

Business Immunity Platform

The Invest India Business Immunity Platform hosted on the website of Invest India, India's National Investment Promotion and Facilitation Agency, under the Ministry of Commerce and Industry is working 24X7 as a comprehensive resource to help businesses and investors get real-time updates on India's active response to COVID-19.

What is Business Immunity Platform (BIP)?

- The Business Immunity Platform (BIP) is the active **platform for business issue redressal**, with a team of dedicated sector experts who respond to queries at the earliest.
- Invest India has also announced a partnership with SIDBI (Small Industries Development Bank of India) for responding and resolving queries for MSMEs.
- This dynamic and constantly updating platform keeps **a regular track on developments with respect to the virus**, provides latest information on various central and state government initiatives, gives access to special provisions, and answers and resolves queries through emails and on WhatsApp.
- BIP has launched '**Joining the Dots**' campaign to procure essential healthcare supplies. It is also facilitating matchmaking to fill the demand-supply shortages of essential equipment to combat COVID-19.

About Invest India Programme -

- Invest India was formed in 2009 under **Section 25 of the Companies Act 1956** for promotion of foreign investment with 49% equity of the then Department of Industrial Policy and Promotion (now Department for Promotion of Industry and Internal Trade) , Ministry of Commerce and Industry and **51% shareholding by FICCI**.
- The current shareholding pattern of Invest India is **51 % of Industry Associations (i.e. 17% each of FICCI, CII & NASSCOM)** and the **remaining 49% of Central and 19 State Governments**.
- It is the National Investment Promotion and Facilitation Agency of India and act as the first point of reference for investors in India.

PM-CARES

Keeping in mind the need for having a dedicated national fund with the primary objective of dealing with any kind of emergency or distress situation, like posed by the COVID-19 pandemic, and to provide relief to the affected, a public charitable trust under the name of '**Prime Minister's Citizen Assistance and Relief in Emergency Situations Fund**' (**PM CARES Fund**)' has been set up.

Details -

- Prime Minister is the **Chairman** of this trust and its Members include **Defence Minister, Home Minister and Finance Minister**.
- Donations to this fund will be exempted from income tax under section 80(G).

Force Majeure

Keeping in view Ministry of Finance advisories inter alia citing "A force majeure (FM) means extraordinary events or circumstance beyond human control such as an event described as an Act of God (like a **natural calamity**)" clarifying that spread of corona virus should be considered as a natural calamity and Force Majeure clause may be invoked, Ministry of Railways has decided that the period from 22.03.2020 to 14.04.2020 shall be treated under force majeure.

Impact -

Railways will not apply several charges that it levies on users and clients to collect money for deferred payment or cancellation of tickets/rescheduling of tickets.

What is Force Majeure?

It is an unforeseeable circumstance that prevent someone from fulfilling a contract. There are dozens of circumstances or events that we class as **examples** of **force majeure**. War, riots, earthquakes, hurricanes, lightning, and explosions, for **example**, are **force majeure** events. The term also includes energy blackouts, unexpected legislation, lockouts, slowdowns, and strikes.

Aarogyasetu

The Government of India has launched a mobile app developed in public-private partnership to bring the people of India together in a resolute fight against COVID-19.

Details -

The App, called 'AarogyaSetu' joins Digital India for the health and well-being of every Indian. It will enable people to assess themselves the risk for 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.

How does it work?

Once installed in a smart phone through an easy and user-friendly process, the app detects other devices with AarogyaSetu installed that come in the proximity of that phone. The app can then calculate the risk of infection based on sophisticated parameters if any of these contacts is tested positive.

Pradhan Mantri Garib Kalyan Yojana

The Union Finance & Corporate Affairs Minister Smt. Niramla Sitharaman has announced Rs 1.70 Lakh Crore relief package under Pradhan Mantri Garib Kalyan Yojana for the poor to help them fight the battle against Corona Virus.

Details of the package -

- Insurance cover of Rs 50 Lakh per health worker fighting COVID-19 to be provided under Insurance Scheme.
- 80 crore poor people will to get 5 kg wheat or rice and 1 kg of preferred pulses for free every month for the next three months. **(PM Garib Kalyan Ann Yojana)**
- 20 crore women Jan Dhan account holders to get Rs 500 per month for next three months.
- Increase in MNREGA wage to Rs 202 a day from Rs 182 to benefit 13.62 crore families.
- An ex-gratia of Rs 1,000 to 3 crore poor senior citizen, poor widows and poor disabled.
- Under **PM Garib Kalyan Yojana, gas cylinders, free of cost**, would be provided to 8 crore poor families for the next three months.
- Government to front-load Rs 2,000 paid to farmers in first week of April under existing **PM Kisan Yojana** to benefit 8.7 crore farmers.
- Wage-earners below Rs 15,000 per month in businesses having less than 100 workers are at risk of losing their employment. Under this package, government proposes to pay 24 percent of their monthly wages into their PF accounts for next three months.
- Central Government has given orders to State Governments to use **Building and Construction Workers Welfare Fund** to provide relief to Construction Workers.
- The State Government will be asked to utilise the funds available under **District Mineral Fund (DMF)** for supplementing and augmenting facilities of medical testing, screening and other requirements in connection with preventing the spread of COVID-19 pandemic as well as treating the patients affected with this pandemic.

About District Mineral Fund -

- DMFs were instituted under the **Mines and Minerals (Development and Regulation) (MMDR) Amendment Act 2015**.
- They are **non-profit trusts** to work for the interest and benefit of persons and areas affected by mining-related operations.
- **They aim** to work for the interest of the benefit of the persons and areas affected mining related operations in such manner as may be prescribed by the State Government.
- Its manner of operation comes under the **jurisdiction of the relevant State Government**.

- **The fund is collected at the district level.** There are certain high-priority areas identified in all states' DMF rules, where at least 60 per cent of the fund must be used. These include vital and pressing concerns, including healthcare.

About Pradhan Mantri Garib Kalyan Yojana -

The Pradhan Mantri Garib Kalyan Yojana was a retailored version of Income Declaration Scheme with a black money declaration option from December 17, 2016 to March 31st 2017. Money mobilised from the PMGKY Income Declaration Scheme was to be utilised to finance the welfare programme for the poor which is called in the same name -Pradhan Mantri Garib Kalyan Yojana (PMGKY).

Companies Fresh Start Scheme, 2020

In pursuance of the Government of India's efforts to provide relief to law abiding companies and Limited Liability Partnerships (LLPs) in the wake of COVID 19, the Ministry of Corporate Affairs (MCA), has introduced the "**Companies Fresh Start Scheme, 2020**" and revised the "**LLP Settlement Scheme, 2020**" which is already in vogue to provide a first of its kind opportunity to both companies and LLPs to make good any filing related defaults, irrespective of duration of default, and make a fresh start as a fully compliant entity.

Details -

- The Fresh Start scheme and modified LLP Settlement Scheme **incentivise compliance and reduce compliance burden** during the unprecedented public health situation caused by COVID-19.
- The USP of both the schemes is **a one-time waiver of additional filing fees for delayed filings** by the companies or LLPs with the Registrar of Companies during the currency of the Schemes, i.e. during the period starting from 1st April, 2020 and ending on 30th September, 2020.
- The Schemes, apart from giving **longer timelines for corporates to comply with various filing requirements** under the Companies Act 2013 and LLP Act, 2008, significantly reduce the related financial burden on them, especially for those with long standing defaults, thereby giving them an opportunity to make a "fresh start".
- Both the Schemes also contain **provision for giving immunity from penal proceedings**, including against imposition of penalties for late submissions and also provide additional time for filing appeals before the concerned Regional Directors against imposition of penalties, if already imposed.
- However, the immunity is only against delayed filings in MCA21 and not against any substantive violation of law.

What is a limited liability partnership?

- LLP is an alternative corporate business form that gives the benefits of limited liability of a company and the flexibility of a partnership. Hence LLP is called a hybrid between a company and a partnership.
- **Legislation in India** - All limited liability partnerships are governed under the limited **liability partnership act of 2008**. The Corporate Affairs Ministry implements the Act.
- **LLP vs Traditional partnership firm** - Under "traditional partnership firm", every partner is liable, jointly with all the other partners and also severally for all acts of the firm done while he is a partner. Under LLP structure, liability of the partner is limited to his agreed contribution. Thus, individual partners are shielded from joint liability created by another partner's wrongful acts or misconduct.

i-GOT e-learning Platform

The Department of Personnel and Training has announced the launch of a learning platform i-GOT to combat COVID-19 for all front-line workers to equip them with the training and updates in coping with Pandemic.

Need -

Appropriate training will also prepare them for the subsequent stages of the pandemic. By giving COVID19 training to other potential second line workforce, India will be better prepared for the emergency situations.

Beneficiaries -

The target group is Doctors, Nurses, Paramedics, Hygiene Workers, Technicians, Auxiliary Nursing Midwives (ANMs), Central & State Govt. Officers, Civil Defence Officials, various Police Organisations, National Cadet Corps (NCC), Nehru Yuva Kendra Sangathan (NYKS), National Service Scheme (NSS), Indian Red Cross Society (IRCS), Bharat Scouts & Guides (BSG) and other volunteers.

What does it do?

- The platform delivers curated, role-specific content, to each learner at his place of work or home and to any device of his choice. iGOT platform is designed to population scale, and will provide training to around 1.50 crore workers and volunteers in the coming weeks.
- To begin with nine (9) courses on iGOT have been launched on topics like Basics of COVID, ICU Care and Ventilation Management, Clinical Management, Infection Prevention through PPE, Infection Control and Prevention, Quarantine and Isolation, Laboratory Sample Collection and Testing, Management of COVID 19 Cases, COVID 19 Training.

MPLADS suspended; PM, MPs to take 30% salary cut

The Union Cabinet has approved a 30% cut in the salaries of all Members of Parliament and a two-year suspension of the MP Local Area Development (MPLAD) scheme so that the amount saved can go to the Consolidated Fund of India to fight COVID-19.

Details -

Apart from all the MPs, the President and Vice-President of India, as well as all Governors, had decided of their own volition to take a 30% salary cut. All the amount saved would go to the Consolidated Fund of India.

About MPLADS -

- The Local Area Development Scheme known as MPLADS is a government scheme launched on 23rd December 1993.
- This central sector scheme was developed as an initiative to enable the parliament members to recommend developmental work in their constituencies based on locally felt needs. These developmental works mainly focused on the areas of national priorities such as drinking water, education, public health, sanitation, roads, etc.
- It is a government-funded scheme where the annual fund provided to each MP constituency is Rs. 5 crores.
- The initial assistance under the MPLAD scheme was Rs. 5 lakh / MP. From 1998-99 onwards, this amount has been increased to Rs. 2 crore / MP and the amount currently available under this scheme has been increased to Rs. 5 crore rupees.
- Recommendation by the MPs should be done annually with works costing at least 15 per cent of the MPLADS entitlement for areas inhabited by Scheduled Caste population and 7.5 per cent for areas inhabited by S.T. population.
- A sum of Rs. 75 lakhs is provided for building assets by trusts and societies as per the scheme guidelines to encourage the trusts and societies for the betterment of tribal people.
- Lok Sabha Members can recommend works within their Constituencies and Elected Members of Rajya Sabha can recommend works within the State of Election. Nominated Members of both the Rajya Sabha and Lok Sabha can recommend works anywhere in the country.
- This scheme is now administered by Ministry of Statistics and Programme Implementation but was initially administered by the Ministry of Rural Development.

SAMADHAN

The Innovation Cell of the Ministry of Human Resources Development and All India Council for Technical Education in collaboration with Forge and InnovatioCuris launched a mega online challenge - SAMADHAN - to test the ability of students to innovate.

What is it?

Under the "Samadhan" challenge, the students and faculty will be motivated for doing new experiments and new discoveries and provide them with a strong base leading to spirit of experimentation and discovery.

Significance -

- The students participating in this challenge will search and develop such measures that can be made available to the government agencies, health services, hospitals and other services for quick solutions to the Coronavirus epidemic and other such calamities.
- Apart from this, through this "Samadhan" challenge, work will be done to make citizens aware, to motivate them, to face any challenge, to prevent any crisis and to help people get livelihood.

Babu Jagjivan Ram

Prime Minister recently paid tributes to Babu Jagjivan Ram on the birth anniversary of Babu Jagjivan Ram.

About Babu Jagjivan Ram -

- Samta Diwas is the celebration of birth anniversary of nationalist politician Babu Jagjivan Ram. The day emphasises on bringing about equality among all spheres of the society.
- His beliefs were of great significance in the past era as there was predominance of multi layered society.
- He focused on the harsh rules of the society and pressed for the abolishment of this society. His 50 years as a MP is a world record.
- He took part in India's independence struggle and was founder member of the All India Depressed Classes League, an organisation dedicated to attaining equality for untouchables. He had also led the rural labour movement.

Acrylosorb

Scientists at Sree Chitra Tirunal Institute for Medical Sciences and Technology (SCTIMST) an autonomous institute under the Department of Science and Technology (DST) have designed and developed a highly efficient super absorbent material for liquid respiratory and other body fluid solidification and disinfection for the safe management of infected respiratory secretions.

Need -

Disposal of infected secretions from patients poses a great challenge to every hospital. This is particularly so in the case of secretions of patients with highly contagious diseases such as COVID-19. The collection and disposal of such wastes put the nursing and cleaning staff at high risk.

How will it work?

- The material is a highly efficient super absorbent material for liquid respiratory and other body fluid solidification and disinfection.
- AcryloSorb can absorb liquids at least 20 times more than its dry weight and also contains a decontaminant for in situ disinfection.
- Containers filled with this material will immobilise the contaminated fluid by solidifying it (gel-like), thus avoiding spillage and will also disinfect it.
- The canister containing the solidified waste canister can then be decomposed as all other biomedical waste by incineration.

Significance -

This technology reduces the risk for the hospital staff, the need for personnel for disinfecting and cleaning the bottles and canisters for reusing them and makes the disposal safer and easier.

Ionospheric based monitoring of large earthquakes

Scientists of Indian Institute of Geomagnetism (IIG), an autonomous institution of the Department of Science and Technology have extensively studied the signatures of recent large earthquakes into the ionosphere with an ambitious aim to derive the seismic source characteristics from the ionosphere.

Background -

- In general, the Earth crust uplift during any earthquake produces compressional (i.e. pressure) waves in the overlying atmosphere. These waves propagate upward in the region of exponentially decreasing atmospheric neutral density, and thus, its amplitudes increase with atmospheric heights.
- On arrival at ionospheric heights, the waves redistribute ionospheric electron density and produce electron density perturbations known as **co-seismic ionospheric perturbations (CIP)**.
- The thrust earthquakes induce significant crustal uplift, while the strike-slip event mostly deforms the crust horizontally. Various ionospheric sounding techniques can be used to study the CIP characteristics.
- However, the TEC derived from Global Navigation Satellite Systems (GNSS) gives large spatial and temporal coverage over seismic source region.

Details -

- The spatial distribution of near field co-seismic ionospheric perturbations (CIP) associated with this event could reflect well the ground deformation pattern evolved around the epicentre.
- These CIP were derived using the Global Positioning System (GPS) measured Total Electron Content (TEC).
- The CIP distribution was estimated at ionospheric piercing point (IPP) altitude.
- By investigating the response of ionosphere to recent major earthquake events, the scientists at IIG have tried to derive the earthquake source parameters using seismic induced ionospheric perturbations by taking into consideration the non-tectonic forcing mechanisms.

Madhuban Gajar

Madhuban Gajar, a biofortified carrot variety with high β -carotene and iron content developed by Shri Vallabhhai Vasrambhai Marvaniya, a farmer scientist from Junagadh district, Gujarat is benefitting more than 150 local farmers in the area.

It is being planted in an area of over 200 hectares in Junagadh, and the average yield, which is 40-50 t/ha, has become the main source of income to the local farmers. The variety is being cultivated in more than 1000 hectares of land in Gujarat, Maharashtra, Rajasthan, West Bengal, Uttar Pradesh during the last three years.

About Madhuban Gajar -

The Madhuban Gajar is a highly nutritious carrot variety developed through the selection method with higher β -carotene content (277.75 mg/kg) and iron content (276.7 mg/kg) dry basis and is used for various value-added products like carrot chips, juices, and pickles. Among all the varieties tested, beta-carotene and iron content were found to be superior.

What is β -carotene (Beta Carotene)?

- Beta carotene is a red/orange pigment found in many fresh fruits and vegetables
- Beta carotene is converted into vitamin A, an essential vitamin. We should remember that Vitamin A is toxic at high levels.
- Beta carotene is a carotenoid and an antioxidant
- Foods rich in vitamin A include onions, carrots, peas, spinach and squash contain beta carotene.
- One study showed that smokers with high beta carotene intake might have an increased risk of lung cancer.
- Some evidence suggests that beta carotene might slow cognitive decline
- Beta carotene supplements interact with certain drugs, including statins and mineral oil
- Beta carotene might help older people retain their lung strength as they age.

Context - The Prime Minister had recently appealed to the people to switch off their lights voluntarily on the 5th of April and there were apprehensions that it may cause instability in the grid and fluctuation in voltage which may harm the electrical appliances.

About Power Grid Corporation of India -

- Originated in 1989 under the Companies Act of 1956, the Power Grid Corporation of India Limited was incorporated as the National Power Transmission Corporation of India limited.
- Its name was changed in 1992 to the Power Grid Corporation of India Limited.
- Powergrid was incorporated as a public limited company, wholly owned by the Government of India. Now, PowerGrid is a Maharatna company.
- The electric utility company is headquartered in Gurugram.
- Powergrid is responsible for the transmission of more than 50% of the total power generated in India through its network.
- Its subsidiary company POSOCO (Power System Operation Corporation Ltd.) engages in power management.

NIF invites innovative citizens to participate in Challenge COVID-19 Competition

At a time when the country is facing a great crisis due to the Corona pandemic, National Innovation Foundation – India (NIF), an autonomous institute under the Department of Science and Technology, Govt. of India has come up with a call inviting innovative citizens to participate in its Challenge Covid-19 Competition (C3).

Details -

All interested innovators are invited to participate with their creative ideas and innovations for problems or issues like reducing transmission of Corona virus through original creative ideas, innovations, which can supplement the efforts of the government in slowing or eliminating the spread further.

About National Innovation Foundation -

- The National Innovation Foundation (NIF) - India was set up in March 2000 with the assistance of Department of Science and Technology, Government of India.
- It is India's national initiative to strengthen the grassroots technological innovations and outstanding traditional knowledge.
- Its mission is to help India become a creative and knowledge-based society by expanding policy and institutional space for grassroots technological innovators.

Role in MANAK scheme -

- The INSPIRE Award - MANAK (Million Minds Augmenting National Aspiration and Knowledge) is being revamped and **executed by Department of Science & Technology and National Innovation Foundation** to align it with the action plan for "Start-up India" initiative.
- The scheme **aims to help build a critical human resource pool for strengthening, expand science and technology system** and increase the research & development base on the same by inviting students from all government and private schools throughout the country and enabling them to send their original & creative technological ideas/innovations on the same.
- Under the INSPIRE AWARDS – MANAK Scheme, **students will be invited from all government or private schools throughout the country**, irrespective of their educational boards (national and state) to send original and creative technological ideas/innovations focusing on common problems and come up with solutions on their own., be it household or for porters, labourers, society or the likes. Once the student has thought of an idea, he/she can submit their ideas to the Principal/Headmaster of their schools.

YUKTI Web Portal

Union Human Resource and Development Ministry has recently launched a web-portal named YUKTI (Young India Combating COVID with Knowledge, Technology and Innovation).

What is it?

- It's a **unique portal and dashboard** to monitor and record the efforts and initiatives of MHRD.
- The portal intends to cover the different dimensions of COVID-19 challenges in a very holistic and comprehensive way.
- It will **cover the various initiatives and efforts of the institutions in academics, research** especially related to CoVID, social initiatives by institutions and the measures taken for the betterment of the total wellbeing of the students.
- The portal will **cover both qualitative and quantitative parameters** for effective delivery of services to the academic community at large.
- It will also **provide a platform to various institutions to share their strategies for various challenges** which are there because of the unprecedented situation of COVID-19 and other future initiatives.

What is its objective?

- It will also **provide inputs for better planning** and will enable MHRD to monitor effectively its activities for coming six months.
- The portal will also **establish a two-way communication channel** between the Ministry of HRD and the institutions so that the Ministry can provide the necessary support system to the institutions.
- This portal will help in critical issues related to **student promotion policies, placements related challenges and physical and mental well-being** of students in these challenging times.
- The web platform Yukti will epitomise its name and prove to be a great enabler in taking the research to the ultimate stakeholders, the citizens of our country.

CollabCAD

Atal Innovation Mission, NITI Aayog and National Informatics Centre (NIC) has jointly launched CollabCAD.

What is it?

- It is a collaborative network, computer enabled software system, providing a total engineering solution from 2D drafting & detailing to 3D product design.
- The aim of this initiative is to provide a great platform to students of Atal Tinkering Labs (ATLs) across country to create and modify 3D designs with free flow of creativity and imagination.
- This software would also enable students to create data across the network and concurrently access the same design data for storage and visualisation.

About Atal Tinkering Labs -

- Atal Innovation Mission housed at NITI Aayog is the Government of India's flagship initiative to promote a culture of innovation and entrepreneurship.
- At the school level, AIM is establishing ATLs in all districts across India.
- ATLs established across India, provide tinkering spaces to children to hone their innovative ideas and creativity.

ICCR celebrates 70th foundation day

Indian Council for Cultural Relations has recently celebrated its 70th Foundation Day on April 9th.

Details -

- ICCR was **founded in 1950 by Maulana Abul Kalam Azad**, Independent India's first Education Minister.
- It is an autonomous organisation.
- ICCR has been assigned the responsibility of facilitating the celebration of **the International Day of Yoga by Indian Missions/Posts abroad since 2015.**

Objectives -

To actively participate in the formulation and implementation of policies and programs pertaining to India's external cultural relations. To foster and strengthen cultural relations and mutual understanding between India and other countries to promote cultural exchanges with other countries and people, and to develop relations with nations.

Important awards by ICCR -

- Distinguished Indologist Award
- World Sanskrit Award
- Gisela Bonn Award
- Jawaharlal Nehru Award for International Understanding

IUUSTF

The Indo-U.S. Science and Technology Forum (IUSSTF), has invited Proposals for 'COVID-19 Indo-U.S. Virtual Networks' that would allow Indian and U.S. scientists and engineers currently engaged in COVID-related research to carry out joint research activities through a virtual mechanism, leveraging existing infrastructure and funding.

About IUSSTF -

- The IUSSTF established under an agreement between the Governments of India and the United States of America in March 2000 is an autonomous bilateral organisation jointly funded by both the Governments that promotes Science, Technology, Engineering, and Innovation through substantive interaction among government, academia, and industry.
- The Department of Science and Technology, Governments of India, and the U.S. Department of State are respective nodal departments.

Monsoon 2020

The monsoon is arriving late in many States and exiting even later, the Indian Meteorological Department said at its annual monsoon forecast monsoon. It also said that India is likely to have a normal monsoon, with a chance of 'above normal' rain in August and September.

What is 'monsoon'?

Out of a total of 4 seasonal divisions of India, monsoon occupy 2 divisions, namely.

- **The southwest monsoon season** - Rainfall received from the southwest monsoons is seasonal in character, which occurs between June and September.
- **The retreating monsoon season** - The months of October and November are known for retreating monsoons.

Monsoon prediction by IMD -

- IMD brands the monsoon as '**normal**' or '**deficient**' based on how it fares against its benchmark Long Period Average (LPA).
- LPA is the average rainfall received by the country as a whole during the south-west monsoon, for a 50-year period.
- **Deficient rainfall** - The country is said to have received deficient rainfall if the actual rainfall falls below 90 per cent of LPA.
- **Excess rainfall** - The country is said to have received excess rainfall if the rainfall is greater than 110 per cent of LPA.
- **Normal rainfall** - It is deemed 'normal' when the actual rainfall received falls between 96 and 104 per cent of LPA. The IMD has recently changed the definition of a "normal" monsoon by reducing average rainfall received during rainy season from 89 cms to 88 cms.

About Indian Meteorological Department -

- IMD was established in 1875.
- It is an agency of the Ministry of Earth Sciences of the Government of India.

- It is the principal agency responsible for meteorological observations, weather forecasting and seismology.

Central Board for Direct Taxes

Even as the COVID-19 pandemic and the lockdown to combat it has brought the economy to a near standstill, the Centre has gone ahead and set its Income Tax authorities a daunting target of collecting ₹13.2 lakh crore for the fiscal year ending in March 2021.

About CBDT -

- It is a statutory body established as per the Central Board of Revenue Act, 1963.
- It is India's official financial action task force unit.
- It is administered by the Department of Revenue under the Ministry of Finance.
- It deals with the levying and collection of direct taxes. It also has auditing and investigative powers.
- The members of the CBDT are drawn from the Indian Revenue Services.

Amendment to Epidemic Diseases Act, 1987

To protect healthcare service personnel and property including their living/working premises against violence during epidemics, the Union Cabinet has approved the promulgation of an Ordinance to amend the Epidemic Diseases Act, 1897.

Details -

- The Ordinance provides for making such acts of violence **cognizable and non-bailable offences** and for compensation for injury to healthcare service personnel or for causing damage or loss to the property in which healthcare service personnel may have a direct interest in relation to the epidemic.
- **Violence as defined in the Ordinance will include harassment and physical injury and damage to property.** Healthcare service personnel include public and clinical healthcare service providers such as doctors, nurses, paramedical workers and community health workers; any other persons empowered under the Act to take measures to prevent the outbreak of the disease or spread thereof; and any persons declared as such by the State Government.

Procedure of punishment -

- The amendment makes acts of violence cognizable and non-bailable offences.
- Commission or abetment of such acts of violence shall be punished with imprisonment for a term of three months to five years, and with fine of Rs.50,000/- to Rs.2,00,000/-.
- In case of causing grievous hurt, imprisonment shall be for a term six months to seven years and with fine of Rs.1,00,000/- to Rs.5,00,000/-.
- In addition, the offender shall also be liable to pay compensation to the victim and **twice the fair market value for damage of property.**
- Offences shall be investigated by an officer of the rank of Inspector within a period of 30 days, and trial has to be completed in one year, unless extended by the court for reasons to be recorded in writing.

About Epidemic Diseases Act, 1897 -

- It was enacted by the British, for the first time in the then state of Bombay during the Bubonic Plague.
- It is a **state government Act**. The Act strives to protect the common citizens in a particular area during the outbreak of an epidemic or a dangerous disease.
- **Section 2** empowers state governments and Union Territories to formulate regulations to contain the outbreak. When the State government is satisfied that the state is threatened with an outbreak of any dangerous epidemic disease, and if it thinks that the ordinary provisions of the law are insufficient, for the purpose, then, the state may take or require or empower any person to take some measures and by public notice prescribe such temporary regulations to be observed by the public. The state government may prescribe regulations for the inspection of persons travelling by railway or otherwise, segregation in hospitals, temporary accommodation

or otherwise, of persons suspected by the inspecting officer, of being infected with any such disease.

- **Section 3** provides penalties for disobeying any regulation made under the Act. **IPC Section 188** states that in case a person does not honour or refuses to honour the public order issued by a public servant, the punishment in such a case is upto 1 month in jail or a fine upto Rs. 200 or both. In case the general public suffers due to the refusal of the person to follow the public order, the punishment is upto 6 months of Jail and/or fine or Rs. 2000.
- **Section 4** deals with legal protection to implementing officers acting under the Act.
- The Act provides for six months' imprisonment or Rs. 1000 fine or both on person disobeying the Act.

VidyaDaan 2.0

Union Ministry of Human Resources and Development has e-launched VidyaDaan 2.0 program for inviting e-learning content contributions.

Need -

- The programme has been launched due to the increasing requirement for e-learning content for students(both school and higher education) especially in the backdrop of situation arising out of COVID-19 and also due to the urgent need to integrate digital education with schooling to augment learning.
- With the unprecedented crisis due to the spread of the Novel Coronavirus and Covid-19 impacting upon school and higher education in many different ways, it is the right time and opportunity for all user states/UTs to strengthen their e- learning content for school and higher education on DIKSHA and leverage its potential use by students and teachers of your states/ UTs.

About DIKSHA Platform -

- The DIKSHA Platform of MHRD has been operating since September 2017 with 30+ States/UTs leveraging DIKSHA for augmenting teaching and learning processes.
- Ministry of HRD and National Council for Teacher Education collaborated to build Diksha portal.
- DIKSHA will serve as National Digital Infrastructure for Teachers.
- It will aid teachers to learn and train themselves for which assessment resources will be available.
- It will help teachers to create training content, profile, in-class resources, assessment aids, news and announcement and connect with teacher community.
- States, government bodies and even private organisations, can integrate DIKSHA into their respective teacher initiatives.

SWAYAM and SWAYAM Prabha

Union Minister for Human Resource Development held a detailed review of the National online education platforms SWAYAM and the 32 DTH television educational channels SWAYAM PRABHA in New Delhi.

About SWAYAM -

- Study Webs of Active Learning For Young Aspiring Minds is an indigenous IT platform for hosting the Massive Open Online Courses (MOOCs).
- The objective is to take the best teaching learning resources to all, including the most disadvantaged.
- It targets those students who could not complete their studies and professionals who wish to upgrade their knowledge.
- It was indigenously **developed by All India Council for Technical Education (AICTE)** with the help of **Microsoft**.

About SWAYAM Prabha -

- The SWAYAM Prabha is a group of 32 DTH channels devoted to telecasting of high-quality educational programmes on 24X7 basis using the GSAT-15 satellite.

- Information and Library Network (INFLIBNET), an autonomous Inter-University Centre (IUC) of UGC maintains the web portal.

Civil Services Day

Prime Minister Narendra Modi has greeted Civil Servants and their families and paid tributes to Sardar Patel on Civil Services Day.

About Civil Services Day -

- Every year, on April 21, the public services rendered by these civil servants is celebrated in the form of Civil Services Day.
- It was on this day in 1947 that the country's first home minister Sardar Vallabhbhai Patel addressed the probationers of Administrative Services Officers in 1947 at Metcalf House, Delhi.
- He rightly described the civil servants the '**steel frame of India**'.
- The first such function was held in Vigyan Bhawan, New Delhi on 21 April 2006.

Software Technology Parks of India

In view of the challenges thrown by COVID19 outbreak and consequent lockdown, the Government has decided to provide relief from payment of rental to the small IT units operating out of the Software Technology Parks of India (STPI). Most of these units are either Tech MSMEs or startups.

Details -

The Ministry of Electronics and Information Technology (MeitY) has decided to provide rental waiver to these units housed in STPI premises in the country for 4 months period as of now.

About STPI -

- Software Technology Parks of India (STPI) is an autonomous society under Ministry of Electronics & Information Technology, Government of India and it has 60 centres across the country.
- It was **established in 1991** with the objective of encouraging, promoting and boosting the export of software from India.
- The STPI's Governing Council's Chairperson is the **Union Minister for Electronics & Information Technology**.

Nutrient Based Subsidy Scheme

The Cabinet Committee on Economic Affairs has given its approval for fixation of Nutrient Based Subsidy (NBS) rates for Phosphatic and Potassic (P&K) Fertilisers for the year 2020-21.

Details -

- The subsidy rates (per kg in Rs) for Nitrogen (N) - 18.79, Phosphorous (P)- 14.88, Potassium (K) - 10.116, Sulphur (S) - 2.374.
- The CCEA also approved the inclusion of a complex fertiliser namely Ammonium Phosphate (NP 14:28:0:0) under the NBS Scheme.

About Nutrient Based Subsidy Scheme -

- Government provides **fertilisers, Urea and 21 grades of P&K fertilisers** to farmers at subsidised prices through fertiliser manufacturers/importers. The subsidy on P&K fertilisers is being governed by **NBS Scheme** from 2010.
- It is being **implemented from April 2010** by the Department of Fertilisers, Ministry of Chemicals & Fertilisers.
- Under NBS, a **fixed amount of subsidy decided on an annual basis**, is provided on each grade of subsidised Phosphatic & Potassic (P&K) fertilisers depending on its nutrient content.
- The NBS scheme sought to deregulate subsidy on non-urea fertilisers and expected to reduce the subsidy burden substantially.

Minor forest produce

Ministry of Home Affairs has added the collection, harvest, and process of minor forest produce to the list of activities that will be permitted during the lockdown period.

What is 'minor forest produce' (MFP)?

Section 2(i) of the **Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006** defines a **Minor Forest Produce (MFP)** as all non-timber **forest produce** of plant origin and includes bamboo, brushwood, stumps, canes, Tusser, cocoon, honey, waxes, Lac, tendu/kendu leaves, medicinal plants and herbs, roots, tuber and the like.

About MSP for MFP Scheme -

- It is a central sector scheme (started in 2013) for marketing of Minor Forest Produce through Minimum Support Price (MSP) and development of value chain to ensure fair monetary returns to MFP gatherers for their efforts in collection, primary processing, storage, packaging, transportation etc.
- The scheme envisages fixation and declaration of MSP for the selected MFP based on the suggestions/inputs received from the **Tribal Cooperative Marketing Development Federation of India (TRIFED)**, which came into existence in 1987, and the States concerned.
- **Procurement and marketing operation** at pre-fixed MSP is **undertaken by the designated state agencies**.
- Initially, the scheme was being implemented by states having areas under the 5th Schedule of the Constitution of India (Chhattisgarh, Madhya Pradesh, Odisha, Jharkhand, Gujarat, Maharashtra, Rajasthan, Andhra Pradesh and Telangana).

KISAN Rath

Union Minister of Agriculture and Farmers' Welfare has launched a farmer friendly mobile application developed by the National Informatics Centre (NIC) to facilitate farmers and traders in searching transport vehicles for Primary and Secondary transportation for movement of Agriculture and Horticulture produce.

Details -

- Primary transportation would include movement from Farm to Mandis, FPO Collection Centre and Warehouses etc.
- Secondary Transportation would include movement from Mandis to Intra-state & Inter-state mandis, Processing units, Railway station, Warehouses and Wholesalers etc.
- The Mobile Application named "Kisan Rath" facilitates Farmers and Traders in identifying right mode of transportation for movement of farm produce ranging from foodgrain (cereal, coarse cereal, pulses etc), Fruits & Vegetables, oil seeds, spices, fiber crops, flowers, bamboo, log & minor forest produce, coconuts etc.
- This App also facilitates traders in transportation of perishable commodities by Reefer (Refrigerated) vehicle.

Draft Electricity Amendment Bill, 2020

For further development of the power sector, Ministry of Power has issued draft proposal for amendment of Electricity Act, 2003 in the form of draft Electricity Act (Amendment) Bill, 2020 for comments / suggestions from Stakeholders.

Features -

Major amendments proposed in the Electricity Act are as follows.

1. Viability of Electricity Distribution companies (Discoms) -

- **Cost reflective Tariff** - To eliminate the tendency of some Commissions to provide for regulatory assets, it is being provided that the Commissions shall determine tariffs that are reflective of cost so as to enable Discoms to recover their costs.

- **Direct Benefit Transfer** - It is proposed that tariff be determined by Commissions without taking into account the subsidy, which will be given directly by the government to the consumers.

2. Sanctity of Contracts -

- **Establishment of Electricity Contract Enforcement Authority** - A Central Enforcement Authority headed by a retired Judge of the High Court is proposed to be set-up with powers of the Civil Court to enforce performance of contracts related to purchase or sale or transmission of power between a generating, distribution or transmission companies.
- **Establishment of adequate Payment Security Mechanism for scheduling of electricity** - It is proposed to empower Load Dispatch Centres to oversee the establishment of adequate payment security mechanism before scheduling dispatch of electricity, as per contracts.

3. Strengthening the regulatory regime -

- **Strengthening of the Appellate Tribunal (APTEL)** - It is proposed to increase the strength of APTEL to seven apart from the Chairperson so that multiple benches can be set-up to facilitate quick disposal of cases. It is also proposed to further empower the APTEL to enforce its decisions.
- **Doing away with multiple Selection Committees** - It is proposed to have one Selection Committee for selection of Chairpersons and Members of the Central and State Commissions and uniform qualifications for appointments of Chairperson and Members of Central and State Electricity Regulatory Commissions.
- **Penalties** - In order to ensure compliance of the provisions of the Electricity Act and orders of the Commission, section 142 and section 146 of the Electricity Act are proposed to be amended to provide for higher penalties.

4. Renewable and Hydro Energy -

- **National Renewable Energy Policy** - It is proposed to provide for a policy document for the development and promotion of generation of electricity from renewable sources of energy.
- It is also proposed that a minimum percentage of purchase of electricity from hydro sources of energy is to be specified by the Commissions.
- **Penalties:** It is being further proposed to levy penalties for non-fulfilment of obligation to buy electricity from renewable and/or hydro sources of energy.

5. Miscellaneous -

- **Cross border trade in Electricity** - Provisions have been added to facilitate and develop trade in electricity with other countries.
- **Franchisees and Distribution sub licensees** - Many States Distribution Companies have been assigning the task of distribution of electricity in a particular area or city to Franchisees / Sub-Distribution Licensees. However, there was a lack of clarity regarding the legal provisions related to this. It is proposed to provide that the Distribution Companies, if they so desire, may engage Franchisees or Sub-Distribution Licensees to distribute electricity on its behalf in a particular area within its area of supply, however, it will be the DISCOM which shall be the licensee, and therefore, ultimately responsible for ensuring quality distribution of electricity in its area of supply.

Revised FDI norms

In a move that will restrict Chinese investments, the Centre has made prior government approval mandatory for foreign direct investments from countries which share a land border with India. Previously, only investments from Pakistan and Bangladesh faced such restrictions.

What is FDI?

- Foreign direct investment (FDI) It is an investment from a party in one country into a business or corporation in another country with the **intention of establishing a lasting interest**.

- Generally, FDI takes place when an investor establishes foreign business operations or acquires foreign business assets, including establishing ownership or controlling interest in a foreign company.
- FDI are distinguished from portfolio investments in which an investor merely purchases equities of foreign-based companies.

Recent changes -

- A non-resident entity can invest in India, subject to the FDI Policy except in those sectors/ activities which are prohibited. However, **an entity of a country, which shares land border with India or where the beneficial owner of an investment into India is situated in or is a citizen of any such country, can invest only under the Government route.**
- The official statement added that a transfer of ownership of any existing or future FDI in an Indian entity to those in the restricted countries would also need government approval.

Need for revision -

With many Indian businesses coming to a halt due to the lockdown imposed to contain the COVID-19 pandemic and valuations plummeting, a number of domestic firms may be vulnerable to “opportunistic takeovers or acquisitions” from foreign players.

Chinese investments in India -

- China’s footprint in the Indian business space has been expanding rapidly, especially since 2014. A recent report from Brookings India showed that net Chinese investment in India until 2014 stood at \$1.6 billion, mostly coming from state-owned players in the infrastructure space.
- Three years later (in 2017), total investment had **increased five-fold** to at least \$8 billion according to Chinese government data, with a shift from a state-driven to market-driven approach.
- The total current and planned Chinese investment in India has now **crossed \$26 billion**, according to estimates in the March 2020 report, titled “Following the Money: China Inc’s Growing Stake in India-China Relations”.
- **The single biggest Chinese acquisition has been in the pharmaceutical space**, with Shanghai-based Fosun paying \$1.09 billion for a 74% stake in Hyderabad-based Gland Pharma.
- A 2017 survey of Chinese enterprises in India by the Industrial and Commercial Bank of China’s Mumbai branch found that **42% were in the manufacturing sector, 25% in infrastructure and others in telecom, petrochemicals, software and IT.**

Chitra GeneLAMP-N

Chitra GeneLAMP-N is a diagnostic test kit that can confirm COVID19 in 2 hours at low cost. It has been developed by Sree Chitra Tirunal Institute for Medical Sciences and Technology, Trivandrum, an Institute of National Importance, of the Department of Science and Technology (DST).

Details -

- The confirmatory diagnostic test detects the N Gene of SARS- COV2 using reverse transcriptase loop-mediated amplification of viral nucleic acid (RT-LAMP).
- The test kit is highly specific for SARS-CoV-2 N-gene and can detect two regions of the gene, which will ensure that the test does not fail even if one region of the viral gene undergoes mutation during its current spread.
- The detection time is 10 minutes, and the sample to result time (from RNA extraction in swab to RT-LAMP detection time) will be less than 2 hours.

What is Reverse transcription loop-mediated isothermal amplification (RT-LAMP)?

- It is a technique for the amplification of RNA.
- It is used in the detection of viruses.
- In this method, **a DNA copy of the viral RNA is generated by reverse transcriptase**, and then isothermal amplification is carried out to increase the amount of total DNA.

Anthurium

D Vasini Bai, a women innovator from Thiruvananthapuram, Kerala, has developed ten varieties of *Anthurium*, a flower with high market value, by cross-pollination.

Details -

The uniqueness of these varieties developed by D Vasini Bai are large and medium-size flowers with uncommon colour combinations of spathe and spadix (*viz.* light and dark orange, magenta, green and rose colour combination, dark red and white colours)

What is Anthurium?

- Anthurium (*Anthurium spp.*) is a vast group of beautiful blooming plants available in a wide range of colours. The plants of the varieties are having high demands due to its use as indoor decorative plants.
- Anthurium is one of the best domestic flowering plants in the world. They are beautiful but also purify the surrounding air and remove harmful airborne chemicals like formaldehyde, ammonia, toluene, xylene, and allergens.
- Its importance of removing toxic substances from the air, NASA has placed it in the list of air purifier plants.
- Anthurium has larger economic importance because of its eye-catching and beautiful inflorescence and fetches a good market price.

Insolvency and Bankruptcy Code

In a major relief for corporate borrowers, the government has decided to amend the insolvency law to suspend up to one year provisions that trigger insolvency proceedings against defaulters. This amendment would pave the way for banks to restructure loans.

Details -

- Sections 7, 9 and 10 of the IBC would be suspended for six months and the suspension time can be extended by up to one year.
- Section 7 and 9 pertain to initiation of corporate insolvency proceedings by a financial creditor and an operational creditor, respectively. Section 10 relates to filing of an application for insolvency resolution by a corporate.

About Insolvency and Bankruptcy Code -

- The IBC 2016 applies to companies and individuals. It provides for a time-bound process to resolve insolvency.
- When a default in repayment occurs, creditors gain control over debtor's assets and must take decisions to resolve insolvency within a 180-day period.
- To ensure an uninterrupted resolution process, the Code also provides immunity to debtors from resolution claims of creditors during this period.
- The Code also consolidates provisions of the current legislative framework to form a common forum for debtors and creditors of all classes to resolve insolvency.
- **National Company Law Tribunal (NCLT)** – The adjudicating authority (AA), has jurisdiction over companies, other limited liability entities.
- **Debt Recovery Tribunal (DRT)** has jurisdiction over individuals and partnership firms other than Limited Liability Partnerships.
- **The Insolvency and Bankruptcy Board of India (IBBI)** – It is the apex body for promoting transparency & governance in the administration of the IBC; will be involved in setting up the infrastructure and accrediting IPs (Insolvency Professionals (IPs) & IUs (Information Utilities). It has 10 members from Ministry of Finance, Law, and RBI.

Swamitva Yojana

On **Panchayati Raj Diwas (April 24th)**, the Prime Minister of India launched '**Swamitva Yojana' or Ownership Scheme** to map residential land ownership in the rural sector using modern technology like the use of drones.

Details -

- The scheme aims to revolutionise property record maintenance in India.
- The scheme is piloted by the **Panchayati Raj ministry**.
- The residential land in villages will be measured using drones **to create a non-disputable record**.
- **Property card for every property in the village** will be **prepared by states** using accurate measurements delivered by drone-mapping. These cards will be given to property owners and will be recognised by the land revenue records department.

National Infrastructure Pipeline

The Task Force on National Infrastructure Pipeline (NIP) submitted its **Final Report on NIP for FY 2019-25** to the Union Minister for Finance recently.

What is 'National Infrastructure Pipeline'?

- NIP is a first-of-its-kind, whole-of-government exercise to provide world-class infrastructure across the country, and improve the quality of life for all citizens.
- NIP will enable a forward outlook on infrastructure projects which will create jobs, improve ease of living, and provide equitable access to infrastructure for all, thereby making growth more inclusive.
- It aims to improve project preparation, attract investments (both domestic and foreign) into infrastructure, and will be crucial for target of becoming a \$5 trillion economy by FY 2025.
- The NIP has been made on a best effort basis by aggregating the information provided by various stakeholders including line ministries, departments, state governments and private sector across infrastructure sub-sectors identified in the Harmonised Master List of Infrastructure.
- To draw up the NIP, a bottom-up approach was adopted wherein all projects (Greenfield or Brownfield, Under Implementation or under conceptualisation) costing greater than Rs 100 crore per project were sought to be captured.
- The Centre (39%) and States (40%) are expected to have almost equal share in implementing the NIP in India, followed by the private sector (21%).

What does the task force say?

- The Final Report of NIP Task Force is projecting total infrastructure investment of Rs 111 lakh crore during the period FY 2020-25.
- Sectors such as energy (24%), roads (18%), urban (17%) and railways (12%) amount to around 71% of the projected infrastructure investments in India.
- Out of the total expected capital expenditure of Rs. 111 lakh crore, projects worth Rs 44 lakh crore (40% of NIP) are under implementation, projects worth Rs 33 lakh crore (30%) are at conceptual stage and projects worth Rs 22 lakh crore (20%) are under development Information regarding project stage are unavailable for projects worth Rs 11 lakh crore (10%).

Fuel Cell Technology

NTPC Ltd, India's largest power producer and a central PSU under Ministry of Power, has invited Global Expression of Interest (EoI) to provide 10 Hydrogen Fuel Cell (FC) based electric buses and an equal number of Hydrogen Fuel Cell based electric cars in Leh and Delhi.

About Fuel Cells -

- A fuel cell is a device that **converts chemical potential energy (energy stored in molecular bonds) into electrical energy**.
- A PEM (Proton Exchange Membrane) cell uses hydrogen gas (H₂) and oxygen gas (O₂) as fuel.
- The products of the reaction in the cell are **water, electricity, and heat**.

- This is a big improvement over internal combustion engines, coal burning power plants, and nuclear power plants, all of which produce harmful by-products.

How does it work?

- The **anode**, the **negative** post of the fuel cell, has several jobs. It conducts the electrons that are freed from the **hydrogen** molecules so that they can be used in an external circuit. It has channels etched into it that disperse the hydrogen gas equally over the surface of the catalyst.
- The **cathode**, the **positive** post of the fuel cell, has channels etched into it that distribute the **oxygen** to the surface of the catalyst. It also conducts the electrons back from the external circuit to the catalyst, where they can recombine with the hydrogen ions and oxygen to form water.
- **Pressurised hydrogen gas (H₂)** entering the fuel cell on the anode side. This gas is forced through the catalyst by the pressure. When an H₂ molecule comes in contact with the platinum on the catalyst, it splits into two H⁺ ions and two electrons (e⁻). The electrons are conducted through the anode, where they make their way through the external circuit (doing useful work such as turning a motor) and return to the cathode side of the fuel cell.
- Meanwhile, on the **cathode side** of the fuel cell, **oxygen gas (O₂)** is being forced through the catalyst, where it forms two oxygen atoms. Each of these atoms has a strong negative charge. This negative charge attracts the two H⁺ ions through the membrane, where they combine with an oxygen atom and two of the electrons from the external circuit to form a water molecule (H₂O).
- Due to the high energetic content of hydrogen and **high efficiency of fuel cells (55%)**, this great technology can be used in many applications like **transport (cars, buses, forklifts, etc) and backup power to produce electricity during a failure of the electricity grid.**

Advantages of the technology -

- By converting chemical potential energy directly into electrical energy, fuel cells avoid the “thermal bottleneck” (a consequence of the 2nd law of thermodynamics) and are thus inherently **more efficient than combustion engines**, which must first convert chemical potential energy into heat, and then mechanical work.
- **Direct emissions from a fuel cell vehicle are just water and a little heat.** This is a huge improvement over the internal combustion engine’s litany of greenhouse gases.
- Fuel cells have **no moving parts**. They are thus much **more reliable than traditional engines**.
- **Hydrogen can be produced in an environmentally friendly manner**, while oil extraction and refining is very damaging.

HCARD

The robotic device HCARD, in short for **Hospital Care Assistive Robotic Device**, can help frontline healthcare workers in maintaining physical distance from those infected by coronavirus.

Details -

- HCARD is developed by Durgapur-based CSIR lab, Central Mechanical Engineering Research Institute.
- The device is equipped with various state-of-the-art technologies and works both in automatic as well as manual modes of navigation.
- This robot can be controlled and monitored by a nursing booth with a control station having such features as navigation, drawer activation for providing medicines and food to patients, sample collection and audio-visual communication.

Super-luminous supernovae SN 2010kd

Researchers at the Arayabhatta Research Institute of Observational Sciences (ARIES) have found that SN 2010kd, a super-luminous supernova stands out with the amount of mass as well as Nickel ejected during explosion, which is much more than seen in case of normal core-collapse supernovae.

What are 'supernovae'?

- Supernovae are a kind of energetic explosions where the core of massive stars (a few times to that of mass of our Sun) go to a catastrophic phase of explosion liberating huge amounts of energy.
- These events are visible through very far away distances much beyond our own solar system.
- Super-luminous supernovae are a special type of stellar explosions having energy output 10 or more times higher than that of standard supernovae.

About Super-luminous supernova SN 2010kd -

- The super-luminous supernova titled SN 2010kd is rather nearby - approximately at a distance of 1.5 Giga light-years discovered by Robotic Optical Transient Search Experiment (ROTSE-IIIb) telescope as a part of ROTSE supernova verification project in the USA on 14 November 2010 embedded in a dwarf host galaxy towards Leo constellation.
- The larger ejected mass of Super-luminous supernovae SN 2010kd indicates that the related star evolution might be different from other possible progenitors of normal core-collapse supernovae with a different possible underlying physical mechanism responsible for producing such energetic supernovae with large ejected mass and Ni.
- It exploded with a larger velocity but decayed slower than other similar supernovae.
- The observations of the scientists show that parameters like rotation and metallicity play a crucial role in stellar explosions and that there are many more types of possible progenitors existing in diverse environments in their host galaxies than previously known.

UV disinfection trolley

International Advanced Research Centre for Powder Metallurgy and New Materials (ARCI), an autonomous R&D Centre of Department of Science and Technology (DST), Govt. of India and University of Hyderabad (UoH) together with the help of Mekins Industries Ltd. (MIL), have developed a UVC based disinfection trolley to fight against COVID-19 by rapid cleaning of hospital environment.

Need -

- UV light in the range of wavelengths between 200 and 300 nm is capable of inactivating microorganisms, such as bacteria and viruses, thus disinfecting both air and solid surfaces.
- Often, chemical disinfectants are not enough to remove the bacteria and viruses found in hospitals and other contamination prone environment.
- Rapid decontamination of the used patient-care beds and hospital rooms before admission of subsequent occupants is a major requirement in hospitals in view of the limited availability of beds.
- Coronavirus is sensitive to UVC light, as in the case of other viruses and bacteria. The germicidal effects of UVC irradiation with a peak intensity at 254 nm results in cellular damage of the virus, thereby inhibiting cellular replication.
- Unlike chemical approaches to disinfection, UV light provides rapid, effective inactivation of microorganisms through a physical process.

About Ultraviolet light -

UV light (ultraviolet light) is having a wavelength between 10 to 400nm that are shorter than the visible light but longer than the X-rays and is a type of **an electromagnetic radiation**. These are present in sunlight and **contributes 10% of the total light from the sun**.

UV light or UV ray is classified into three components **ultraviolet A (UVA), ultraviolet B (UVB) and ultraviolet C (UVC)**.

Ultraviolet A (UVA) -

- Most of the UV (98.7%) that reaches us on the earth's surface is of type UVA and is affected by the ozone.
- It can be the cause of ageing of the skin, fading of paints and dyes.
- It is the cause of skin cancer called *melanoma*.

Ultraviolet B (UVB) -

- 1.3% of the UV reaches the earth's surface and is highly affected by ozone. These rays are responsible for sunburn and tan.

- It is important for the production of Vitamin D.

Ultraviolet C (UVC) -

- 0% of the rays reach the earth's surface as most of them are scattered and absorbed by the atmospheric oxygen, nitrogen and ozone.
- It causes lesions on the skin.

Ruhdaar

A team of engineering students from IIT Bombay, NIT Srinagar and Islamic University of Science & Technology (IUST), Awantipora, Pulwama, Jammu and Kashmir have come forward to solve the problem of ventilator requirement. The team has come up with a low-cost ventilator using locally available materials, known as Ruhdaar.

Naming of cyclones

Worldwide there are six regional specialised meteorological centres (RSMCs) and five regional Tropical Cyclone Warning Centres (TCWCs) mandated for issuing advisories and naming of tropical cyclones. India Meteorological Department is one of the six RSMCs to provide tropical cyclone and storm surge advisories to 13 member countries under WMO/ESCAP Panel including Bangladesh, India, Iran, Maldives, Myanmar, Oman, Pakistan, Qatar, Saudi Arabia, Sri Lanka, Thailand, United Arab Emirates and Yemen.

Details -

During WMO/ESCAP PTC 45th Session held at Muscat, Oman in September, 2018 it was decided to prepare a fresh list of names of tropical cyclones including representation from five new member countries, viz., Iran, Qatar, Saudi Arabia, United Arab Emirates and Yemen (Total 13 member countries).

How the cyclones are named?

- These countries submitted eight names each, which are arranged in a table.
- The first cyclone after the list was adopted was given the name in the first row of the first column (proposed by Bangladesh).
- Subsequent cyclones are being named sequentially, column-wise, with each cyclone given the name immediately below that of the previous cyclone.
- Once the bottom of the column is reached, the sequence moves to the top of the next column.

Significance of naming of cyclones -

- identify each individual cyclone.
- create awareness of its development.
- remove confusion in case of simultaneous occurrence of TCs over a region
- remember a TC easily
- rapidly and effectively disseminate warnings to a much wider audience.

About World Meteorological Organisation -

- The World Meteorological Organization (WMO) is an intergovernmental organisation with a membership of 192 Member States and Territories.
- It originated from the International Meteorological Organization (IMO), which was established after the 1873 **Vienna International Meteorological Congress**.
- Established by the ratification of the WMO Convention on 23 March 1950, WMO became the specialised agency of the United Nations for meteorology (weather and climate), operational hydrology and related geophysical sciences.'
- WMO is headquartered in **Geneva, Switzerland**.

Bhagwan Basaveshwara Jayanti

Prime Minister Shri Narendra Modi paid homage to Lord Basaveshwara and greeted the people on the occasion of Basava Jayanthi, the Birth anniversary of Lord Basaveshwara.

About Bhagwan Basaveshwara -

- Basvanna (Lord Basaveshwara) was a 12th-century poet-philosopher, and the founding saint of the **Lingayat sect**.
- **Basvanna Jayanti (Basava Jayanthi)** is celebrated on his birth anniversary, particularly in state of **Karnataka and Maharashtra**.
- **Early life** - Basaveshwara was born in **Bagevadi** (of undivided Bijapur district in Karnataka) during 1131 AD. His father was Madarasa and Madalambike was his mother. They belonged to the Brahmin community. As a religious tradition, he was initiated with the holy thread '**janivara**' in Upanayana, (thread ceremony) at the early age of eight years. Basavanna revolted against this tradition, cut threw his janivara, left home and went to Kudalasangama from where he was educated in all respects.
- Later he went to Kalyana, where the **Kalchuri king Bijjala (1157-1167, AD)** was ruling. Because of his highly intellectual personality, he was appointed as a karanika (Accountant) in the initial stage, in the court of king Bijjala and later he became the Prime Minister of Bijjala after proving his administrative ability.
- **The ideas of Basavanna** are scripted in a novel form of literature called **Vachana** (poetry). This innovative literary form is the main contribution of "**Sharanas movement**" through which they express their revolutionary and reformist ideology in a very simple Kannada language. Thus the main aim of Vachana (poetry) movement, led by Basaveshwara was welfare of all. He proclaimed this as- "**Sakala jeevatmarige lesu**" (**welfare of all**).
- He gave two important and innovative concepts called "**Sthavara**" and "**Jangama**", the meaning of which is "Static" and "Dynamic", respectively. Both of these concepts are the main foundation stones of his revolutionary ideology.
- **He was born progressive activist** - Revolted against all the social evils of the traditionalistic society and brought a drastic change in various facets. He gave an idea of Socialistic and Democratic system. He talked about human rights in the twelfth century.
- **Religious reforms** - He tried to change the **concept of Temple** which was the main centre of various types of harassment. Priests and rich people were exploiting the common folk in the name of God and temple. He gave a new dimension to the human body and soul (inner spirit), by which the self respect of all human beings was boosted.
- Basvanna was first Kannadiga in whose honour a commemorative coin has been minted in recognition of his social reforms.
- Prime Minister Narendra Modi inaugurated his statue along the bank of the river Thames at Lambeth in 2015.

CERT-In

In the wake of controversy surrounding the Sprinklr deal, Kerala government has decided to carry out a security audit of CERT-In, the nodal agency responsible for dealing with cyber security threats, of the various data collected by government departments and agencies related to COVID19.

About CERT-In -

- Computer Emergency Response Team (CERT-in) was established in January 2004.
- It comes under the aegis of **Union Ministry of Communications and Information Technology**.
- The main function of CERT-In is to **provide early security warning and effective incident response**.
- It operates on 24 x 7 basis and is actively engaging its users with early warning alerts and advisories.
- It is aimed at catering to the needs of critical sectors, defence, banks, law enforcement & judiciary and e-governance project owners.
- In the Information Technology (Amendment) Act 2008, **CERT-In has been designated to serve as the national agency to perform the functions in the area of cyber security**.
- CERT-In has taken steps to implement **National Information Security Assurance Programme (NISAP)** to create awareness in government and critical sector organisations.

Pitch Black 2020

Australia has informed India that its premier multilateral air combat training exercise - Pitch Black 2020 - scheduled from July 27 to August 14 has been cancelled due to the COVID-19 situation.

About Pitch-Black Exercise -

- Exercise Pitch Black a biennial multi-national large force employment warfare exercise conducted by Australia.
- The 2018 exercise saw participation of 16 nations and more than 140 aircraft and it was the largest Pitch Black ever conducted by Australia.
- The first Pitch Black exercises took place in 1981 between different RAAF units.
- Later in 1990, it began as training exercise between Australia and Singapore and then was expanded as multilateral exercises by inviting international air forces with which Australia has defence ties.