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1. INDIAN SOCIETY & POLITY

1. Gandhi Peace Prize

Why in News?

- Government extends last date for receipt of nominations for the Gandhi Peace Prize 2020 up to 15.6.2020.

Highlights:

- The Ministry of Culture invites nominations for awarding the Gandhi Peace Prize every year. The nominations are to be made in accordance with the provisions of the Code of Procedure for Gandhi Peace Prize as prescribed by the Ministry.
- For the year 2020, the last date for receiving the nominations was 30th April 2020. Due to COVID-19 lockdown throughout the country, the last date has now been extended.

Gandhi Peace Prize:

- The International Gandhi Peace Prize, named after Mahatma Gandhi, is awarded annually by the Government of India.
- As a tribute to the ideals espoused by Gandhi, the Government of India launched the Prize in 1995 on the occasion of the 125th birth anniversary of Mohandas Gandhi.
- This is an annual award given to individuals and institutions for their contributions towards social, economic and political transformation through non-violence and other Gandhian methods.
- The award carries ₹ 1 Crore (10 million) in cash, convertible in any currency in the world, a plaque and a citation.
- It is open to all persons regardless of nationality, race, creed or gender.
- A jury consisting of the Prime Minister of India, the Leader of the Opposition in the Lok Sabha, the Chief Justice of India, Speaker of the Lok Sabha and one other eminent person decides the awardee each year.
- If it is considered that none of the proposals or nominations merit recognition, the jury is free to withhold the award for that year; the award was withheld in the years from 2006 to 2012 inclusive.
- The first recipient of the award was Tanzanian leader Julius Nyerere, in 1995.
- The latest recipient (in 2018) was Yōhei Sasakawa of Japan, for his work in leprosy eradication in India and across the world.

- Other awardees include ISRO, Ramakrishna Mission, Akshaya Patra Foundation, Sulabh International, Desmond Tutu, Nelson Mandela, etc.

2. Sikkim Statehood Day

Why in News?

- PM greets people of Sikkim on their Statehood Day.

Highlights:

- On 16 May 1975, Sikkim became the 22nd state of the Indian Union, and the monarchy was abolished.
- To enable the incorporation of the new state, the Parliament amended the Indian Constitution.
- The Kingdom of Sikkim was founded by the Namgyal dynasty in the 17th century. It was ruled by a Buddhist priest-king known as the Chogyal.
- It became a princely state of British India in 1890.
- After 1947, Sikkim continued its protectorate status with the Republic of India.
- In 1973, anti-royalist riots took place in front of the Chogyal's palace.
- In 1975, the monarchy was deposed by the people.
- A referendum in 1975 led to Sikkim joining India as its 22nd state.

Constitutional Provisions:

- Indian constitution empowers the Union government to create new states out of existing states or two merge one state with other. This process is called the reorganisation of the states.
- The basis of reorganisation could be linguistic, religious, ethnic or administrative.
- Article 3 of the Indian Constitution provides for the formation of new States and alteration of areas, boundaries or names of existing States.

2. GOVERNANCE

1. Janaushadhi Sugam Mobile App

Why in News?

- Amid nationwide lockdown due to COVID-19 crisis Janaushadhi Sugam Mobile App is helping people in a big way to locate their nearest Pradhan Mantri Bharatiya Janaushadhi Kendra (PMJAK) and availability of affordable generic medicine with its price.

Highlights:

- Over 325000 people are using Janaushadhi Sugam Mobile App to avail the host of benefits provided by it.
- In order to make use of digital technology for easing the life of consumers, this mobile application for Pradhan Mantri Bhartiya Janaushadhi Pariyojana (PMBJP) has been developed by Bureau of Pharma PSUs of India (BPPI) under 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, by the virtue of which
 - ✓ they can avail a host of user-friendly options like locate nearby Janaushadhi kendra,
 - ✓ direction guided through Google Map for location of the Janaushadhi kendra,
 - ✓ search Janaushadhi generic medicines,
 - ✓ analyze product comparison of Generic and Branded medicine in form of MRP & overall Savings, etc.

2. IDEathon on 'The Future of River Management'

Why in News?

- The National Mission for Clean Ganga (NMCG) under the Ministry of Jal Shakti and National Institute of Urban Affairs (NIUA) organized an IDEathon on "The future of River Management" to explore how the COVID-19 crisis can shape River Management strategies for the future.

Highlights:

- While the general narrative around this crisis has been that of anxiety and concern, the crisis has also thrown up some positive developments.
- One of these is the visible improvement in the natural environment.
- Rivers have become cleaner. The air has become fresher. There has been a significant drop in GHG emissions.

- Animals and Birds are returning to and enjoying their habitats.

The Future of River Management:

- Purely from a river management point of view, in India there has been a noticeable improvement in the water quality of the Ganga and the Yamuna.
- During the last year or so, the Gangetic Dolphin, an indicator species, has been showing improvements with sightings at several stretches of the river.
- The IDEathon examined the response mechanisms that are needed in the event of a river crisis and how the social angle of rivers can be leveraged on to address other crises based on the lessons for river management that the pandemic has taught.
- National Mission for Clean Ganga had initiated this IDEathon to garner more attention towards river management and also highlight the interconnectivity of Cities with the River.
- A different perspective than traditional urban planning methods, the River cities need a special focus to capitalize on not only the socio-cultural significance of the river but also the ecological importance and economic potential which can help the city, if properly planned. With intent to mainstream River Management in a city's Urban Planning framework, NMCG has been developing a template for an Urban River Management Plan with the National Institute of Urban Affairs. NMCG is also working with GIZ (Germany's leading development agency) in developing the River Basin Organization and also River Basin Planning and Management Cycle to develop an adaptive framework under Namami Gange for Ganga River Basin Management.

3. Labour Intensive Programmes to Restore the Rural Economy

Why in News?

- The Jharkhand government has recently launched three labour intensive programmes to restore the rural economy.
- The schemes have been launched seeing the possibility of a steep rise in the rate of unemployment in villages due to the arrival of large-scale stranded migrant workers from other States.

Highlights:

- The three schemes have been devised in convergence with the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGA).
- The schemes are— Birsa Harit Gram Yojana (BHGY), Neelambar Pitambar JAL Sammridhi Yojana (NPJSY) and Veer Sahid Poto Ho Khel Vikas Scheme (VSPHKVS) — to create wage employment for workers in rural areas.

Birsa Harit Gram Yojana:

- The BHGY is envisaged at bringing over two lakh acres of unused government fallow land under the afforestation programme.
- About five lakh families will be provided 100 fruit-bearing plants.
- The initial plantation, maintenance, land work and afforestation will be taken up through MGNREGA.
- Each family is estimated to receive an annual income of ₹50,000 from fruit harvest after three years while the ownership of land will remain with the government.

Neelambar Pitambar JAL Sammridhi Yojana:

- As per NPJSY, the government aims at creating agro-water storage units by arresting rainwater and runaway groundwater.
- Nearly 5 lakh acre of cultivable land can be irrigated through the initiative.
- An estimated 10 crore person days will be generated through the scheme in the next 4-5 years.

Veer Sahid Poto Ho Khel Vikas Scheme:

- 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.

Concern:

- According to the Centre for Monitoring Indian Economy (CIME) data, the State is reeling under severe joblessness with unemployment rate pegged at 47.1% – double that of the national average (23.5%).
- The arrival of an estimated 5 lakh to 6 lakh migrant workers is likely to worsen the situation.

4. Government of India to Facilitate return of Indian Nationals Stranded Abroad

Why in News?

- The Government of India will be facilitating the return of Indian nationals stranded abroad on compelling grounds in a Phased Manner.

Highlights:

- The travel would be arranged by aircraft and naval ships.

- Indian Embassies and High Commissions are preparing a list of distressed Indian citizens.
- This facility would be made available on payment-basis. Non-scheduled commercial flights would be arranged for air travel.
- The travel would begin in a phased manner from May 7.
- Medical screening of passengers would be done before taking the flight.
- Only asymptomatic passengers would be allowed to travel.
- During the journey, all these passengers would have to follow the protocols, such as the Health Protocols, issued by the Ministry of Health and the Ministry of Civil Aviation.

On Reaching the Destination:

- The passengers would have to register on the Aarogya Setu app.
- They would be medically screened.
- After scrutiny, they would be quarantined for 14 days, either in a hospital or in an institutional quarantine on payment-basis, by the concerned State government.
- COVID test would be done after 14 days and further action would be taken according to health protocols.
- State Governments are being advised to make arrangements, including for testing, quarantine and onward movement of the returning Indians in their respective States.

5. Lost at Home' Report by UNICEF

Why in News?

- More than five million people were internally displaced in India due to natural disasters, conflict and violence in 2019, constituting the highest number of new internal displacements in the world.

The 'Lost at Home' Report:

- The report is published by the UN Children's Fund (UNICEF).
- It says that almost 33 million new displacements were recorded in 2019 – around 25 million were due to natural disasters and 8.5 million as a consequence of conflict and violence.
- Of these, there were 12 million new displacements involving children, including around 3.8 million of them caused by conflict and violence, and 8.2 million due to disasters linked mostly to weather-related events.
- The report said that natural disasters resulted in more new displacements than conflict and violence.

- Almost 10 million new displacements in 2019 were recorded in East Asia and the Pacific (39 %) – and almost the same number in South Asia (9.5 million).
- The report looks at the risks internally displaced children face – child labour, child marriage, trafficking among them – and the actions urgently needed to protect them.

Displacement in India:

- India, the Philippines, Bangladesh and China all suffered from natural disasters leading to displacement in the millions, which accounted for 69% of global disaster-induced displacements. These were overwhelmingly caused by extreme conditions created by dangerous storms and floods. In India, the total number of new internal displacements in 2019 stood at 5,037,000 – including 5,018,000 due to natural disasters and 19,000 because of conflict and violence.

Global Scenario:

- India is followed by the Philippines, Bangladesh and China.
- The Philippines accounted for 4.27 million new internal displacements due to natural disasters, conflict and violence, Bangladesh 4.08 million and China 4.03 million.
- The largest number of internally displaced children due to conflict is found in the Middle East and North Africa (MENA) and sub-Saharan Africa.
- Internally displaced persons are concentrated in two regions – the Middle East and North Africa and West and Central Africa.
- The MENA region recorded over 12 million IDPs as a result of conflict and violence at the end of 2019. Almost all of them lived in just three countries – Syria, Yemen, and Iraq – and around 5 million were children.

What makes the Situation Worse?

- The COVID-19 pandemic is only making a critical situation worse.
- Camps or informal settlements are often overcrowded and lack adequate hygiene and health services.
- Physical distancing is often not possible, creating conditions that are highly conducive to the spread of the disease, the report said.

6. Issue of Rent Control During COVID-19

Why in News?

- With the social and economic impacts of the current pandemic and associated lockdown, there is a clarion call made to landlords by tenants to ‘forgive’ rent for a month or two.

Highlights:

- Government, civil society, academia, and migrants themselves are already urging landlords to stop evictions as it would exacerbate the pandemic.
- Governments are currently ‘ordering’ or requesting landlords to excuse rent and stop evictions on the basis of the Disaster Management (DM) Act of 2005.

Problems related to India’s Rent Arrangements:

Informality in the Rental Housing Market:

- The vast majority of rent arrangements in India are informal and unrecorded.
- Due to this it is uncertain how many people are giving out their houses on rent, for how much, how long, or under what terms and conditions.

Loopholes in Existing Legislations:

- Typical rent control laws have historically favoured tenants, considering the landlords as petty capitalists exploiting poor, vulnerable tenants.
- Consumption data for poor households in urban areas indicate a uniform lack of savings or access to social and economic safety nets for both landlords and tenants.
- That means many times landlords themselves, by and large, cannot afford a no-rent month.
- Disaster Management (DM) Act of 2005 does not have any provisions for demanding continuation of rental housing arrangements.
- There is no legal obligation for landlords to excuse rent or not evict tenants in the current pandemic.

Way Ahead:

Removing Hurdles in Existing Laws:

- The focus has to shift away from the DM Act to rent control acts that actually aim to regulate rental housing.
- Here some medium to long-term thinking on rent control laws in States, as well as the Central government’s Model Tenancy Act, 2019, could be utilised.

Need of Specific Provisions During Emergencies in Rent Law:

- Model Tenancy Act, need a force majeure clause for emergencies such as the pandemic.
- In such times there is a strong case for passing an order to prevent evictions.
- When passed under a rent law, for registered tenancies, it will carry a far stronger legal sanction than under a disaster law.

Formalisation of the Field:

- There is a need for making rent Act applicable across more and more tenancies. This means that all tenancies, including those informal in nature, must get registered under the Act.

Help in collection of Tenancy Related Data:

- By formalisation we will know who actually the landlords and tenants are, and where these houses are.
- The advantage of having registered tenancies would then be evident because the government would be able to channel funds directly into the accounts of landlords and tenants.
- Proposed MTA emphasises on the registration of rent agreements through to-be-established rent authorities in every State.
- All States need to pursue it. Tamil Nadu has already launched such an authority that manages a portal for simplified registration.

Mobilisation of Housing, Welfare and Disaster Funds:

- We still need to consider that landlords may not be able to afford a rent-free month they need the rent for their own survival.
- These kinds of funds can make up for this loss of rent.
- These types of funds could also be crowd-sourced, acquired from corporate social interests, and grants from international and national donor organisations.

7. AYUSH Sanjivani App

Why in News?

- The Union Health & Family Welfare Minister launched the 'AYUSH Sanjivani' App and two AYUSH based studies related to the COVID-19 situation.

AYUSH Sanjivani App:

- The App will help to generate data on the acceptance and usage of AYUSH advocacies and measures among the population and its impact in prevention of COVID-19.
- It is developed by the Ministry of AYUSH and the Ministry of Electronics and Information Technology (MeitY) and shall reach out to a target of 50 lakh people.
- The AYUSH Ministry, in collaboration with the Health Ministry, launched the clinical trials of Ayurvedic medicines for the novel coronavirus infection.

- The scientific studies on Ayurveda interventions as preventive prophylaxis and as an add-on to standard care to COVID-19 are a joint initiative of AYUSH Ministry, Health Ministry and Council of Scientific and Industrial Research (CSIR) with technical support of Indian Council of Medical Research (ICMR).
- Ayurvedic medicines such as Ashwagandha, Yashtimadhu, Guduchi Pippali, and a poly herbal formulation (Ayush-64) are being used in the clinical trials involving health workers and those working in COVID-19 high-risk areas.
- The researchers would test Ashwagandha for prevention against SARS-CoV-2 in subjects with increased risk during the COVID 19 Pandemic – a comparison with Hydroxychloroquine in the health care providers.
- Another study is to assess the effectiveness of Ayurveda Formulation as an adjunct to ‘Standard of Care’ for the treatment of mild to moderate COVID-19.

8. Modifications in PMRF Scheme

Why in News?

- The Ministry of Human Resource Development has announced amendments in the Prime Minister’s Research Fellowship Scheme.

Highlights:

- After the amendments, for the students from any recognised institute/ university (other than IISc/ IITs/NITs/IISERs/IEST/CF IIITs), the requirement of GATE Score is reduced to 650 from 750 apart from minimum CGPA of 8 or equivalent.
- There will be two channels of entries, one direct entry and lateral entry.
- In lateral entry, the students, who are pursuing PhD in PMRF granting institutions (completed 12 months or 24 months as per certain requirements) can also apply to become fellow under the scheme as per new guidelines.
- The NITs, which appear in top 25 institutions as per NIRF Ranking can also become PMRF Granting institution. The Minister hoped that the modifications would enable more students to avail of the benefit under the Prime Minister’s Research Fellowship Scheme.

Research and Innovation Division:

- To boost research a dedicated Division is being created in the ministry with the name of “Research and Innovation Division”.
- This division will be headed by a director who will be coordinating research work of various institutions coming under MHRD.

Prime Minister's Research Fellows Scheme:

- The PMRF Scheme has been designed for improving the quality of research in various higher educational institutions in the country.
- With attractive fellowships, the scheme seeks to attract the best talent into research thereby realizing the vision of development through innovation.
- The scheme was announced in the Budget 2018-19.
- The institutes which can offer PMRF include all the IITs, all the IISERs, Indian Institute of Science, Bengaluru and some of the top Central Universities/NITs that offer science and/or technology degrees.
- The metrics of the candidates are judged (but not restricted to) by a strong research proposal, publications record and grades & publication in reputed journals/conferences.

9. Inter-State Migrant Workmen Act, 1979

Why in News?

- The unprecedented distress and misery faced by migrant workers due to the current lockdown has drawn attention to a beneficial legislation dedicated to their welfare.

Inter-State Migrant Workmen Act, 1979:

- Inter-State Migrant Workmen (Regulation of Employment and Conditions of Service) Act, 1979 seeks to regulate the employment of inter-State migrants and their conditions of service.

Applicability:

- 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.

Provisions:

- The principal employer is prohibited from employing inter-State workmen without a certificate of registration from the relevant authority.
- The law also lays down that every contractor who recruits workmen from one State for deployment in another State should obtain a licence to do so.

- The wage rates, holidays, hours of work and other conditions of service of an inter-State migrant workmen shall be the same as those extended to other workmen in the same establishment, if the nature of their work is similar.
- In other cases, it would be as prescribed by the appropriate government.
- In no case, shall the wages be lower than what is prescribed under the Minimum Wages Act.

Beneficial provisions for inter-State migrants:

- The provision for registration of establishments employing inter-State workers creates a system of accountability.
- It acts as the first layer of formalising the utilisation of their labour.
- It helps the government keep track of the number of workers employed and provides a legal basis for regulating their conditions of service.
- As part of the licensing process, contractors are bound by certain conditions.
- These include committing them to providing terms and conditions of the agreement or any other arrangement on the basis of which they recruit workers.
- These terms include the remuneration payable, hours of work, fixation of wages and other essential amenities in respect of the inter-State migrant workmen.

10. Atmanirbhar Bharat Abhiyan

Why in News?

- In his fifth address to the nation, Prime Minister Narendra Modi announced an economic package totaling Rs 20 lakh crore to tide over the Covid-19 crisis under 'Atmanirbhar Bharat Abhiyan'.

Highlights:

- The Rs 20 lakh crore package includes the government's recent announcements on supporting key sectors and measures by Reserve Bank of India.
- PM Modi said the economic package would be around the 10 percent of the GDP. PM Modi said it would benefit laborers, farmers, honest taxpayers, MSMEs and cottage industry.
- The special economic package would focus on land, labor, liquidity and laws. The prime minister said the goal of the country would be to become self-reliant, and identified economy and infrastructure as key drivers for it.
- He said making the country self-reliant was only way to make 21st century belong to India.

- Self-reliance will prepare the country for tough competition in the global supply chain, and it is important that the country wins this competition. It will not only increase efficiency in various sectors but also ensure quality.
- India's self-reliance will be based on five pillars — economy, infrastructure, technology driven system, vibrant demography and demand. The prime minister also urged the people to buy and promote local products and brands. He urged the people to be 'vocal for the local'.

11. Using NFHS for Population Surveillance

Why in News?

- Researchers suggest that the scientific and logistical infrastructure of India's National Family Health Survey (NFHS) be leveraged to conduct a random sample-based population surveillance to track coronavirus.

Highlights:

- Governments worldwide have been testing for coronavirus (COVID-19) in high-risk individuals, such as those with symptoms, close contacts of those tested positive, health-care professionals and those with travel history to an affected region.
- But this does not give an accurate number of those affected, making it impossible to understand the true prevalence in a population.
- The article gives the example of how India used NFHS for HIV surveillance, India was projected to have 25 million HIV-positive individuals, with a 3-4% prevalence in adults, but when a random-sample-based population surveillance was conducted to test for HIV in the general population, the estimates sharply reduced to 2.5 million, with a 0.28% prevalence in adults.
- Layering a COVID-19-focused data-collection effort on to the NFHS infrastructure would keep operational costs low, with the major expense being laboratory costs for testing samples. They estimated that if COVID-19 anticipated prevalence is under 0.5%, it needs a sample of about 3,000 individuals to be tested. If a disease is widespread, meaning there is higher prevalence, its detection is easier, needing only a smaller sample.
- Conversely, if it is rare, it is harder to find and a larger sample should be tested to detect that. This sampling approach could be implemented at the State or district levels.
- The Government of India is considering a random-sample based sero-prevalence survey. It would be more relevant to use the latest NFHS district-sampling frame and not invent a new one.

12. Sample Registration System Report

Why in News?

- Sample Registration System (SRS) is the largest demographic survey in the country undertaken by the Registrar General of India.

Highlights:

- The survey is mandated to provide annual estimates of infant mortality rate, birth rate, death rate, fertility and mortality indicators at the state and national level, in both urban and rural areas.
- 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.
- These details were released by the Centre recently in its Sample Registration System (SRS) bulletin based on data collected for 2018.
- The national birth rate in 2018 stood at 20, and death and infant mortality rates stood at 6.2 and 32.
- The rates are calculated per one thousand of the population.
- **Birth rate:**
 - ✓ Birth rate is a crude measure of fertility of a population and a crucial determinant of population growth.
 - ✓ India's birth rate has declined drastically over the last four decades from 36.9 in 1971 to 20.0 in 2018.
 - ✓ The rural-urban differential has also narrowed.
 - ✓ The birth rate has continued to be higher in rural areas compared to urban areas in the last four decades.
 - ✓ There has been about an 11 per cent decline in birth rate in the last decade, from 22.5 in 2009 to 20.0 in 2018.
 - ✓ The corresponding decline in rural areas is 24.1 to 21.6, and in urban areas, it is 18.3 to 16.7.
 - ✓ Bihar has the highest birth rate at 26.2 and Andaman and Nicobar Islands has the lowest birth rate of 11.2.
- **Death rate:**
 - ✓ Mortality is one of the basic components of population change and the related data is essential for demographic studies and public health administration.

- ✓ 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.
- ✓ In the last decade, death rate at an all-India level has declined from 7.3 to 6.2.
- ✓ 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 8 and Delhi, an almost entirely urban state, has a rate of 3.3, indicating better healthcare facilities.
- **Infant Mortality rate:**
 - ✓ The data shows that against the national infant mortality rate (IMR) of 32, Madhya Pradesh has an IMR of 48 and Nagaland 4.
 - ✓ The present figure of 32 is about one-fourth as compared to 1971 (129).
 - ✓ In the last 10 years, IMR has witnessed a decline of about 35 per cent in rural areas and about 32 per cent in urban areas.
 - ✓ The IMR at an all-India level has declined from 50 to 32 in the last decade.

13. GOAL Program for Digital Skilling of Tribal Youth

Why in News?

- ‘Goal’ (Going Online as Leaders) programme of M/o Tribal Affairs for Digital Skilling of Tribal Youth across India in partnership with Facebook was recently launched.

Highlights:

- Facebook had on its own run the project on pilot basis from February 2019 to October 2019 in 5 states with 100 mentees and 25 mentors; which received enthusiastic response.
- Based on its success, Facebook approached MoTA for a joint initiative under affirmative action and help Facebook in selection of mentees, design curriculum and various activities under the program.

GOAL:

- GOAL (Going Online As Leaders) is a Joint initiative of Facebook India with the Ministry of Tribal affairs.
- **Objectives:**
 - ✓ The program aims to enable Scheduled Tribe (ST) 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 ‘Mentees’) will get an excellent opportunity to get training by experts from different disciplines and fields (to be called ‘Mentors’).
- There will be 1 mentor for 2 mentees.
- The IT based system is designed to match mentors and mentees so that they are from similar professions and preferably speak the same language.
- 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.
- At least 250 Fellows who are getting scholarships from the Ministry of Tribal Affairs under the National Scholarship and Fellowship Scheme and are part of Tribal Talent Pool will also be mentored through the program.
- All the selected mentees will be provided with smartphones and Internet access (for one year) by Facebook.
- 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.
- Efforts will be made to integrate the program with other government schemes such as Kaushal Vikas Yojana, Skill India, Start Up India, Stand Up India, among others.
- This will enable participants to leverage opportunities provided under these government schemes.

Significance:

- Exploring the Hidden Talents: The digitally enabled program envisages to act as a catalyst to explore hidden talents of the tribal youth, which will help in their personal development as well as contribute to all-round upliftment of their society.
- Integrating the Tribals with Mainstream: Digital skilling and technology will integrate them into the mainstream. It will develop Tribal Entrepreneurship and connect Tribal Youth to Domestic and International Markets through Digital Platforms.
- Curtail the Digital divide: Initiatives like this significantly help in reducing the digital divide between tribals and non tribals. A digital divide is any uneven distribution in the access to, use of, or impact of Information and Communication Technologies between any number of distinct groups
- Empowerment of Tribal Women: The program will go a long way in creating an environment for empowerment of tribal women by connecting them with the digital world and using digital platforms to groom their talents.

- **Financial Independence:** The program would be successful in making fruitful impact towards enabling the ST youth to become financially independent as thus tackle adverse situations like Covid pandemic.
- **Awareness generation:** The program will also create awareness amongst tribal beneficiaries about various schemes initiated by Central and State Governments for welfare of STs as well as their Fundamental Duties.

14. Defence Testing Infrastructure Scheme

Why in News?

- Raksha Mantri has recently approved the launch of Defence Testing Infrastructure Scheme with an outlay of Rs 400 crores.

Highlights:

- The Scheme would run for the duration of five years and envisages to set up six to eight new test facilities in partnership with private industry.
- This will facilitate indigenous defence production, consequently reduce imports of military equipment and help make the country self-reliant.
- The projects under the Scheme will be provided with up to 75 percent government funding in the form of 'Grant-in-Aid'.
- The remaining 25 percent 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.
- The SPVs under the Scheme 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.
- The equipment/systems tested will be certified as per appropriate accreditation.
- **Aim:**
 - ✓ To give a boost to domestic defence and aerospace manufacturing in India.
 - ✓ To create state of the art testing infrastructure for the sector.

15. eVidya Programme for digital education

Why in News?

- The PM eVidya programme was launched recently in order to promote digital education in the country and make e- learning Feasible.



PM eVidya Programme:

- A programme for multimode access to digital/ online education that will consist of:
- Top 100 universities will be permitted to automatically start online courses by May 30.
- Online components in conventional Universities and ODL programmes will also be raised from 20% to 40%.

DIKSHA:

- DIKSHA that will give 'one nation, one digital platform' for school education in states and union territories: It will provide e- content and QR coded energised textbooks for all grades. This will benefit nearly 25 crore school going children across the country.
- DIKSHA has content in 14 languages – Assamese, Bengali, English, Gujarati, Hindi, Kannada, Malayalam, Marathi, Odia, Sindhi, Tamil, Telugu, Urdu, Chhattisgarhi.
- Over the next three month a large number of high-quality e- resources for learning and teaching will be made available on DIKSHA through the recently launched VidyaDaan Program.

VidyaDaan:

- VidyaDaan is conceptualised as a common national program for individuals & organizations across the country to donate/contribute e-learning resources for school education to ensure continuity of quality learning.

One Class One Channel Programme:

- One earmarked TV channel for each class from standard 1 to 12 under 'one class one channel programme'.
- There will be extensive use of radio, community radio and podcasts among students.
- The use of 289 Community Radio Stations will be attempted for school education.

Shiksha Vani:

- Podcast called Shiksha Vani of CBSE disseminates audio content for various subjects of grades 9 to 12, in a timely, educative, lucid and seamless manner.
- So far Shikshavani contains approximately 400 pieces of content in the form of audio files on topics in accordance with NCERT curriculum.

For the Visually Impaired Learners:

- Study material has been developed in Digitally Accessible Information System (DAISY), a technical standard for digital audiobooks, periodicals and computerized text.
- Learners can access all study material of NIOS through DAISY.
- These lessons are broadcast on Gyanamrit, Channel 30 of Swayam Prabha

For the Hearing-impaired Learners:

- Course content (Selected ones) of NIOS has also been recorded in sign language which is placed on NIOS website as well as on YouTube.
- The recorded content is sent to HI learners on DVD.

Swayam Prabha:

- In order to support and reach out to those who do not have much access to the internet, MHRD introduced SWAYAM PRABHA DTH channels.
- SWAYAM PRABHA is a group of 32 channels devoted to telecast high-quality educational programmes.
- Four of these channels (27- Panini, 28-Sharda, 30- Gyanamrit and 32- Vagda) are already being used by NIOS and one channel (31- Kishore Manch) by NCERT to telecast school education related learning and teaching material.
- NIOS organises live interactive web-streaming of Personal Contact Programmes (PCPs) on various subjects of Secondary, Senior Secondary and Vocational courses for its enrolled learners through Mukta Vidya Vani (MVV).
- Radio Vahini also broadcast these PCPs to maximize its reach not only among the learners but to the masses in General.

16. IOA forms 11-member Annual Grant and Affiliation Committee

Why in News?

- Indian Olympic Association has constituted an 11-member committee, led by Athletics Federation of India president Adille Sumariwala, to monitor annual grant and affiliation fee of its members for the 2020-2021 cycle.

Highlights:

- The seeds for creation of an organisation for coordinating the Olympic movement in India was related to India's participation in the 1920 and 1924 Olympics, when Sir Dorabji Tata suggested the need for a Sports body at National level for promoting Olympic Sport in united India.
- Subsequently, in 1923-24, a provisional All India Olympic Committee was set-up, which organised the All India Olympic Games (that later became the National Games of India) in February 1924.

Indian Olympic Association:

- The Indian Olympic Association (IOA) is the body responsible for selecting athletes to represent India at the Olympic Games, Asian Games, Commonwealth Games and other international athletic meets.
- It is registered as a Non-Profit Organisation under the Societies Registration Act of 1860.
- It is an affiliated member of the International Olympic Committee (IOC), Commonwealth Games Federation (CGF), Olympic Council of Asia (OCA) and Association of National Olympic Committees (ANOC).
- The members of IOA include National Sports Federations, State Olympic Associations, IOC Members and other select multi-sport organisations.
- It is currently governed by a 32-member Executive Council. The election for the Executive Council is held once in every 4 years.

17. Instant PAN

Why in News?

- FM launches facility of Instant PAN through Aadhaar based e-KYC.

Highlights:

- This facility is now available for those PAN applicants who possess a valid Aadhaar number and have a mobile number registered with Aadhaar.
- The allotment process is paperless and an electronic PAN (e-PAN) is issued to the applicants free of cost.
- The process of applying for instant PAN is very simple.
- The instant PAN applicant is required to access the e-filing website of the Income Tax Department to provide her/his valid Aadhaar number and then submit the OTP received on her/his Aadhaar registered mobile number.

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- On successful completion of this process, a 15-digit acknowledgment number is generated.
 - If required, the applicant can check the status of the request anytime by providing her/his valid Aadhaar number and on successful allotment, can download the e-PAN.
 - The e-PAN is also sent to the applicant on her/his email id, if it is registered with Aadhaar.

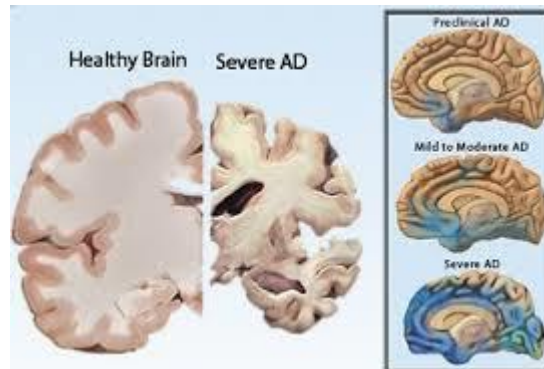


3. SCIENCE & TECHNOLOGY

1. Natural Product based Alzheimer Inhibitor

Why in News?

- Scientists from Jawaharlal Nehru Centre For Advanced Scientific Research (JNCASR), an autonomous institute under the Department of Science & Technology have developed a natural product based Alzheimer inhibitor.



Highlights:

- The scientists have modified the structure of Berberine, a natural and cheap product similar to curcumin, available commercially, into Ber-D to use as a Alzheimer's inhibitor.
- They selected isoquinoline natural product berberine found in India and China and used in traditional medicine and other applications.
- However, berberine is poorly soluble and toxic to cells.
- So they modified berberine to Ber-D, which is a soluble (aqueous), antioxidant.
- They found it to be a multifunctional inhibitor of multifaceted amyloid toxicity of Alzheimer's disease.
- The multifunctional attributes make Ber-D a promising candidate for developing effective therapeutics to treat multifaceted toxicity of Alzheimer's disease.

Alzheimer's Disease:

- Alzheimer's disease is an irreversible and progressive brain disorder that slowly destroys memory, thinking ability and the capability to carry out simple tasks.
- Alzheimer's disease is the most common cause of dementia (a continuous decline in thinking, behavioral and social skills).
- In most people with Alzheimer's, symptoms first appear in their mid-60s.

Assumed factors causing Disease:

- ✓ A Genetic Mutation,

- ✓ Abnormal build-up of proteins in and around brain cells,
- ✓ Head Injuries, Cardiovascular disease and Down's syndrome,
- ✓ Other factors are hearing loss, social isolation, a sedentary lifestyle, untreated depression etc.

2. Scientists to make use of AI to solve nuclear fusion problem

Why in News?

- Scientists believe the world will see its first working thermonuclear fusion reactor by the year 2025. That's a tall order in short form, especially when you consider that fusion has been here for nearly a century.
- Fusion reactors are the holiest of Grails when it comes to physics achievements. According to most experts, a successful fusion reactor would function as a near-unlimited source of Energy.

Highlights:

- TAE, one of the companies working on the fusion problem, says the big difference-maker now is machine learning.
- According to a report from Forbes, Google's been helping TAE come up with modern solutions to decades-old math problems by using novel AI systems to facilitate the discovery of new fusion techniques.
- Fusion occurs naturally in stars such as our sun, but recreating the sun's conditions on Earth is simply not possible with our current technology.
- The sun is much more massive than the Earth, and that mass comes with the fusion-friendly benefit of increased gravity.
- All that extra gravity smashes the sun's atoms into one another. The combination of pressure and heat force hydrogen atoms to fuse together, thus becoming helium atoms. This results in the expulsion of energy.
- Unfortunately, all the current terrestrial attempts at fusion have come up short because, though many have been successful at fusing atoms, they always take more energy to produce the temperatures required to fuse atoms on Earth than said atoms produce in the process.
- The entry of AI and machine learning has made things interesting. By giving physicists "super human" analysis abilities, they can turn around experiments faster. This enables quicker iterations and more meaningful results.

Nuclear Fusion:

- Nuclear fusion is a reaction in which two or more atomic nuclei are combined to form one or more different atomic nuclei and subatomic particles (neutrons or protons).
- The difference in mass between the reactants and products is manifested as either the release or absorption of energy.
- A fusion process that produces nuclei lighter than iron-56 or nickel-62 will generally release energy. These elements have relatively small mass per nucleon and large binding energy per nucleon.
- Fusion nuclei lighter than these releases energy (an exothermic process), while fusion of heavier nuclei results in energy retained by the product nucleons, and the resulting reaction is Endothermic.

3. COVID-19 and sense of smell

Why in News?

- Earlier this week, the US Centre for Disease Control and Prevention (CDC) introduced “a new loss of taste or smell” in a list of COVID-19 Symptoms.

Highlights:

- While loss of smell is a known symptom of several diseases, it is less common than hearing loss or vision loss, and patients become conscious of it later than they would notice a fever or body ache.
- People with COVID-19 have had a wide range of symptoms reported, ranging from mild symptoms to severe illness. Symptoms may appear 2-14 days after exposure to the virus.
- People with these symptoms or combinations of symptoms may have COVID-19 — Cough and Shortness of breath or difficulty breathing.
- In addition, it lists symptoms that include fever, chills, repeated shaking with chills, muscle pain, headache, sore throat, and a new loss of taste or smell.
- If a patient has two or more of these symptoms, the CDC says there is a chance that the person has COVID-2019 infection.
- Rhinology, ENT and otolaryngology experts have been pushing for inclusion of loss of smell, known as anosmia — in the list of symptoms for some time now.
- Chills are associated with many other infections, such as malaria, and muscle pain and body ache are typically associated with common flu.
-

- For these reasons, health experts have repeatedly noted that it is impossible to symptomatically differentiate between COVID-19 and the common flu.
- Anosmia and hyposmia, the inability or decreased ability to smell, is estimated to afflict 3-20% of the population.
- Risk of olfactory dysfunction increases with old age and may also result from chronic sinonasal diseases, severe head trauma, and upper respiratory infections, or neurodegenerative diseases.
- Other diseases with anosmia among its symptoms include Parkinson's disease, Alzheimer's disease and multiple sclerosis. In such cases, it is permanent.

4. Mobile Phones Act as Reserves for Virus

Why in News?

- A new study has warned that mobile phones could be acting as “Trojan horses” for coronavirus. It found that phones host a cocktail of live germs.
- While all those studies predate the current pandemic, the authors said SARS-CoV2 is probably present on mobiles and other touch-screen devices of coronavirus sufferers.

Highlights:

- The research found that 68% of the phones sampled in these studies were contaminated. Golden staph and E. coli microbes were among the most common bugs on phones. Researchers recommended that phones should be decontaminated daily and regularly with either 70% isopropyl or by sanitising with (ultraviolet) devices like PhoneSoap.
- The systematic review found golden staph and E.Coli microbes were among the most common bugs on phones.
- According to the researchers, mobile devices were ‘five-star hotels with premium heated spas, free buffet for microbes to thrive on’.
- According to the researchers, community transmission could occur when an infected person touched their phone and then a pole on a bus which was grasped by an elderly person.
- The wider research community needs to do more work here to find out exactly what types of microbes can live on a phone and for how long, so that people understand the risk of this thing they carry around with them every day.

5. Honey bee disease

Why in News?

- Honey bee colonies from across the UK are increasingly suffering from a viral disease, a new study has shown.
- The team found that the number of honey bee colonies affected with chronic bee paralysis rose exponentially between 2007 and 2017.

Highlights:

- The scientists also found that clusters of chronic bee paralysis, where disease cases are found close together, were becoming more frequent.
- Chronic bee paralysis symptoms include abnormal trembling, an inability to fly, and the development of shiny, hairless abdomens.
- The disease is caused by a virus known as chronic bee paralysis virus (CBPV), and infected bees die within a week.
- This leads to piles of dead bees just outside honey bee hives and whole colonies are frequently lost to the disease.
- The study also investigated whether disease risk was associated with honey bee queen imports.
- Honey bee queens head up honey bee colonies and beekeepers use imported honey bee queens to replenish their stocks.
- Future work will concentrate on the susceptibility of different honey bee races and comparing the management practices of professional and amateur beekeepers to help discover the reasons behind the current disease emergence.

Significance of Honey Bees:

- It is estimated that one third of the food that we consume each day relies on pollination mainly by bees, but also by other insects, birds and bats.
- In addition, honey bees play a significant role in the pollination of other important crops such as cotton and flax.
- And there are also a number of valuable non-food products produced by the honey bee, such as beeswax used in cleaning and beauty products.
- If bees contribute in the production of fruits and vegetables, the quality improves and the yield will grow by up to 71%.

6. eCovSens: Portable coronavirus detection kit

Why in News?

- The researchers from the National Institute of Animal Biotechnology (NIAB), Hyderabad, have developed a biosensor that can detect the novel coronavirus in saliva samples.

Highlights:

- Biosensors have been currently used across the world to detect toxins, narcotic drugs, and are also considered as a reliable tool to detect infectious diseases.
- The new portable device named eCovSens, can be used to detect the presence of novel coronavirus antigens in human saliva within 30 seconds using just 20 microlitres of the sample.

Mechanism:

- The in-house built biosensor consists of a carbon electrode and the coronavirus antibody.
- The antibody is capable of binding with the spike protein found on the outer layer of the virus.
- An electrical signal is generated when the antigen and antibody binds.
- Electrical components in the device further amplify this signal, process it, convert it to digital readings on an LCD display.
- The device can also be battery-operated as it uses very low voltage of 1.3V to 3V.

National Institute of Animal Biotechnology (NIAB):

- The National Institute of Animal Biotechnology is an Indian autonomous research establishment of the Department of Biotechnology, Ministry of Science and Technology (India).
- The primary mandate of NIAB is towards the development of sustainability and globally competitive livestock (farm animals) for public and industry through innovative and cutting-edge technology.
- The emphasis is on showing excellence in production of globally competitive livestock products, pharmaceuticals (medicines), nutritional products and other biologicals related to animal health care.

7. China to send astronauts to moon

Why in News?

- In a major development, China has launched a new rocket and a prototype deep-space spacecraft.

- The state media reported the launch successful which paves the way for the country's ambitions to operate a permanent space station and sending astronauts to Moon.

Highlights:

- As per Xinhua, a Long March 5B rocket took off from the Wenchang launch site on the southern island of Hainan.
- The rocket is a massive vehicle with four strap-on boosters that provide extra thrust at liftoff.
- Aboard the Long March 5 was a special prototype spacecraft that is somewhat akin to the deep-space Orion capsule NASA has been developing to people to the Moon and beyond. Eight minutes after the launch, the unmanned prototype spacecraft separated successfully and entered its planned orbit.
- A test version of a cargo return capsule also separated from the rocket successfully. China hopes the craft will transport astronauts to a space station by 2022— and eventually to the Moon.
- The United States is so far the only country to have sent humans to the Moon but so far, China has also not only successfully sent satellites into orbit and astronauts into space but also landed a rover to the far side of the Moon last year.
- The successful maiden flight of the 849 tonnes and 54-metre Long March 5B should pave way for its future plans.
- The next big mission for China is to land a probe on Mars that is expected to liftoff this year.
- China space exploration plans include sending an astronaut to the Moon in about a decade and build a base on the lunar surface. Meanwhile, its lunar rover on the far side has driven about 450 metres so far.

8. Energy storage application of Nanomaterials

Why in News?

- Researchers from IIT BHU have made significant achievements in developing nanomaterials-based supercapacitors to achieve high energy power density of supercapacitors.

Highlights:

- Dr. Mishra and his research group at IIT (BHU) have developed a reduced graphene oxide (rGO) at a moderate temperature of 100°C with high Capacitance Performance.

- The production process is a cost-effective one, making it suitable for commercial purposes.
- The group has also developed a novel green approach for synthesis of Iron-based nano catalyst, which can be used for large scale production of Carbon Nanotubes.
- They are also working on optoelectronic applications of nanomaterials.
- They are developing novel nanostructures of carbon and metal dichalcogenides semiconductors for photodetection and Surface-Enhanced Raman spectroscopy (SERS).
- The SERS can help detect harmful molecules present in water at ultra-low concentrations.

Significance:

- Increasing energy demand due to the growth of human population and technological advancement poses a great challenge for human society.
- High energy density of supercapacitors suggests that constant current can be withdrawn for a longer duration without recharging.
- Hence automobiles can run longer distances without charging.
- These Supercapacitors can be an alternative for such purposes.
- The optoelectronics devices pave the way for the development of cost-effective and efficient devices, which can be used for energy storage application.
- Their findings make way for materials which can be used as advanced photodetectors and also be used as optical sensors for water Pollution Control.

INSPIRE Faculty Award:

- The Department of Science and Technology has launched the “Innovation in Science Pursuit for Inspired Research (INSPIRE)” program in 2008.
- The program aims to attract talent for study of science and careers with research.
- INSPIRE Faculty Scheme offers contractual research awards to young achievers and opportunities for independent research and emerge as a future leader in the long term.
- Each selected INSPIRE Faculty shall be eligible to receive a consolidated amount of Rs. 1,25,000/- pm.
- In addition, a Research Grant of Rs 7 lakh per year for 5 years shall also be provided to each successful candidate.
- The INSPIRE Faculty Award is for a maximum period of 5 (five) years.

9. Hydroxychloroquine Fails Another Test

Why in News?

- Anti-malaria drug hydroxychloroquine has failed another test to check its efficacy in treating the coronavirus disease (Covid-19), with patients admitted to hospitals showing no change in their conditions after being administered the medicine.

Highlights:

- The observational study showed that doctors reported that the use of hydroxychloroquine neither lessened the need for patients requiring breathing assistance nor the risk of death.
- The study found that the risk of intubation or death was not significantly higher or lower among consecutive patients who were given hydroxychloroquine compared to those who were not given the drug.
- The findings come two weeks after the US Food and Drug Administration warned the public against using hydroxychloroquine and chloroquine without prescription or supervision because of reports of “serious heart rhythm problems” in patients treated with the malaria drugs.
- Hydroxychloroquine is the only drug approved for treating hospitalised Covid-19 patients in India, where it is given in combination with the antibiotic azithromycin. It is also being given to health care workers and people at risk of exposure as a prophylaxis for Covid-19, which leads to potentially fatal complications in some patients. The cheap and widely available drug that has been used to treat malaria for at least a century emerged as the most sought-after medicine after two preliminary trials in Covid-19 patients in China in March showed it boosted recovery and lowered the severity of Covid-19.
- Apart from malaria, hydroxychloroquine is prescribed for rheumatoid arthritis and lupus. Several countries including India, China, France, South Korea, Italy, India and the United States are using anti-malarials to treat people severely ill with Covid-19.
- Anti-malarials work by decreasing the acidity in endosomes, which are compartments within cells that some viruses hijack to enter the cell and cause infection. The doorway used by Sars-Cov-2 is the spike protein on its surface that it uses to attach to a receptor on the surface of human cells, but studies in cell culture have suggested chloroquines have some activity against the virus.
- Observational studies aren’t considered as conclusive as randomised-controlled trials because clinicians often use several drugs and therapies to treat patients. More rigorous clinical trials are needed to establish the effectiveness of the drug.

10. Artificial chloroplasts

Why in News?

- Scientists report making an artificial chloroplast that operates outside of cells to harvest sunlight and use the resulting energy to convert carbon dioxide (CO₂) into energy-rich molecules.

Highlights:

- Synthetic biologists have remade chloroplasts, the engine at the heart of photosynthesis, by combining the light-harvesting machinery of spinach plants with enzymes from nine different organisms.
- Photosynthesis is a two-step process. In chloroplasts, chlorophyll molecules absorb sunlight and pass the extra energy to molecular partners that use it to generate the energy-storing chemicals adenosine triphosphate (ATP) and nicotinamide adenine dinucleotide phosphate (NADPH).
- A suite of other enzymes working in a complex cycle then use ATP and NADPH to convert CO₂ from the air into glucose and other energy-rich organic molecules that the plant uses to grow.
- CO₂ conversion starts with an enzyme called RuBisCO, which prompts CO₂ to react with a key organic compound, starting a chain of reactions needed to make vital metabolites in plants. Each copy of the enzyme can grab and use just five to 10 CO₂ molecules per second. That puts a speed limit on how fast plants can grow. Researchers sought to ramp things up by designing a new set of chemical reactions.
- Instead of RuBisCO, they substituted a bacterial enzyme that can catch CO₂ molecules and force them to react 10 times faster.
- In combination with 16 other enzymes from nine different organisms, this created a new CO₂-to-organic-chemical cycle they dubbed the CETCH cycle. The enzymes convert the CO₂ into a molecule called glycolate that can be used as a feedstock for making useful organic products.
- Researchers hope to modify their setup further to produce other organic compounds that are even more valuable than glycolate, such as drug molecules. They also hope to more efficiently convert captured CO₂ into organic compounds that plants need to grow.
- That would open the door to engineering the genes for this novel photosynthesis pathway into crops to create novel varieties that grow much faster than current varieties—a boon for agriculture in a world with a booming population.

11. Russia Largest Contributor to Space Debris

Why in News?

- A new infographic reveals which countries owns the garbage floating in space and Russia is responsible for 14,403 pieces and the US comes in second with 8,734.

Highlights:

- The compiled data shows more than 30,000 particles from satellites, rockets and other man-made devices are orbiting Earth, which is more than double what was found in orbit two years ago.
- Space junk left behind after missions can be as big as spent rocket stages or as small as paint flakes.
- With fragments able to travel at speeds above 16,777 mph, even tiny pieces could seriously damage or destroy satellites.
- In 2018, the compiled data had found that the US had contributed the most space junk with 4,037 and Russia followed with 4,035. However, in just two years, Russia moved to the top spot with 14,403 pieces.
- The US is in second with 8,734, followed by China 4,688 and France with just 994. India saw an increase with 124 more particles in the past two years, bringing its total to 517.

Space Junk:

- There are an estimated 170 million pieces of so-called 'space junk', left behind after missions that can be as big as spent rocket stages or as small as paint flakes, in orbit alongside some US\$700 billion (£555bn) of space infrastructure.
- But only 22,000 are tracked, and with the fragments able to travel at speeds above 16,777 mph (27,000kmh), even tiny pieces could seriously damage or destroy satellites.
- However, traditional gripping methods don't work in space, as suction cups do not function in a vacuum and temperatures are too cold for substances like tape and glue.
- Grippers based around magnets are useless because most of the debris in orbit around Earth is not magnetic. Most proposed solutions, including debris harpoons, either require or cause forceful interaction with the debris, which could push those objects in unintended, unpredictable directions. Experts also pointed to two sites that have become worryingly cluttered. One is low Earth orbit which is used by satnav satellites, the ISS, China's manned missions and the Hubble telescope, among others.
- The other is in geostationary orbit, and is used by communications, weather and surveillance satellites that must maintain a fixed position relative to Earth.

12. COBAS 6800 Testing Machine

Why in News?

- Recently the Union Minister of Health & Family Welfare dedicated the COBAS 6800 testing machine to the nation
- This is the first such 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.
- Our country has now developed a capacity to conduct 1,00,000 tests per day and has tested nearly 20 lakh tests for COVID-19 mark at more than 500 laboratories.

COBAS 6800:

- It is a fully automated, high end machine for performing real time PCR testing COVID-19 in the service of the nation.
- It is a sophisticated machine enabled with robotics that minimizes the chance of contamination as well as the risk of infection to the health care workers since it can be operated remotely with limited human intervention.
- As the machine requires a minimum BSL2+ (Biosafety level) containment level for testing, it cannot be placed at just any facility.

Significance:

- It will provide quality, high-volume testing with a high throughput of around 1200 samples in 24 hours.
- It will largely increase the testing capacity with reduction in pendency.
- COBAS 6800 can also detect other pathogens like Viral Hepatitis B & C, HIV, MTb (both rifampicin and isoniazid resistance), Papilloma, CMV, Chlamydia, Neisseria etc.

Way Ahead:

- The success of these machines is also dependent on the nation's attitude towards the corona warriors i.e the country needs to shun stigma and applaud the contribution of these frontline healthcare providers.
- Further emphasises needs to be placed on the quality and sturdiness of the community surveillance and contact tracing.

Polymerase Chain Reaction (PCR):

- It is done after taking nasal or throat swabs of the patient, from which RNA is extracted and converted to DNA, which is then amplified before being checked for confirmation of the virus.

- **Report comes after 9 hours.**
- Early detection of disease is possible as it is a standard test for COVID -19 identification and not dependent on antibodies formation.
- More efficient as it ensures certainty of Disease.

13. Moon soil

Why in News?

- Indian Space Research Organisation (ISRO) has received a patent for its method of manufacturing highland lunar soil simulant.

Highlights:

- The simulant is made in bulk from similar rock samples identified and picked out from Sittampundi Anorthosite Complex, almost 67 km from Salem, in Tamil Nadu.
- The procedure has satisfied all aspects such as mineralogy, bulk chemistry, grain size distribution and geo-mechanical properties.
- The method used for preparing the lunar simulant is cost-effective, reproducible and easy to scale up, said the patent specification filed by the Space Agency.
- It can be used to control the mobility of the rover for scientific exploration and for the study of geo-technical or mechanical properties of lunar soil.
- The simulant could also be used for fundamental theoretical and experimental research for constructing civil engineering structures on the surface of the Moon, and to make headway in lunar locomotive engineering. There are bright and dark areas on the Moon's surface.
- The dark areas are called Maria or mare, which are mostly flat, while the highlands are heavily cratered and mountainous. Isro's patent application claims that most of the countries produced simulants representing lunar mare region, while the highland crust occupies 83 per cent of the lunar surface. Yet, only a limited number of simulants represent the regolith of this region. Several countries have been developing and producing lunar simulants, including the US, Japan and China, and several attempts has been made in the past to reproduce the lunar environment for research purpose.

14. Subacute Thyroiditis

Why in News?

- According to a new case study Patients with COVID-19 may develop an inflammatory thyroid disease called subacute thyroiditis.

Subacute thyroiditis:

- Subacute thyroiditis is characterised by neck pain and is usually preceded by an upper respiratory tract infection.
- The disease may be caused by a viral infection or a post-viral inflammatory reaction, and many viruses have been linked to the disease.
- COVID-19 caused by SARS-CoV-2 virus has emerged as a pandemic with severe respiratory symptoms and may involve other organs too.

Thyroid Gland:

- The thyroid is a small butterfly-shaped gland located at the base of the neck just below the Adam's apple.
- It's part of an intricate network of glands called the endocrine system.
- The endocrine system is responsible for coordinating many of our body's activities.
- The thyroid gland manufactures hormones that regulate our body's metabolism.
- The two hormones secreted are Triiodothyronine (T₃) hormone and the Thyroxine hormone (T₄).
- Thyroxine is a hormone that affects physiological processes such as growth, development, metabolism, etc. Several different disorders can arise when the thyroid gland produces too much hormone (hyperthyroidism) or not enough (hypothyroidism).

15. Fusarium wilt TR4

Why in News?

- Fusarium wilt TR4, a novel fungus strain, is devastating banana plantations across the Globe.

Highlights:

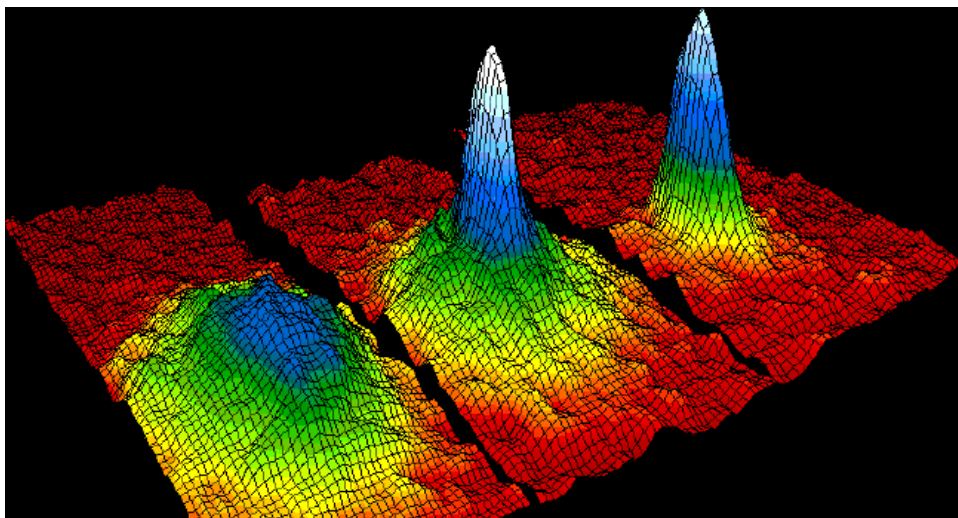
- According to the Food and Agriculture Organization TR4 is one of the most destructive of all plant diseases.
- The outbreak of the fungal disease is setting up new hotspots and threatening output in India, the world's largest producer of bananas.
- The strain, Tropical Race 4 (TR4), was first identified in Taiwan, and has jumped from Asia to the Middle East and Africa, reaching as far as Latin America.
- It cripples plantations by first attacking the leaves, which turn yellow from their trailing edges before wilting away and there is no effective remedy yet.

- Due to large scale devastation, it is being compared to Covid-19 of the plant world.
- The Indian Council of Agricultural Research is advocating a set of measures, known as “biopriming”.
- It has asked farmers whose plantations have been affected to abandon them.
- They must grow rice for a year or two before returning to the Banana.

16. Fifth state of Matter

Why in News?

- A physicist has created the fifth state of matter Bose-Einstein Condensate (BEC) recently from her living room.



Highlights:

- The India born physicist Dr Amruta Gadge has created a Bose-Einstein Condensate (BEC) – a state of matter where extremely cold atoms clump together and act as if they were a single entity.
- It is the first time someone has established a BEC remotely in a lab that didn't previously have one.
- The achievement could provide a blueprint for using a computer to operate quantum technology remotely, in inaccessible environments such as space or underwater.
- Quantum technology makes use of quantum physics to vastly speed up information processing, which could lead to the most powerful computer on Earth.

Bose-Einstein Condensate:

- A Bose-Einstein condensate (BEC) is known as the fifth state of matter, after solid, liquid, Gas and Plasma.

- The fifth state of matter is produced when the atoms in a gas become ionised.
- It is formed at a fraction above absolute zero and only in atoms that act like bosons, one of two types of fundamental particles.
- When bosonic atoms are cooled to form a condensate, they can lose their individuality.
- They behave like one big collective superatom, a bit like how photons become indistinguishable in a laser beam.
- In the mid-1920s, Albert Einstein and Indian physicist Satyendra Nath Bose predicted that quantum mechanics can force a large number of particles to behave like a single particle, heralding research into the so-called fifth matter.
- The first BEC was shown experimentally in June 1995 by researchers at the University of Colorado Boulder in the US, by cooling a gas of around 2,000 Rubidium atoms.

What is Quantum Computer and How does it work?

- The key to a quantum computer is its ability to operate on the basis of a circuit not only being 'on' or 'off', but occupying a state that is both 'on' and 'off' at the same time.
- It is possible due to the laws of quantum mechanics, which govern the behaviour of the particles which make up an atom.
- At this micro scale, matter acts in ways that would be impossible at the macro scale of the universe we live in. Quantum mechanics allows these extremely small particles to exist in multiple states, known as 'superposition', until they are either seen or interfered with.
- A classical computer has 'bits' made up of zeros and ones, a quantum computer has 'qubits' which can take on the value of zero or one, or even both simultaneously.

17. Heparin may stop SARS-CoV-2 Infecting Host Cells

Why in News?

- The researchers have found that incubating the cells with unfractionated heparin, stopped the spike protein of the virus binding to them.
- The spike protein is the main structure that SARS-CoV-2 uses to bind to ACE2 receptors expressed on target cells, before infecting them and potentially causing coronavirus disease 2019 (COVID-19).

Highlights:

- On binding to ACE2, the spike protein undergoes host cell proteolytic cleavage into two subunits: S1, which contains the receptor-binding domain (RBD) and S2, which enables fusion with the host cell membrane and viral entry.

- They found that an intact recombinant form of the viral spike protein containing both S1 and S2 (S1S2), but not the S1 domain alone, binds strongly to RT4 cells in a temperature-dependent manner.
- Most cell types only express quite low levels of ACE2, suggesting that the spike protein might also interact with other receptor sites to gain viral entry.
- Certain viruses such as herpes simplex are already known to bind with host glycosaminoglycans called heparan sulfates.
- In addition, a study suggested that the soluble glycosaminoglycan heparin can inhibit the entry of SARS CoV-2 into “Vero” cells, a cell line derived from monkey kidney epithelia.
- The team reports that unfractionated heparin (UFH) completely inhibited the binding of S1S2 to RT4 cells. Treating the cells with two low molecular weight heparins (LMWHs) that are already in clinical use also inhibited the binding, but only partially and not as strongly. The experiment did not result in any significant reduction in the binding of RT4 cells, suggesting that heparan sulfates do not play any significant role in the attachment of SARS-CoV-2 spike protein to host cells.

18. Space Junk Problem

Why in News?

- Researchers say that the most effective way to solve the space junk problem is not to capture debris or deorbit old satellites: it's an international agreement to charge operators "orbital-use fees" for every satellite put into orbit.
- Space is getting crowded. Aging satellites and space debris crowd low-Earth orbit, and launching new satellites adds to the collision risk.

Highlights:

- Orbital use fees would also increase the long-run value of the space industry. By reducing future satellite and debris collision risk, an annual fee rising to about \$235,000 per satellite would quadruple the value of the satellite industry by 2040. Orbital-use fees could be straight-up fees or tradeable permits, and they could also be orbit-specific, since satellites in different orbits produce varying collision risks. Currently, an estimated 20,000 objects, including satellites and space debris, are crowding low-Earth orbit.
- Each operator launches more and more satellites until their private collision risk equals the value of the orbiting satellite. Technological fixes include removing space debris from orbit with nets, harpoons, or lasers.

- De-orbiting a satellite at the end of its life is a managerial fix. Removing space debris might motivate operators to launch more satellites, further crowding low-Earth orbit, increasing collision risk, and raising costs.
- With orbital-use fees, the long-run value of the satellite industry would increase from around \$600 billion under the business-as-usual scenario to around \$3 trillion, researchers found. The increase in value comes from reducing collisions and collision-related costs, such as launching replacement satellites.

19. RT-LAMP based test for COVID-19

Why in News?

- CSIR-IIIM, Jammu a constituent laboratory of CSIR has partnered with Reliance Industries Limited (RIL) to develop and scale-up a new Reverse Transcriptase-Loop Mediated Isothermal Amplification (RT-LAMP) based COVID-19 Diagnostic kit.

COVID-19 RT-LAMP Test:

- It is a nucleic acid-based test carried out from a nasal/throat swab sample from patients.
- The test recipe has been developed and successfully demonstrated using synthetic templates.
- It has been tested with a small number of patient's samples and validating the kit on a greater number of patient samples is planned and will be done together with RIL.
- **Advantages:**
 - ✓ It is rapid (45-60 min), cost-effective, and accurate test.
 - ✓ The components of the kit are easily available and these can be completely manufactured in India.
 - ✓ On the other hand, the current COVID-19 testing is done by real-time PCR their components are mostly imported.
 - ✓ Further, these tests are expensive; they require highly trained manpower, costly instruments, and a relatively high-end lab and cannot be deployed at remote locations in quarantine centers, airports and railway stations, etc.
- RT-LAMP test can be done in a single tube with minimal expertise in a very basic lab setup like mobile units/kiosks for testing at Airports, Railway Stations, Bus Stands, and other public places.
- The end detection of the test is a simple colored reaction, which is easily visible in UV light. It is also being modified such that it can be detected in regular light.

Way Ahead:

- After testing the accuracy of the kit, on a much larger number of patients, CSIR-IIIM and RIL will jointly approach ICMR for approval.
- RIL plans to rapidly scale up the tests for the larger population and use it for easy, rapid, and widespread diagnosis for COVID-19 detection for the larger interest of Society.

20. Researchers culture novel Coronavirus

Why in News?

- The Centre for Cellular and Molecular Biology (CCMB) has established stable cultures of coronavirus (SARS-CoV-2) from patients' Samples.

Highlights:

- Virologists at CCMB have isolated infectious viruses from several isolates.
- The ability to culture the virus in lab enables CCMB to work towards vaccine development and testing of potential drugs to fight COVID-19.

Novel Coronavirus:

- Novel Coronavirus enters human cell by binding with the ACE-2 receptor on the cell surface. **Not all cells have ACE-2 receptors.**
- Human epithelial cells in the respiratory tract copiously express ACE-2 receptors, causing respiratory disease in the infected patient.
- However, human epithelial cells cannot be grown in lab.
- Currently, primary epithelial cells generated from human origins do not grow for many generations in labs, which is key to culturing viruses continuously. At the same time, the labs that are growing the virus need an 'immortal' cell line.
- They use Vero cells (kidney epithelial cell lines from green African monkey), which express ACE-2 proteins and carry a cell division that allows them to proliferate indefinitely.
- Using the Vero cell lines to grow the Coronavirus, CCMB is now in a position to isolate and maintain viral strains from different regions.

Why cultivate a Dreadful Germ?

- If large amount of the virus are cultivated and are inactivated, they can be used as inactivated virus vaccine.
- Once the inactivated virus is injected, the human immune system triggers the production of germ-specific antibodies.

- One can inactivate the virus by heat or chemical means.
- The inactivated virus can trigger antibody response, but does not infect and make the person sick as the virus cannot reproduce.
- For the development of antibodies or antidotes, virus cultures are important. Inactivated viruses can trigger antibody response in other mammalian hosts in addition to humans.
- Various such hosts are currently under test for their efficiency of antibody response.
- Such antibodies generated in these non-human hosts can be purified, processed and collected.
- The antibodies can be used as therapeutic intervention for patients suffering from the infection.
- Such antibodies can trigger antiviral response upon injection into humans and have the potential of limiting the infection.
- Administering antibodies does not provide immunity like a vaccine does, but can be considered as anti-dotes against the virus.
- These cultures may also be helpful in the process of drug screening. Potential drugs can be tested against the virus in a test-tube for their efficacy.

4. ECONOMY

1. COVID-19 Effects on Global Energy Sector

Why in News?

- The International Energy Agency (IEA) has released a report detailing the impact of Covid-19, which it has called a “once-in-a-century crisis”, on global energy demands and CO₂ Emissions.

Highlights:

- With lockdowns imposed in several countries, transportation such as road and air travel has been largely restricted, due to which global energy demands have plummeted.
- As per the report, countries in full lockdown are seeing an average decline of 25 per cent in energy demand per week, while in those with a partial lockdown, the fall in energy demand is about 18 per cent per week.
- This may not be a reason to celebrate as it is expected that emissions will soar once economies restart, unless governments take a conscious decision to change the sources of energy.
- The report estimates that the global demand for oil could drop by nine percent on average this year, which will return oil consumption to 2012 levels.
- As a result of lockdowns, road transport has dropped between 50-75 percent with the average global road transport activity falling to 50 percent of what it was during this time in 2019. Aviation activity the world over dropped by 60 percent at the end of March 2020. The International Air Transport Association (IATA) expects the flight capacity utilisation to average below 65 percent of what it was in 2019 in the second quarter of 2020, further impacting the demand for jet fuel and kerosene.
- Coal demand could decline by eight percent, mainly due to a fall in electricity demand of over five percent over the course of the year. In advanced economies, coal demand will fall by 25 percent in the US, 20 percent in the European Union (EU) and 5-10 percent in Korea and Japan. In the coming months, the demand for coal will be impacted based on how its biggest consumers, such as China, recover from the crisis.
- Regardless of the lengths of global lockdowns or a second pandemic wave, the demand for renewable is likely to increase.
- Renewable sources of energy have been the “most resilient” to Covid-19 lockdown measures and the total global use of renewable energy is expected to rise by 1 percent by 2020.

- Emissions declined the most in regions which were impacted the highest by the disease. For instance, there was an 8 percent decline in emissions in China and Europe, and a 9 percent decline in the US.
- India, which is one of the IEA association countries, has seen a reduction in its energy demands by over 30 percent as a result of the nation-wide lockdown. This translates to a fall in energy demand by 0.6 per cent with every additional week of lockdown.

2. Contribution of Excise Tax to Economy

Why in News?

- Following the easing of restrictions in the third phase of the nationwide lockdown, some of the cities showed long queues outside liquor stores around the country.
- Manufacture and sale of liquor is one of the major sources of state revenue, and the reopening comes at a time when the states have been struggling to fill their coffers amid the disruption on account of the lockdown.

Highlights:

- Liquor contributes a considerable amount to the exchequers of all states and Union Territories except Gujarat and Bihar, both of which have enforced prohibition. Generally, states levy excise duty on manufacture and sale of liquor.
- Some states, for example Tamil Nadu, also impose VAT (value added tax). States also charge special fees on imported foreign liquor; transport fee; and label & brand registration charges.
- A few states, such as Uttar Pradesh, have imposed a “special duty on liquor” to collect funds for special purposes, such as maintenance of stray cattle.
- Reports show that a state excise duty on liquor is the second or third largest contributor to the category State’s Own Tax revenue; sales tax (now GST) is the largest.
- This is the reason states have always wanted liquor kept out of the purview of GST. The states collected about Rs 12,500 crore per month from excise on liquor in 2018-19, which rose to about Rs 15,000 crore per month in 2019-20, and which was further expected to cross Rs 15,000 crore per month in the current financial year.
- During that financial year, the five states that collected the highest revenue from excise duty on liquor were Uttar Pradesh (Rs 25,100 crore), Karnataka (Rs 19,750 crore), Maharashtra (Rs 15,343.08 crore), West Bengal (Rs 10,554.36 crore) and Telangana (Rs 10,313.68 crore).

- With Bihar and Gujarat having prohibited liquor, Bihar had ‘nil’ revenue from liquor in 2018-19 and 2019-20, while Gujarat’s liquor revenue was negligible.
- Andhra Pradesh too announced prohibition last year; however, sale of the liquor has been allowed with “prohibition tax”. The states’ revenues comprise broadly two categories – Tax Revenue and Non-Tax Revenue.
- Tax revenue is divided into two further categories: State’s Own Tax Revenue, and Share in Central Taxes.
- Again, Own Tax Revenue comprises three principal sources: Taxes on Income (agricultural income tax and taxes on professions, trades, callings and employment); Taxes on Property and Capital Transactions (land revenue, stamps and registration fees, urban immovable property tax); and Taxes on Commodities and Services (sales tax, state sales tax/VAT, central sales tax, surcharge on sales tax, receipts of turnover tax etc).
- According to the RBI report, in 2019-20, state GST had the highest share, 43.5%, in states’ Own Tax Revenue, followed by Sale Tax at 23.5% (mainly on petroleum products which are out of GST), state excise at 12.5%, and taxes on property and capital transactions at 11.3%.

3. Kailash – Mansarovar Yatra Route from Dharchula to Lipulekh

Why in News?

- The Border Roads Organisation (BRO) has completed the construction of road from Dharchula to Lipulekh along the China Border, famously known as Kailash-Mansarovar Yatra Route.

Darchula – Lipulekh Road:

- The road is an extension of Pithoragarh-Tawaghat-Ghatiabagarh road. In this 80 Km road, the altitude rises from 6000 feet to 17,060 feet.
- It originates from Ghatiabagarh in Uttarakhand and terminates at Lipulekh Pass, the gateway to Kailash Mansarovar. With the completion of this project, the arduous trek through treacherous high-altitude terrain can now be avoided by the Pilgrims of Kailash Mansarovar Yatra and the period of journey will be reduced by many days.

Significance:

- At present, the travel to Kailash Mansarovar takes around two to three weeks through Sikkim or Nepal routes. Lipulekh route had a trek of 90 Km through high altitude terrain and the elderly yartris faced lot of difficulties.
- Now, this yatra will get completed by vehicles.

Border Roads Organisation (BRO):

- The BRO develops and maintains road networks in India's border areas and friendly neighbouring countries and functions under the Ministry of Defence.
- It is entrusted for construction of Roads, Bridges, Tunnels, Causeways, Helipads and Airfields along the borders.
- Officers from the Border Roads Engineering Service (BRES) and personnel from the General Reserve Engineer Force (GREF) form the parent cadre of the Border Roads Organisation.
- It is also staffed by officers and troops drawn from the Indian Army's Corps of Engineers on extra regimental employment.
- The BRO operates and maintains over 32,885 kilometers of roads and about 12,200 meters of permanent bridges in the country.

4. Economic Package to make India self-reliant

Why in News?

- Union Finance Minister announced a ₹20-lakh-crore economic stimulus package to deal with the COVID-19 pandemic.



Lockdown antidote

Finance Minister Nirmala Sitharaman announced the features for the first part of the Atmanirbhar Bharat Abhiyan

<p>For small businesses</p> <ul style="list-style-type: none"> ▪ ₹3,00,000 crore emergency credit for Micro, Small and Medium Enterprises (MSMEs) ▪ Only domestic firms can bid for govt. procurements up to ₹200 crore 	<p>For employees/ tax payers</p> <ul style="list-style-type: none"> ▪ EPF deductions slashed for 3 months to 20% from 24% of salary; IT returns deadline extended ▪ This will enhance take-home pay if employers pass it on, but dent retirement savings 	<p>companies</p> <ul style="list-style-type: none"> ▪ Deadlines for realty projects and public infrastructure contracts extended
	<p>For infrastructure sector</p> <ul style="list-style-type: none"> ▪ Power PSUs to lend ₹90,000 crore to stressed State distribution 	<p>For financial sector</p> <ul style="list-style-type: none"> ▪ Fresh ₹45,000 crore partial credit guarantees for non-banking finance companies (NBFCs) ▪ ₹30,000 crore special liquidity for microfinance/ housing finance firms and NBFCs

Relief at hand: Finance Minister Nirmala Sitharaman addressing a press conference to announce details of the economic stimulus package in New Delhi on Wednesday.

• SHIV KUMAR PUSHPAKAR

Highlights:

- This is the first tranche of the Atmanirbhar Bharat Abhiyan announced by Prime Minister Narendra Modi recently as a ₹20 lakh crore economic package.

- That package includes the ongoing Pradhan Mantri Garib Kalyan Yojana, meant to support the poorest and most vulnerable communities during the pandemic, as well as several measures taken by the Reserve Bank of India to improve liquidity.
- More tranches are expected in the next few days.

Pradhan Mantri Garib Kalyan Package (1):

- Rs. 1.70 Lakh Crore relief package under Pradhan Mantri Garib Kalyan Yojana for the poor to help them fight the battle against Coronavirus which includes -
 - ✓ Insurance cover to health worker;
 - ✓ 5 kg wheat or rice per person for next 3 months to poor people;
 - ✓ 20 crore women Jan Dhan account holders get Rs 500 per month for next 3 months;
 - ✓ Gas cylinders, free of cost, provided to 8 crore poor families for the next 3 months;
 - ✓ Increase in MNREGA wage to Rs 202 a day from Rs 182 to benefit 13.62 crore families;
 - ✓ Ex-gratia of Rs 1,000 to 3 crore poor senior citizens, poor widows and poor Divyang.

Pradhan Mantri Garib Kalyan Package (2):

- Front-loaded Rs 2,000 paid to farmers under existing PM-KISAN to benefit 8.7 crore farmers; Building and Construction Workers Welfare Fund allowed to be used to provide relief to workers;
- Five crore workers registered under Employee Provident Fund (EPF) to get non-refundable advance of 75% of the amount or three months of the wages, whichever is lower, from their accounts;
- Limit of collateral free lending to be increased from Rs 10 to Rs 20 lakhs for Women Self Help Groups supporting 6.85 crore households;
- District Mineral Fund (DMF) to be used for supplementing and augmenting facilities of medical testing, screening etc.

Measures taken by Reserve Bank of India:

- Reduction of Cash Reserve Ratio (CRR) has resulted in liquidity enhancement of ₹1,37,000 crores Targeted Long Term Repo Operations (TLTROs) of ₹1,00,050 crore for fresh deployment in investment grade corporate bonds, commercial paper, and non-convertible debentures. Increased the banks' limit for borrowing overnight under the marginal standing facility (MSF). Announced special refinance facilities to NABARD, SIDBI and the NHB for a total amount of ₹50,000 crore at the policy repo rate.
- Moratorium of three months on payment of instalments and payment of Interest on Working Capital Facilities in respect of all Term Loans.

- For loans by NBFCs to the commercial real estate sector, additional time of one year has been given for extension of the date for commencement for commercial operations (DCCO).

Other Measures:

- On the request of the Government of India, RBI raised the Ways and Means advance limits of States by 60% and enhanced the Overdraft duration limits;
- Issued all the pending income-tax refunds up to ₹5 lakh, immediately benefiting around 14 lakh taxpayers;
- Implemented “Special Refund and Drawback Disposal Drive” for all pending refund and drawback claims;
- Sanctioned Rs 15,000 crores for Emergency Health Response Package.

Dissecting the current Economic Package:

- **For Salaried Workers and Taxpayers:**
 - ✓ Some relief was provided in the form of an extended deadline for income tax returns for 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.
- **MSMEs Get Attention:**
- A major chunk (₹3 lakh crore) of this package is for collateral free loan schemes for businesses, especially micro, small and medium enterprises (MSMEs).
- The ₹3 lakh crore emergency credit line will ensure that 45 lakh units will have access to working capital to resume business activity and safeguard jobs.
- For two lakh MSMEs which are stressed or considered non-performing assets, the Centre will facilitate provision of ₹20,000 crore as subordinate debt.
- A ₹50,000 crore equity infusion is also planned, through an MSME fund of funds with a corpus of ₹10,000 crore. In a bid to fulfil the Prime Minister’s vision of a self-reliant or “Atmanirbhar” India, global tenders will not be allowed for government procurement up to ₹200 crore. Other interventions for MSMEs: e-market linkage and Fintech will be used to enhance transaction-based lending using the data generated by the e-marketplace.
- The definition of an MSME is being expanded to allow for higher investment limits and the introduction of turnover-based criteria.

- **Non-banking Finance companies (NBFCs):**
 - ✓ NBFCs/HFCs/MFIs are finding it difficult to raise money in debt markets.
 - ✓ Government will launch a Rs 30,000 crore Special Liquidity Scheme;
 - ✓ Under this scheme investment will be made in both primary and secondary market transactions in investment grade debt paper of NBFCs/HFCs/MFIs;
 - ✓ Will supplement RBI/Government measures to augment liquidity;
 - ✓ Securities will be fully guaranteed by GoI.
- This will provide liquidity support for NBFCs/HFC/MFIs and mutual funds and create confidence in the market.
- **Power Distribution Companies:**
 - ✓ Revenues of Power Distribution Companies (DISCOMs) have plummeted. Unprecedented cash flow problem accentuated by demand reduction.
 - ✓ PFC/REC to infuse liquidity of Rs 90,000 cr to DISCOMs against receivables.
 - ✓ Loans to be given against State guarantees for the exclusive purpose of discharging liabilities of Discoms to Gencos.
- Linkage to specific activities/reforms: Digital payments facility by Discoms for consumers, liquidation of outstanding dues of State Governments, Plan to reduce financial and operational losses.
- Central Public Sector Generation Companies shall give rebate to Discoms which shall be passed on to the final consumers (industries).
- **Relief to Contractors:**
 - ✓ Extension of up to 6 months (without costs to contractor) to be provided by all Central Agencies (like Railways, Ministry of Road Transport & Highways, Central Public Works Dept, etc)
 - ✓ Covers construction/ works and goods and services contracts.
 - ✓ Covers obligations like completion of work, intermediate milestones etc. and extension of Concession period in PPP contracts.
 - ✓ Government agencies to partially release bank guarantees, to the extent contracts are partially completed, to ease cash flows
- **The Real Estate Industry:**
 - ✓ Adverse impact due to COVID and projects stand the risk of defaulting on RERA timelines. Time lines need to be extended.
 - ✓ Ministry of Housing and Urban Affairs will advise States/UTs and their Regulatory Authorities to the following effect:

- ✓ Treat COVID-19 as an event of 'Force Majeure' under RERA.
- ✓ Extend the registration and completion date suo-moto by 6 months for all registered projects expiring on or after 25th March, 2020 without individual applications.
- ✓ Issue fresh 'Project Registration Certificates' automatically with revised timelines.
- ✓ Extend timelines for various statutory compliances under RERA concurrently.
- ✓ These measures will de-stress real estate developers and ensure completion of projects so that homebuyers are able to get delivery of their booked houses with new Timelines.

5. Measures to strengthen Agriculture sector in India

Why in News?

- Union Finance Minister announced the 3rd Tranche of measures to strengthen Infrastructure Logistics, Capacity Building, Governance and Administrative 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:

- The recent package is a part of the Special economic and comprehensive package of Rs 20 lakh crore - equivalent to 10% of India's GDP, announced recently amid COVID-19 pandemic. Aatmanirbhar Bharat or Self-Reliant India Movement having five pillars - Economy, Infrastructure, System, Vibrant Demography and Demand, is what this special economic and comprehensive package called.
- Two significant Agriculture-related measures were also announced as part of 2nd tranche to support farmers - Additional Emergency Working Capital facility through NABARD to enable RRBs and Cooperative Banks extending farm loans for Rabi post-harvest and Kharif expenses and Credit boost to the farm sector by covering 2.5 crore PM-KISAN beneficiaries under Kisan Credit Card Scheme.

Measures Announced:

- Out of these 11 measures, 8 measures are for improving agricultural infrastructure and 3 measures are for administrative and governance reforms, including removing restrictions on sale and stock limits of farm produce. Measures are
 - ✓ Rs 1 lakh crore Agri Infrastructure Fund for farm-gate infrastructure for farmers:
 - ✓ Impetus for development of farm-gate & aggregation point, affordable and financially viable Post Harvest Management infrastructure. The fund will be created immediately.
- **Rs 10,000 crore scheme for Formalisation of Micro Food Enterprises (MFE):**
 - ✓ A 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.
 - ✓ The focus will be on women and SC/ST owned units and those in Aspirational districts and a Cluster based approach (e.g. Mango in UP, Tomato in Karnataka, Chilli in Andhra Pradesh, Orange in Maharashtra etc.) will be followed.
- **Pradhan Mantri Matsya Sampada Yojana (PMMSY):**
 - ✓ The Government will launch the PMMSY for integrated, sustainable, inclusive development of marine and inland fisheries. The focus will be on Islands, Himalayan States, North-east and Aspirational Districts.
 - ✓ Rs 11,000 crore for activities in Marine, Inland fisheries and Aquaculture and Rs. 9000 crore for Infrastructure - Fishing Harbours, Cold chain, Markets etc shall be provided.
 - ✓ Impact: This will lead to Additional Fish Production of 70 lakh tonnes over 5 years, Employment to over 55 lakh persons and double the exports to Rs 1,00,000 crore.
- **National Animal Disease Control Programme:**
 - ✓ National Animal Disease Control Programme for Foot and Mouth Disease (FMD) and Brucellosis launched with total outlay of Rs. 13,343 crore to ensure 100% vaccination of cattle, buffalo, sheep, goat and pig population for Foot and Mouth Disease (FMD) and for brucellosis.

6. Dekho Apna Desh

Why in News?

- In a bid to boost tourism in the country, the government has come out with a very creative approach which might cheer travel enthusiasts.
- The Ministry of Tourism has stated that it would reward people who visit at least 15 tourist spots in the country in a Year.

Highlights:

- The tourism ministry will fund the travel expenses of tourists who visit 15 destinations in the country in a year and submit the photos on the department's website.
- One needs to travel outside their home state to be eligible
- Ministry of Tourism brings centuries-old crafts of Mysuru through webinar titled 'Mysuru: Craft Caravan of Karnataka' under "Dekho Apna Desh" series.
- It offered an immersive tour of crafts forms namely Channapatna Toys, Rosewood inlay craft that have been thriving for centuries around the city of Mysuru.

Channapatna Toys:

- ✓ Channapattana is a city and taluk headquarter in Ramanagara District in Karnataka.
- ✓ It is noted for its famous handmade lacquer wooden toys all over the world and hence popularly known as "Gombegala Ooru" or the "Toy-City" of Karnataka.
- ✓ Made of aale mara or ivory wood, which is coloured with vegetable dyes, these environment-friendly toys line the streets of the town.
- ✓ This traditional craft is protected as a Geographical Indication (GI)
- ✓ The origin of the wooden toys dates back to the period of Tipu Sultan, the ruler of Mysore who was a great admirer of wooden toys. He took the initiative to invite artisans from Persia and train the local artists to learn the process of making the wooden toys.

Rosewood Inlay:

- ✓ The wooden inlay is the process of decorating the surface of wood by setting in pieces of material such as ivory, bone, plastic, or wood of different colours whose history goes back to the time of Tipu Sultan.
- ✓ It is a GI-tagged craft

7. Structural reforms across different sectors paving way for Aatma

Nirbhar Bharat

Why in News?

- Union Finance Minister announced the 4th Tranche of Comprehensive Economic package under Aatmanirbhar Bharat Abhiyan, that includes structural reforms across eight sectors.

Breaking down walls

Finance Minister Nirmala Sitharman announced a set of structural reforms across sectors as a part of the efforts to boost a sagging economy

 <p>COAL Commercial mining on a revenue sharing basis to be introduced. Companies in the private sector will be allowed to carry out exploration</p>	 <p>MINERALS Composite exploration-cum-mining-cum-production regime for minerals to be announced. 500 mining blocks will be auctioned</p>	 <p>DEFENCE A list of weapons/platforms for ban on import will be notified. FDI limit in manufacturing under automatic route to be raised to 74%</p>	 <p>CIVIL AVIATION Restrictions on utilisation of the airspace will be eased so that flying becomes efficient. Now, only 60% of the airspace is freely available</p>	 <p>POWER Power departments/utilities and distribution companies in U.T.s to be privatised. It will be in line with the tariff policy which is to be announced</p>
 <p>SPACE Privatisation to be introduced. Planetary exploration, outer space travel to be opened to the private sector</p>	 <p>ATOMIC ENERGY Research reactor in PPP mode to be set up for the production of medical isotopes</p>			

Highlights:

- These reforms will ensure policy simplification across many sectors, to make it simpler for people to understand what sector can give, participate in activities & bring transparency.
- Once the sectors are decongested, economic growth can be achieved by boosting these sectors.
- The recent package is a part of the Special economic and comprehensive package of Rs 20 lakh crore - equivalent to 10% of India's GDP, announced recently amid COVID-19 pandemic.
- Aatmanirbhar Bharat or Self-Reliant India Movement having five pillars - Economy, Infrastructure, System, Vibrant Demography and Demand, is what this special economic and comprehensive package called.

Structural Reforms Announced:

- The reforms have been announced in the eight sectors of Coal, Minerals, Defence production, Civil Aviation, Power Sector, Social Infrastructure, Space and Atomic energy. The details are as follows:

COAL SECTOR:

- ✓ Introduction of Commercial Mining in Coal Sector: The Government will introduce competition, transparency and private sector participation in the Coal Sector.
- ✓ Diversified Opportunities in Coal Sector
- ✓ Liberalised Regime in Coal Sector

MINERAL SECTOR:

- ✓ Enhancing Private Investments in the Mineral Sector: There will be structural reforms to boost growth, employment and bring state-of-the-art technology especially in exploration.
- ✓ Policy reforms in the Mineral Sector:
- ✓ The distinction between captive and non-captive mines to allow transfer of mining leases and sale of surplus unused minerals, leading to better efficiency in mining and production shall be removed.

DEFENCE SECTOR:

- ✓ Enhancing Self Reliance in Defence Production
- ✓ Policy Reforms in Defence Production

CIVIL AVIATION SECTOR:

- ✓ Efficient Airspace Management for Civil Aviation
- ✓ More World-Class Airports through PPP
- ✓ India to become a Global hub for Aircraft Maintenance, Repair and Overhaul (MRO)

8. Project Arth Ganga

Why in News?

- The Prime Minister recently reviewed the plans being envisaged for implementing “Project Arth Ganga”.

Project Arth Ganga:



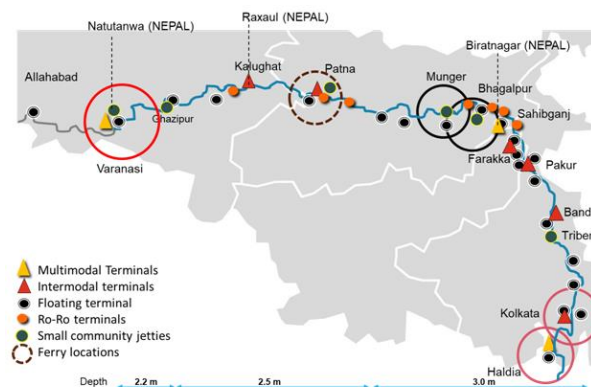
- The Arth-Ganga project is a sustainable development model with a focus on economic activities related to River Ganga.
- It was envisaged during the first meeting of the National Ganga Council in Kanpur on December 14, 2019.
- The Jal Marg Vikas Project aimed to develop river Ganges as a safe mode of navigation and is being implemented with the technical and financial assistance of the World Bank.
- ‘Project Arth Ganga’ envisages to re-engineer the JMVP by involving the local community to energise the economic activity along the Ganga river bank.
- West Bengal Major Irrigation and Flood Management Project

Plan of Action:

- With the call to ‘Reform, Perform and Transform’, Cargo volume on Ganga will be increased by 4 times with special focus on developing inland waterways.
- The Arth-Ganga project will boost economic development and inclusive growth for farmers, small traders and villagers.
- Farmers should be encouraged to engage in sustainable agriculture practices, including zero budget farming, planting of fruit trees and building plant nurseries on the banks of Ganga.
- Priority would be given to women Self Help Groups and ex-servicemen organizations for these programs.
- Creation of infrastructure for water sports and development of campsites, cycling and walking tracks etc. to tap the ‘hybrid’ tourism potential of the river basin area- for religious purposes as well as adventure tourism.

Initiatives Taken:

- The Ministry of Shipping has taken several initiatives in the last few years which has resulted in substantial growth in-terms of increasing Inland Cruises from 3 to 9, Cargo from 30,00,000 MT to 70,00,000 MT, and Vessels in-flow from 300 to 700.



- Development of small jetties have been carried out for the benefit of small communities especially for farmers, traders and general public in the 1400 km stretch of National Waterway-1 from Banaras to Haldia.
- National Waterway- 1 will act as a main conduit of connection with Nepal in a trilateral manner, i.e. from Varanasi to Nautanwa (280km), Kaughatto Raxaul (204km) and Sahibganj to Biratnagar (233km).
- Earlier Nepal was connected by Kolkata and Visakhapatnam Ports for transporting cargo. Now, Inland Waterways, particularly NW-1 will be allowed under the Treaty for Transit of Cargo between Government of India and Government of Nepal.
- It will save logistic cost and decongest Kolkata Port as well.

9. West Bengal Major Irrigation and Flood Management Project

Why in News?

- The Government of India, West Bengal and the World Bank signed a loan agreement for a \$145 million project to improve irrigation services and flood management in the Damodar Valley Command Area in West Bengal.

Highlights:

- The project aims to improve the management of the Damodar Valley Command Area (DVCA) irrigation scheme to delivery, performance monitoring and irrigation efficiency.
- The loan granted will be invested in the modernization of irrigation infrastructure at main, branch, distributary and minor canal levels.
- The project contains measures to reduce flooding in the Damodar Valley Command Area in West Bengal.
- It will also include the implementation of the Dam Safety.
- The other initiatives include capacity for project management, including financial management, monitoring and evaluation, and environmental and social safeguards management and communication.

Significance:

- The Project will benefit about 2.7 million farmers from five districts of West Bengal across 393,964 ha area with better irrigation services.
- It will improve protection against annual flooding in the region.

Damodar River:

- The Damodar river rises in the Palamu hills of the Chotanagpur plateau in Jharkhand.

- The total length of the river is 541 km and has a number of tributaries and sub-tributaries, such as Barakar (most significant), Konar, Bokaro, Haharo, etc.
- The river flows through two states: Jharkhand and West Bengal.
- The river used to cause devastating floods earning the name ‘Sorrow of Bengal’.
- Now the river is tamed by constructing numerous dams for the generation of hydroelectric power.
- The valley is called “the Ruhr of India”.
- The Damodar river valley is rich in mineral resources and home to large-scale mining and industrial activity.

10. India opposes Rejoining RCEP

Why in News?

- India has not responded to a fresh proposal of rejoining negotiations on the ASEAN-led RCEP indicating its refusal to join RCEP.

Reasons behind India not joining RCEP:

- India’s experience of trade pacts in the past had hollowed out manufacturing in the country.
- The decision to join RCEP would hamper the government’s renewed commitment to the ‘Make in India’ policy.
- Presently, the government is quite focussed on moving the ‘Make in India’ programme from Level 1 to Level 2, and up above to Level 10.
- It is a signal to the world that not only is India an attractive place to invest, but has the potential of being a global manufacturing hub.
- India’s decision to not join RCEP will generate “optimism” amongst Indian companies, given the uncertainty over demand and consumption due to the pandemic.



RCEP:

- The Regional Comprehensive Economic Partnership (RCEP) is a proposed free trade agreement in the Indo-Pacific region.
- It is between the ten member states of the Association of Southeast Asian Nations (ASEAN), namely Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand, and Vietnam, and five of ASEAN's FTA partners—Australia, China, Japan, New Zealand, and South Korea.
- India is also ASEAN's FTA partner, but opted out of RCEP in November 2019.

Background:

- RCEP negotiations were formally launched in November 2012 at the ASEAN Summit in Cambodia.
- In 2018, the 16 negotiating parties accounted for about half of the world's population and 39% of the world's GDP.
- Without India, the 15 negotiating parties account for 30% of the world's population and just under 30% of the world's GDP.
- RCEP is viewed as an alternative to the Trans Pacific Partnership trade agreement, which includes the United States but excludes China.

Objective:

- RCEP aims to create an integrated market within member countries, making it easier for products and services of each of these countries to be available across this region.
- The negotiations are focused on the following: Trade in goods and services, investment, intellectual property, dispute settlement, e-commerce, small and medium enterprises, and Economic Cooperation.

Why did India quit RCEP?

- India faced a demand to reduce its existing tariffs to a considerably low level.
- It was demanded to eliminate duties on 92% of its products and keep very low duties on another 7%, covering a total of 99% of all its agricultural and industrial products.
- In order to protect its interest, India had proposed a three-tier tariff reduction mechanism under which the RCEP countries were categorised into three tiers based on the level of trade imbalance and existence of free trade agreement with the member country.
- India had been facing stiff opposition from the member countries and was branded as the one impeding the overall negotiations with its unjustified demands of three-tier tariff reduction and services liberalisation.

- Hence, the present form of the RCEP agreement did not fully reflect the basic spirit and the agreed guiding principles of RCEP.

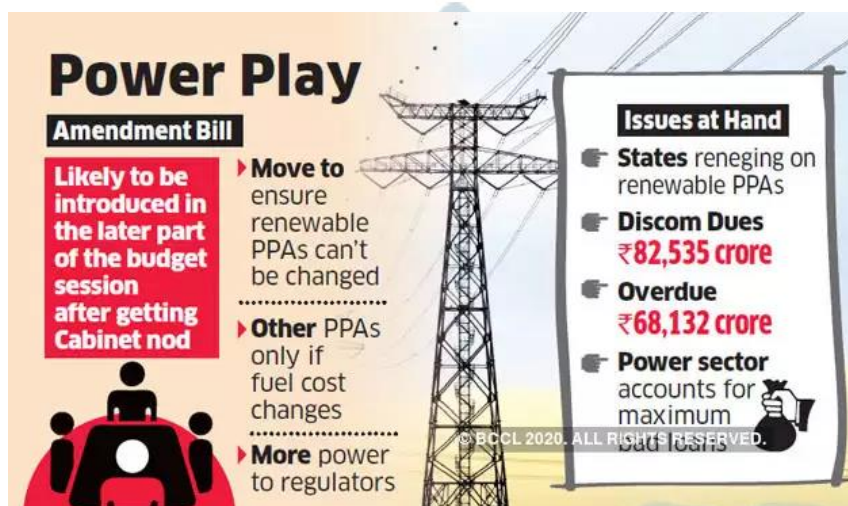
India's Concern:

- There was a fear in India that Indian industries would be unable to compete with cheap Chinese goods that would flood Indian markets.
- India's farmers were also worried given that they would be unable to compete on a global scale.

11. Concerns with Power Sector Reforms

Why in News?

- Finance Minister announced proposal for reform of power tariff policy announced as part of the stimulus package following the pandemic.



New Power Tariff Policy:

- Privatization: India will privatize electricity distribution companies (discoms) in all its eight union territories. It will lead to better services to consumers and improvement in operational and financial efficiency in distribution.
- Unlike discoms in states governed by the respective state governments, those in Union territories are directly administered by the central government.
- The proposed national tariff policy; includes penalty on unjustified power cuts, not allowing losses of more than 20% as a pass-through in tariff, and limiting cross-subsidies.
- Objectives: The policy will help reduce the cost of power and has been cleared by the empowered group of ministers and will be taken to the next meeting of the Union cabinet.

- The government is also exploring public-private partnerships for power distribution in Some states.

Proposed reforms in the Power Sector:

Draft Electricity Act (Amendment) Bill 2020:

- **Objectives:** The govt. wants to ensure that renewable energy tariffs are not changed by the states after execution of contracts, and electricity regulatory commissions have more teeth to enforce power purchase agreements between projects and distribution companies (discom).
- The proposal comes after the new governments in Andhra Pradesh and Maharashtra refused to honour power purchase agreements, leaving investors jittery.
- It seeks privatisation of discoms (distribution companies) by way of sub-licensing & franchisees.
- According to the draft, state commissions will determine tariff for retail sale of electricity without any subsidy under Section 65 of the Act and the tariff should reflect the cost of supply of electricity and cross-subsidies to be reduced.
- It proposes greater concessions to renewable power developers.
- It seeks to eliminate the cross-subsidies in retail power tariff.
- The State governments will directly subsidise whichever category they want to, through direct benefit transfers.
- State regulators will henceforth be appointed by a central selection committee.
- The establishment of a centralised Electricity Contract Enforcement Authority whose members and chairman will again be selected by the same selection committee referred to above.
- It proposes that the ECEA would adjudicate on matters regarding performance of obligations under a contract related to sale, purchase or transmission of electricity.

India's Electricity Distribution Reforms Scheme:

- Tentatively named Atal Distribution System Improvement Yojana (Aditya) -- aims to cut electricity losses below 12%.
- India's average aggregate technical and commercial loss are currently at 21.4%.
- Prepaid smart meters will be made mandatory across the power distribution chain, including 250 million households.
- **Aims:** The scheme aims to ensure continuous supply of power, by privatizing state-run Discoms and negating Tariff Gaps.

- It proposes to empower load dispatch centres to oversee the payment security mechanism before scheduling dispatch of electricity, and suggested a National Renewable Energy Policy for the promotion of generation of electricity from renewable sources.

Electricity Act 2003:

- It is an Act to consolidate the laws relating to generation, transmission, distribution, trading and use of electricity. For taking measures conducive to development of the electricity industry, promoting competition therein, protecting the interest of consumers and supply of electricity to all areas, rationalization of electricity tariff.
- Ensuring transparent policies regarding subsidies, promotion of efficient and environmentally benign policies. It provides for constitution of Central Electricity Authority, Regulatory Commissions and establishment of Appellate Tribunal and for matters connected therewith or incidental thereto.

Discoms:

- Power distribution companies collect payments from consumers against their energy supplies (purchased from generators) to provide necessary cash flows to the generation and transmission sectors to operate.
- The Discoms have to purchase and distribute power to fulfil their Universal Supply Obligation (USO) as defined in the Electricity Act 2003 or borrow for capital expenditure to meet Load Augmentation and Growth Requirements.

Expected Benefits of the Reforms:

- PPP models: Privatisation of Power distribution in UTs will assist in generating private sector appetite amongst Indian and international investors; various PPP models will be tested; and quick demonstration of possible efficiency improvement and customer engagement models. It will provide confidence to larger states and utilities to undertake privatisation based on improvements achieved here," said Sambitosh Mohapatra, partner, power and utilities

12. Formalisation of Micro Food Processing Enterprises (FME)

Why in News?

- The Union Cabinet, chaired by the Prime Minister, has given its approval to a new Centrally Sponsored Scheme - Scheme for Formalisation of Micro food processing Enterprises (FME) - for the Unorganized Sector on All India basis with an outlay of Rs.10,000 crore.

Highlights:

- There are about 25 lakh unregistered food processing enterprises which constitute 98% of the sector and are unorganized and informal.
- Nearly 66 % of these units are located in rural areas and about 80% of them are family-based enterprises.
- This sector faces a number of challenges including the inability to access credit, high cost of institutional credit, lack of access to modern technology, inability to integrate with the food supply chain and compliance with the health & safety standards.
- Strengthening this segment will lead to reduction in wastage, creation of off-farm job opportunities and aid in achieving the overarching Government objective of doubling Farmers' Income.

Objectives:

- ✓ Increase in access to finance by micro food processing units.
- ✓ Increase in revenues of target enterprises.
- ✓ Enhanced compliance with food quality and safety standards.
- ✓ Strengthening capacities of support systems.
- ✓ Transition from the unorganized sector to the formal sector.
- ✓ Special focus on women entrepreneurs and Aspirational districts.
- ✓ Encourage Waste to Wealth activities.
- ✓ Focus on minor forest produce in Tribal Districts.

Salient Features:

- ✓ Centrally Sponsored Scheme. Expenditure to be shared by the Government of India and States at 60:40.
- ✓ 2,00,000 micro-enterprises are to be assisted with credit linked subsidies.
- ✓ Scheme will be implemented over a 5-year period from 2020-21 to 2024-25.
- ✓ Cluster approach.
- ✓ Focus on perishables.
- ✓ Support to Individual micro units:
- ✓ Micro enterprises will get credit linked subsidy @ 35% of the eligible project cost with ceiling of Rs.10 lakh.
- ✓ Beneficiary contribution will be minimum 10% and balance from loan.
- ✓ On-site skill training & Handholding for DPR and technical upgradation.

Support to FPOs/SHGs/Cooperatives:

- ✓ Seed capital to SHGs for loan to members for working capital and small tools.

- ✓ Grant for backward/ forward linkages, common infrastructure, packaging, marketing & branding.
- ✓ Skill training & Handholding support.
- ✓ Credit linked capital subsidy.
- ✓ Implementation schedule:
- ✓ The scheme will be rolled out on an All India basis.
- ✓ Back ended credit linked subsidy will be provided to 2,00,000 units.
- ✓ Seed capital will be given to SHGs (@Rs. 4 lakhs per SHG) for loan to members for working capital and small tools.
- ✓ Grant will be provided to FPOs for backward/forward linkages, common infrastructure, packaging, marketing & branding.

Administrative and Implementation Mechanisms:

- The Scheme would be monitored at Centre by an Inter-Ministerial Empowered Committee (IMEC) under the Chairmanship of Minister, FPI.
- A State/ UT Level Committee (SLC) chaired by the Chief Secretary will monitor and sanction/ recommend proposals for expansion of micro units and setting up of new units by the SHGs/ FPOs/ Cooperatives. The States/ UTs will prepare Annual Action Plans covering various activities for implementation of the scheme, which will be approved by the Government of India. A third-party evaluation and mid-term review mechanism would be built in the programme.

State/ UT Nodal Department & Agency:

- The State/ UT Government will notify a Nodal Department and Agency for implementation of the Scheme. State/ UT Nodal Agency (SNA) would be responsible for implementation of the scheme at the State/ UT level including preparation and validation of State/ UT Level Upgradation Plan, Cluster Development Plan, engaging and monitoring the work of resource groups at district/ regional level, providing support to units and groups, etc.

National Portal & MIS:

- A National level portal would be set-up wherein the applicants/ individual enterprise could apply to participate in the Scheme. All the scheme activities would be undertaken on the National portal.

Convergence Framework:

- Support from the existing schemes under implementation by the Government of India and State Governments would be availed under the scheme.

- The Scheme would attempt to fill in the gaps, where support is not available from other sources, especially for capital investment, handholding support, training and common infrastructure.

Impact and Employment Generation:

- Nearly eight lakh micro-enterprises will benefit through access to information, better exposure and formalization.
- Credit linked subsidy support and hand-holding will be extended to 2,00,000 micro enterprises for expansion and upgradation.
- It will enable them to formalize, grow and become competitive.
- The project is likely to generate nine lakh skilled and semi-skilled jobs.
- Scheme envisages increased access to credit by existing micro food processing entrepreneurs, women entrepreneurs and entrepreneurs in the Aspirational Districts.
- Better integration with organized markets.
- Increased access to common services like sorting, grading, processing, packaging, storage etc.

13. Criteria for 'medium' units to be Revised

Why in News?

- The Central government has decided to revise the criteria for medium-sized units by enhancing the investment and turnover limits to up to ₹50 crore and ₹200 crore.

Highlights:

- The Finance Minister Nirmala Sitharaman had recently announced a change in the definition of micro, small and medium enterprises (MSMEs).
- As per the revised definition, any firm with an investment of up to ₹1 crore and turnover under ₹5 crore will be classified as 'micro.'
- A company with an investment of up to ₹10 crore and a turnover of up to ₹50 crore will be classified as 'small'.
- A firm with an investment of up to ₹20 crore and a turnover under ₹100 crore will be classified as 'medium.'
- The previous criteria for classifying enterprises in the 'medium' category was an investment of up to ₹10 crore and a turnover of up to ₹50 crore.
- The government is further deciding to raise ₹20 crore investment criteria to up to ₹50 crore and turnover limit to up to ₹200 crore for the medium sector.

Significance:

- The government has planned to raise MSMEs' contribution to India's exports to 60% from the 48% at present and boost the sector's contribution to the country's GDP from 29% currently to 50%. The government is keen on developing Indian MSMEs of international standards and increasing employment.

14. UMANG Application

Why in News?

- The following 7 services hosted on the web site of India Meteorological Department (IMD) have been on boarded to the Unified Mobile Application for New-age Governance (UMANG) Application.

Highlights:

- IMD has taken various initiatives in recent years for improvement in dissemination of weather forecast and warning services based on latest tools and technologies.
- To further enhance this initiative, IMD has taken the leverage of Digital India Programme to utilise "UMANG App".
- The following 7 services hosted on web site of IMD have been on boarded to UMANG Application:
 - ✓ **Current Weather** – Current temperature, humidity, wind speed, direction for 150 cities are updated 8 times a day.
 - ✓ **Nowcast** – Three hourly warnings of localized weather phenomena and their intensity is issued for about 800 stations, and districts of India by State Meteorological Centres of IMD.
 - ✓ **City Forecast** – Past 24 hours and 7 day forecast of weather conditions around 450 cities in India are given.
 - ✓ **Rainfall Information**– All India district Rainfall information daily, weekly, monthly and cumulative series are available.
 - ✓ **Tourism Forecast** – Past 24 hours and 7 day forecast of weather conditions of around 100 Tourist cities in India are provided.
 - ✓ **Warnings** – Alerts are issued to warn citizens of approaching dangerous weather. It is colour coded in Red, Orange and yellow.
 - ✓ **Cyclone warnings** and alerts provides the track of cyclonic storms along with likely time and point of crossing of coast.

UMANG:

- UMANG is an all-in-one single, unified, secure, multi-channel, multi-platform, multi-lingual, multi-service mobile app, powered by a robust back-end platform providing access to high impact services of various organization (Central and State).
- The UMANG App was launched in 2017 to bring all government services on a single mobile app, with a larger goal to make the government accessible on the Mobile Phones.

15. General Financial Rules (GFR)

Why in News?

- The union government has notified amendments to General Financial Rules (GFR) to ensure that goods and services valued less than Rs 200 crore are being procured from domestic firms, a move which will benefit MSMEs.

Highlights:

- The GFRs are a compilation of rules and orders of the Government of India to be followed by all while dealing with matters involving public finances. They are instructions that pertain to financial matters. They lay down the general rules applicable to Ministries / Departments, and detailed instructions relating to the procurement of goods. They are issued by the procuring departments broadly in conformity with the general rules while maintaining the flexibility to deal with varied situations.

16. Odisha Promotes Contract Farming System

Why in News?

- The Odisha government has promulgated an ordinance allowing investors and farmers to enter into an agreement for contract farming.
- It is envisaged that the new system will lead to improved production and marketing of agricultural produce and livestock while promoting farmers' interest.

Highlights:

- According to the State government, the ordinance is aimed at facilitating both farmers and sponsors to develop mutually beneficial and efficient contract farming systems in view of the continuing uncertainties due to COVID-19 pandemic.
- The agreement will be entered into between the contract farming sponsor, who offers to participate in any component or entire value chain including pre-production, and the contract farming producer (farmers), who agree to produce the crop or rear the livestock.

- No title, rights, ownership or possession of land or premises or other such property will be transferred or alienated or vest in the sponsor or its successor or its agent.
- Moreover, both the loans and advances given by the sponsor to the producer can be recovered from the sale proceeds of the produce.
- In no case be realised by way of sale or mortgage or lease of the land in respect of which the agreement has been entered into.

Contract Farming:

- Under contract farming, agricultural production (including livestock and poultry) can be carried out based on a pre-harvest agreement between buyers (such as food processing units and exporters), and producers (farmers or farmer organisations).
- The producer can sell the agricultural produce at a specific price in the future to the buyer as per the agreement.
- Under contract farming, the producer can reduce the risk of fluctuating market price and demand.
- The buyer can reduce the risk of non-availability of quality produce.

Advantages of Contract Farming:

- **For Producer/Farmer:**
 - ✓ It makes small scale farming competitive – small farmers can access technology, credit, marketing channels and information while lowering transaction costs.
 - ✓ It assured the market for their produce at their doorsteps, reducing marketing and transaction costs.
 - ✓ It reduces the risk of production, price and marketing costs.
 - ✓ It can open up new markets which would otherwise be unavailable to small farmers.
 - ✓ It also ensures higher production of better quality, financial support in cash and /or kind and technical guidance to the farmers.
 - ✓ In case of agro-processing level, it ensures consistent supply of agricultural produce with quality, at the right time and at a lesser cost.
- **For Agri-based Firms:**
 - ✓ They can utilize their installed capacity, infrastructure and manpower, and respond to food safety and quality concerns of the consumers.
 - ✓ Contract farming makes direct private investment in agricultural activities.
 - ✓ The price fixation is done by the negotiation between the producers and firms because of contract farming.

17. RBI as the Lender of First Resort

Why in News?

- RBI's monetary easing tools are turning blunt even as the government relies on lending for an economic revival. Perhaps RBI could fight credit-risk aversion by buying corporate bonds.

Highlights:

- To ease credit in the economy: We have by now got accustomed to the Reserve Bank of India (RBI) declaring interest rate cuts in unscheduled instalments of monetary policy.
- Repo rate was reduced to 4% last week, the lowest in about two decades. However, not all of this easing translates into cheaper or easier loans for borrowers.
- RBI has slashed its reverse repo rate drastically too.
- Ever since the covid crisis struck, our central bank has adopted a flurry of unconventional measures as well, mostly meant to put large tranches of money at the disposal of the banking system for disbursal or deployment.

Rationale Behind such move:

- Rising default risk, given the current recession, plays a major role in money being less easily available.
- Burden on Banks: Rising NPAs is another reason for banks to worry.
- Slowdown: business demand for credit is held back by economic uncertainty. This is evident in the record sums that lenders have been lending RBI overnight via its reverse repo window.
- RBI has slashed its reverse repo: to dissuade the inflow coming through reverse repo rate but has no remarkable impact.
- Big restraint on credit is not the cost of funds, but the fear that any debt advanced or taken would not be able to justify itself.
- A small business may not expect a return on investment higher than the interest rate on offer, for example, while a household may not see earnings rise to lighten the burden.
- Most companies seem to have dealt with the crisis by cutting costs, not adding on debt.
- In a nutshell a lack of market demand, revenue losses and doubts about servicing loans have joined forces to push money into safety vaults at a time it needs to get out there and move around.

What should be done?

- A burst of government spending is the need of the hour.

- RBI needs to take a relatively radical approach: It could take this risk upon itself by buying corporate bonds.
- If RBI cannot directly subscribe to debt issuances by India Inc. or snap up its debentures in the secondary market—since its choices would draw scrutiny—it could still ease the flow of credit to companies by opening a repo-like window for the purchase of well-rated corporate bonds from banks, which are reported to be investing heavily in these.

Repo Rate:

- It is the rate at which the central bank of a country lends money to commercial banks in the event of any shortfall of funds (Reserve Bank of India, in case of India).
- It is used by monetary authorities to control inflation.
- In the event of inflation, central banks increase the repo rate as this acts as a disincentive for banks to borrow from the central bank. This ultimately reduces the money supply in the economy and thus helps in arresting inflation.
- The central bank takes the contrary position in the event of a fall in inflationary pressures.
- Ideally, a low repo rate should translate into low-cost loans for the general masses. When the RBI slashes its repo rate, it expects the banks to lower their interest rates charged on loans.

Reverse Repo Rate:

- Reverse repo rate is the rate at which the central bank of a country (Reserve Bank of India in case of India) borrows money from commercial banks within the country.
- It is a monetary policy instrument which can be used to control the money supply in the country

CRR- Cash Reserve Ratio:

- Banks are required to hold a certain proportion of their deposits in the form of cash. This minimum ratio (that is the part of the total deposits to be held as cash) is stipulated by the RBI and is known as the CRR. It means that banks do not have access to that much amount for any economic activity or commercial activity. Banks can't lend the money to corporates or individual borrowers, banks can't use that money for investment purposes. CRR remains in the current account and banks don't earn anything on that.

Corporate Bond:

- A corporate bond is a type of debt security that is issued by a firm and sold to investors. The company gets the capital it needs and in return the investor is paid a pre-established number of interest payments at either a fixed or variable Interest Rate.

- When the bond expires, or "reaches maturity," the payments cease and the original investment is returned.
- The highest quality (and safest, lower yielding) bonds are commonly referred to as "Triple-A" bonds, while the least creditworthy are termed "junk".

18. Data Vacuum Due to COVID-19

Why in News?

- The COVID-19 pandemic has stalled the many surveys which were to be conducted this year including Household Consumer Expenditure and Census survey.

Household Consumer Expenditure:

- The National Sample Survey Office (now National Statistical Office) conducted a large sample survey of Household Consumer Expenditure (HCE) in 2009-10.
- This survey, usually carried out once in five years, was repeated in 2011-12.
- The reason: 2009-10 saw India suffer both a severe drought and the aftereffects of the global financial crisis.
- 2011-12 was a normal year like 1999-2000 and 2004-05, free from any major economic downturn.
- The NSO did carry out a HCE survey for 2017-18, but the Ministry of Statistics & Programme Implementation did not release its results citing "data quality issues".
- Instead, it proposed conducting back-to-back HCE surveys in 2020-21 and 2021-22 "after incorporating all data quality refinements".
- The 2020-21 survey is supposed to start from July, which looks unlikely given the novel coronavirus-induced situation.

What Else is Uncertain?

- The Census, which collects individual-level demographic information as well as socio-cultural, occupational, education and migration-related information is scheduled to be conducted in February-March 2021.
- Prior to that, the first Houselisting & Housing phase – which looks at the amenities and assets possessed by households along with the condition of homes (construction material, number of rooms, etc) – was to take place during April-September 2020.
- With Covid-19, there is no chance of the Houselisting & Housing phase taking off immediately.
- The same goes for the Socio Economic and Caste Census (SECC) 2021.

- The Modi government has used the SECC-2011 database for identifying beneficiaries under Pradhan Mantri Gramin Awaas Yojana (rural housing), Ujjwala (LPG connection), Saubhagya (household electrification), Ayushman Bharat (health insurance) and other welfare schemes.
- But the SECC-21 cannot be undertaken without the demarcation of enumeration blocks as part of the Census houselisting operation.

What can this lead to?

- With neither 2020-21 nor 2021-22 set to be “normal years”, any official survey may throw up distorted results, such as a dramatic drop in HCE.
- The 2017-18 HCE survey report itself was allegedly withheld because it showed rural consumption declining in real inflation-adjusted terms over 2011-12 amid high farm distress.
- The upcoming Census could also give a distorted picture with regard to migrants, whose share in India’s population rose from 29.9% to 37.6% between 2001 and 2011.
- In this unusual year many migrant workers have gone back to their villages, so census might end up with something different from the actual overall decadal trend.

19. Monetisation of the Deficit by the RBI

Why in News?

- With the announcement of the government keeping her options open on direct monetisation of the deficit by the RBI, its significant implications for India’s economic prospects in the short-term, and in the long-term need a fair assessment.



Highlights:

- Until 1997, the RBI automatically monetised the government's deficit.
- In 1997, the government and the RBI agreed that henceforth, the RBI would operate only in the secondary market through the Open Market Operations (OMO) route.
 - ✓ The implied understanding was that the OMO route by the RBI will be used as a liquidity instrument to manage the balance between the policy objectives of supporting growth, checking inflation and preserving financial stability.
 - ✓ It was not so much to support government borrowing.
- The outcomes of the agreement were unprecedented.
 - ✓ With the government started borrowing in the open market, interest rates went up which incentivised saving and in turn spurred investment and growth.
 - ✓ Also, the interest rate that the government commanded in the open market acted as a critical market signal of fiscal sustainability. Further, the agreement shifted control over money supply and inflation, from the government's fiscal policy to the RBI's monetary policy.
- The Indian economy in the years before the global financial crisis when the growth rates were in the range of 9 per cent was a consequence of the high savings rate and low inflation which in turn were a consequence of this agreement.

Indirect Monetisation (OMO) and Direct Monetisation: A comparison

- First of all, contrary to the popular perception, monetisation of the deficit does not mean the government getting free money from the RBI, rather it is a highly subsidised lending.
- Further, the RBI is not monetizing the deficit directly, but indirectly by buying government bonds in the secondary market through open market operations (OMOs).
- Although both monetisation and OMOs involve printing of money by the RBI.
 - ✓ But the prominent differences between the two options that emphasize upon the banality of shifting over to monetisation.
- Although they are both potentially inflationary, the inflation risk they carry is different.
 - ✓ OMOs are a monetary policy tool with the RBI in the lead, deciding on how much liquidity to inject and when. In contrast, monetisation is a way of financing the fiscal deficit with the quantum and timing of money supply determined by the government's borrowing rather than the RBI's monetary policy.
 - ✓ If RBI is seen as losing control over monetary policy, it will raise concerns about inflation.

Case for Direct Monetisation of the Deficit:

- The FRBM Act amendment in 2017 contains an escape clause which allows monetisation of the deficit under special circumstances.
- Even though it means potentially jeopardising the hard-won gains of the government-RBI agreement there is a case to it.
 - ✓ There aren't enough savings in the economy to finance government borrowing of such a large size.
 - ✓ The spike in bond yields would be so high that financial stability will be threatened.
 - ✓ So, the situation calls for the RBI to step in and finance the Government directly.

Case against Direct Monetisation of the Deficit:

- However, there is no reason to believe that we are anywhere close to that situation.
 - ✓ There has been injection of such an extraordinary amount of systemic liquidity through the OMO operations that bond yields are still relatively soft.
 - ✓ The yield on the benchmark 10 year bond which was ruling at 8 percent last year has since dropped to just around 6 per cent.
 - ✓ That should be evidence that the market feels quite comfortable about financing the enhanced government borrowing.
- If at all, the government decides to continue with monetization, markets will be apprehensive that the constraints on fiscal policy are being abandoned.
 - ✓ It will also signal that the government is planning to solve its fiscal problems by inflating away its debt.
 - ✓ If that occurs, yields on government bonds will shoot up, the opposite of what is sought to be achieved.

Way Forward:

- There cannot be a blanket ban on direct monetisation despite its costs.
- If the government is not able to finance its deficit at reasonable rates, then it really doesn't have much choice. If bond yields shoot up in real terms, there might be a case for monetisation, strictly as a one-time measure.

20. Special Board of Governors meeting of New Development Bank

Why in News?

- Union Minister of Finance attended the Special Board of Governors meeting of the New Development Bank (NDB) through video-conference Recently.

Highlights:

- The agenda included the election of the next President of NDB, appointment of Vice-President and Chief Risk Officer and membership expansion. In her opening remarks, the Finance Minister commended the contribution of NDB in funding the infrastructure development, which has positively impacted the development agenda of the member countries, including India. Within a short span of time, NDB has approved 55 projects of member countries for an amount of \$16.6 billion, which is quite a Remarkable Achievement.

NDB:

- **Idea:** At the fourth BRICS Summit in New Delhi (2012), the leaders of Brazil, Russia, India, China and South Africa considered the possibility of setting up a new Development Bank to mobilize resources for infrastructure and sustainable development projects in BRICS and other emerging economies, as well as in developing countries.
- **Agreement:** Following the report from the Finance Ministers at the fifth BRICS summit in Durban (2013), the leaders agreed on the feasibility of establishing the New Development Bank and made the decision to do so.
- **Origin:** During the sixth BRICS Summit in Fortaleza (2014), the leaders signed the Agreement establishing the New Development Bank (NDB).
- The Bank formally came into existence as a legal entity at the inaugural meeting of the Board of Governors of the NDB chaired by Russia and held on the eve of the Ufa Summit in 2015. During the meeting, the appointment of the President, Mr. K.V. Kamath (Current President), as well as four Vice Presidents and the Board of Directors took place. The NDB became fully operational at the signing of the Headquarters Agreement with the government of the People's Republic of China in 2016. HQ - Shanghai
- **Objectives:**
 - ✓ In the Fortaleza Declaration, the leaders stressed that
 - ✓ the NDB will strengthen cooperation among BRICS and
 - ✓ will supplement the efforts of multilateral and regional financial institutions for global development, thus contributing to collective commitments for achieving the goal of strong, sustainable and balanced growth.
- **Capital:** The authorized capital for NDB is \$100 Billion while initial subscribed capital is \$50 billion. Initial subscribed capital was equally distributed among the founding members {\$10 billion each}. Voting power of each member is equal to the number of its subscribed shares in capital stock.

5. GEOGRAPHY & ENVIRONMENT

1. Environment Ministry gives nod for New Parliament Project

Why in News?

- Recently, the Centre's proposal to construct a new Parliament building next to the existing heritage structure was approved by the Environment Ministry's expert appraisal committee (EAC).

Highlights:

- No stay order: The March notification of the Ministry of Housing and Urban Affairs of (MoHUA) changing the land-use of the plot from "recreational (district park)" to "Parliament" in the Master Plan of Delhi has been challenged in the Supreme Court
- There would be "no significant impacts on public space" and with the entire area being in "high security zone"
- The project would not lead to any increase in air and noise pollution and the water consumption would decrease due to reuse of treated water.
- Inadequate Assessment: an independent environment law researcher, said the assessment done was inadequate. As per him the project is without carrying out a full environment assessment of the stand-alone Parliament project.

New Parliament Project:

- The EAC said the approval is subjected to the outcome of a legal challenge to the change of land-use of the plot, according to the minutes of the meeting.
- New Parliament house: The Central Public Works Department's (CPWD) proposal for "expansion and renovation of the existing Parliament building at Parliament Street" was among the projects considered by the EAC at its meetings on April 22-24.
- The project cost: the project cost, as submitted by the CPWD, had gone up from ₹776 crore to ₹922 crore due to "changes in project specifications.
- The new Parliament will have a maximum height of 42 metre spread over 65,000 square metre of built-up area on a 10.5 acre or 42,031 square metre plot.
- Buildings constructed in the 1970s and 1980s on the site, including the existing Parliament reception and an AC plant, which total 5,200 square metre in built-up space, will be demolished. Of the 333 trees on the plot, 223 will be transplanted and 100 retained.
- Need retrofitting: The existing Parliament building was constructed 93 years ago. Over the years many planned/ unplanned changes have been made, often undocumented. It is in dire need of retrofitting as soon as possible.

Environmental Impact Assessment:

- UNEP defines Environmental Impact Assessment (EIA) as a tool used to identify the environmental, social and economic impacts of a project prior to decision-making.
- It aims to predict environmental impacts at an early stage in project planning and design, find ways and means to reduce adverse impacts, shape projects to suit the local environment and present the predictions and options to decision-makers.
- Environment Impact Assessment in India is statutorily backed by the Environment Protection Act, 1986 which contains various provisions on EIA methodology and process.

The need for EIA:

- Development projects have Negative externalities too. Every anthropogenic activity has some impact on the environment more often it has a negative impact on the environment than positive. That is why there is a need to harmonize development activities with Environmental Concerns.
- The EIA process also serves an important procedural role in the overall decision-making process by promoting transparency and Public Involvement.

Objective of EIA:

- To identify, predict and evaluate the economic, environmental and social impact of development activities
- To provide information on the environmental consequences for decision making and

Benefits of EIA:

- Proposes modified designs to reduce environmental impacts
- Identifies feasible alternatives
- Predicts significant adverse impacts
- Other benefits - Environmental assessment has many benefits, such as protection of the environment, optimum utilization of resources and saving of time and cost of the project.
- Identifies mitigation measures to reduce, offset, or eliminate major impacts
- Engages and informs potentially affected communities and individuals
- Influences decision-making and the development of terms and conditions.
- Promoting community participation - Properly conducted EIA also lessens conflicts by promoting community participation, informing decision-makers, and helping lay the base for environmentally sound projects.

2. Algal Bloom

Why in News?

- New study, entitled Ecosystem state change in the Arabian Sea shows that Algal Blooms in the Arabian Sea threatens our food chain.

Highlights:

- The study, fuelled by the recent loss of snow over the Himalayan-Tibetan plateau region, is an unusually all-encompassing snapshot of the interconnected impacts of climate change
- India continues to grapple with the coronavirus emergency, but another grave threat to public health is the focus of a dramatic Nature Scientific Reports study released recently.
- Algal bloom, almost unknown in these waters, is now growing thick, malodorous green swirls and filaments that are visible even from space.
- They occupy an area that is almost three times the size of the state of Texas.
- And since they are not a preferred food for most higher trophic organisms, they mostly attract only slugs, jellyfish and turtles, thereby short-circuiting the food chain in the Arabian Sea.
- At least 120 million people along these coasts are now at risk.

Algal Bloom:

- An algal bloom or algae bloom is a rapid increase or accumulation in the population of algae in freshwater or marine water systems, and is often recognized by the discoloration in the water from their pigments.
- The term algae encompass many types of aquatic photosynthetic organisms, both macroscopic, multicellular organisms like seaweed and microscopic, unicellular organisms like cyanobacteria.
- Algal bloom commonly refers to rapid growth of microscopic, unicellular algae, not macroscopic algae. An example of a macroscopic algal bloom is a kelp forest.
- Algal blooms are the result of a nutrient, like nitrogen or phosphorus from fertilizer runoff, entering the aquatic system and causing excessive growth of algae.
- The process of the oversupply of nutrients leading to algae growth and oxygen depletion is called Eutrophication.
- Blooms that can injure animals or the ecology are called "harmful algal blooms" (HAB), and can lead to fish die-offs, cities cutting off water to residents, or states having to close Fisheries.

3. International Whaling Commission (IWC)

Why in News?

- Iceland will not be hunting any whales in 2020. Iceland, alongside Norway and Japan, has frequently broken the International Whaling Commission's 1986 worldwide moratorium, which indefinitely "paused" Commercial Whaling.

International Whaling Commission (IWC):

- The IWC is an Inter-Governmental Organisation set up by the terms of the International Convention for the Regulation of Whaling (ICRW) signed in Washington, D.C in 1946.
- It aims to provide for the proper conservation of whale stocks and thus make possible the orderly development of the whaling industry.
- The main duty of the IWC is to keep under review and revise as necessary the measures laid down in the Schedule to the Convention which governs the conduct of whaling throughout the world.
- The body is the first piece of International Environmental Legislation established in 1946.
- Commercial whaling was banned by the IWC in 1986 after some species were almost driven to extinction.
- 89 countries have the membership of in IWC and all the member countries are signatories to this convention.
- India is a member state of the IWC.

4. Study of Endemism of Northern Western Ghats

Why in News?

- Scientists at the Agharkar Research Institute, Pune have come up with plant data of the Northern Western Ghats.

Highlights:

- The researchers investigated the Northern Western Ghats to produce an updated checklist of 181 local endemic plant species, including four monospecific genera.
- They have found that a majority of the endemic species are therophytes, which complete their life cycle in a short period during monsoon.
- The data indicates that in addition to the forest's plateaus should be prioritized for conservation of the Northern Western Ghats.



- It is the plateaus and the cliffs that harbour most of the endemic species, thus increasing their importance in conservation plans.
- The Northern Western Ghats is the region of rapid diversification of specific herbaceous Endemic Genera.

Biodiversity in Northern Western Ghats:

- The Western Ghats of India is one of the global biodiversity hotspots owing to the endemism that is sheltered by a chain of mountains.
- The northern part of this biodiversity hotspot, along with the Konkan region, is considerably different from its southern and central counterparts on account of lesser precipitation and extended dry season.
- A notable geographical feature of the Northern Western Ghats is the presence of plateaus and cliffs that display maximum endemic species, unlike forests.
- Although the Northern Western Ghats region has been floristically surveyed well, the local endemism of the Flowering Plants in the area is not much explored.

Significance:

- To project the Northern Western Ghats prominently on the world vegetation map, it is absolutely necessary to complete the IUCN threat status assessment on priority, which is underrepresented for the region. The published data can be used as a proxy for conservation planning and effective protection measures of the Northern Western Ghats.

Western Ghats:

- Western Ghats run around 1.6 lakh sq. km, from Kanyakumari to Gujarat and spread across six states. Western Ghats is a treasure trove of biodiversity and source of major rivers, including Godavari, Krishna and Cauvery. The hills of this area run parallel to the western coast of the Indian peninsula and span Gujarat, Maharashtra, Goa, Karnataka, Kerala and Tamil Nadu. The area is an important biological landscape and hosts a variety of endemic species of flora and fauna. Alongside such biodiversity, the Ghats also support about 50 million people.

5. Risk of Early Locusts Attacks

Why in News?

- Locusts normally arrive during July-October but have already been spotted in Rajasthan. At a time India is battling COVID, they present a new worry with their potential for exponential growth and crop destruction.

Locusts:

- The desert locust (*Schistocerca gregaria*) is a short-horned grasshopper that is innocuous while it is in a “solitary phase” and moving about independently.
- These winged insects differ from normal hoppers and become dangerous only when their populations build up rapidly and the close physical contact in crowded conditions triggers behavioural changes.
- They, then, enter the “gregarious phase”, by grouping into bands and forming swarms that can travel great distances (up to 150 km daily), while eating up every bit of vegetation on the way.
- If not controlled at the right time, these insect swarms can threaten the food security of countries.

How Seriously should the First Sightings be Viewed?

- The damage potential of locusts has been limited in India only because of the country hosting a single breeding season – unlike Pakistan, Iran and East Africa, where they also multiply during January-June.
- There’s nothing much to worry right now, as the rabi crop has already been harvested and farmers are yet to commence plantings for the new Kharif season.
- The locusts’ bands so observed are less populated. But their timing, though, is cause for concern.
- The normal breeding season for locusts in India is July-October. But this time, they have been sighted by mid-April. Last year, too, they were seen towards end-May as isolated grasshoppers. The longer time to breed is more conducive for a build-up of gregarious insect swarms, as opposed to solitary, innocuous hoppers.

Control Measures in India:

- India has a Locust Control and Research scheme that is being implemented through the Locust Warning Organisation (LWO), established in 1939.
- It was amalgamated in 1946 with the Directorate of Plant Protection Quarantine and Storage (PPQS) of the Ministry of Agriculture.
- The LWO’s responsibility is monitoring and control of the locust situation in Scheduled Desert Areas mainly in Rajasthan and Gujarat, and partly in Punjab and Haryana.
- The LWO publishes a fortnightly bulletin on the locust situation.

What kind of Damage can they cause?

- Locusts are polyphagous, i.e. they can feed on a wide variety of crops.

- Secondly, they have the ability to multiply rapidly. A single female desert locust lays 60-80 eggs thrice during its roughly 90-day life cycle.
- It is estimated that a 1-square-km area can accommodate 40-80 million of these insects, making the growth of their swarms exponential quite like the Covid-19 virus.

What is the Genesis of the Present Locust Upsurge, Particularly in East Africa?

- It lies in the Mekunu and Luban cyclonic storms of May and October 2018 that struck Oman and Yemen, respectively.
- These turned large desert areas in remote parts of the southern Arabian Peninsula into lakes, which allowed the insects to breed undetected across multiple generations.
- The swarms attacking crops in East Africa reached peak populations from November onwards while building up since the start of this year in southern Iran and Pakistan.
- Widespread rains in East Africa in late March and April have enabled further breeding.
- Prior to that, the locusts from spring breeding areas of southwest Pakistan and southern Iran would arrive in Rajasthan and Gujarat during May-June.
- They would, then, breed with the onset of the southwest monsoon rains and continue doing so through the Kharif cropping season.

What can and Should be done?

- If the monsoon is good, and in the absence of control operations, the magnitude of attack could be worse than in the 2019-20 rabi season.
- The last year's locust incursions were the first and most significant since 1993.
- Local authorities in Rajasthan and Gujarat had to treat over 4.30 lakh hectares of infested areas with sprayers mounted on tractors and other vehicles.

Pesticides give Better Control:

- The old generation organophosphate insecticides such as Malathion (96% ultra-low volume aerial application) are effective against locusts.
- About one litre of the chemical is necessary to treat a hectare of their breeding areas, including trees where they halt for the night.
- There is ample stock of pesticides to control any swarms in India.

6. Tiger Population Rises in Sunderbans

Why in News?

- The latest estimation of tiger numbers in the Indian Sunderbans indicates an increase in the population of big cats.

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

Highlights:

- The Sunderbans delta, spread over India and Bangladesh, is the only mangrove forest in the world inhabited by tigers.
- The increase in the number by eight was significant as it was the biggest annual jump reported from the Sunderbans.
- Previously, the highest yearly increase of tigers in the Sunderbans had been seven. The estimation revealed that of the 96 tigers, 23 were identified as male and 43 as female, while the sex of 30 big cats could not be determined. The survey also revealed the presence of 11 tiger cubs.
- The Sunderban mangrove forest is spread over 2,585 sq. km and includes the Sundarban Tiger Reserve and the 24 Parganas (South) Division. While 23 tigers were found in 24 Parganas (South) Division, 73 big cats were recorded inside the four divisions of the Sunderban Tiger Reserve. Estimation of the number of tigers in the Sunderbans, a world heritage as well as a Ramsar site, has always been a challenge because of the difficult terrain that comprises dense mangrove forests, with creeks and rivulets, and floods twice a day during the high tides.

Sunderbans:

- The Sundarbans is a mangrove area in the delta formed by the confluence of the Ganges, Brahmaputra and Meghna Rivers in the Bay of Bengal.
- It spans from the Hooghly River in India's state of West Bengal to the Baleswar River in Bangladesh. It comprises closed and open mangrove forests, agriculturally used land, mudflats and barren land, and is intersected by multiple tidal streams and channels.
- Four protected areas in the Sundarbans are enlisted as UNESCO World Heritage Sites, viz Sundarbans National Park, Sundarbans West, Sundarbans South and Sundarbans East Wildlife Sanctuaries.

7. Sal Forest Tortoise

Why in News?

- A recent study by ecologists in the Wildlife Institute of India, Dehradun, has found that the area designated as a protected area network has only a small overlap with the actual habitat of **Sal Forest Tortoise**.

- Over 90% of the potential distribution of the species falls outside the current protected area's network.

Sal Forest/ Elongated Tortoise:

- Also known as the elongated tortoise (*Indotestudo elongata*), the sal forest tortoise, recently assessed as Critically Endangered, is heavily hunted for food.
- It is collected both for local use, such as decorative masks, and international wildlife trade.
- The Sal forest tortoise is widely distributed over eastern and northern India and Southeast Asia.
- It is one of the only four land tortoises found in India. It is legally protected under Schedule IV of the Indian Wildlife (Protection) Act, 1972 as amended up to 2006.
- According to the IUCN, the population of the species may have fallen by about 80% in the last three generations (90 years).

Sal Forest:

- It is a forest type dominated by a single plant species, commonly known as Sal tree (*Shorea robusta*).
- It belongs to the category 'Tropical Moist Deciduous Forest'.
- The distribution of Sal forests is controlled by the conditions of topography, geology, and soil. Sal forests are mainly distributed in the South and Southeast Asia, occurring along the base of Tropical Himalayas from Assam to Punjab, in the eastern districts of Central India, and on the Western Bengal Hills.

8. Earth's inner core is rotating

Why in News?

- A new study based on seismic data from repeating earthquakes and new data-processing methods has revealed that Earth's inner core is rotating. The findings could give detailed insights into the processes that control the planet's Magnetic Field.

Highlights:

- Temporal changes of inner-core (IC) seismic phases have been confirmed with high-quality waveform doublets. However, the nature of the temporal changes is still controversial.
- In 1996, a small but systematic change of seismic waves passing through the inner core was first detected, which was interpreted as evidence for differential rotation of the inner core relative to the Earth's surface.

- Some studies said that the movement is instead the result of seismic waves reflecting off an alternately enlarging and shrinking inner core boundary, like growing mountains and cutting canyons.
- Scientists reviewed seismic data from a range of geographic locations and repeating earthquakes, called doublets, that occur in the same spot over time.
- This allowed them to categorize between seismic signals that change due to localized variation in relief from those that change due to movement and rotation.
- Scientists found that some of the earthquake-generated seismic waves infiltrate through the iron body underneath the inner core boundary and change after some time, which would not occur if the inner core were stationary.
- These refracted waves change before the reflected waves bounce off the inner core boundary, implying that the changes are coming from inside the inner core. This work confirms that the temporal changes come mostly, from the body of the inner core, and the idea that inner core surface changes are the sole source of the signal changes can now be ruled out.

9. Keeping Asia-Pacific Afloat

Why in News?

- The marine environment in the Asia Pacific region is getting strained, jeopardising lives and livelihoods.

Highlights:

- Before 1972, humans around the world spewed trash, sewage sludge, and chemical, industrial, and radioactive wastes into the ocean with impunity. Millions of tons of heavy metals and chemical contaminants, along with thousands of containers of radioactive waste, were purposely thrown into the ocean.
- Strains on the marine environment are threatening to drown progress and our way of life.
- Asia and the Pacific produces nearly half of global plastic by volume, of which it consumes 38%.
- In less than a century, climate change and unsustainable resource management have degraded ecosystems and diminished biodiversity.
- Levels of overfishing have exponentially increased, leaving fish stocks and food systems vulnerable.



- Marine plastic pollution coursing through the region's rivers has contributed to most of the debris flooding the ocean.

Obstacles in Addressing Marine Pollution:

- Lack of Data: Despite a seascape celebrated in our collective imaginations, research shows that our picture of the ocean is remarkably shallow.
- Insights from 'Changing Sails: Accelerating Regional Actions for Sustainable Oceans in Asia and the Pacific', the theme study of this year's Economic and Social Commission for Asia and the Pacific (ESCAP), reveal that without data environment management is swimming in the dark.
- Data are available for only two out of ten targets for the Sustainable Development Goal 14, 'Life Below Water'.
- Due to limitations in methodology and national statistical systems, information gaps have persisted at uneven levels across countries.
- Plastics represent a double burden for the ocean: their production generates CO₂ absorbed by the ocean, and as a final product enters the ocean as pollution. Beating this challenge will hinge upon effective national policies and re-thinking production cycles.

Implications:

- Environmental decline is also affecting fish stocks: Asia-Pacific region's position as the world's largest producer of fish has come at the cost of over-exploitation. The percentage of stocks fished at unsustainable levels has increased threefold from 10% in 1974 to 33% in 2015.
- Many of these pollutants sink to the ocean's depths or float far distances from their original source, where they are consumed by small marine organisms and introduced into the global food chain.
- Marine pollution encompasses many types of pollution that disrupt the marine ecosystem, including chemical, light, noise, and plastic pollution.
- Excess nutrients trigger massive blooms of algae that rob the water of oxygen, leaving dead zones where few marine organisms can live.

Way Ahead:

- Generating complete data on fish stocks, fighting illicit fishing activity and conserving marine areas must remain a priority.
- Closing the maritime connectivity gap must be placed at the centre of regional transport Cooperation Efforts.

- Enforcing sustainable shipping policies is essential: Work with the shipping community to navigate toward green shipping.
- Work with countries to harmonise ocean data and provide a space for regular dialogue: Trans-boundary ocean management and linking ocean data call for close cooperation among countries in the region.
- Harnessing ocean statistics through strong national statistical systems will serve as a compass guiding countries to monitor trends, devise timely responses and clear blind spots.
- Translating international agreements and standards into national action is also key. We must fully equip countries and all ocean custodians to localise global agreements into tangible results.
- The COVID-19 pandemic has temporarily reduced pollution, this should not be a moment of reprieve. Rather, recovery efforts need to build a new reality, embedded in sustainability.

United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP):

- Established in 1947 and headquartered at Bangkok, Thailand, ESCAP is the regional development arm of the United Nations for the Asia-Pacific region.
- Objective: ESCAP works to overcome some of the region's greatest challenges by providing results-oriented projects, technical assistance and capacity building to member States.
- It has 53 Member States and 9 Associate Members from Asia-Pacific Region including India.

10. Global Forest Resources Assessment 2020: FAO

Why in News?

- Food and Agriculture Organisation has come up with its Global Forest Resources Assessment 2020 (FRA 2020).

Highlights:

- The FRA 2020 was released by the United Nations Food and Agriculture Organization (FAO) on May 13, 2020.
- The FRA 2020 has examined the status of, and trends in, more than 60 forest-related variables in 236 countries and territories in the period 1990–2020.

Key Findings:

- **World Level:**

- ✓ The world's total forest area was 4.06 billion hectares (bha), which was 31 per cent of the total land area. This area was equivalent to 0.52 ha per person, the report noted.
- ✓ The largest proportion of the world's forests were tropical (45 per cent), followed by boreal, temperate and subtropical.
- ✓ Ninety-three percent of the forest area worldwide is composed of naturally regenerating forests and 7 percent is planted.
- ✓ More than 54 per cent of the world's forests were in only five countries — the Russian Federation, Brazil, Canada, the United States of America and China.
- ✓ The world lost 178 mha of forest since 1990, an area the size of Libya.
- ✓ However, the rate of net forest loss decreased substantially during 1990–2020 due to:
 - ✓ A reduction in deforestation in some countries, plus
 - ✓ Increase in forest area in others through afforestation and the natural expansion of forests.
- ✓ The rate of net forest loss declined from 7.8 mha per year in the decade 1990–2000 to 5.2 mha per year in 2000–2010 and 4.7 mha per year in 2010–2020.

- **Regional Level:**

- ✓ Among the world's regions, Africa had the largest annual rate of net forest loss in 2010–2020, at 3.9 mha, followed by South America, at 2.6 mha.
- ✓ On the other hand, Asia had the highest net gain of forest area in 2010–2020, followed by Oceania and Europe.
- ✓ However, both Europe and Asia recorded substantially lower rates of net gain in 2010–2020 than in 2000–2010.

Food and Agriculture Organisation:

- It is a specialized agency of the United Nations that leads international efforts to defeat hunger.
- The main goal is to achieve food security for all and make sure that people have regular access to enough high-quality food to lead active, healthy lives.
- With over 194 member states, FAO works in over 130 countries worldwide.
- The FAO was established in 1945 and is headquartered in Rome, Italy.
- It helps governments and development agencies coordinate their activities to improve and develop agriculture, forestry, fisheries, and land and water resources.

- It also conducts research, provides technical assistance to projects, operates educational and training programs, and collects data on agricultural output, production, and Development.

11. Rare Palm from Andamans gets Second Home

Why in News?

- A rare palm endemic to the South Andaman Island is finding a second home at Jawaharlal Nehru Tropical Botanic Garden and Research Institute (JNTBGRI), Palode, Kerala.

Pinanga Andamanensis:

- It was originally described by the Italian botanist Odoardo Beccari in 1934.
- The name is derived from ‘Penang’, the modern-day Malaysian state. “Penang itself has its origins in ‘Pulau Pinang’, which means ‘Island of the Areca Nut Palm’.
- It was based on an old herbarium specimen collected by E.H. Man, a late-19th century assistant superintendent in the Andaman administration.
- It was thought to be extinct till 1992.
- At first glance, *Pinanga andamanensis* — which at one point was written off as extinct — resembles the areca palm to which it is closely related.
- But its entire population of some 600 specimens naturally occurs only in a tiny, evergreen forest pocket in South Andaman’s Mount Harriet National Park.
- The *Pinanga andamanensis* “a critically endangered species and one of the least known among the endemic palms of the Andaman Islands”.
- Significance: By conserving the germplasm on the Indian mainland, JNTBGRI can ensure its continued survival in the event of its minuscule original home getting wiped out by, say, a natural calamity.

Critically Endangered:

- A critically endangered (CR) species is one that has been categorized by the International Union for Conservation of Nature (IUCN) as facing an extremely high risk of extinction in the wild.
- A category containing those species that possess an extremely high risk of extinction as a result of rapid population declines of 80 to more than 90 percent over the previous 10 years (or three generations), a current population size of fewer than 50 individuals, or other factors

12. Dwarfing Genes in Wheat

Why in News?

- Scientists at Agharkar Research Institute have mapped two alternative dwarfing genes Rht14 and Rht18 in wheat.

Highlights:

- In India farmers burn leftover rice residues annually to get rid of the straw and prepare their fields for sowing wheat resulting in air pollution.
- The dry environments pose a challenge for the germination of wheat varieties with short coleoptile.
- To overcome these problems, Scientists at Pune based Agharkar Research Institute (ARI) have mapped two alternative dwarfing genes Rht14 and Rht18 in wheat.
- These genes are associated with better seedling vigour and longer coleoptiles (sheath protecting the young shoot tip).

Dwarfing Gene Research:

- The scientists 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, so as to make them suitable for sowing under rice stubble-retained conditions and dry environments.
- Wheat lines with these alternative dwarfing genes, apart from reducing crop residue burning, can allow deeper sowing of wheat seeds to avail advantage of residual moisture in the soil under Dry Environments.

Significance:

- The improved wheat lines which are being developed at ARI will help reduce stubble burning incidences under the rice-wheat cropping system.
- These lines will also allow deeper sowing of wheat seeds to avail advantage of residual moisture in the soil, therefore, saving valuable water resources and reducing the cost of Cultivation to Farmers.

13. Hippocampus nalu - Sea Horse

Why in News?

- A new species of seahorse is discovered in the waters of Sodwana Bay, South Africa, which falls within the iSimangaliso Wetland Park, a World Heritage Site.

Highlights:

- Hippocampus nalu grows to a maximum size of just two centimetres.
- It is the first pygmy seahorse ever discovered in African waters.
- It is physically and genetically distinct from the seven known species of pygmy seahorses.
- Its nearest relatives are found more than 8,000 km away in the Pacific Ocean.
- As not much is known about the species, their IUCN status is unknown.
- Pygmy seahorses can also provide an important boost for tourism: scuba divers love these small species and are willing to travel far and wide for a chance to see them.

Sea Horse:

- Seahorse is the name given to species of small marine fish in the genus Hippocampus.
- Seahorses are mainly found in shallow tropical and temperate salt water throughout the world, from about 45°S to 45°N.
- They live in sheltered areas such as seagrass beds, estuaries, coral reefs, and mangroves.
- Seahorses are threatened all around the world.
- Many species are at risk of becoming extinct because of human activities such as bottom trawling, overfishing, and habitat destruction.

14. Cicadas

Why in News?

- A brood of periodical cicadas, noisy insects that breed underground for as long as 13-17 years are expected to emerge into some states on the east coast of the US this year.

Cicadas:

- Cicadas are insects that spend most of their lives underground and emerge from the soil mainly to mate.
- They take up to 17 years to reach adulthood.
- Once out of the ground, their life span is fairly short, somewhere between two-four weeks.
- There will be major outbreaks of periodical cicadas in 2020 and 2021.
- The insects are found in the America's as well as New Zealand and Australia.

- The people living in these areas will experience a unique natural phenomenon that has not occurred in most of the area since 2003.

What happens when Cicadas Emerge?

- After emerging from the ground in billions, the cicadas shed their exoskeletons or outer skins to take their winged form.
- After mating, the females lay their eggs in twigs that are $\frac{1}{2}$ to $\frac{1}{4}$ in diameter.
- One female is capable of laying over 400 eggs in 40-50 different sites.
- The eggs remain in the twigs for six to ten weeks before they hatch and after hatching the nymphs fall to the ground where they burrow 6-18 inches underground to feed and emerge 13 or 17 years later.
- The egg-laying by the cicadas causes significant damage to small twigs.

15. Heat Wave sweeps North India

Why in News?

- Several parts of north India reeled under an intense heatwave with many districts in Rajasthan, Haryana, Uttar Pradesh, Madhya Pradesh posting temperatures over 45 degrees Celsius or five degrees above what is normal.

Highlights:

- Churu in Rajasthan registered 47° C whereas Prayagraj in Uttar Pradesh recorded 46° C.
- The India Meteorological Department had forecast “heatwave to severe heatwave conditions” over northwest, central and adjoining peninsular India for most of the week along with heavy rain over northeast India.
- Rising temperature: Many parts of coastal Andhra Pradesh, Odisha and Maharashtra also saw temperatures soar above 42° C, triggering heatwave conditions.
- The heat was due to dry northwesterly winds prevailing over northwest and central India.

Current Scenario:

- The State and district administrations have warned the residents to take precautions against the heat waves.
- The IMD said that summer temperatures in May — on average — were lower than usual mostly due to several rain-bearing Western Disturbances.
- High summer temperatures in north India are one of the factors important for drawing in the monsoon rain into Kerala, however, cyclone Amphan might delay this advent.

- The IMD had said that it expected the monsoon to hit Kerala only on June 5, while Skymet, a private weather forecast agency, disagreed saying it might hit the State by May 28.
- Beginning Saturday (23rd May), temperatures are finally in the realm of normal for this time of the year in north India .

Measures to Deal with it:

- Sensitizing States to the need of preparing and implementing specific Heat Action Plans in line with NDMA's national guidelines on Heat Wave.
- Establish Early Warning System and Inter-Agency Coordination to alert residents on predicted high and extreme temperatures.
- Capacity building/training program for health care professionals at the local level to recognize and respond to heat-related illnesses, particularly during extreme heat events.
- Public Awareness and community outreach: Disseminating public awareness messages on how to protect against the extreme heat-wave through print, electronic and social media and Information, Education and Communication (IEC) materials.
- Collaboration with non-government and civil society in building temporary shelters, wherever necessary, improved water delivery systems in public areas and other innovative measures to tackle Heat wave conditions.
- Knowledge of effective prevention and first-aid treatment, besides awareness of potential side-effects of prescription drugs during hot weather, is crucial for physicians and pharmacists.
- Sharing experiences and best practices to help other stakeholders prepare and implement their Heat Action Plans.

Heat Wave:

- The heatwave is a period of abnormally high temperatures, more than the normal maximum temperature that occurs during the pre-monsoon (April to June) summer season.
- Heat waves typically occur between March to June, and in some rare cases even extend till July. The heatwave is considered if the maximum temperature of a station reaches at least 40°C or more for Plains, 37°C or more for coastal stations and at least 30°C or more for Hilly regions. Following criteria are used to declare heat wave:
 - ✓ **Based on Departure From Normal**
 1. Heat Wave: Departure from normal is 4.5°C to 6.4°C
 2. Severe Heat Wave: Departure from normal is >6.4°C

✓ **Based on Actual Maximum Temperature (for plains only)**

1. Heat Wave: When actual maximum temperature $\geq 45^{\circ}\text{C}$
 2. Severe Heat Wave: When actual maximum temperature $\geq 47^{\circ}\text{C}$
- To declare a heat wave, the above criteria should be met at least in 2 stations in a Meteorological subdivision for at least two Consecutive Days.

16. Snow Leopard Conflict

Why in News?

- The cases of Snow leopard conflict have risen in Ladakh after the imposition of lockdown.

Highlights:

- This is a lean season for them. They do not find enough prey in high altitudes during this time of year and so tend to come down.
- Snow leopards do periodically kill free grazing livestock.
- So, if herders haven't been taking livestock out for grazing amid lockdown, a particular snow leopard who is partially dependent on livestock, can get into a village in search of food, enter a corral and attack livestock.

Snow Leopard:

- The snow leopard is a large cat native to the mountain ranges of Central and South Asia.
- Snow leopards inhabit the higher Himalayan and Trans Himalayan landscape in an altitude range between approximately 3,000 m to 5,400 m above mean sea level.
- In India they are found in UT Jammu and Kashmir, UT Ladakh, Himachal Pradesh, Uttarakhand, Sikkim and Arunachal Pradesh.
- This area contributes to only 5% of the global snow leopard range.
- There are around 500 snow leopards in India according to the Wildlife Fund for Nature but no census has been conducted yet.
- **IUCN status: Vulnerable**
- The global population is estimated to number less than 10,000 mature individuals and is expected to decline about 10% by 2040.

17. Maharashtra Governor Modifies law on Forest Rights

Why in News?

- Maharashtra Governor has modified the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006, allowing rightful claimants of forest rights to appeal against decisions of the district level committee (DLC).

Highlights:

- The Governor has modified Section 6 of the Act, in its application to Scheduled Area of the State of Maharashtra, in exercise of the powers conferred on him by Schedule V of the Constitution.
- The notification states that divisional level committees under the chairmanship of divisional commissioners have been constituted to hear the appeals against the DLC's decisions. In the case of an order passed by the DLC before commencement of the notification, the application for appeal needs to be made within six months from the date of issue of notification. However, if an order has been passed after commencement of the notification, the application has to be made within 90 days of the date of communication of the DLC's order, the notification said.
- The notification applies to areas covered in the Panchayats (Extension to Scheduled Areas) Act in the State and allows appeal provision against the DLC's decision.

Significance:

- The new notification is important to provide justice to tribals whose 'individual or community forest right' has been rejected by the DLC, constituted under the Forest Rights Act (FRA).

Fifth Schedule:

- The fifth schedule of the constitution under Article 244, deals with the "provisions relating to the administration and control of scheduled areas and scheduled tribes".
- At present, 10 States namely Andhra Pradesh, Chhattisgarh, Gujarat, Himachal Pradesh, Jharkhand, Madhya Pradesh, Maharashtra, Odisha, Rajasthan and Telangana have Fifth Schedule Areas.

Special Provisions for Fifth Schedule Areas:

- The Governor of each State having Scheduled Areas (SA) shall annually, or whenever so required by the President, make a report to the President regarding the administration of Scheduled Areas in that State.

- The Union Government shall have executive powers to give directions to the States as to the administration of the Scheduled Areas.
- Para 4 of the Fifth Schedule provides for establishment of a Tribes Advisory Council (TAC) in any State having Scheduled Areas.
- If the President so directs, there will be established a TAC in a State having Scheduled tribes but not Scheduled Areas therein, consisting of not more than twenty members of whom, three-fourths shall be the representatives of the Scheduled Tribes in the Legislative Assembly of the State. If the number of representatives of the STs in the Legislative Assembly of the State is less than the number of seats in the TAC to be filled by such representatives, the remaining seats shall be filled by other members of those Tribes.
- The TAC shall advise on such matters pertaining to the welfare and the advancement of the STs in the State as may be referred to them by the Governor.
- The Governor may make rules prescribing or regulating
- the number of members of the Council, the mode of their appointment and the appointment of the Chairman of the Council and of the officers and servants thereof,
- the conduct of its meetings and its procedure in general; and all other incidental matters.
- The Governor may direct that any particular Act of Parliament or of the Legislature of the State shall or shall not apply to a SA or any part thereof in the State.
- The Governor may make regulations for the peace and good government of any area in the State which is for the time being a SA. Such regulations may
- prohibit or restrict the transfer of land by or among members of the Scheduled tribes in such area; regulate the allotment of land to members of the STs in such area;
- regulate the carrying on of business as money-lender by persons who lend money to members of the STs in such area.
- In making such regulations, the Governor may repeal or amend any Act of Parliament or of Legislature of the State or any existing law after obtaining assent of the President.

Criteria for Declaring Schedule Areas:

- These criteria are not spelt out in the Constitution of India but have become well established.
 - ✓ Preponderance of Tribal Population;
 - ✓ Compactness and reasonable size of the area;
 - ✓ Under-developed nature of the area; and
 - ✓ Marked disparity in economic standard of the People.

6. INTERNATIONAL RELATIONS

1. India remains on U.S. Priority Watch List

Why in News?

- India continues to be on the ‘Priority Watch List’ of the United States Trade Representative (USTR) Special 301 report for lack of adequate intellectual property (IP) rights protection and enforcement.

Highlights:

- While India made “meaningful progress” to enhance IP protection and enforcement in some areas over the past year, it did not resolve recent and long-standing challenges, and created new ones.
- Algeria, Argentina, Chile, China, Indonesia, Russia, Saudi Arabia, Ukraine and Venezuela are also on the Priority Watch List.
- Online IP enforcement in India has improved but progress is undercut by factors including
 - ✓ weak enforcement by courts and the police,
 - ✓ lack of familiarity with investigative techniques and
 - ✓ no centralised IP enforcement agency.
- The same assessment was made in the 2019 report.
- The report notes some of the best practices by India in the IP sector last year.
 - ✓ For instance, India’s Cell for Intellectual Property Rights Promotion and Management (CIPAM) that organises and spearheads the government’s efforts to simplify and streamline IP processes, increase IP awareness, promote commercialization, and enhance enforcement.
- Long-standing concerns were about -Innovators not being able to receive, maintain and enforce patents particularly in the pharmaceutical sector.
- India also restricted the transparency of information provided on state-issued pharmaceutical manufacturing licenses,
- Continues to apply restrictive patentability criteria to reject pharmaceutical patents, and
- Still has not established an effective system for protecting against the unfair commercial use, as well as the unauthorized disclosure, of undisclosed test or other data generated to obtain marketing approval for pharmaceuticals and certain agricultural chemical products
- Concerns over copyright laws not incentivising the creation and commercialisation of content.

- ✓ Further 2019 draft Copyright Amendment Rules, if implemented, would have “severe” consequences for Internet-content rights holders, as the proposed rules broadened the scope of compulsory licensing from radio and television broadcasting to online broadcasting.
- ✓ Compulsory licensing is when a government allows someone else to produce a patented product or process without the consent of the patent owner or plans to use the patent-protected invention itself.
- **An outdated Trade Secrets Framework.**
 - ✓ Trademark counterfeiting levels were “problematic” and there were “excessive delays” in obtaining trademarks due to a lack of examination quality.
 - ✓ The U.S. continues to urge India to join the Singapore Treaty on the Law of Trademarks, a treaty that harmonises trademark registration.
- India maintains extremely high customs duties directed to IP-intensive products such as medical devices, pharmaceuticals, Information and Communications Technology (ICT) products etc.. which hinders the trade.
- The USTR also noted that India was ranked among the top five source economies for fake goods by the Organization of Economic Development and Cooperation (OECD) in 2019.

Way Ahead:

- Priority watch countries will be the subject of increased bilateral engagement with the USTR to address Intellectual Property (IP) concerns.
- The USTR will review the developments against the benchmarks established in the Special 301 action plans for countries that have been on the ‘Priority Watch List’ for multiple years.
- For such countries that fail to address US’ concerns, the USTR will take appropriate actions, such as
 - ✓ Enforcement actions under Section 301 of the Trade Act or
 - ✓ Pursuant to World Trade Organisation or other trade agreement dispute settlement procedures

Intellectual Property:

- It is a category of property that includes intangible creations of the human intellect.
- There are many types of intellectual property, and some countries recognize more than others.
- The most well-known types are copyrights, patents, trademarks, and trade secrets.

- The main purpose of intellectual property law is to encourage the creation of a wide variety of intellectual goods.
- To achieve this, the law gives people and businesses property rights to the information and intellectual goods they create, usually for a limited period of time.
- This gives economic incentive for their creation, because it allows people to profit from the information and intellectual goods they create.

Special 301 Report:

- It is prepared annually by the Office of the United States Trade Representative (USTR) that identifies trade barriers to United States companies and products due to the intellectual property laws, such as copyright, patents and trademarks, in other countries.
- The USTR must identify countries which do not provide -
 - ✓ Adequate and effective protection of intellectual property rights, or
 - ✓ Fair and equitable market access to United States persons that rely upon intellectual property rights
- It is published pursuant to Section 301 of the Trade Act of 1974 as amended by Section 1303 of the Omnibus Trade and Competitiveness Act of 1988.
- It was first published in 1989.

Main Categories Under the Report:

- **Priority Foreign Countries** - These are judged to have inadequate intellectual property laws and may be subject to sanctions.
- **Priority Watch List** - These countries have serious intellectual property rights deficiencies which requires increased USTR attention.
- **Watch List** - These are identified as having serious intellectual property rights deficiencies but are not yet placed on the "Priority Watchlist".

2. India and the Issue of UNSC Permanent Seat

Why in News?

- As the election to the temporary membership of the U.N. Security Council for the 2021-22 period is due, prospects of India for the same amongst other issues of relevance can be discussed.

Highlights:

- The issue of the expansion and reform of the Security Council is not an India-centric issue.
- The institutions of Global Governance need an Overhaul.

- It is an issue which entails a whole host of teams, because India in many ways is a sui generis country where a billion plus people work together in a democratic setup.

Priorities for India:

- One of the biggest issues that will confront all multilateral organisations and certainly the security council will be issues which are beyond borders.
- Issues of the global commons, whether it is in cases of public health as we are now seeing in the current pandemic, but other issues, for example, cyber issues.
- There are no regulatory mechanisms or no rules on that, and that's another.
- A third one is issues of high seas. Again, beyond EEZ, there is a very limited understanding of what states can do and what states can't do.
- Another area of interest would obviously be technology with a human touch.
- Increasingly, resilience of human beings is an important factor that all of us have been confronted with.
- Where there are disasters, a more humane approach is needed.

India's Position on Accepting Permanent Membership and Veto Power:

- If we look at the voting pattern at that stage when the reform or the expansion from 11 to 15 happened by increasing four non-permanent members, none of those present there as permanent members right now voted in favour.
- There were some who opposed, there were others who abstained.
- The only representative at that stage who voted in favour of change was the Republic of China.
- On veto, there are many who feel that veto was the outcome of a situation in 1945 when the world was different.
- There are many who feel the need to be some restrictions on its use in some form or the other, that's the global trend in these matters.
- India's view is that it does not oppose any approach that is non-discriminatory in nature.
- On the issue of discrimination, India has a very strong historical record, whether it was going back to the NPT. At that stage, it was discriminating among those who had nuclear weapons before a certain date or later. Similarly, on the issue of veto, if there are restrictions, these need to be applicable to everyone.

Internationalisation of Kashmir Issue:

- In a globalised world, it can be said anything is internationalised, but there is no apprehension.

- States are sovereign, they can do what they want, but if they don't have resonance, it's a loss.

Plurilateralism v/s Multilateralism during a Pandemic:

- There doesn't seem a conflict between the two frameworks.
- There are multiple levels at which the same issues can be addressed the same issue and perhaps that's the way to go about it. There is a national effort under way.
- But that does not detract from a regional effort like India has tried in SAARC with our Health Ministers.
- The EU is trying in some way in the European Union countries, there are others trying elsewhere.
- However, at some stage, it needs to be addressed at multilateral level, beyond plurilateral levels.
- A pandemic knows no borders, so there will always be a threat unless we address it across the board, and that's the role of multilateralism.

India's Position on a Global Response to Terrorism:

- India needs to be looked at in the global context in which CCIT (Comprehensive convention on International Terrorism) was submitted in 1996.
- At that stage, terrorism was not even looked on as anything beyond a law and order issue.
- Today, there are multiple elements as they are now part of many security council resolutions, itself.
- There still remain areas where addressal is needed like terrorism financing, terrorism nuclear issues.

United Nations Security Council:

- The Security Council has primary responsibility for the maintenance of international peace and security.
- It has 15 Members, and each Member has one vote.
- Under the Charter of the United Nations, all Member States are obligated to comply with Council decisions. The Security Council takes the lead in determining the existence of a threat to the peace or act of aggression.
- It calls upon the parties to a dispute to settle it by peaceful means and recommends methods of adjustment or terms of settlement.
- In some cases, the Security Council can resort to imposing sanctions or even authorize the use of force to maintain or restore international peace and security.

3. India and the Issue of UNSC Permanent Seat

Why in News?

- In the global war against the COVID-19, emerging economies, many belonging to BRICS, have reached out to other countries affected by the pandemic.



Response by BRICS Countries during the Pandemic:

India:

- India has reinforced its credentials as a rapidly emerging pharmacy of the world.
- Export of Hydroxychloroquine:
- As the world's largest producer of hydroxychloroquine, we have recently exported the drug not only to SAARC countries and to its "extended neighbourhood" in the Gulf, but also to Russia, Brazil, Israel and the U.S.
- These steps taken have set the stage for India to create an inclusive BRICS-driven pharma alliance, which could also actively explore the production of vaccines.

China:

- China has also responded strongly in containing the pandemic, leveraging its position as the workshop of the world.
- China has supplied the "hardware" i.e masks, gloves, coveralls, shoe covers and testing kits to hotspots worldwide.
- Under its Health Silk Road doctrine, the Chinese reached out to two of the worst global hotspots, Italy and Iran.
- A Chinese shipment which included essential supplies and equipment, including respirators, protective suits, masks and medications has been sent to Italy.
- China is running a medical air bridge bound for Europe.

Russia:

- Russia has sent its doctors and virologists overseas, including the launch of the famous 'From Russia with love' air mission to Italy.
- A Russian Antonov-124, packed with medical supplies and experts, landed at New York's John F. Kennedy International Airport recently.
- Russia is equipped with top-of-the-line emergency services, which are equipped to handle any kind of Emergency.

South Africa:

- As being the current rotating head of the African Union, it is engaged in framing a pan-African response to COVID-19.

Brazil:

- Among the BRICS countries, only Brazil's response may need a course correction, as its resistance to breaking the infection chains through travel bans, lockdowns, isolation and testing appears to have led to an Infection Surge.

Coordination of Efforts to Tackle the Pandemic:

- BRICS nations have already demonstrated their comparative strengths as providers of Humanitarian Assistance and Disaster Relief (HADR).
- BRICS countries now need to pool and coordinate their efforts, in partnership with the WHO, and Europe and North America, as part of a Global Assault on the Virus.

Special focus on Vulnerable Countries:

- BRICS nations may have to reactivate an existing disaster response mechanism, and earmark resources and assets to combat a whole range of natural disasters, with special attention towards the emerging economies and the global south.

Financial Allocation Model:

- The New Development Bank of the BRICS countries has already demonstrated the way forward to allocate financial resources to combat COVID-19.
- NDB has already disbursed a \$1 billion emergency loan to China, and subsequently to India, South Africa and Brazil, Also the NDB had the financial heft to provide \$10 billion in "crisis-related assistance" to BRICS member countries.
- The NDB's financial model, demonstrated to address the pandemic, can now become a template to address Natural Disasters.

4. Changes in US Visa Guidelines

Why in News?

- On May 1, the US government announced a grace period of 60 days for H-1B visa holders and Green Card applicants who have been served notices for submission of various documents, in view of the novel coronavirus outbreak.
- Earlier, on March 30, the United States Citizenship and Immigration Services (USCIS) had first given a flexibility of 60 days for responding to requests or notices having issuance dates between March 1 and May 1, 2020.

Highlights:

- As per the fresh notification from the agency, the grace period will become applicable to the documents if the issuance date listed on the request, notice or decision is between March 1 and July 1, 2020.
- The new USCIS notification said the extension of flexibilities could be availed for responding to Requests for Evidence; Continuations to Request Evidence (N-14); Notices of Intent to Deny; Notices of Intent to Revoke; Notices of Intent to Rescind and Notices of Intent to Terminate regional investment centres; and Filing date requirements for Form I-290B, Notice of Appeal or Motion.
- The US Department of Homeland Security said it would allow non-immigrant visa holders, such as those on H-1B visa, to apply for an extension of their stay in the country. The decision came as a timely respite for thousands of Indian workers, students, and tourists who remain stranded in the US due to the novel coronavirus.
- The notification also had extended flexibility for late applications and had said the government could excuse the failure to file on time if caused due to extraordinary circumstances beyond control, such as those that may be caused by Covid-19.
- The USCIS can issue a maximum of 65,000 H-1B work visas every year to highly skilled foreign workers. It can issue an additional 20,000 H-1B visas to those highly skilled foreign workers who have obtained masters or higher degrees from an American educational institution.

5. India Protests Permit to Conduct Elections in Gilgit Baltistan

Why in News?

- The Ministry of External Affairs issued a “strong protest” over an order by the Pakistan Supreme Court that permits to hold elections in the region of Gilgit-Baltistan of Pakistan-occupied Kashmir (PoK).



Pakistan Occupied Kashmir:

- Pakistan Occupied Kashmir (PoK) is that part of UT Jammu and Kashmir which was invaded by Pakistan in 1947.
- PoK has a population of over 40 lakhs and is divided into 10 districts.
- The capital of PoK is Muzaffarabad, a town located in the valley of the Jhelum river and its tributary Neelum (which Indians call Kishanganga) to the west and slightly north of Srinagar.
- In 1963, through an agreement, Pakistan gave over 5,000 sq km of J&K land to China in the Shaksgam area, in northern Kashmir, beyond the Karakoram.
- Pakistan occupied Kashmir is divided into two parts:
 - Azad Jammu and Kashmir (AJK): attached to the western part of Indian Kashmir.
 - Gilgit-Baltistan (referred to as the 'Northern Areas' till 2009)

Gilgit-Baltistan (GB):

- Gilgit-Baltistan is a hilly region to the north of PoK and east of the Pakistani province of Khyber Pakhtunkhwa
- It is over five times the size of PoK. However, it is sparsely populated, with just under 20 lakh people.
- GB is divided into three administrative divisions and 10 districts.

Significance of GB:

- The GB region is strategically important for many reasons as it is a source of vast glaciers feeding the Indus River system that meets Pakistan's water needs.
- It is a gateway for China to the Indian Ocean through the China-Pakistan Economic Corridor.
- It also shares borders with several countries – the Punjab and North-West Frontier Province provinces (Khyber-Pakhtunkhwa) in Pakistan to the west, the Wakhan Corridor of Afghanistan in the north-west and Xinjiang province of China to the north.

Background:

- The British sold Gilgit-Baltistan, along with the rest of Jammu and Kashmir, to the Dogra ruler of Jammu, Gulab Singh, after defeating the Sikh army in 1846.
- However, Britishers retained control over the area through a lease of 20 years from the Maharaja to snoop on Russia.
- Raja Hari Singh acceded the entire state of Kashmir including GB to independent India in 1947.

- However, Pakistan, along with the Britishers, illegally acceded the GB to Pakistan.
- Pakistan got the possession but had no legality.

Representation of People:

- The GB people want Constitutional Status of a province but accession to Pakistan of this disputed territory is not legally tenable hence people of GB have historically been deprived of participation in representative institutions.
- The 'Gilgit-Baltistan Empowerment and Self-Governance Order of 2009' for the first time established a Representative Government and Legislature but neither allowed constitutionally guaranteed autonomy like other provinces.
- The GB Legislative Assembly adopted resolutions demanding status of a province till the settlement of the Kashmir dispute.
- The 'Gilgit-Baltistan Order of 2018' vested powers with the Prime Minister to legislate on 68 subjects that reduced the local council to an advisory body.
- The order was challenged in the Supreme Court of Pakistan, which in January, 2019 provided them with provisional representation in the Parliament, till the settlement of the Kashmir dispute.

Administrative status in Gilgit-Baltistan:

- Though both PoK and GB are ruled directly from Islamabad, neither is officially listed as the territory of Pakistan, which has just four provinces: Punjab, Khyber Pakhtunkhwa, Balochistan, and Sindh. PoK and GB are both autonomous territories because incorporating these areas into its Pakistani map would damage Pakistan's international position in the United Nations. For India as per the resolution passed by Parliament in 1994, PoK and GB are both part of Jammu and Kashmir, which is an integral part of India by virtue of its accession to India in 1947.

6. Afghan peace and India's Role

Why in News?

- U.S. Special Representative for Afghanistan reconciliation in his visit to India, has suggested that India should directly talk to Taliban for a sustained peace in Afghanistan. This is the first time the USA has publicly suggested India to talk to the Taliban directly.

Highlights:

- Earlier, the Indian government had made it clear that India would not engage the Taliban directly, and had not changed its position on the issue.

- Recently, India was not included in a UN-coordinated “6+2+1” meeting of Afghanistan, its neighbours and U.S. and Russia recently, an exclusion New Delhi is understood to have protested.
- “6+2+1” group includes six neighbouring countries of Afghanistan: China, Iran, Pakistan, Tajikistan, Turkmenistan and Uzbekistan; global players the United States and Russia, and Afghanistan itself.
- The reason given for keeping India out of regional discussions on Afghanistan was that it holds no “boundary” with Afghanistan; but in fact it is because New Delhi has never announced its support for the U.S.-Taliban peace process.
- Objectives of the trip: According to the U.S. State department, the trip is meant to build support for the full implementation of the US-Taliban agreement, which has been derailed by differences between the Afghan government and the Taliban over the release of prisoners.
- Part of the Confidence Building Measures leading to intra-Afghan negotiations, is that both the Taliban and the Afghan government have to release prisoners on both sides.
- Secondly that there must be a reduction in violence compared to the period before the agreement was signed,
- Thirdly, that in order to get lasting peace and bring the long war in Afghanistan to an end, the door to negotiations should be opened for a political roadmap and a permanent comprehensive ceasefire.
- International support for peace in Afghanistan is important and Indian support in particular was the focus of the Delhi trip.
- His next stop to Islamabad is also expected to stress the need for a ceasefire, which the Taliban has rejected, and to push for support in kick-starting intra-Afghan talks, which have already missed the recent deadline, set in the U.S.-Taliban February agreement, by two months.

USA-Taliban pact:

- Recently, the US and Taliban signed an agreement for Bringing Peace to Afghanistan, which will enable the US and NATO to withdraw troops in the next 14 months.
- **The key elements of the USA-Taliban pact:**
 - ✓ **Withdrawal of Troops:** The US will draw down its troops in 135 days and the NATO or coalition troop numbers will also be brought down. And all troops will be out within 14 months (all would include non-diplomatic civilian personnel).

- ✓ **What Taliban Committed:** The main counter-terrorism commitment by the Taliban is that Taliban will not allow any of its members, other individuals or groups, including al-Qaeda, to use the soil of Afghanistan to threaten the security of the United States and its allies.
- ✓ **Removal of sanctions:** UN sanctions on Taliban leaders to be removed by three months and US sanctions by August.
- ✓ **On prisoner's release:** According to the agreements, 5,000 Taliban prisoners will be released by March 2020, the first day of intra-Afghan negotiations, and the remainder in another three months. A possible trouble spot because the US-Taliban agreement and the joint declaration differ.
- ✓ **On ceasefire:** The agreement states ceasefire will be simply an item on the agenda when intra-Afghan talks start, and indicates actual ceasefire will come with the completion of an Afghan political agreement.

Challenges for the Pact:

- Terms still nebulous: The actual terms of the peace deal are yet to be negotiated between the Taliban and the Afghan side, facilitated by the U.S.
- Afghan government completely sidelined: The Afghan government has been completely sidelined during the talks between the US and Taliban.
- Future of the deal depends on the Taliban: The future for the people of Afghanistan is uncertain, and will depend on how the Taliban honours its commitments and whether it goes back to the medieval practices of its 1996-2001 regime.
- Afghan government publicly disagrees on terms of deal: Just after the agreement, Afghanistan's president said that he will not free thousands of Taliban prisoners ahead of all-Afghan power-sharing talks.
- Agreement on ceasefire another potential trouble spot: As the convergence between all stakeholders is difficult to achieve.
- India-Pakistan tussle: India and Pakistan are not talking to each other, is an impediment to the process in Afghanistan. For reconciliation in Afghanistan, support from Pakistan, India and the international community is very important

How India influenced the Afghan Peace Process?

- At the Bonn agreement, India ensured that Northern Alliance leaders came to a consensus to accept Hamid Karzai as the Chairman of the interim arrangement that replaced the Taliban regime.

- In 2011, Prime Minister Manmohan Singh and Afghanistan President Karzai signed the historic Strategic Partnership Agreement, which was Afghanistan’s first such agreement with any country.
- India’s goodwill: The building blocks of that goodwill are India’s assistance in infrastructure projects, health care, education, trade and food security, and also in the liberal access to Afghans to study, train and work in India.
- Future possible role of India: Afghan officials have hinted that they are speaking to the UN, U.S. and others about a broader “6+4” formation for regional talks on Afghanistan soon, which would include India.

7. Commonwealth Collaboration in the Coronavirus Crisis

Why in News?

- The Commonwealth has in the face of the COVID-19 crisis postponed its biennial Heads of Government Meeting, originally slated for Kigali in June 2020.



Significance of Commonwealth:

- **Global Representation:** The Commonwealth Secretariat, whose administrative hub in London covers 54 countries encompassing over 30% of the world’s population (the 2.4 billion people), has been at the forefront of global institutional response to the Coronavirus crisis.
- **Diversity within:** The Commonwealth is that we do represent one-third of the world’s population. It has Nauru, which has between 11,000-12,000 people, and then the biggest country in the Commonwealth, India, with around 1.3 billion people.

- It represents all five regions, and every income level, country size, race and religion.
- **Regional leadership:** There are examples of great leadership from a number of its Member States, including India, the African Union, the Commonwealth Caribbean, the Pacific Region.

Addressing Climate Change:

- In 1989 the Commonwealth came together in Langkawi, Malaysia, to face the reality of the climate crisis.
- It was the Commonwealth in 2015 in Malta at the CHOGM that came up with the construct to say that we have to have an enforceable agreement
- It had to be two degrees and enforceable, and that we needed the 1.5 degrees aspirational target to stay alive.
- That was the world agreed in Paris in 2015, a month later.

Triple Challenges for the Commonwealth Nations:

- **Pandemic Crisis:** The coronavirus COVID-19 pandemic is the defining global health crisis of our time and the greatest challenge we have faced since World War Two.
- **Climate Crisis:** There is a monsoon season in Asia. There are prospects of a bad hurricane season across the Caribbean e.g Vanuatu cyclones.
 - ✓ Desertification and locust attacks in Africa.
 - ✓ Flooding in Kenya, East Africa.
- **Economic crisis:** Lives have been lost, economies are shrinking, and livelihoods have been shattered. It is difficult to predict what the new normal will look like.

Concerns for Commonwealth:

- **Variations Across the Group:** It has the very wealthy countries, we have medium-income countries, and we have the least-developed and some of the smallest countries in the world. On the public health front, there is much variation across the Commonwealth nations. In India for example some have said there is a shortage of critical medical equipment including PPEs, ventilators, and testing kits.
- The variance between the universal health systems is wide. Some of the smaller member countries were paying 30 times more than some of the other countries for the same medication.
- **Non-communicable Decisions:** There is a huge risk to our member states from non-communicable diseases including, obesity and heart attacks, which are killing more of our people than anything else.

- **Internet speed:** Digitization is necessary but some of the Member States are now on 2G, others on 3G and 4G, and some will be migrating to 5G.

India's role:

- India has a bigger role in terms of medical supplies and providing health care.
 - ✓ The COVID-19 lockdown is estimated to cost India \$4.5 billion each day, but that price, which has been paid by India, has meant that the survival rate in India has been one of the best across the world.
 - ✓ India as a member of the SAARC proposed the creation of the creation of the COVID-19 emergency fund, with voluntary contributions for all Member States and immediately proposed an initial contribution of \$10 million.
 - ✓ India supplied medical supplies, testing equipment, and sanitisers among other items to SAARC members including Commonwealth members such as the Maldives, Sri Lanka and Bangladesh

Way Forward:

- **Bracing for a new Normal:** The Commonwealth collaboration has to come up with a different construct to prepare for the new normal.
- **A universal Healthcare System:** There is a need for a Commonwealth-identified method for cost-effective and cost-efficient mechanism that will enable us to have universal coverage, which would enable us to respond to epidemic and pandemic health issues.
- Digitalisation and sharing that knowledge between the member nations is important. This could be done by establishing common digital platforms and websites.
- **Fostering Multilateralism:** The role of multilateral organisations in coordinating policy responses worldwide has increased manifold in the Coronavirus crisis.
- **Innovation:** Recently Secretary-General's Innovation Awards was created specifically to highlight the genius that is within young people.
- **Life over Economy Approach:** We know that the long-term economic costs are going to be significant. But if we have life, we have a chance to come together in solidarity and collaboration with other countries, and forge a new response to the economic reality.
- **Changing the GDP Criteria:** In the past we have judged ourselves, by our gross national product. That approach is to be amended by taking into account other parameters like health and environment.
- **Debt Management:** It can be debt postponement along with debt forgiveness for small countries.

- **More Multilateralism:** As the Commonwealth sees itself as a family of nations, its Member States are reaching out to each other and asking how they can help.
- The COVID-19 pandemic is radically changing what we know to be our position, but it is producing innovative solutions for our young people – 60% of Commonwealth is under 30 years of age -- leading to new jobs, industries and futures.

8. Call for probe into origin of COVID-19

Why in News?

- A resolution has been pushed by the European Union and Australia for a review of the origin and spread of the coronavirus at the World Health Assembly's Annual Meeting.

Highlights:

- The entire international community at the 73rd session of the World Health Assembly voiced support for addressing the key issues raised by the Corona crisis by debating the resolution.
- An India-backed draft resolution received a big boost when the African group of nations extended support for the motion which seeks global investigation into the spread of the novel coronavirus.
- The resolution calls for an impartial, independent and comprehensive evaluation into review of the origin and spread of the coronavirus.
- The resolution gained support from almost two-thirds of the WHA's 194 members.

World Health Assembly:

- The World Health Assembly (WHA) is the forum through which the World Health Organization (WHO) is governed by its 194 member states.
- It is the world's highest health policy setting body and is composed of health ministers from member states.
- The members of the WHA generally meet annually in May in Geneva, the location of WHO Headquarters. The main tasks of the WHA are to decide major policy questions, approve the WHO work programme and budget and elect its Director-General.
- International Health Regulations:
- The International Health Regulations or IHR (2005) represent an agreement between 196 countries including all WHO Member States to work together for global health security.
- Through IHR, countries have agreed to build their capacities to detect, assess and report public health events.

- WHO plays the coordinating role in IHR and together with its partners, helps countries to build capacity
- IHR includes specific measures at ports, airports and ground crossings to limit the spread of health risks to neighbouring countries, and to prevent unwarranted travel and trade restrictions so that traffic and trade disruption is kept to a minimum.
- IHR is a legally binding instrument of International Law.

9. International Day for Biological Diversity 2020

Why in News?

- In a virtual celebration of the International Day for Biological Diversity 2020, Union Minister of Environment, Forest and Climate Change launched key initiatives towards conservation of biodiversity.
- The year 2020 which is also the “SUPER YEAR FOR BIODIVERSITY”, as the Strategic Plan for Biodiversity with 20 global Aichi targets adopted in 2010 ends in 2020 and all the countries together are in the process of preparation of Post-2020 Global Biodiversity Framework.



Highlights:

- The National Biodiversity Authority (NBA) and United Nations Development Programme (UNDP) Biodiversity Samrakshan Internship Programme was launched.
- United Nations Environment Programme (UNEP) Campaign on Illegal Trafficking of Endangered Species: ‘Not all Animals Migrate by Choice’ was launched. The campaign ‘Not all Animals Migrate by Choice’, launched by the Wildlife Crime Control Bureau, with UNEP, seeks to address these environmental challenges, to raise awareness, and to advocate solutions.
- A Webinar Series on ‘Biodiversity Conservation and Biological Diversity Act, 2002’ was also launched along with the WWF Model Conference of Parties (MCoP), an initiative which involves the younger generation so they can usher in a new beginning and engage in conversations around impact of humanity’s footprint on biodiversity and also the importance of sustenance of biodiversity for our own survival.

- An awareness campaign supported by WWF to highlight the crucial role played by nature through its free ecological services provided for humankind was also launched.

International Day for Biological Diversity:

- The United Nations has proclaimed May 22nd as the International Day for Biological Diversity (IDB) to increase understanding and awareness of biodiversity issues.
- The theme for International Day for Biological Diversity 2020 is “Our solutions are in nature”.

Aichi Target:

- The Aichi Targets were adopted at the Nagoya conference of the Convention on Biological Diversity (CBD). In the conference of parties (COP-10), the parties agreed to come up with new plans and targets as the previous targets on biodiversity protection were not achieved. The short-term plan which consists of 5 strategic goals and further sub divided into 20 ambitious targets is collectively known as Aichi targets.
 - ✓ **Strategic Goal A:** Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society.
 - ✓ **Strategic Goal B:** Reduce the direct pressures on biodiversity and promote sustainable use.
 - ✓ **Strategic Goal C:** Improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity.
 - ✓ **Strategic Goal D:** Enhance the benefits to all from biodiversity and ecosystem services.
 - ✓ **Strategic Goal E:** Enhance implementation through participatory planning, knowledge management and capacity building.

10. China seeks more control over Hong Kong

Why in News?

- China has started pushing for an improvement in the Basic Law — the mini-constitution that defines ties between Hong Kong and Beijing.

Highlights:

- A controversial national security law for Hong Kong is being mooted in the Chinese parliament which is being described as the most sweeping step at curbing dissent in Hong Kong.
- It seeks to ban treason, secession, sedition and subversion and could be passed without consulting the Hong Kong legislature.

- Towards the end of May, the Chinese parliament is expected to vote on a resolution that will make way for the new law, which could be promulgated in Hong Kong by June end.

Hong Kong's 'Basic Law':

- Hong Kong was earlier a British colony which was handed over to mainland China in 1997, becoming one of its Special Administrative Regions.
- It is governed by a mini-constitution called the Basic Law – which affirms the principle of “one country, two systems”.
- The constitutional document is a product of the 1984 Sino-British Joint Declaration– under which China promised to honour Hong Kong’s liberal policies, system of governance, independent judiciary, and individual freedoms for a period of 50 years from 1997.
- Since the handover, Hong Kong residents have time and again taken to the streets to protect their Basic Law freedoms.
- The first major pro-democracy protest took place in 2003.
- In 2014, over one lakh city residents took part in the ‘Umbrella Revolution’ to protest against China’s denial of democratic reforms.

Impact of the 2019 Protests:

- The largest protests since 1997 took place in 2019 when for months tens of thousands of Hong Kongers agitated against a proposed extradition law, and continued with pro-democracy marches even after the legislation was withdrawn.
- The large scale protests were seen as an affront by mainland China.
- The Hong Kong unrest is also believed to have left its mark on Taiwan, another heated issue for Beijing which considers the island state as its own.
- Hong Kong’s pro-democracy lawmakers have sharply criticized China’s move to take over long-stalled efforts to enact national security legislation in the semi-autonomous territory.
- What could happen if such a law takes effect?
- The new law would ban seditious activities that target mainland Chinese rule, as well as punish external interference in Hong Kong affairs.
- A major blow to Hong Kong’s freedoms, the law could effectively bring the city under full control of mainland China.
- The move could also undermine Hong Kong’s position as an East Asian trading hub, and invite global disapproval for Beijing.

11. Open Skies Treaty

Why in News?

- The U.S administration recently said that it will withdraw from the Open Skies Treaty (OST) accusing Russia of violating the Treaty in various ways for years.

Open Skies Treaty (OST):

- The idea behind the OST was first proposed in the early years of the Cold War by the former U.S. President Dwight Eisenhower as a means to deescalate tensions during the Cold War.
- It was eventually signed in 1992 between NATO members and former Warsaw Pact countries following the demise of the Soviet Union.
- It finally went into effect in 2002.
- It is an agreement that allows countries to monitor signatories' arms development by conducting surveillance flights over each other's territories.
- The treaty allows to conduct unarmed reconnaissance flights over the territory of treaty countries.
- The treaty currently has 35 signatories along with one non-ratifying member (Kyrgyzstan).



Objectives:

- ✓ The primary objective of the Open Skies Treaty is to reduce the risk of conflict by providing participants with the ability to collect information about the military forces and activities of others in the treaty.
- ✓ The OST aims at building confidence among members through mutual openness, thus reducing the chances of accidental war.
- ✓ In particular, "information derived from Open Skies flights can contribute to participating states' national efforts to address a range of military and civil issues.

Provisions:

- Under the OST, a member state can “spy” on any part of the host nation, with the latter’s consent. A country can undertake aerial imaging over the host state after giving notice 72 hours before, and sharing its exact flight path 24 hours before.
- The information gathered, such as on troop movements, military exercises, and missile deployments, has to be shared with all member states.
- Only approved imaging equipment is permitted on the surveillance flights, and officials from the host state can also stay on board throughout the planned journey.

Significance:

- **Gathering of Key Information:**
 - ✓ The OST was signed in 1992, much before the advent of advanced satellite imaging technology which is currently the preferred mode for intelligence gathering.
 - ✓ However, it is considered that surveillance aircraft provide key information that still cannot be gathered by satellite sensors, such as thermal imaging data.
- **Reduction in the need to rely on US Satellite Infrastructure:**
 - ✓ As only the US has an extensive military satellite infrastructure, other NATO members would have to rely on the US to obtain classified satellite data.
 - ✓ This would be more difficult to obtain compared to OST surveillance records that have to be shared with all members as a treaty obligation.
- **OST's utility for the US:**
 - ✓ The U.S. has used the treaty more intensively than Russia.
 - ✓ Between 2002 and 2016, the U.S. flew 196 flights over Russia (in addition to having imagery from other countries) compared to the 71 flights flown by Russia.

12. Grand Renaissance Dam Dispute

Why in News?

- The Nile, Africa's longest river, has been at the center of a decade-long complex dispute involving several countries in the African continent who are dependent on the river's waters.

Highlights:

- The Grand Renaissance Dam hydropower project is being constructed by Ethiopia.
- It will be Africa's largest dam when completed.
- While the main waterways of the Nile run through Uganda, South Sudan, Sudan and Egypt, its drainage basin runs through other countries in East Africa, including Ethiopia.
- Ethiopia began construction of the dam in 2011 on the Blue Nile tributary that runs across one part of the country.
- Egypt has objected to the construction of this dam and in Sudan has found itself caught in the midst of this conflict.



- Due to the importance of the Nile as a necessary water source in the region, observers are concerned that this dispute may evolve into a full-fledged conflict between the two nations.
- The US has stepped in to mediate between the parties.

How can this lead to Conflict?

- Ethiopia's mega project on the Nile may just allow the country to control the river's waters, and this essentially concerns Egypt because it lies downstream.
- Last year, Ethiopia announced that it planned on generating power using two turbines by December 2020.
- Egypt has objected to these plans and has proposed a longer timeline for the project because it does not want the water level of the Nile to dramatically drop as the reservoir fills with water in the initial stages.
- For the past four years, tri-party talks between Egypt, Ethiopia and Sudan have been unable to reach agreements.

Why does Ethiopia want this Dam?

- Ethiopia believes this dam will generate approximately 6,000 megawatts of electricity when it is done.
- According to a BBC report, 65% of Ethiopia's population suffers due to lack of access to electricity.
- This dam will reduce those shortages and help the country's manufacturing industry.
- The country may also be able to supply electricity to neighbouring nations and earn some revenue in exchange.
- Neighbouring countries like Kenya, Sudan, Eritrea and South Sudan also suffer from electricity shortages.
- If Ethiopia sells electricity to these nations, they may also reap benefits.

What is Happening Now?

- In the latest developments Egypt announced that it is willing to resume negotiations with Ethiopia and Sudan concerning the dam.
- While Ethiopia has stated that it does not need Egypt's permission to fill the dam.
- Egypt has written to the UN Security Council on May 1, saying the dam would jeopardise food and water security and livelihoods of ordinary Egyptian citizens.
- In the letter to the UNSC, Egypt also implied that the dam would cause armed conflict between the two countries.

7. INTERNAL SECURITY & DISASTER MANAGEMENT

1. Shekatkar Committee

Why in News?

- Government implements Shekatkar Committee recommendations related to creating border infrastructure.

Highlights:

- The government has 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 were related to speeding up road construction, leading to socio-economic development in the border areas.
- On the matter related to creating border infrastructure, the Government has implemented the recommendation to outsource road construction work beyond optimal capacity of the Border Roads Organisation (BRO).
- It has been made mandatory to adopt Engineering Procurement Contract (EPC) mode for execution of all works costing more than Rs 100 crore.

Shekatkar Committee:

- The Shekatkar Committee was set up by former defence minister Manohar Parrikar.
- The committee had submitted its report in December 2016.
- The report, which is now the guiding principle for ongoing defence reforms, has never been made public, because it covers operational aspects of the armed forces, and its disclosure is not in the interests of national security.
- The Defence Ministry is in the process of implementing a slew of reforms suggested by the committee, which studied how to make the armed forces much leaner, cohesive and modern.
- Initially, the Ministry had considered the report and sent 99 recommendations to the armed forces for making an implementation plan.
- In August 2017, the then Defence Minister Arun Jaitley had approved 65 recommendations pertaining to the Indian Army for implementation.
- Some of the recommendations of the Committee include the following:
 - ✓ India's defence budget should be in the range of 2.5 to 3 per cent of the GDP, keeping in mind possible future threats.
 - ✓ A Joint Services War College for training middle-level officers should be established.

- ✓ It had also recommended that the Military Intelligence School at Pune be converted to a tri-service intelligence training establishment.
- ✓ The Committee recommended the enhancement in standards for recruitment of clerical staff and drivers in the Army.
- ✓ Other recommendations of the committee that are already being implemented include optimisation of Signals establishments, restructuring of repair echelons, redeployment of Ordnance echelons, better utilisation of supply and transportation echelons and animal transport units, closure of military farms and Army postal establishments in peace locations, enhancement in standards for recruitment of clerical staff and drivers in the Army, improving the efficiency of the National Cadet Corps.
- ✓ The Army has started implementing the Government Owned Contractor Operated (GOCO) model for its base workshops and ordnance depots, aiming to improve operational efficiency. Read more about this on CNA dated Jan 8, 2020.
- ✓ The creation of the post of the Chief of Defence Staff (CDS) is also one of the recommendations of the Shekatkar Committee.

2. Operation Samudra Setu

Why in News?

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

Highlights:

- 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 enroute to the port of Malè, 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 Republic of Maldives is preparing a list of Indian nationals to be evacuated by Naval ships and will facilitate their embarkation after requisite medical screening.
- The Government has been closely monitoring the situation with respect to the effect of COVID-19 pandemic on Indian citizens abroad. The Indian Navy has been directed to make suitable preparations for their evacuation by sea.