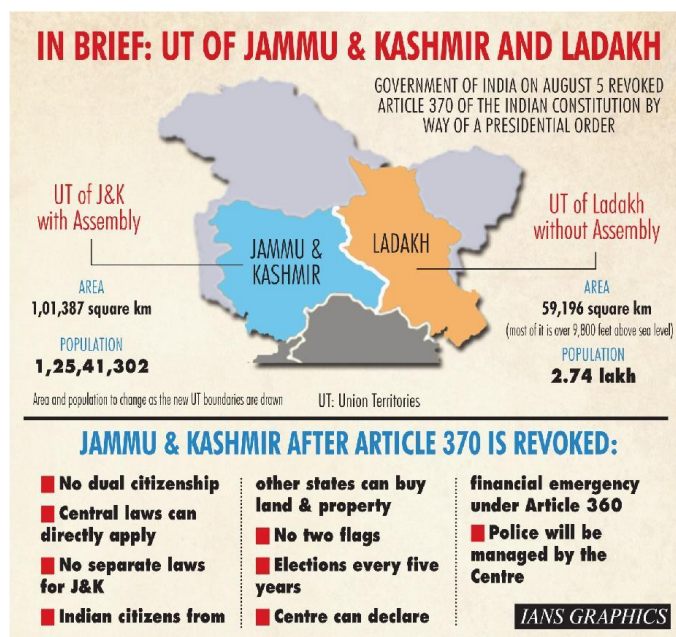
- The **J&K administration** has recently **notified the J&K grant of domicile certificate procedure rules 2020** and set a **fast track process in motion to issue the certificates** within a stipulated time of **15 days**.

**Background**

- The **Centre** had issued the **Jammu and Kashmir Reorganization (Adaptation of State Laws) Order 2020**.
- **Under this order, the domicile is defined as**
  - any person “**who has resided for 15 years in the UT of J&K** or
  - has studied for **seven years** and **appeared in class 10th/12th examination** in an **educational institution** located in the **UT of J&K**”.







### Highlights of the Amendment

- Under the **amended rules**, **eligible non-locals** can also apply for the certificate.
- These rules provide a **simple time-bound and transparent procedure** for issuance of **domicile certificates** in such a manner that **no category of person** is put to **any inconvenience**.
- There is a **timeline of 15 days** for **issuance of certificates**.

### Eligibility

- All **Permanent Resident Certificate holders** and their **children living outside J&K** can apply for the certificates.
- Kashmiri migrants living** in or outside J&K can get **domicile certificates** by **simply producing their Permanent Residence Certificate (PRC), ration card copy, voter card or any other valid document**.
- A **special window** is also **provided to migrants who have not registered** with the **Relief and Rehabilitation department**.
- Bonafide migrants** can apply with the **Relief and Rehabilitation department** by providing documents like **electoral rolls of 1988, proof of registration as a migrant in any State** in the country or **any other valid document**.
- The new process will allow **West Pakistan refugees, safai karamcharis and children of women who married non-locals** to apply for jobs here.
- According to the **new domicile laws**, **Central government officials**, All India Service Officers, officials of Public Sector Undertakings, Autonomous bodies of the Central Government, Public Sector Banks, Statutory bodies, Central Universities and recognised research institutes of the Central Government, who have served in the Union Territory of Jammu and Kashmir for a total period of ten years, are eligible for the certificate.
- Children who can produce **Class 10 or Class 12 certificate** from any **J&K school** will also be eligible for these certificates.
- A person who has studied for **seven years** and appeared in **class 10/12th examination** in an **educational institution located in J&K** will also be eligible.

### National Test Abhyas App

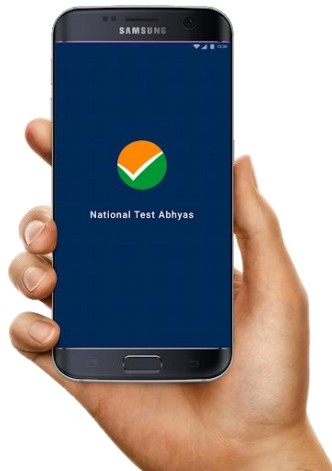
Why is in the news?



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- **Union Human Resource Development Minister** has recently launched a **new mobile app** called the '**National Test Abhyas**'.



### **About the National Test Abhyas App**

- It has been developed by **National Testing Agency** to enable candidates to take mock tests for upcoming exams such as **JEE Main, NEET under the NTA's purview**.
- It will help to **facilitate candidates' access** to high-quality mock tests in the **safety and comfort of their homes** since there was a demand for making up the loss to students due to closure of educational institutions and **NTA's Test-Practice Centers (TPCs)** due to the continuing lockdown.
- The **app will make available practice tests** on smartphones or computers for all students in India irrespective of their **level of access to devices and quality of the network**.
- The app also has an **offline mode where students, on downloading the mock tests, can attempt the test without the internet**.

### **About National Testing Agency**

- It is an **autonomous and self-sustained premier testing organization** to conduct entrance examinations for **higher educational institutions**.
- It will be society registered under **Indian Societies Registration Act, 1860**.

### **Composition**

- It will be chaired by **an eminent educationist appointed by Ministry of Human Resource Development**.
- Its **CEO will be Director General (DG)** appointed by the Government.
- It also has **Board of Governors** comprising members from **user institutions**.

### **Nepal-India border dispute**

#### **Why in the news?**

- The **Nepal cabinet** has decided it will **release a new, updated political map** which will include the **disputed areas of Lipulekh, Kalapani and Limpiyadhura** as **part of Nepali territory**.



### What was the issue?

- **Kathmandu** has **stepped up its protests** on the border issue after the **Indian defence ministry** recently **inaugurated a link road to the China border** that passes **through Lipulekh**. Following the **road inauguration**, the **Nepal government** released a press note stating that the **eastern area from Mahakali River belongs to Nepal** as per the **Sugauli Treaty, 1816**.
- But the **Indian government** said that it **had constructed the road in its territory**.



### About the Treaty of Sugauli

- **Treaty of Sagauli, (March 4, 1816)**, an agreement between the **Gurkha chiefs of Nepal** and the **British Indian government** that ended the **Anglo-Nepalese (Gurkha) War (1814–16)**.
- By the treaty, **Nepal renounced all claim to the disputed Tarai, or lowland country**, and ceded its **conquests west of the Kali River** and **extending to the Sutej River**.
- **Nepal remained independent**, but it **received a British resident** with the status of an **ambassador to an independent country** rather than of the **controlling agent of the supreme government in an Indian state**.

### Star Rating of Garbage Free Cities

#### Why is in the news?

- Recently **Minister of State (I/C) for Housing and Urban Affairs** announced the results of **Star Rating of Garbage Free Cities** for the **year 2019-2020**. The government also **launched the revised protocol** for the **Star Rating of Garbage Free Cities** at the event.
- The **revised protocol** will consider **ward-wise geo-mapping, monitoring of Solid Waste Management (SWM) value chain** through **ICT interventions**

like Swachh Nagar App and zone-wise rating in cities with a population of 50 lakh+.

#### Highlights of the survey

- As per the survey, there are **a total of 6 cities** have been **graded five stars**, **65 Cities rated 3 Star** and **70 Cities rated 1 Star**.
- These **5-Star Garbage Free Cities** are **Surat, Rajkot, Indore, Mysore, Ambikapur** and **Navi Mumbai**.
- The **total 34 of Maharashtra's cities** including **Chandrapur, Dhule, Jalgaon, Jalna, Thane** and **Mira-Bhayandar** have been given a **3-star rating**.
- **Total 41 cities** including **Ahmednagar, Akola, Nashik, Vasai-Virar** and **Kalyan-Dombivili** have been **rated 1 star**.



#### About Star Rating Protocol

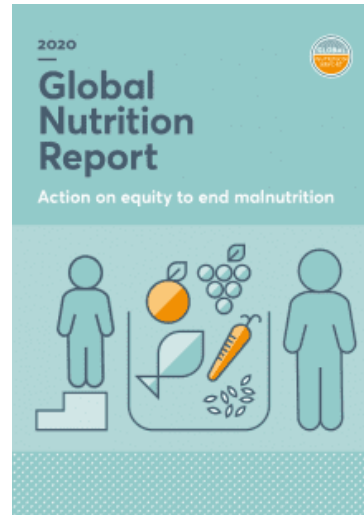
- The **Star Rating Protocol** was launched by the **Ministry of Housing and Urban Affairs in January 2018**.
- In this, the **Ministry of Housing and Urban Affairs (MoHUA)** had launched a **unique initiative – the 7-star rating system**.
- The 7-star rating system aimed to **institutionalize a mechanism for cities to achieve garbage free status and achieve higher degrees of cleanliness**.
- As part of the **star rating protocol**, **urban spaces of the country** are evaluated based on **multiple cleanliness indicators** about **waste management**:
  - a. door to door waste collection
  - b. waste segregation
  - c. plastic waste management
  - d. cleaning of drains
  - e. water bodies and others

#### Global Nutrition Report 2020

##### Why in the news?

- **Global Nutrition Report 2020** has been **published recently**. With **India facing a major malnutrition crisis**, it calls for **concerted actions to address the gaps and concerns**.





### About the Report

- **Key nutrition indicators used in the report**
  - a. **Stunting**, or **low height for age**, is caused by **long-term insufficient nutrient intake** and **frequent infections**.
  - b. **Wasting**, or **low weight for height**, is a **strong predictor of mortality** among **children under five**, which usually the **result of acute significant food shortage and disease**.
  - c. **Overweight**: It is the **condition of having more body fat** than is healthy.
    - It also identified the country as one with the **highest rates of domestic inequalities in malnutrition**.
    - In **2012**, the **World Health Assembly** identified **six nutrition targets** for **maternal, infant, and young child nutrition** to be **met by 2025**.

### India and Report

- According to the **Global Nutrition Report 2020**, India will miss targets for **all four nutritional indicators** for which there is **data available**.

These indicators are

- a. **stunting among under-five children**
- b. **anaemia** among women of reproductive age
- c. **childhood overweight**
- d. **exclusive breastfeeding**

### Underweight children

- Between **2000 and 2016**, **underweight rates** have decreased **from 66.0% to 58.1% for boys and 54.2% to 50.1% in girls**.
- However, this is **still high** compared with the **average of 35.6% for boys and 31.8% for girls in Asia**.
- In addition, **37.9% of children under five are stunted**, and **20.8% are wasted**, compared with the **Asia average of 22.7% and 9.4%, respectively**.

### Anaemic Condition

- **One in two women** of reproductive age is anaemic, while at the same time, the **rate of overweight and obesity continues to rise**, affecting almost a **fifth of the adults**, at **21.6% of women and 17.8% of men**.
- **India** is identified as **among the three worst countries**, along with **Nigeria and Indonesia**, for steep **within-country disparities on stunting**, where the levels varied **four-fold across communities**.

### Stunting level

- **The stunting level in Uttar Pradesh** is **over 40%**, and the rate among individuals in the **lowest income group** is **more than double** those in the **highest income group at 22.0% and 50.7%**, respectively.



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- In addition, **stunting prevalence is 10.1% higher** in **rural areas** compared with **urban areas**.
- The same applies to **overweight and obesity**, where there are **nearly double** as many obese **adult females** as there are **males (5.1% compared to 2.7%)**.

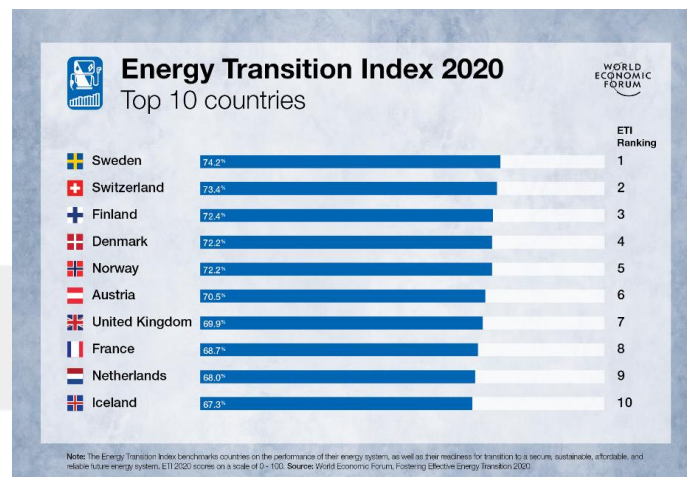
**Note:** Sustainable Development Goal (SD Goal 2: Zero hunger)

- It aims to **end all forms of hunger and malnutrition by 2030**, making sure **all people – especially children – have access to sufficient and nutritious food** all year round.
- This involves **promoting sustainable agricultural practices**: supporting **small scale farmers** and **allowing equal access to land, technology, and markets**.

## Global Energy Transition Index

Why in the news?

- Recently, the **World Economic Forum (WEF)** has released the **annual rankings of the global Energy Transition Index**.



### About the Energy Transition Index

- It is a **fact-based ranking intended to enable policymakers and businesses** to plot the course for a **successful energy transition**.
- 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**.

### Overall Progress

- The current study **measuring readiness for the clean energy transition in 115 economies** showed that **94** had made **progress since 2015**, but **environmental sustainability continues to lag**.
- This progress is a result of **multifaceted, incremental approaches**, including **pricing carbon, retiring coal plants ahead of schedule, and redesigning electricity markets to integrate renewable energy sources**.
- The greatest overall progress is observed among **emerging economies**, with the **average ETI score for countries in the top 10 percent remaining constant since 2015**.

### Highlights of the index

- **Sweden has topped the Energy Transition Index** for the **third consecutive year** and is followed by **Switzerland and Finland in the top three**.

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- In **G20 countries** only **France (ranked 8th)** and the **UK (ranked 7th)** are in the **top ten**.
- **Argentina, China, India, and Italy** are among the major countries with consistent **annual improvements since 2015**.
- However, scores for **Canada, Chile, Lebanon, Malaysia, Nigeria, and Turkey** have declined **since 2015**.

#### **India's position**

- **India** has moved up **two positions** to rank **74th** on a global 'Energy Transition Index', **2020**.
- **India** has made improvements on all **key parameters** of **economic growth, energy security, and environmental sustainability**.
- It is one of the **few countries** in the **world to have made consistent year-on-year progress since 2015**.

#### **The improvements have come due to factors such as**

- Political commitments, consumer engagement and investment, innovation, and infrastructure improvements.**
- The initiatives of the **Indian Government** like **government-mandated renewable energy** expansion program which is 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 the labelling of appliances**.
- Measures** are also being **experimented to drive down the costs of electric vehicles**.

#### **About World Economic Forum**

- It is a **nonprofit foundation** established in **1971**, based in **Geneva, Switzerland**.

#### **Major reports published by World Economic Forum**

- Global Gender Gap Report
- Global Risk Report
- Global Competitiveness Report
- Global IT Report
- Global Travel and Tourism Report

## Economy and Social development

### **Bank of Schemes, Ideas, Innovation & Research Portal**

#### **Why in the news?**

- Recently, the **Union Minister of Micro Small and Medium Enterprises** launched the **Bank of Schemes, Ideas, Innovation, and Research portal** (<http://ideas.msme.gov.in/>) on MSMEs.



#### **About the portal**

- The **Portal** (<http://ideas.msme.gov.in/>) gives **access to all Schemes of Union, State, and UT Governments**.
- It has the **provision for uploading Ideas, Innovations & Researches** in the **sector**.
- The **portal has unique features** of not only **crowdsourcing of ideas**, but also **evaluation and rating the ideas by crowdsourcing**.
- The **portal has the facility to indicate the stage of Idea (Concept, Prototype, or Commercialized)** to make more users friendly.
- **Papers and photos related to Idea and Video and Social Media links** can also be uploaded.

### **Open Budget Survey 2019**

#### **Why in the news?**





- Recently India has been placed at **53rd position among 117 nations** in terms of **budget transparency and accountability**, according to the recently released **Open Budget Survey 2019**.

#### About the survey:

- The survey is conducted by **the International Budget Partnership (IBP)**. It rates the **level of budget transparency** across countries on a **scale of 0-100**, based on several normative, internationally comparable indicators.
- It **evaluates for each country the availability of eight key budget documents** of the **Central or Federal Government**.
- The survey assesses whether these **budget documents are made public**, in a **timely manner**, and **provides comprehensive information**.

#### Highlight of the Recent Survey

- **Worldwide scenario:**
- **New Zealand has topped the chart with a score of 87.**
- Some of the other large developing countries, with the **exception of China**, have got much **higher transparency scores compared to India**.
- **South Africa (87), Mexico (82), and Brazil (81)** are among the **top six countries providing extensive information** to the public for scrutiny.
- **India and the Survey**
- The survey has **provided India's Union Budget process a transparency score of 49 out of 100**, which is **higher than the global average of 45**.
- **Suggestions to India for further improvements:**
- **Enhancing public participation**
- There is a **need to provide adequate space for public participation for priority setting in its budgets**.
- **Public understanding of Union and State Budgets** should be **encouraged to bring more clarity in the discourses** on issues relating to **fiscal policy and budgetary processes**.

#### About the Open Budget Survey

- It is part of the **International Budget Partnership's Open Budget Initiative**.
- The **headquarters– Washington, D.C., United States (U.S.)**
- **Open Budget Initiative** is a **global research and advocacy program to promote public access to budget information and the adoption of an accountable budget system**.
- **Centre for Budget and Governance Accountability (CBGA)**, has contributed research inputs towards developing an assessment of budget transparency for the efforts by the Union Government.

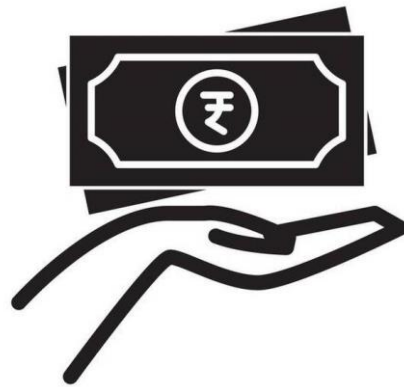
#### About the Centre for Budget and Governance Accountability

- It is a **think tank envisioned by a group of civil society leaders and academicians**.
- It was **started in 2002 as a program of the National Centre for Advocacy Studies (NCAS)**.
- It was set up as an **independent organization in 2005 with the mandate to promote transparent, accountable, and participatory governance**, and a **people-cantered perspective in the preparation and implementation of budgets in India**.

### Consol Bond

#### Why in the news?

- With the pandemic's shadow over the economy, a **Consol Bond issue** is a more compelling solution for the government.



### About the Consol Bond

- It is also known as **perpetual bond** means a bond **without a maturity date**.
- The issuer has the option to **buy back the bond after a specific period**.
- The call option is typically **five years after the date of the issue**.
- In **India**, **perpetual bonds** are listed on **stock exchanges** in which an **investor can sell the bonds on the transaction**. These bonds are generally issued by **large manufacturing companies** or by banks to fund their **long-term capital requirements**.
- These **bonds carry liquidity risk, interest rate risk, and credit risk**.

### Background

- In 2014, the **British government**, a century after the start of the **First World War**, paid out **10% of the total outstanding Consol bond debt**.
- The bonds, which paid out **interest of 5%**, were issued in 1917 as the government sought to **raise more money to finance** the ongoing cost of the **First World War**.
- **Citizens** were asked to **invest with the advertising message: “If you cannot fight, you can help your country by investing all you can in 5 percent Exchequer Bonds.”**
- Unlike the soldier, the **investor runs no risk.”**

### **The energy efficiency initiatives by Bureau of Energy efficiency**

#### **Why in the news?**

- The **Ministry of Power** has released a report on **“Impact of energy efficiency measures for the year 2018-19”** through a **Video conference** recently.



### Highlights of the Report

- The report **highlights India's pledge in COP-21** that will bring down the **energy intensity of the economy by 33 to 35% compared to 2005 levels by 2030.**
- Now, with **energy efficiency initiatives**, the energy intensity of our economy has already been **reduced by 20% compared to 2005 levels**, which is a very good performance indeed.
- The study has identified the following major programs:
  - a. **Perform, Achieve and Trade Scheme,**
  - b. **Standards & Labelling Programme,**
  - c. **UJALA Programme, Municipal Demand Side Management Programme, etc.**

### About Star Rating Programme

- Recently the **Bureau of Energy Efficiency (BEE)** has included **Deep Freezer and Light Commercial Air Conditioners (LCAC)** under its **Star Rating Programme** voluntarily.
- The program has been formulated by **the Bureau of Energy Efficiency**, as part of its mandate, under the **Energy Conservation Act, 2001.**
- Under this Programme, **BEE has covered 24 appliances** till date wherein **ten appliances** are under the mandatory regime.

### About the Bureau of Energy Efficiency

- It is a **statutory body under the Ministry of Power**, Government of India.
- It is assisted in **developing policies and strategies** with the **primary objective of reducing the energy intensity** of the Indian economy.
- It coordinates with designated consumers, designated agencies, and other organizations to identify and utilize the existing resources and infrastructure, in performing the functions assigned to it under the energy conservation act.

### Toman Currency

#### Why in the news?

Recently the **Iranian Parliament** proposed a **bill to replace the national currency (redenomination)**, the **rial** with another basic unit of currency called the **Toman**.



### Highlights of the bill

- It allows the government to **slash four zeros from the rial** and to replace **Iranian national currency Rial** with another basic unit of currency called **Toman (redenomination)**.
- **Each Toman** will be equal to **10,000 rials**.
- The rial will **remain legal tender alongside Toman** for **two years**, during which the **old coins and bills** will be gradually **collected for new ones** to replace them.

### Reasons behind this move

- **Iran's move** is to **offset the fallout from inflation** fueled by **U.S. sanctions**.
- It **helps to overcome** the **declining value of the rial against other currencies**.
- It also **helps to ease the psychological impact** of **using large digits in financial transactions**.

### Atal Pension Yojana

- Recently the flagship social security scheme of Government of India 'Atal Pension Yojana' (APY) has completed five years of successful implementation.

### About the Atal Pension Yojana

- It is previously known as Swavalamban Yojana which is a government-backed pension scheme in India, primarily targeted at the unorganised sector.
- It was mentioned in the 2015 Budget speech by the then Finance Minister Arun Jaitley.

### Benefits

- It has a fixed pension for the subscribers ranging from Rs.1000 to Rs. 5000, if s/he joins and contributes between the age of 18 years and 40 years.
- The contribution levels would vary and would be low if the subscriber joins early and increase if s/he joins late.
- The same pension is payable to Spouse after the death of the Subscriber.
- Return of indicative pension wealth to nominees after the death of spouse.
- Contributions to the Atal Pension Yojana (APY) are eligible for tax benefits similar to the National Pension System (NPS).



**MINISTRY OF FINANCE**

## ATAL PENSION YOJANA

- Subscribers base crosses 1 crore mark on completion of 3 years of launch of the Scheme
- Atal Pension Yojana (APY), a guaranteed Pension Scheme for citizens of India announced by the Government of India, is focused on the unorganised sector workers which constitute more than 85% of workforce.
- Under the APY, the guaranteed minimum pension of Rs. 1,000/- or 2,000/- or 3,000/- or 4,000/- or 5,000/- per month will be given at the age of 60 years depending on the contributions by the subscribers.
- The Spouse of the Subscriber is also eligible for pension and the nominee would be receiving the accumulated pension wealth.

1 crore subscribers Recently, Pension Fund Regulatory Development Authority (PFRDA) in coordination with the Department of Financial Services, Ministry of Finance, Government of India organised a massive outreach campaign "APY Formation Day" across the country to enhance the enrolments in APY by the banks and Department of Posts.

3 years of launch

Atal Pension Yojana

[/finmin.goi](https://www.finmin.goi) [www.finmin.nic.in](http://www.finmin.nic.in) [/FinMin.india](https://twitter.com/FinMin.india)

### Eligibility

- Atal Pension Yojana (APY) is open to all bank account holders who are not members of any statutory social security scheme.
- Any individual who is eligible to receive benefits under the APY will have to furnish proof of possession of Aadhaar number or undergo enrolment under Aadhaar authentication.
- **Age of joining and contribution period**
- The minimum age of joining APY is 18 years and maximum age is 40 years.

### Aatma Nirbhar Bharat Abhiyaan

#### Why is in the news?

- Amid the coronavirus outbreak and national lockdown, the Prime Minister of India launched a **Special economic and comprehensive package of Rs 20 lakh crores**-equivalent to **10% of India's GDP** and called it **Aatma Nirbhar Bharat Abhiyaan**.
- This is the **first tranche of the Atmanirbhar Bharat Abhiyan** which includes the ongoing **Pradhan Mantri Garib Kalyan Yojana**, meant to **support the poorest and most vulnerable communities** during the pandemic.
- It also has **several measures taken by the Reserve Bank of India** to improve liquidity.
- More tranches are expected in the next few days.

#### Details of the economic package:

##### i. For salaried workers and taxpayers:

- Some relief was provided in the form of an **extended deadline for income tax returns** for the **financial year 2019-20**, with the due date now pushed to **November 30, 2020**.
- The **rates of tax deduction at source (TDS)** and **tax collection at source (TCS)** have been **cut by 25%** for the next year.
- While **statutory provident fund (PF) payments** have been **reduced from 12% to 10%** for both **employers and employees** for the next **three months**.

##### ii. NBFCs get attention:

- The amount of **₹3 lakh crore** of this package has been **allocated for collateral-free loan schemes** for **businesses, especially micro, small and medium enterprises (MSMEs)**.
- This **emergency credit line** will ensure that **45 lakh units** will have access to working capital to resume **business activity and safeguard jobs**.
- A **₹50,000 crore equity infusion** is also planned, through an **MSME fund of funds** with a corpus of **₹10,000 crores**.

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- The **definition of an MSME** is being **expanded to allow for higher investment limits** and the **introduction of turnover-based criteria**. These are:
  - a. **Micro Industry:** Investment is less than 1 crore, and Turnover is less than 5 crore.
  - b. **Small Industry:** Investment is between 1-10 crore, and Turnover is between 5-50 crore.
  - c. **Medium Industry:** Investment is between 10-20 crore, and Turnover is between 50-100 crore.
- iii. **Employees Provident Fund Support for business and organized worker**
  - The scheme introduced as part of PMGKP under which Government of India contributes 12% of salary each on behalf of both employer and employee to EPF will be extended by another 3 months for salary months of June, July and August 2020.
- iv. **Tax-related measures**
  - There is Reduction in Rates of ‘**Tax Deduction at Source**’ and ‘**Tax Collected at Source**’.
  - The TDS rates for all non-salaried payment to residents, and tax collected at source rate will be reduced by 25 percent of the specified rates for the remaining period of FY 20-21.

### Third tranche of the economic stimulus package

#### Why in the news?

- The **Union Finance Minister** has recently announced the **third economic package under Atma Nirbhar Bharat** to strengthen **Infrastructure Logistics, Capacity Building, Reforms for Agriculture, Fisheries and Food Processing Sectors**.

#### Booster dose

The third tranche of the measures announced under the **Atmanirbhar Bharat Abhiyan** focuses on agriculture and allied activities



- Funds worth **₹1 lakh crore** to be given to agricultural cooperative societies, farmer producer organisations and start-ups for boosting farm-gate infrastructure
- **₹10,000 crore** for formalisation of micro-food enterprises; cluster-based farming approach to be followed
- **₹20,000 crore** for fishermen under PM Matsya Sampada Yojana; expected to pave way for additional fish production of 70 lakh tonnes over 5 years
- **₹13,000 crore** drive to achieve 100% vaccination of cattle, buffalos, sheep, goats and pigs
- **₹15,000 crore** boost for animal husbandry infrastructure
- **₹4,000 crore** for promotion of herbal cultivation; 10 lakh hectares to be covered
- **₹500 crore** for beekeeping initiatives
- Essential Commodities Act, 1955, to be amended to de-regulate **cereals, edible oils, oilseeds, pulses, onion and potato**
- Marketing reforms to be undertaken to provide adequate choice for **farmers to sell produce** at prices of their choice

A farmer carries strawberries after harvesting them in Srinagar on Friday. ■ NISSAR AHMAD

#### Highlights of the third economic package

##### a. Micro Food Enterprises

- The Scheme promoting the **government’s vision: ‘Vocal for Local with Global outreach’** will be launched to help **2 lakh MFEs** who need **technical upgradation to attain FSSAI food standards, build brands and marketing**. Operation Greens
- It is run by the **Ministry of Food Processing Industries (MOFPI)** which was earlier only for the tomatoes, onion and potatoes now **will be extended to all fruits and vegetables**.

##### b. Animal Husbandry Infrastructure Development Fund



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- This fund will be set up with an **outlay of Rs.15, 000 crores** to support **private investment in Dairy Processing, value addition and cattle feed infrastructure.**
- c. Beekeeping initiatives**
- The government will **implement a scheme for Infrastructure development** related to **Integrated Beekeeping Development Centres, Collection, Marketing and Storage Centres, Post-Harvest & value Addition facilities,** among others.
- d. Essential Commodities Act**
- **The government** will amend the **Essential Commodities Act** to **deregulate cereals, pulses, onions and potatoes.**
  - **Stock limits** will be **imposed under very exceptional circumstances** like **national calamities, famine with a surge in prices.**
- e. Contract Farming**
- **The government** will consider **introducing a law on contract farming under the Contract Act of 1872** to **enable farmers to directly engage** with processors, aggregators, large retailers and exporters fairly and transparently.

Source- The Hindu

### **Employees Provident Fund**

Why in the news?

- The **Central government** has notified the **reduction in statutory rate of contributions of Employees Provident Fund** from **12 per cent to 10 per cent** for wage months period from **May to July 2020.**
- It will be **applicable for all class of establishments** covered under the **Employees Provident Fund and Miscellaneous Provisions Act, 1952.**



**Beneficial**

- The reduction in the rate of **EPF contributions from 12 per cent to 10 percent** of **basic wages and Dearness allowances** is intended to **benefit both 4.3 Crore employees and employers of 6.5 lakhs establishments** to tide over the **immediate liquidity crisis** to some extent.

**Exempted**

- This **reduction of the rate of contribution** does not apply to **establishments like Central and State Public Sector enterprises** or any other establishment owned or controlled by or under control of the **Central or State Government.**
- The reduced rate is also not applicable for **Pradhan Mantri Garib Kalyan Yojana-PMGKY beneficiaries** as the entire **employees' employees' EPF contributions of 12 per cent of wages and employers.**

### About Employees' Employees' Provident Fund Organisation (EPFO)

- It is a **government organization** that **manages the provident fund** and pension accounts of member employees and implements the **Employees' Employees' Provident Fund and Miscellaneous Provisions Act, 1952**.
- The **Employees' Provident Fund and Miscellaneous Provisions Act, 1952** provides for the **institution of provident funds for employees in factories and other establishments**.
- It is **administered by the Ministry of Labour & Employment, Government of India**.

### **Cabinet approves Special Liquidity Scheme for NBFCs/HFCs to address their Liquidity Stress**

#### Why is in the news?

- The **Union Cabinet** has given its **approval to the proposal of the Ministry of Finance** to launch a new **Special Liquidity Scheme for Non-Banking Financial Companies (NBFCs) and Housing Finance Companies (HFCs)** to **improve the liquidity position of the NBFCs/HFCs**.



#### Details of the Scheme:

- The **Government has proposed a framework for addressing the liquidity constraints of Non-Banking Financial Companies (NBFCs) and Housing Finance Companies (HFCs)** through a **Special Liquidity Scheme**.
- A **Special Purpose Vehicle** would be set up to manage a **Stressed Asset Fund (SAF)** whose **special securities** would be **guaranteed by the Government of India** and purchased by the **Reserve Bank of India (RBI)** only.
- The proceeds of the sale of such securities would be used by the SPV to acquire **short-term debt of NBFCs/HFCs**.
- The **Scheme will be administered by the Department of Financial Services**, which will issue the detailed guidelines.
- **Impact:**
- The **proposed Scheme** would be a **one-stop arrangement** between the **SPV and the NBFCs without having to liquidate** their current asset portfolio.
- The Scheme would also act as an **enabler for the NBFC** to get **investment grade or better rating for bonds issued**.
- The Scheme is likely to be **easier to operate and also augment the flow of funds** from the non-bank sector.

#### Benefits:

- This **facility would supplement the liquidity measures** taken so far by the **Government and RBI**.



- The Scheme would **benefit the real economy** by **augmenting the lending resources of NBFCs/HFCs/MFLs**.
- **Background:**
- It has been announced in the **Budget Speech of 2020-21** that a mechanism would be devised to provide **additional liquidity facility to NBFCs/HFCs** over that **provided through the Partial Credit Guarantee Scheme (PCGS)**.
- There is an urgency to implement the above **Budget announcement to strengthen financial stability** on account of the **emerging situation of Covid-19**.

### **Coir Geotextiles gets the nod for Rural Road Construction**

#### **Why in the news?**

- Recently **National Rural Infrastructure Development Agency** has said that **Coir Geotextiles** will be used for the **construction of rural roads** under the **Pradhan Mantri Gram Sadak Yojana-III (PMGSY-III)**



#### **About Coir Geotextile**

- It is a **permeable fabric, natural, strong, highly durable, resistant to rots, moulds and moisture, free from any microbial attack**.
- As per the **PMGSY new technology guidelines** for road construction, **15% length** in each batch of proposals is to be constructed using new technologies.
- **Out of this 5% of roads** are to be constructed **using IRC accredited technology**.
- The **Indian Roads Congress (IRC)** has now **accredited coir Geotextiles** for **construction of rural roads**.
- As per these instructions, **5% length of the rural roads** under **PMGSY-III** will be **constructed using Coir Geotextiles**.

#### **About Pradhan Mantri Gram Sadak Yojana-III**

- The Scheme was announced by the **Finance Minister in Budget Speech** for the **year 2018-19**.

#### **Features of Pradhan Mantri Gram Sadak Yojana-III (PMGSY-III):**

- Under the **PMGSY-III Scheme**, it is **proposed to consolidate 1, 25, 000 Km road length** in the States.
- It involves **the consolidation of Through Routes and Major Rural Links connecting habitations to Gramin Agricultural Markets (GrAMs), Higher Secondary Schools and Hospitals**.

- The funds would be **shared in the ratio of 60:40** between the **Centre and State** for all **States except for 8 North-Eastern states and Himachal Pradesh & Uttarakhand** for which it is **90:10**.

#### **Pradhan Mantri Gram Sadak Yojana-I**

- It was launched in **December 2000**.

#### Objective

- To provide **single all-weather road connectivity** to **eligible unconnected habitation of designated population size** (500+ in plain areas and 250+ in North-East, hill, tribal and desert areas as per Census, 2001) for overall **socio-economic development of the areas**.

#### **About Road Connectivity Project for Left Wing Extremism Area (RCPLWEA)**

- **The government had also launched Road Connectivity Project for Left Wing Extremism affected Areas in the year 2016** as a **separate vertical under PMGSY**.
- It helps to **provide all-weather road connectivity** with **necessary culverts and cross-drainage structures in 44 districts** (35 are worst LWE affected districts, and 09 are adjoining districts), which are **critical from security and communication point of view**.
- Under the **Scheme, 5,066 Km road length** has been sanctioned.

#### **About Indian Roads Congress**

- The **Indian Roads Congress (IRC)** is the **Apex Body of Highway Engineers** in the country.
- It was set up in **December 1934** on the recommendations of the Indian Road Development Committee best known as **Jayakar Committee** set up by the **Govt. of India** with the **objective of Road Development in India**.

#### **Pradhan Mantri Matsya Sampada Yojana**

##### **Why in the news?**

- The **Cabinet** has approved the **“Pradhan Mantri Matsya Sampada Yojana**.

##### **About the Pradhan Mantri Matsya Sampada Yojana**

- The scheme was **announced by the Government in its Union Budget, 2019-20**.
- It is a scheme to **bring about the Blue Revolution** through **sustainable and responsible development of the fisheries sector in India**.



##### **Implementation strategy**

- The **PMMSY will be implemented** as an **umbrella scheme** with **two separate Components** namely:
  - a. **Central Sector Scheme (CS)**
  - b. **Centrally Sponsored Scheme (CSS)**.

- Under the **Centrally Sponsored Scheme (CSS) Component**, an investment of **Rs. 18330 crores** has been envisaged, which in turn is segregated into **Non-beneficiary oriented** and **Beneficiary orientated** sub-components/activities under the following three broad heads:
  - a. **Enhancement of Production and Productivity**
  - b. **Infrastructure and Post-harvest Management**
  - c. **Fisheries Management and Regulatory Framework**
    - It will be implemented over a period of **5 years from FY 2020-21 to FY 2024-25** in all **States/Union Territories**.

#### **Central Sector Scheme (CS):**

- a. The entire **project/unit cost** will be borne by the Central Government (i.e. 100% central funding).
- b. Wherever **direct Beneficiary oriented**, i.e. **individual/group activities** are undertaken by the entities of central Government including **National Fisheries Development Board (NFDB)**
- c. the central assistance will be up to **40% of the unit/project cost** for **General category** and **60% for SC/ST/Women category**

#### **Centrally Sponsored Scheme (CSS):**

The entire project/unit cost will be shared between **Centre and State** as detailed below:

- **North Eastern & Himalayan States: 90% Central share and 10% State share.**
- **Other States: 60% Central share and 40% State share.**
- **Union Territories** (with the legislature and without legislature): **100% Central share.**

#### **Aims and objectives of PMMSY**

- **We are harnessing of fisheries potential in a sustainable, responsible, inclusive and equitable manner.**
- **Enhancing of fish production and productivity through expansion, intensification, diversification and productive utilization of land and water**
- **Modernizing and strengthening of the value chain** - post-harvest management and quality improvement
- **Doubling fishers and fish farmers incomes** and generation of employment
- **Enhancing contribution to Agriculture GVA** and exports
- **Social, physical and economic security** for fishers and fish farmers
- **Robust fisheries management and regulatory framework**

#### **Note:**

- The **Gross Value Added (GVA)** of **fisheries sector** in the national **economy** during **2018-19** stood at **Rs 2,12,915 crores** (current basic prices) which constituted **1.24%** of the total **National GVA** and **7.28%** share of **Agricultural GVA**.
- The **sector has immense potential to double the fishers and fish farmers' incomes by 2022** as envisioned by **Government** and usher in **economic prosperity**.

### **Cabinet approves extension of 'Pradhan Mantri Vaya Vandana Yojana'**

#### **Why in the news?**

- **Union Cabinet** has recently given its **approval for the extension of Pradhan Mantri Vaya Vandana Yojana**. The extension of **Pradhan Mantri Vaya Vandana Yojana (PMVVY)** up to **March 31st, 2023** for a further period of three years beyond **March 31st 2020**.



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### Highlights of Cabinet decisions

- It has allowed initially an **assured rate of return of 7.40 % per annum** for the **year 2020-21 per annum** and thereafter to be reset every year.
- There will be an **annual reset of the assured rate of interest** with effect from **April 1st of the financial year** in line with the **revised rate of returns of Senior Citizens Saving Scheme (SCSS)** upto a **ceiling of 7.75%** with a **fresh appraisal of the scheme** on breach of this threshold at any point.
- **We are capping Management expenses at 0.5% p.a. of funds** of the scheme for the **first year of scheme in respect of new policies issued** and thereafter **0.3% p.a.** for the second year onwards for the next 9 years.
- It has delegated the authority to **Finance Minister to approve annual reset rate of return at the beginning of every financial year.**
- The **minimum investment** has also been revised to **Rs.1, 56,658** for a pension of **Rs.12, 000/- per annum** and **Rs.1, 62,162/-** for getting a **minimum pension amount of Rs.1000/- per month** under the scheme.
- **About Pradhan Mantri Vaya Vandana Yojana**
- It is a **social security scheme for senior citizens** intended to give an **assured minimum pension** to them based on an assured return on the **purchase price/subscription amount.**

### Emergency Credit Line Guarantee Scheme

#### Why in the news?

- Recently the **Union Cabinet** has approved additional funding of up to **Rs. 3 lakh crores** through the **introduction of Emergency Credit Line Guarantee Scheme.**



#### About the Emergency Credit Line Guarantee Scheme

- It has been **formulated as a specific response** to the unprecedented situation **caused by COVID-19** and the **consequent lockdown**, which has **severely impacted manufacturing** and other **activities in the MSME sector.**
- The salient features of the Scheme include **all MSME borrower accounts with outstanding credit of up to Rs. 25 crores** as on **29.2.2020** and with an **annual turnover of up to Rs. 100 crore** would be **eligible for GECL funding** under the Scheme.
- The Scheme would be **applicable to all loans sanctioned under GECL during the period** from the **date of announcement of the Scheme to 31.10.2020**, or till an **amount of three lakh crore** is sanctioned under the GECL, whichever is earlier.

### Scheme for Formalization of Micro Food Processing Enterprises

#### Why is in the news?

- Union Cabinet has given its approval for **Formalization of Micro Food Processing Enterprises** for the **Unorganized Sector on All India basis** with an **outlay of Rs. 10 thousand crores.**



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### About the scheme for the formalization of Micro Food Processing Enterprises

- It is a **Centrally Sponsored Scheme** for the **Unorganized Sector on All India basis**.
- The **expenditure of the scheme** will be **shared by the Government of India and the States in the ratio of 60:40**.

### Objectives of the scheme are

- a. Increase in access to finance by micro food processing units.
  - b. Increase in revenues of target enterprises.
  - c. Enhanced compliance with food quality and safety standards.
  - d. The transition from the unorganized sector to the formal sector.
  - e. Special focus on women entrepreneurs and Aspirational districts.
  - f. Strengthening capacities of support systems.
  - g. Focus on minor forest produce in Tribal Districts.
- The scheme will be **implemented over 5 years** from **2020-21 to 2024-25**.
  - The **State/UT Government** will notify a **Nodal Department and Agency for implementation** of the Scheme.

### **RBI announces nine additional measures for strengthening the Economy**

#### Why is in the news?

- **RBI Governor** has recently announced **nine measures to smoothen the flow of finance** and **preserve financial stability** in the **turbulent and uncertain times** ushered in by the **COVID-19 pandemic**.



This follows the earlier **sets of measures announced by RBI on April 17, 2020**, and on **March 27, 2020**. These measures are:

#### **1. Repo rate has been reduced by 40 basis points**

- The repo rate has been reduced by 40 basis points from 4.4% to 4.0%.

- The Marginal Standing Facility rate and the Bank rate have been reduced from 4.65% to 4.25%.
  - The reverse repo rate has been reduced from 3.75% to 3.35%.
- 2. Refinance Facility to SIDBI extended for another 90 days**
- To enable the increased supply of affordable credit to small industries, the RBI had, on April 17, 2020, announced a special refinance facility of ₹15,000 crores to SIDBI at RBI's policy repo rate for 90 days.
  - This facility has now been extended by another 90 days.
- 3. Relaxation of Rules for Foreign Portfolio Investment under Voluntary Retention Route**
- The **Voluntary Retention Route** is an investment window provided by RBI to Foreign Portfolio Investors, which provides easier rules in return for a commitment to make higher investments.
  - The rules stipulate that at least 75% of the allotted investment limit be invested within three months; considering the difficulties being faced by investors and their custodians, the time limit has now been revised to six months.
- 4. Measures to Support Exports and Imports**
- The maximum permissible period of pre-shipment and post-shipment export credit sanctioned by banks to exporters has been increased from the existing one year to 15 months, for disbursements made up to July 31, 2020.
- 5. Loan facility to EXIM Bank**
- The Governor has announced a line of credit of ₹15,000 crores to the EXIM Bank, for financing, facilitating and promoting India's foreign trade.
  - The loan facility has been given for 90 days, with a provision to extend it by one year.
  - The loan is being given to enable the bank to meet its foreign currency resource requirements, especially in availing a US dollar swap facility.
- 6. More time for Importers to Pay for Imports**
- The time period for import payments against normal imports (i.e. excluding import of gold/diamonds and precious stones/jewellery) into India has been extended from six months to twelve months from the date of shipment.
  - This will be applicable for imports made on or before July 31, 2020.
- 7. Credit Extension**
- The maximum credit which banks can extend to a particular corporate group has been increased from 25% to 30% of the bank's eligible capital base.
- 8. Provision to convert Interest on Working Capital into Interest Term Loan**
- Lending institutions have been allowed to convert the accumulated interest on working capital facilities over the total deferment period of 6 months (i.e. March 1, 2020, up to August 31, 2020) into a funded interest term loan, to be fully repaid during the current financial year, ending March 31, 2021.
- 9. Time period extended**
- The time period for import payments against normal imports into India has been extended from six months to twelve months from the date of shipment.

### **Second Addendum on Protocol on Inland Water Transit and Trade between India and Bangladesh, 2020**

#### **Why in the news?**

- Recently **India and Bangladesh have added five more "ports of call" on either side and increased the protocol (water) routes from 8 to 10** which help to **boost trade, economic activity and connectivity**.



### About the 2nd Addendum on Protocol on Inland Water Transit and Trade Routes:

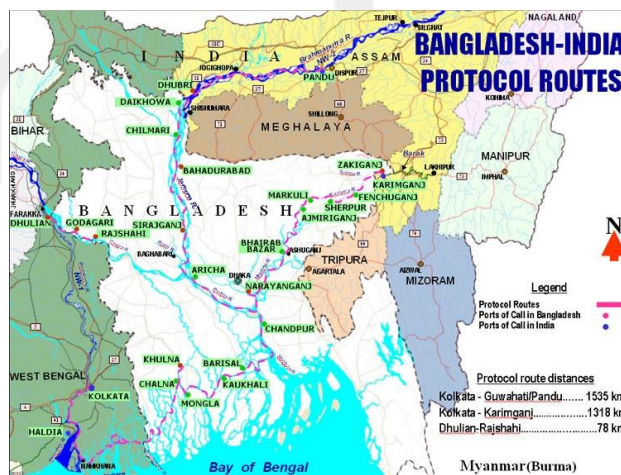
- The number of **Indo Bangladesh Protocol (IBP) routes** are being increased from **8 to 10**, and **new locations** are also added to the existing routes: -
  - a. The inclusion of **Sonamura- Daudkhandi stretch of Gumti river as IBP route No. 9 & 10 in the Protocol** will improve the connectivity of Tripura and adjoining States with Indian and Bangladesh's economic centres. This route shall be connecting all existing IBP routes from 1 to 8.
  - b. **Rajshahi-Dhulian-Rajshahi Routes and its extension up to Aricha**
    - It will help the **augmentation of infrastructure in Bangladesh** as it would **reduce the transportation cost of stone chips/aggregate to the northern part of Bangladesh** through this route.
    - It will also decongest the **Land Customs Stations** on both sides.
  - c. **Ports of Call**
    - Port of call means **an intermediate stop for a ship** on its scheduled **journey for cargo operation** or taking on supplies or fuel.
    - The new five "ports of call" on the **Indian side are Dhulian, Maia, Jogigopha, Kolaghat and Sonamura** and on the **Bangladesh side Rajshahi, Sultanganj, Chilmari, Daudkandi and Bahadurabad.**
  - d. **Newly added Ports of Call**
    - Inclusion of **Jogigopha in India** and **Bahadurabad in Bangladesh** as new Port of Call will provide connectivity to **Meghalaya, Assam and Bhutan.**
    - These **new Ports of Call** would enable the loading and unloading of cargo transported on the **Indo Bangladesh Protocol Route** and **provide a stimulus to the economic development of the new locations and their hinterland.**





### About the Protocol on Inland Water Transit

- This Protocol, which was first **signed in 1972** (immediately after independence of Bangladesh), is a reflection of **shared history and friendship** between the two countries.



- It was last **renewed in 2015 for five years** with a provision for its **automatic renewal for a further period of five years**, giving long term assurance to various stakeholders.

### **9th Edition of the 'Status Paper on Government Debt' released**

#### Why in the news?

- Recently, the **Central Government** has released the **9th Edition of the "Status Paper on the Government Debt"**.





to public sector banks/ EXIM Bank, securities issued to international financial institutions, and compensation and other bonds.

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## Science and Technology

### Earth's Magnetosphere

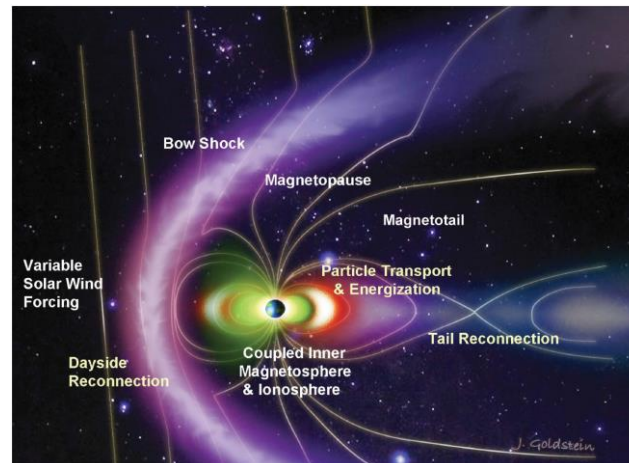
#### Why in the news?

- Scientists at the **Indian Institute of Geomagnetism** have developed a **generalized one-dimensional fluid simulation code** capable of studying a **broad spectrum of coherent electric field structures** in **near-earth plasma environment** or **earth's magnetosphere**, which can be **useful in the planning of future space missions**.



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### About Earth's Magnetosphere

- The **magnetosphere is the region of space surrounding Earth**, where the **dominant magnetic field is the Earth's magnetic field**, rather than the **magnetic field of interplanetary space**.
- The **magnetosphere is formed by the interaction of the solar wind with Earth's magnetic field**.
- The **boundary between the solar wind and Earth's magnetic field is called the magnetopause**.
- The **boundary is continuously in motion** as the ever-changing solar wind buffets Earth.
- While the **magnetopause shields us to some extent from the solar wind**, it is far from **impenetrable**, and **energy, mass, and momentum are transferred from the solar wind to regions inside Earth's magnetosphere**.
- The **interaction between the solar wind and Earth's magnetic field**, and the **influence of the underlying atmosphere and ionosphere**, creates various regions of fields, plasmas.
- **Almost 99% of matter in the universe is in the form of plasma**, Earth's magnetosphere, too, contains this material.
- The conditions inside the **magnetosphere are highly dynamic and create a "space weather"** that can affect technological systems and human activities such as:
  - The **radiation belts can have impacts on the operations of satellites**.
  - The **particles and currents from the magnetosphere can heat the upper atmosphere and result in satellite drag** that can affect the orbits of **low-altitude Earth-orbiting satellites**.
  - **Influences from the magnetosphere on the ionosphere can also affect communication and navigations systems**.

### Background

- It has been **several thousand years** since the **Chinese discovered that certain magnetic minerals, called lodestones, would align in roughly the north-south direction**.
- The **reason for this effect wasn't understood, though, until 1600**, when **William Gilbert published De Magnete and demonstrated that our Earth behaved like a giant magnet and lodestones were aligning with Earth's magnetic field**.

### Note:

- In **January 2019 British Geological Survey** reported that the earth's magnetic north pole is moving **from its current position in Canada to Siberia**.



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- The **shift is causing geophysicists** to reconsider the **world magnetic model**, which is **used for navigation purposes**.

### **Pulse oximeter**

#### **Why in the news?**

- As **healthcare systems** around the **world struggle to test** as well as treat **people for Covid-19**, some experts have **advocated the use of a medical device called the 'pulse oximeter'** for **testing those who have the disease**, or those suspected of having it.



#### **What is a pulse oximeter?**

- "Pulse oximetry is a test used to **measure the oxygen level (oxygen saturation) of the blood**.
- It is an easy, **painless measure of how well oxygen** is being sent to **parts of your body** furthest from **your heart**, such as **the arms and legs**.
- The device is generally used to **check the health of patients** who have **known conditions** that **affect blood oxygen levels**, such as **heart and lung conditions**, and for those who **show symptoms such as shortness of breath**.
- The **device measures the saturation of oxygen in red blood cells** and can be **attached** to a person's fingers, toes, nose, feet, ears, or forehead.
- It can be **reused or disposed of after use**.

### **UV disinfection tower**

#### **Why in the news?**

- The **Defence Research and Development Organisation (DRDO)** has **developed an ultraviolet (UV) disinfection tower** for **rapid and chemical-free disinfection** of **high infection-prone areas**.





### About Ultraviolet (UV) Disinfection Tower

- It was **designed and developed by Laser Science & Technology Centre (LASTEC)** based in Delhi with the help of **New Age Instruments and Materials Private Limited, Gurugram.**
- The equipment named **UV blaster is a UV based area sanitizer** for rapid and chemical-free disinfection of high infection-prone areas.
- It 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.
- It is also **effective for areas with a large flow of people**, such as **airports, shopping malls, metros, hotels, factories, offices**, etc.
- The **UV based area sanitizer** may be used by **remote operation through laptop/mobile phone using wifi link.**

### Silent hypoxia, puzzle among doctors

#### Why in the news?

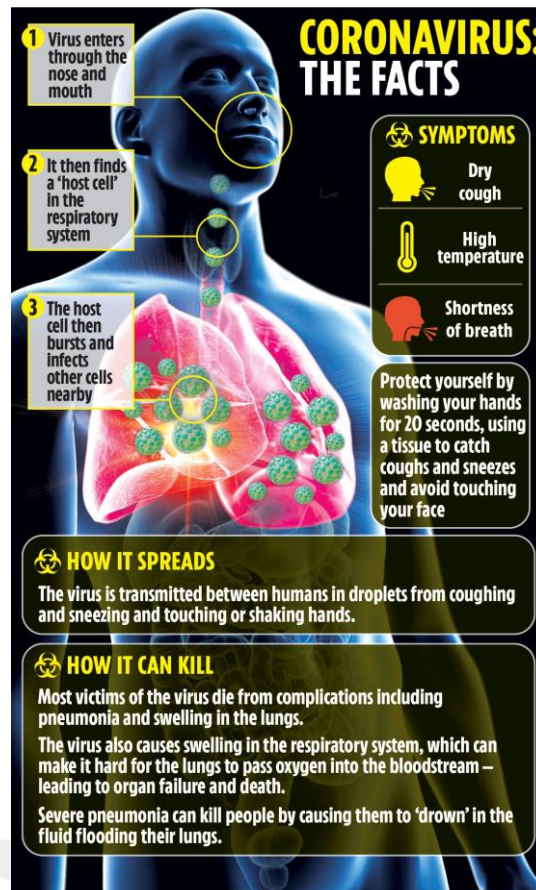
- As medical practitioners around the world are busy treating people for Covid-19, many have reported a condition called **'silent' or 'happy' hypoxia**, in which patients have **extremely low blood oxygen levels, yet do not show signs of breathlessness.**

#### What is hypoxia?

- **Hypoxia** is a condition wherein there is **not enough oxygen available to the blood and body tissues.**
- Hypoxia can either be **generalized, affecting the whole body**, or local, affecting a region of the body.

#### What is silent hypoxia?

- It is a **serious medical condition** found in **severe Covid-19 patients** — is preceded by **'silent hypoxia,'** a form of **the oxygen deprivation that is harder to detect** than regular hypoxia.



- In 'silent' or 'happy' hypoxia, patients appear to be less in distress. Many Covid-19 patients, despite having oxygen levels below 80 percent, look fairly at ease and alert, according to multiple reports.
- This phenomenon has puzzled several medical practitioners.

### Reasons for Hypoxia

- According to Dr. Levitan, this happens because, in patients with Covid pneumonia, the virus causes air sacs to fall, leading to a reduction in levels of oxygen. However, the lungs initially do not become stiff or heavy with fluid and remain "compliant" – being able to expel carbon dioxide and avoiding its buildup.
- Thus, patients do not feel short of breath.

### Llamas vs. COVID-19

#### Why in the news?

- Recently, the researchers at the University of Texas at Austin have found in a llama named Winter an unlikely ally in the hunt for an effective treatment for COVID-19.



### How does it work?

- The researchers linked **two copies of a special kind of antibody** produced by **llamas** and created a **new antibody**, which **binds tightly to a key protein** on the **novel coronavirus SARS-CoV2**.
- This **protein is the spike protein**, shaped like a **corona (crown)** that gives coronaviruses their name.
- It is also the **protein that allows the virus to break into human and animal cells**.
- Initial tests with the **new antibody and cultured cells indicated the antibody blocks viruses** with this **spike protein from infecting cells**.

### About Llama

- The **Llama is a domesticated South American camelid**, widely used as a **meat and pack animal by Andean cultures** since the Pre-Columbian era.
- Llamas are **very social animals and live with others in a herd**. Their **wool is very soft and lanolin-free**.



### Distribution:

- These are **no longer found in the wild**.
- They are now **distributed throughout North America, Europe, Australia, Argentina, Ecuador, Chile, Bolivia, and Peru**.
- Currently, **nearly 70% of llamas are found in Bolivia**.

### Vizag gas leak tragedy

#### Why in the news?

- A **gas leak**, reminiscent of the **1984 Bhopal tragedy**, has recently **claimed at least 11 lives** and **affected thousands of residents** in **five villages in Visakhapatnam in Andhra Pradesh**.
- The **source of the leak** was a **styrene plant** owned by **South Korean electronics giant LG**, located at **RRV Puram near Gopalapatnam**, about **15 km from the coastal city**.

#### About the Styrene Gas

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- It is a **flammable liquid** that is used in the manufacturing of polystyrene plastics, fiberglass, rubber, and latex.
- It is also found in **vehicle exhaust, cigarette smoke**, and in **natural foods like fruits and vegetables**.



#### Implications of exposure to styrene:

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

#### Symptoms

- Headache, hearing loss, fatigue, weakness, difficulty in concentrating, etc.

### African Swine Fever

#### Why in the news?

Recently over **2,900 pigs have died in Assam** due to **African Swine Fever (ASF)**, which does not **affect humans** but can be **catastrophic for pigs**, which are **the first time reported in India**.



#### About African Swine Fever

- It is a **severe viral disease** that **affects wild and domestic pigs**, typically resulting in **an acute hemorrhagic fever**.
- The disease has a **case fatality rate (CFR)** of **about 100 percent**.
- Its **routes of transmission** include direct contact with **an infected or wild pig** (alive or dead), **indirect contact** through **the ingestion of contaminated**



**material** such as food waste, feed or garbage, or through biological vectors such as ticks.

- It is **less infectious than other animal diseases** such as **foot-and-mouth disease**.
- It does **not affect human beings**.
- The disease is **characterized by the 'sudden deaths of pigs.'**

#### About Classical Swine Fever (Hog cholera)

- It is a **viral disease related to pigs**, which is **highly contagious and usually spreads by infectious meat or meat products consumption by Pigs** or contact of healthy Pigs with infected pigs or their faeces or body fluids, etc.
- It is also not known to **affect humans**.
- It is different from **Swine Flu, which affects humans too**.

#### Antibodies hmAbs

##### Why in the news?

- Recently **CSIR**, through its **New Millennium Indian Technology Leadership Initiative (NMITLI) program**, approves a **multi-institutional project** to develop **human monoclonal antibodies (hmAbs)** that can **neutralize SARS-CoV-2 in patients**.



#### About the NMITLI program

- The **project** will be **implemented by the National Centre for Cell Science (NCCS), IIT-Indore, and PredOmix Technologies Pvt. Ltd.** with **Bharat Biotech International Ltd.**, as the **commercialization partner**.

#### Aim of the Project

- The project aims to generate **hmAbs to SARS-CoV-2** from the **convalescent phase of COVID-19 patients** and select **high affinity and neutralizing antibodies**.
- The project also aims to **anticipate future adaptation** of the **virus** and **generate hmAbs clones** that can **neutralize the mutated virus** so that it could be **readily used for combating future SARS-CoV infections**.
- **BBIL** will be the **commercial partner** and **responsible for subsequent development and commercialization of the hmAbs generated**.

#### HR 6819: The Earth's closest black hole

##### Why in the news?



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- Recently the researchers have discovered the **closest black hole to Earth** known as **HR 6819**, which is at **least 4.2 times** the **mass of the Sun**, is **gravitationally bound** to two stars in a **so-called triple system**.



### About HR 6819

- It is also known as **HD 167128** or **QV Telescopii**, is a **triple star system** in the **southern constellation of Telescopium**, which is **1,120 light-years from the Sun**.
- It can be seen from **Earth's southern hemisphere** with the **naked eye in the constellation Telescopium**.
- **HR 6819** is a **hierarchical triple** containing a **classical be star in a wide orbit of the unknown period**, a **B3 III star**, and a **non-emitting (non-accreting) black hole**, designated **Ab**.
- These are the **extraordinarily dense objects** possessing **gravitational pulls so powerful** that not **even light can escape**.
- Some are **monstrous** like the one at our **galaxy's center 26,000 light-years from Earth** that is **four million times the Sun's mass**.

### **COaVID KAVACH ELISA: India's first indigenous antibody-based testing kit**

#### Why in news?

- National Institute of Virology, Pune, has recently developed the first indigenous antibody-based ELISA test kit - COaVID KAVACH for diagnosis of novel Corona Virus.

#### About the ELISA Test

- The ELISA stands for enzyme-linked immunoassay which is a commonly used laboratory test to detect antibodies in the blood.

#### Significance

- The kit has displayed high sensitivity and accuracy in the validation tests at different sites.
- It can test around 90 samples in approximately two and a half hours.

#### Note:

- ICMR-National Institute of Virology (NIV), Pune is the apex laboratory of the country with state-of-art infrastructure and expertise for research in virology.

### **'Immunity passports' and the 'Release certificates'**

#### Why in the news?

- **Chile** has recently announced that it would **push for "release certificates"** for those **individuals** who had **recovered from Covid-19**.
- The **certificate** would **not prove immunity to the virus** but **instead, be issued** to those who had **finished a mandatory quarantine** after **testing positive for the disease**.

- Other countries such as the **UK, Italy, and Germany** have also considered **issuing “immunity passports” and “risk-free certificates.”**

#### About immunity certificates

- These **certificates** are based on the **idea that the natural immunity a person develops to any infection will protect them from contracting the disease again.**
- Once infected with a **viral pathogen**, the **body’s innate immune response** kicks in, which **slows the spread of the virus** and **potentially helps** not lead to any symptoms.



#### About immunity certificates

- These **certificates** are based on the **idea that the natural immunity a person develops to any infection will protect them from contracting the disease again.**
- Once infected with a **viral pathogen**, the **body’s innate immune response** kicks in, which **slows the spread of the virus** and **potentially helps** not lead to any symptoms.
- An “adaptive response then follows this response”, wherein the **body makes antibodies**, which **bind to the virus and help eliminate it.**
- If this **response is strong enough**, it may **even prevent re-infection** from the **same pathogen.**

#### Concern issue

- **World Health Organization (WHO)** warned against using such **certificates** since there was **no evidence** yet that a **person infected with Covid-19 could not get the infection again.**
- There is currently no evidence that people who have recovered from Covid-19 and **have antibodies are protected from a second infection.**

#### Difference between Immunity certificates Vs. Vaccine certificates

- The **immunity passports** are **fundamentally different** from **vaccine certificates** since the former **incentivizes infection**, and the latter **incentivizes getting vaccinated.**
- **Vaccine certificates** may be an **effective way to start lifting physical distancing measures**, but this can also be **implemented once a vaccine is ready.**

#### Defense Research Ultraviolet Sanitise

##### Why in the news?

- Recently a **Hyderabad-based Defence Research and Development Organisation (DRDO)** premier lab, **Research Centre Imarat (RCI)**, has developed **Defence Research Ultraviolet Sanitiser devices.**



#### About Defence Research Ultraviolet Sanitiser (DRUVS)

- It is an **automated contactless UVC sanitizing cabinet**.
- It has been **designed to sanitize mobile phones, iPads, laptops, currency notes, cheques, challans, passbooks, paper, envelopes, etc.**

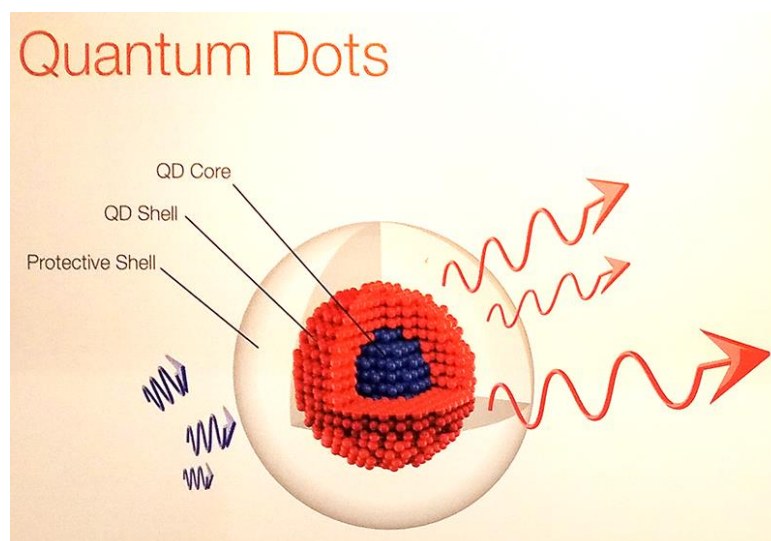
#### Other devices developed by Research Centre Imarat (RCI):

- **NOTESCLEAN**
- It is an **automated UVC currency sanitizing device** which picks the note inserted from the **input slot** and **makes them pass through a series of UVC lamps** for **complete disinfection**.

#### Quantum Dots

##### Why in the news?

- Recently researchers at the **Agharkar Research Institute (ARI), Pune** have developed a new process for the **synthesis of quantum efficient and biocompatible quantum dots (QDs)**.



#### About biocompatible quantum dots



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- It is used in **capturing images of cellular organelles** and **processes within the visible wavelength ranges** across the **electromagnetic spectrum**.
- Currently, **bioimaging applications** such as **visualisation of cellular organelles, tracking cellular processes**, etc. are **reliant on traditional fluorophores** which are **fluorescent chemical compounds** that can **re-emit light upon excitation**.

**What are quantum dots?**

- **Quantum dots** are **semiconductor particles** with **typical diameter of 2–10 nm**.
- **Quantum dots (QDs)** are man-made **nanoscale crystals** that that can **transport electrons**.
- Quantum dots **emit light via this mechanism**: under **external stimulus**, some of the **electrons of the dot material absorb sufficient energy to escape their atomic orbit**.
- When **Ultraviolet light** hits these **semiconducting nanoparticles**, they can emit light of various colours.
- These **artificial semiconductor nanoparticles** that have found applications in composites, **solar cells, and fluorescent biological labels**.
- It can also be used as **active materials in single-electron transistors**.

### **COBAS 6800 testing machine**

**Why in the news?**

- **Union Minister of Health & Family Welfare** has recently dedicated the **COBAS 6800 testing machine** to the nation.



**About the COBAS 6800 testing machine**

- It is the **first testing machine** that has been procured by the **Government for testing of COVID-19 cases** and is installed at the **National Centre for Disease Control**.

**Features**

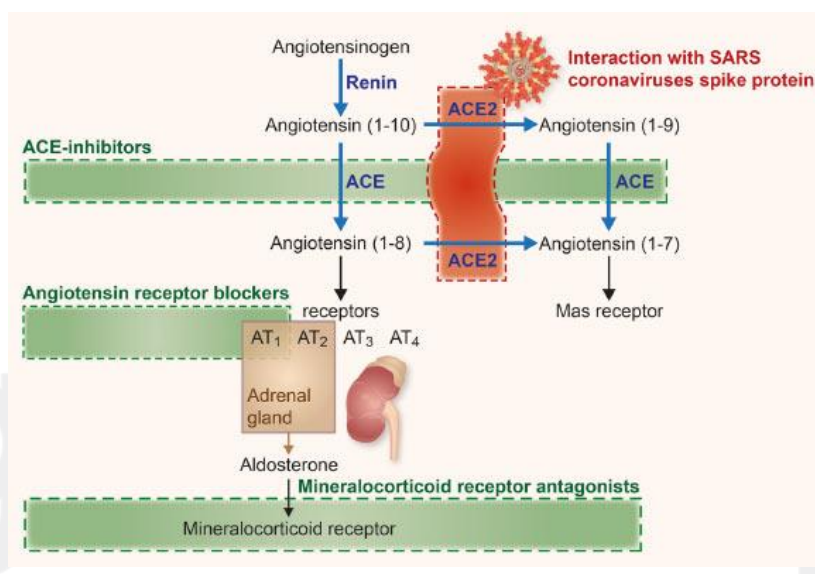
- It is a **fully automated, high-end machine for performing real-time PCR testing COVID-19 in the Service of the nation**.
- **COBAS 6800** will provide **quality, high-volume testing** with a **high throughput of test around 1200 samples in 24 hours**.

- The **machine requires a minimum BSL2+ containment level** for testing; it cannot be placed at just any facility.
- COBAS 6800 can also **detect other pathogens like Viral Hepatitis B & C, HIV, MTb** (both rifampicin and isoniazid resistance), **Papilloma, CMV, Chlamydia, Neisserreia** etc.

### Angiotensin-Converting Enzyme 2(ACE2)

#### Why in the news?

- According to a study, **ACE-2 enzymes** are responsible for why **men seem to be more vulnerable to Covid-19 than women**. According to the survey, **men have higher levels of the angiotensin-converting enzyme 2 (ACE2)**, which is a protein in the blood that **Sars-CoV2, the virus that causes Covid-19, uses to enter human cells**.



#### About Angiotensin-Converting Enzyme 2(ACE2)

- It is an **enzyme molecule** that connects the **inside of our cells** to the outside **via the cell membrane**.
- It is **found not only in lungs**, but also the **heart, kidneys and tissues lining blood vessels**, and there are particularly **high levels in the testes**.
- The **enzyme essentially acts** as a port of entry that allows the **coronavirus to invade our cells and replicate**.

#### How will it work?

- **ACE2 is a receptor on the surface of cells** which **binds to the coronavirus** and **allows it to enter and infect healthy cells** after it is has been modified by **another protein on the surface of the cell, called TMPRSS2**.
- **High levels of ACE2 are present in the lungs** and, therefore, it is thought to **play a crucial role in the progression of lung disorders related to Covid-19**.

### EventBot: A new Malware

#### Why in the news?

- According to the **Computer Emergency Response Team of India (CERT-In)**, Android users who **use mobile banking** might be **vulnerable to a new malware called 'EventBot'**.

#### About the EvenBot

- It is a **mobile-banking Trojan and info-stealer** that abuses **Android's in-built accessibility features** to steal user data from **financial applications**, read user



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SMS messages and intercept SMS messages, allowing malware to **bypass two-factor authentication.**



- A **Trojan virus** often enters a device by **cheating the user** into believing that it is **software the user needs.**
- It then attacks the **operating system from within.**
- According to the **CERT-In**, the virus "**largely targets financial applications like Paypal Business, Revolut, Barclays, UniCredit, CapitalOne UK, HSBC UK, TransferWise, Coinbase, Paysafecard etc.**

#### **About Computer Emergency Response Team of India (CERT-In)**

- It was **established in 2004** as an attached office within the **Ministry of Electronics and Information Technology.**
- It is the **nodal agency** to deal with **cybersecurity threats like hacking and phishing.**

#### **Less invasive surfactant administration technique**

##### **Why in the news?**

- Recently the **medical technique**, known as **less invasive surfactant administration (LISA)**, has been started at **J.K. Lon Government Children's Hospital** here for **treatment of lung disease or respiratory distress syndrome** among **premature babies.**



**About the Less invasive surfactant administration technique:**

- It has been developed as a **lung-protective strategy** for **respiratory management** and ventilation in view of the **mechanical ventilation causing damage to the preterm lungs of newborns.**
- Infants considered suitable for LISA are those being managed with **primary CPAP or high flow** with the evidence of **increasing respiratory distress** and with a **rising oxygen requirement.**
- This new technique's main objective was to **minimise damage to the fragile premature lungs.**

### **Next-generation biodegradable metal implants**

#### **Why in the news?**

- Scientists at the **International Advanced Research Centre for Powder Metallurgy and New Materials (ARCI)** and **Sree Chitra Tirunal Institute of Medical Sciences** have **jointly developed new generation Iron-Manganese based alloys for biodegradable metal implants for use in humans.**



#### **How does it work?**

- A **biodegradable material (Fe, Mg, Zn, and polymer)** degrades gradually during the **healing process by maintaining the integrity and without leaving any implant residues in the human body.**
- They are **better alternatives** to currently used **metallic implants** which **remain permanently** in the human body.
- Such **metallic implants** can cause **long-term side effects** like **systemic toxicity, chronic inflammation, and thrombosis.**

#### **Composition**

- This **Iron-Manganese based alloy Fe-Mn** contains more than **29% Mn by weight.**
- It is a **promising biodegradable metallic implant** which exhibits a **single austenitic phase (a non-magnetic form of iron)** with **MRI compatibility.**

### **Preparing for a syndemic**

#### **Why in the news?**

- The **World Health Organization** has announced that **COVID-19 will likely be syndemic.**

#### **About Syndemic**

- Syndemic is a **situation when two or more epidemics interact synergistically** to produce an **increased burden of disease in a population.**

#### **Example**



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- When the **diseases like dengue and malaria emerging** with the **upcoming monsoon season in tropical South Asia**, there is a possibility that the **world will face an increased burden of the diseases** and thus the **situation of a syndemic**.
- It is a **situation first** described by **medical anthropologist Merrill Singer** in the **mid-1990s**.



### **Classification of Diseases based on spread and occurrence**

#### Pandemic

- A pandemic is declared when a new disease for which **people do not have immunity spreads** around the **world beyond expectations**.

#### Epidemic

- An **epidemic is a large outbreak**, one that spreads among a **population or region**. It is less severe than **pandemic due to a limited area of spread**.

#### Endemic

- A **disease is called endemic** when the **presence or usual prevalence of its infectious agent** is constant within a **given geographical area or population group**.

### **Rht14 and Rht18 dwarfing genes**

#### **Why in the news?**

- Recently the **scientists at Pune based Agharkar Research Institute (ARI)** have mapped two **alternative dwarfing genes Rht14 and Rht18** in wheat.

#### **About the dwarfing genes**

- These **genes are associated with better seedling vigour and longer coleoptiles** (sheath protecting the young shoot tip).
- They have **mapped the dwarfing genes on chromosome 6A** in durum wheat, and **DNA-based markers** were developed for a better selection of these genes in **wheat breeding lines**.
- The **DNA-based markers will help wheat breeders** to precisely select **wheat lines carrying these alternative dwarfing genes** from a **massive pool of wheat breeding lines**.
- These **DNA based markers are being used at ARI** for **marker-assisted transfer of these genes** in **Indian wheat varieties**.



### Benefits

- It helps in **controlling pollution because in India**, close to **twenty-three million tonnes** of leftover **rice residues** are annually burnt by farmers to get rid of the straw and prepare their fields for sowing wheat.
- The **dry environments** pose a challenge for the **germination of wheat varieties with short coleoptile**.

### Sonic boom

#### Why in the news?

- Recently the '**loud sound**' heard in **Bengaluru** which was revealed to have **emanated from an Indian Air Force test flight** involving a **supersonic profile**.
- The **sound effect** caused due to **such high-speed flights** is known as '**sonic boom**'.



#### About Sonic Boom

- It is the sound **associated with the shock waves** created whenever an **object travels** through the **air faster than the speed of sound**.
- **Sonic booms generate enormous** amounts of **sound energy**, sounding **similar to an explosion** or a thunderclap to the human ear.
- The sonic boom was probably heard while the aircraft was decelerating from supersonic to subsonic speed between 36,000- and 40000-feet altitude."
- Sonic booms **due to large supersonic aircraft** can be particularly **loud and startling**, tend to awaken people, and may cause minor damage to some structures.

#### Notes:

- Sound travels in the form of waves which are emitted outwards from its source.
- In the air, the **speed of these** waves depends on **a number of factors**, such as the **temperature of the air and altitude**.

## **SpaceX Demo-2 mission**

### **Why in the news?**

- Recently on May 27, NASA's **SpaceX Demo-2 test flight** will lift off for **International Space Station (ISS)**, becoming the **first crewed flight** to launch from **American soil since the conclusion of the space shuttle era in 2011.**



### **What is the mission?**

- The **Demo-2 mission** is part of NASA's **Commercial Crew Program** and will see astronauts **Robert Behnken** and **Douglas Hurley** fly on **SpaceX's Crew Dragon spacecraft**. The craft will lift off from a **Falcon 9 rocket**, from **Florida**.
- NASA's **Commercial Crew Program** has worked with several **American aerospace industry companies** to facilitate the development of **US human spaceflight systems since 2010**, to develop **reliable and cost-effective access to and from the ISS**.
- It is a flight test to **certify if SpaceX's crew transportation system** can be used to **ferry crew** to and from the **space station regularly**.
- This is the **final flight test** for the **system and intends to validate its different components**, including the **spacecraft (Crew Dragon)**, the launch vehicle (**Falcon 9**), the launch pad (**LC-39A**) and the **operations capabilities**.
- After its launch, the **Crew Dragon** will perform a **series of phasing manoeuvres** to gradually **approach and autonomously dock** with the ISS on May 28.

### **Note:**

- **Boeing and SpaceX** were **selected by NASA in September 2014** to develop **transportation systems** meant to **transfer crew from the US to the ISS**.
- These **integrated spacecraft, rockets and associated systems** will carry up to **four astronauts on NASA missions**, maintaining a **space station crew of seven to maximize time** dedicated to **scientific research on the orbiting laboratory**.

## Security Matters

### Exercise RIMPAC 2020

#### Why in the news?

- The **U.S. Navy will host the Exercise RIMPAC** (Rim of the Pacific) this year, but the drills will only **be held at sea** because of the coronavirus pandemic.
- The **theme of RIMPAC 2020** is "**Capable, Adaptive, Partners.**"



#### About the Exercise RIMPAC 2020

- It is the **world's largest international maritime warfare exercise** held **biennially since 1971** by the **United States Navy's Indo-Pacific Command** at **Hawaii**.

#### Objective

- To **strengthen international maritime partnerships, enhance interoperability, and improve the readiness of participating forces** for a wide range of potential operations.

#### India and Exercise

- **Indian Navy had participated in the exercise in 2006, 2010, and 2012** as an **observer, since 2014, India has been participating as a member country.**

#### Other Bilateral Exercises between India and the U.S.

- **Vajra Prahar** - It is a **Special Forces joint military training exercise conducted alternately in India and the U.S. since 2010.**
- **Yudh Abhyas** - It is a **joint military exercise between India and the U.S.**
- **Tiger Triumph**- It is a **tri-service military exercise between India and the U.S.**

### Arktika-M Satellite

#### Why in the news?

- Recently, **Russia has decided to launch Arktika-M satellite at the end of 2020.**





#### About Arktika-M satellite

- It is a **satellite aimed at monitoring the Arctic climate**.
- Soyuz -2,1b carrier rocket will launch it **with a frigate booster**.
- The **remote sensing Arktika-M** will monitor the meteorological conditions in the **polar region**.

Source- AIR

#### China's largest carrier rocket 'Long March-5B


Why is it in the news?

- Recently, **China** has **successfully launched its largest carrier rocket 'Long March-5B'** from the **Wenchang Space Launch Center** in the **southern island province of Hainan**.



#### About Long March-5B

- It was the **first mission** carried out by the **Long March-5B**, which was **carrying a new-generation spacecraft**. It inaugurates the **"third step"** of China's **manned space program**.
- The **Long March-5B**, with a **length of about 53.7 meters** and a **takeoff mass of about 849 tonnes**, was also **carrying an inflatable cargo return module**.
- The spaceship will take **one-day transport astronauts** to a **space station that China plans to complete by 2022** and eventually to the **Moon**.

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- It will have **the capacity for a crew of six.**

### **Integrated Battle Groups to be operational soon**

#### **Why in the news?**

- Recently the **Integrated Battle Groups (IBG)** as part of the overall **force transformation** will be operationalised very soon.

#### **About Integrated Battle Groups**

- They are **brigade-sized agile self-sufficient** combat formations which can **swiftly launch strikes against the adversary.**
- Each **Integrated Battle Group** would be **tailor-made based on Threat, Terrain, and Task**, and resources will be allotted based on the three Ts.
- They will be able to **mobilise within 12-48 hours based on the location.**

### **Tour of Duty' (ToD) or 'three-year short Service**

#### **Why in the news?**

- Recently the **Army** has plans to take **civilians on a three-year 'Tour of Duty' (ToD) or 'three-year short service'** on a **trial basis to serve in the force as both officers and other ranks** initially for a **limited number of vacancies** and then expanded later.
- The **proposal is under consideration**, if approved, it will be **voluntary**, and **there will be no dilution of criteria in selection.**



#### **Purpose of three-year short Service**

- The overall purpose of the **ToD concept** is **'internship/temporary experience'**.
- 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.

#### **Advantages**

- This scheme was for those who did not want a **full career** in the **Army** but still wanted to put on **the uniform.**

- **Individuals** who **opted for ToD** would get a much **higher salary** than their peers on an average that **started a career** in the **corporate sector** and would also have an **edge after leaving the Service** and going to the **corporate sector**.
- The **Army** hoped that this would **attract individuals** from the **best colleges, including the Indian Institute of Technology**.

### **Defence Testing Infrastructure Scheme**

#### **Why in the news?**

- Recently, the **Union Defence Minister** has **approved the launch of the Defence Testing Infrastructure Scheme**.

#### **About Defence Testing Infrastructure Scheme**

- It is launched with an **outlay of Rs 400 crore for creating a state of the art testing infrastructure for the defence sector**. The Scheme aimed to **provide a boost to domestic defence and aerospace manufacturing**.
- The Scheme would run for **five years** and **envisages set up six to eight new test facilities** in partnership with **private industry**.
- It will **facilitate indigenous defence production**, consequently, **reduce imports of military equipment** and **help make the country self-reliant**.

#### **Funding Pattern**

- The projects under the Scheme will be **provided with up to 75 percent of government funding** in the form of **'Grant-in-Aid'**.
- The remaining **25 per cent of the project cost** will have to be **borne by the Special Purpose Vehicle (SPV)** whose constituents will be **Indian private entities and State Governments**.

#### **About the Special Purpose Vehicle**

- It will be **registered under Companies Act 2013** and shall also **operate and maintain all assets under the Scheme**, in a **self-sustainable manner** by collecting user charges.

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