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(Preliminary Examination)

Current Issues

(January - 2021)

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15 All India 1st Ranks in ESE

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Current Issues

(January 2021)

1. The Reserve Bank of India (RBI) has constructed a composite **Digital Payments Index (DPI)** to capture the extent of digitisation of payments across the country.

The **objective** of the RBI-DPI is to reflect accurately the penetration and deepening of various digital payment methods.

The RBI-DPI comprises five **broad parameters** that enable the measurement of deepening and expansion of digital payments in the country over different time periods.

These parameters are including

- Payment Enablers (weight 25%),
- Payment Infrastructure – Demand-side factors and (10%),
- Payment Infrastructure – Supply-side factors (15%),
- Payment Performance (45%) and
- Consumer Centricity (5%)

Each of these parameters have sub-parameters which, in turn, consist of various measurable indicators.

Payment enablers comprises multiple channels through which digital payments can be accessed. This includes the internet, mobile, Aadhaar, bank accounts, merchants, and participants. The sub-parameters for payment infrastructure include credit cards, debit cards, prepaid payment instruments, point of sale terminals, automated teller machines, quick response codes, among others.

The RBI-DPI has been constructed with March 2018 as the base period. The DPI for March 2019 and March 2020 work out to 153.47 and 207.84 respectively, indicating appreciable growth.

Going forward, RBI-DPI shall be published on RBI's website on a semi-annual basis from March 2021 onwards with a lag of 4 months.

2. In the News: **Arctic melting of ice** - issues and potential benefits

It is in the Arctic that global warming is most significantly visible; the region is warming up twice as fast as the global average. The ice cap is shrinking fast — since 1980, the volume of Arctic sea ice has declined by as much as 75 per cent. Some of the effects are as follows:

- The loss of ice and the warming waters will affect sea levels, salinity levels, and current and precipitation patterns.
- Already, the Tundra is returning to swamp, the permafrost is thawing, sudden storms are ravaging coastlines and wildfires are devastating interior Canada and Russia.
- The phenomenally rich biodiversity of the Arctic region is under serious threat. Habitat loss and degradation, the absence of year-long ice and higher temperatures are making the survival of Arctic marine life, plants and birds difficult while encouraging species from lower latitudes to move north.
- The Arctic is also home to about 40 different indigenous groups, whose culture, economy and way of life is in danger of being swept away. Increasing human encroachment with its attendant stresses will only aggravate this impact and upset a fragile balance.

Potential benefits of Arctic melting:

The opening of the Arctic presents huge commercial and economic opportunities, particularly in shipping, energy, fisheries and mineral resources.

- Commercial navigation through the Northern Sea Route (NSR) is the most tempting: The distance from Rotterdam to Yokohama will be cut by 40 per cent compared to the Suez route.
- Oil and natural gas deposits, estimated to be 22 per cent of the world's unexplored resources, mostly in the Arctic ocean, will be open to access along with mineral deposits including 25 per cent of the global reserves of rare earths, buried in Greenland.

Models predict that this route could be ice free in summer by 2050, if not earlier.

Geopolitical conditions in the region:

Unlike Antarctica, the Arctic is not a global common and there is no overarching treaty that governs it, only the **UN Convention of Law of the Sea (UNCLOS)**. Large parts of it are under the sovereignty of the five littoral states — **Russia, Canada, Norway, Denmark (Greenland) and the US** — and exploitation of the new resources is well within their rights.

Russia, Canada, Norway and Denmark have put in overlapping claims for extended continental shelves, and the right to sea-bed resources; in 2007, Russia embedded a flag on the seabed below the North Pole to bolster its claim. The US, not a party to UNCLOS, is unable to put in a formal claim but is under pressure to strengthen its Arctic presence. For the present, Russia is the dominant power, with the longest Arctic coastline, half the Arctic population, and a full-fledged strategic policy. Claiming that the NSR falls within its territorial waters (the US believes the passage lies in international waters), Russia anticipates huge dividends from commercial traffic including through the use of its ports, pilots and ice-breakers. Russia has also activated its northern military bases, refurbished its nuclear armed submarine fleet and demonstrated its capabilities, including through an exercise with China in the eastern Arctic. China, playing for economic advantage, has moved in fast, projecting the Polar Silk Road as an extension of the BRI, and has invested heavily in ports, energy, undersea infrastructure and mining projects. This limbering up of strategic postures is only the tip of the proverbial iceberg.

India and the Arctic region:

India's interests in these developments, though distant, are not peripheral. Our extensive coastline makes us vulnerable to the impact of Arctic warming on ocean currents, weather patterns, fisheries and most importantly, our monsoon. Scientific research in Arctic developments, in which India has a good record, will contribute to our understanding of climatic changes in the Third Pole — the Himalayas. The strategic implications of an active China in the Arctic and its growing economic and strategic relationship with Russia are self-evident and need close monitoring. Fortunately, since 2013, India has had a toehold in the region. It has observer status in the Arctic Council, which is the predominant inter-governmental forum for cooperation on the environmental and development (though not the security) aspects of the Arctic. It is high time that our presence on the Arctic Council was underpinned by a strategic policy that encompassed economic, environmental, scientific and political aspects.

3. The **International Financial Services Centres Authority (IFSCA)** has become an **Associate Member** of the **International Organization of Securities Commissions (IOSCO)**.

International Organization of Securities Commissions (IOSCO).

The IOSCO is the international organization that brings together the world's securities regulators, covering more than 95% of the world's securities markets, and is the global standard setter for the securities sector.

IOSCO works closely with the G20 and the Financial Stability Board (FSB) in setting up the standards for strengthening the securities markets. The IOSCO Objectives and Principles of Securities Regulation have been endorsed by FSB as one of the key standards for sound financial systems.

The membership of IOSCO would provide IFSCA the platform to exchange information at the global level and regional level on areas of common interests. Further, the IOSCO platform would enable IFSCA to learn from the experiences and best practices of the regulators of other well established financial centres.

The IOSCO's membership is a significant milestone in connecting IFSCA with the regulators of securities markets globally and would contribute immensely towards the development and regulation of the financial products, financial services and financial institutions at the Gujarat International Finance Tec-City International Financial Services Centre.

International Financial Services Centres Authority (IFSCA)

The International Financial Services Centres Authority (IFSCA) has been established on April 27, 2020 under the **International Financial Services Centres Authority Act, 2019**. It is headquartered at **GIFT City, Gandhinagar** in Gujarat.

The IFSCA is a unified authority for the development and regulation of financial products, financial services and financial institutions in the International Financial Services Centre (IFSC) in India. At present, the GIFT IFSC is the maiden international financial services centre in India. Prior to the establishment of IFSCA, the domestic financial regulators, namely, RBI, SEBI, PFRDA and IRDAI regulated the business in IFSC.

4. The Prime Minister has laid the foundation of six **Light House Projects (LHPs)** as part of **Global Housing Technology Challenge – India (GHTC -India) initiative**

Under the 'Light House Projects' around 1,000 houses will be constructed in each of the six sites across six states. These include Indore, Chennai, Ranchi, Agartala, Lucknow and Rajkot. Houses for Economically Weaker Sections (EWS) are being built under the project to provide shelter to the urban poor using green construction technology.

The projects showcase the best of new-age alternative global technologies, materials and processes in the construction sector for the first time in the country at such a large scale.

Officials have also stated that LHPs will serve as live laboratories for facilitating transfer of technology to the field and its further replication. This includes planning, design, production of components, construction practices and testing for both faculty and students of IITs/ NITs/ engineering colleges/ planning and architecture colleges, builders, professionals of private and public sectors and other stakeholders. Mass use of these technologies from across the globe will bring speed, sustainability, resource efficiency, environment friendliness; disaster resilience, quality and durability in structures.

Global Housing Technology Challenge – India (GHTC -India)

The **Ministry of Housing and Urban Affairs**, Government of India has conceptualized a Global Housing Technology Challenge - India (GHTC- India) which aims to identify and mainstream a basket of innovative technologies from across the globe that are sustainable and disaster-resilient. Such technologies would be cost effective, speedier and ensure a higher quality of construction of houses, meeting diverse geo-climatic conditions and desired functional needs. The GHTC-India platform **aspires to provide an eco-system for the adoption of innovative technologies in the housing construction sector in a holistic manner.**

5. The draft of the 5th **National Science Technology and Innovation Policy** has been released

The STIP is guided by the **vision of positioning India among the top three scientific superpowers in the decade to come;**

The objectives of the STIP are

- to attract, nurture, strengthen, and retain critical human capital through a people-centric STI ecosystem;
- to double the number of full-time equivalent (FTE) researchers, gross domestic expenditure on R&D (GERD) and private-sector contribution to GERD every five years; and
- to build individual and institutional excellence in STI with the aim of reaching the highest levels of global recognition and awards in the coming decade.

The 5th national STI policy (STIP) follows core principles of being **decentralised, evidence-informed, bottom-up, experts-driven, and inclusive.**

It aims to be dynamic, with a robust policy governance mechanism that includes periodic review, evaluation, feedback, adaptation and, most importantly, a timely exit strategy for policy instruments.

Some of the important highlights are as follows:

- The draft proposes an **Open Science Framework**, with free access for all to findings from publicly funded research. The draft states that the framework will foster more equitable participation in science through increased access to research output; greater transparency and accountability in research; inclusiveness; better resource utilisation through minimal restrictions on reuse of research output and infrastructure; and ensuring a constant exchange of knowledge between the producers and users of knowledge.
- The draft proposes a **One Nation, One subscription** model. It states that R&D institutions in India spend huge amounts of money subscribing to journals, especially the international high impact-factor ones. As per a rough estimate, this amount comes to nearly Rs. 1,500 crore per annum. But still, only a third of the country's total 3.5 lakh-odd researchers get access to these journals. Researchers in remote areas, poor students who cannot pay for such articles, or those who are not part of government institutions, do not have access to this scholarly knowledge.

The STIP envisions free access to all journals, Indian and foreign, for every Indian against a centrally-negotiated payment mechanism. This amount may be higher than what our institutions together pay today, but will facilitate access to India's over 1.3 billion people.

- The draft proposes to establish a **national STI Financing Authority and an STI Development Bank** that can cater to the long term investments in select strategic areas. A corpus fund will also be established for investing in various long and medium-term projects, commercial ventures, start-ups, technology diffusion and licensing to address identified priority areas in the STI ecosystem.

It also proposes to streamline STI financial ecosystem through strengthening and providing greater autonomy to existing funding organisations with the objective of promoting sector specific research along with interdisciplinary and multidisciplinary research.

6. The Food Safety and Standards Authority of India (FSSAI) has capped the amount of trans fatty acids (TFA) in oils and fats to 3% for 2021 and 2% by 2022

Background: The current permissible limit of trans fatty acids is capped at **5%**.

The FSSAI rule comes at the time of a pandemic where the burden of non-communicable diseases has risen. Cardiovascular diseases along with diabetes are proving fatal for COVID-19 patients

The revised regulation applies to edible refined oils, vanaspati (partially hydrogenated oils), margarine, bakery shortenings, and other mediums of cooking such as vegetable fat spreads and mixed fat spreads.

Trans fats

Trans fats are **unsaturated fats** produced from vegetable oils. There are two forms of trans fat - naturally-occurring and artificial trans fats. Artificial trans fats are man-made fats produced through a chemical process called **hydrogenation**. Naturally-occurring trans fats can be found in many animal products, including milk and meat.

Why are Trans fats used? Artificial trans fats are used to turn vegetable oils into solids to **improve shelf life**. The resultant product remains solid at room temperature and is called partially hydrogenated oils. Hydrogenation **preserves foods, making them less likely to spoil**. This **method is also relatively cheap and imparts a desirable taste to food**.

Why are trans fats considered unhealthy?

Trans fats are associated with **increased risk of heart attacks and death from coronary heart disease**. As per the World Health Organisation (WHO), approximately 5.4 lakh deaths take place each year globally because of intake of industrially produced trans fatty acids. The **WHO has also called for global elimination of trans fats by 2023**.

Efforts Taken by FSSAI to reduce the Intake of Trans fats:

- The World Health Organisation (WHO) launched a **REPLACE campaign in 2018** for global-level elimination of trans-fats in **industrially produced edible oils by 2023**.
- FSSAI launched a **“Trans Fat Free”** logo for voluntary labelling to promote **TFA-free products**. The label can be used by bakeries, local food outlets and shops for preparations containing TFA not exceeding **0.2 per 100 g/ml**.

7. The state authorities in Rajasthan have sounded of avian influenza following the death of several hundred crows

Avian influenza or bird flu is a **highly contagious viral disease** caused by **Influenza Type A viruses** which generally affects poultry birds such as chickens and turkeys. There are many strains of the virus – some of them are mild and may merely cause a low egg production or other mild symptoms among chickens, while others are severe and lethal.

Transmission

Wild aquatic birds such as ducks and geese are the natural reservoir of Influenza A viruses and the central players in the ecology of these viruses.

Many birds carry the flu without developing sickness, and shed it in their droppings.

From water birds, many of whom migrate and travel long distances, the viruses are thus further spread to poultry and terrestrial birds. Sometimes, the virus jumps over to mammals such as pigs, horses, cats and dogs.

Transmission to Humans:

Generally, people coming in close contact with infected alive or dead birds have contracted the H5N1 bird flu, and it does not usually spread from person to person, as per the WHO. There is also no evidence, the WHO says, that the disease can be spread to people through properly prepared and cooked poultry food. The virus is sensitive to heat, and dies in cooking temperatures.

However viruses such as H5N1 is severe and deadly – around 6 out of 10 confirmed cases in humans have led to deaths (though the actual mortality rate may be lower due to under-reporting of asymptomatic cases).

If the virus mutates and becomes easily transmissible from person to person, say by altering its shape to grab human cells much more effectively, it can potentially cause a pandemic.

Also, flu viruses are more prone to mutation because they have a segmented genome. All known strains of flu – including the seasonal flu and the pandemic flu – have jumped from birds to humans in this way.

Prevention and Eradication: Strict **biosecurity measures** and **good hygiene** are essential in protecting against disease outbreaks. However, in cases of an outbreak a policy of **culling infected** and **contact animals** is normally used in an effort to rapidly contain, control and eradicate the disease.

Symptoms and Treatment: The avian influenza attacks the respiratory tract of humans and may cause severe respiratory illnesses such as pneumonia or **Acute Respiratory Distress Syndrome (ARDS)**. Its early symptoms include fever, cough, sore throat, and sometimes abdominal pain and diarrhoea.

Antiviral drugs, especially oseltamivir, improve the prospects of survival in humans, according to the Union health ministry. The ministry advises people working with poultry to use PPEs and follow hand hygiene. In the US, the FDA approved a vaccine for the H5N1 virus in 2007.

Among poultry birds, vaccination strategies advised by the World Organisation for Animal Health can be used to prevent the flu, and the Organisation recommends eradicating the highly pathogenic avian influenza (HPAI) at its source to decrease the disease in avian species and further human infections.

8. Ministry of Ports, Shipping and Waterways is kicking off ambitious Project of **Sagarmala Seaplane Services (SSPS) with potential airline operators**

The operations of the Seaplane services, on the select routes, will be done under a Special Purpose Vehicle (SPV) framework. The project execution and implementation would be through **Sagarmala Development Company Ltd (SDCL)**, which is under the administrative control of the Ministry.

Several destinations are envisaged for seaplane operations. The proposed Origin-Destination pairs under Hub and Spoke model include various islands of Andaman & Nicobar and

Lakshadweep, Guwahati Riverfront & Umranso Reservoir in Assam, Yamuna Riverfront / Delhi (as Hub) to Ayodhya, Tehri, Srinagar(Uttarakhand), Chandigarh and many other tourist places of Punjab & HP; Mumbai (as Hub) to Shirdi, Lonavala, Ganpatipule; Surat (as Hub) to Dwarka, Mandvi & Kandla; Khindsi Dam, Nagpur & Erai Dam, Chandrapur (in Maharashtra) and/or any other Hub & Spoke suggested by the Operator.

To provide connectivity and easier accessibility to remote locations, SDCL is exploring plans to leverage the potential of the vast coastline and numerous water bodies/rivers across India by commencing seaplane operations. Sea Plane will utilize the nearby water bodies for take-off and landing and thus connect those places in a much economical way as conventional airport infrastructure like a runway and terminal buildings are not required for seaplane operations.

Potential Benefits of the Sea Plane project

The seaplanes services will be a game-changer providing a supplementary means of faster and comfortable transportation across the nation. Apart from providing **air connectivity** to various remote religious/tourist places, it will **boost tourism** for domestic and international holidaymakers. It will save travel time and stimulate localized short distance travelling especially in the hilly regions or across the rivers/lakes etc. In addition to the infrastructural enhancements at the places of operations, it will enormously boost tourism and business activities.

Sagarmala Project

The Sagarmala is a series of projects to leverage the country's coastline and inland waterways to drive industrial development. It was originally mooted by the Vajpayee government in 2003 as the waterways equivalent of the Golden Quadrilateral. Sagarmala, integrated with the development of inland waterways, is expected to reduce cost and time for transporting goods, benefiting industries and export/import trade.

To implement this, State governments would set up State Sagarmala committees, headed by the chief minister or the minister in charge of ports. At the central level, a Sagarmala Development Company (SDC) will be set up to provide equity support to assist various special purpose vehicles (SPVs) set up for various projects.

9. In the News: Stricter monitoring of social media platforms to check pangolin poaching and trading.

Pangolins are solitary, primarily nocturnal animals that are easily recognized by their full armor of scales.

Eight species of pangolins are found on two continents. They range from **Vulnerable to Critically Endangered**.

- Four species live in Africa: Black-bellied pangolin (*Phataginus tetradactyla*), White-bellied pangolin (*Phataginus tricuspis*), Giant Ground pangolin (*Smutsia gigantea*) and Temminck's Ground pangolin (*Smutsia temminckii*).
- The four species found in Asia: Indian pangolin (*Manis crassicaudata*), Philippine pangolin (*Manis culionensis*), Sunda pangolin (*Manis javanica*) and the Chinese pangolin (*Manis pentadactyla*).

Pangolins in India

Of the eight extant species of pangolin, the Indian Pangolin *Manis crassicaudata* and Chinese Pangolin *M. pentadactyla* occur in India.

The species is understood to occur in various types of tropical forests as well as open land,

grasslands and degraded habitats, including in close proximity to villages. The species can adapt well to modified habitats, provided its ant and termite prey remains abundant. Indian Pangolin is widely distributed in India, except the arid region, high Himalayas and the North-East. It can be found at elevation up to 2500 m. The species also occurs in Bangladesh, Pakistan, Nepal and Sri Lanka.

In India, the **pangolin** is protected under **Schedule I of the Wildlife (Protection) Act 1972**

10. Ethiopia, Sudan and Egypt agreed on Sunday to resume negotiations to resolve their decade-long complex dispute over the **Grand Renaissance Dam hydropower project** in the Horn of Africa.

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

Spearheaded by Ethiopia, the 145-meter-tall (475-foot-tall) Grand Renaissance Dam hydropower project, when completed, will be Africa's largest. The main waterways of the Nile run through Uganda, South Sudan, Sudan and Egypt, and its drainage basin runs through several countries in East Africa, including Ethiopia, the portion where this dam is being constructed.

The dispute

Given the dam's location on the Blue Nile tributary, it would potentially allow Ethiopia to gain control of the flow of the river's waters. Egypt lies further downstream and is concerned that Ethiopia's control over the water could result in lower water levels within its own borders.

When Ethiopia had announced in 2019 that it planned on generating power using two turbines, Egypt had strongly objected. In addition, Egypt proposed a longer timeline for the project over concerns that the water level of the Nile could dramatically drop as the reservoir fills with water in the initial stages.

Sudan's location between Egypt up north and Ethiopia down south has caused it to become an inadvertent party to this dispute. But that isn't all; Sudan too is concerned that if Ethiopia were to gain control over the river, it would affect the water levels Sudan receives.

The Horn of Africa

The Horn of Africa is the **easternmost extension of African land**. It is home to the countries of **Djibouti, Eritrea, Ethiopia, and Somalia**. (according to some broader definitions, it also includes parts or all of Kenya, Sudan, South Sudan, and Uganda). Part of the Horn of Africa region is also known as the **Somali peninsula**; this term is typically used when referring to lands of Somalia and eastern Ethiopia.

Its coasts are washed by the **Red Sea, the Gulf of Aden, and the Indian Ocean**, and it has long been in contact with the Arabian Peninsula and southwestern Asia.

11. The Government has launched **hackathon for toys** titled "**toycathon**"

The Centre launched a hackathon for students, teachers and start-ups to design and develop toys and games "**based on Indian culture and ethos, local folklore and heroes, and Indian value systems.**" The Toycathon has nine themes, including fitness and sport and rediscovering traditional Indian toys.

The goal of the "toycathon" is **to promote India as a global toy manufacturing hub**. According to Ministry for Human Resource Development, though the toy market in India is worth \$1 billion, 80% toys are imported.

The hackathon is an initiative of the Ministry of Education, Ministry of Women and Child

Development Ministry of Textile, Ministry of Commerce and Industries, Ministry of Micro, Small and Medium Enterprises, Ministry of Information and Broadcasting and All India Council for Technical Education.

12. The Reserve Bank of India (RBI) on Tuesday announced the operationalisation of the payment infrastructure development fund (PIDF) scheme

The Scheme is intended to **subsidise deployment of payment acceptance infrastructure** in tier-3 to tier-6 centres, with a special focus on the north-eastern states of the country.

Some of the highlights of the scheme are as follows:

- An advisory council (AC) under the chairmanship of RBI deputy governor BP Kanungo has been constituted for managing the PIDF.
- The fund will be operational for **three years** effective from January 1, 2021 and may be extended for two more years.
- The PIDF presently has a corpus of Rs 345 crore, with Rs 250 crore contributed by the RBI and Rs 95 crore by the major authorised card networks in the country.
- The authorised card networks shall contribute in all Rs 100 crore. The card issuing banks shall also contribute to the corpus based on the card issuance volume — covering both debit and credit cards — at the rate of `1 and `3 per debit and credit card issued by them, respectively.
- Besides, the PIDF shall also receive annual contributions from card networks and card issuing banks. Card networks will have to chip in with one basis point (bps), or 0.01 paisa per rupee of transaction. Card issuing banks will have to contribute one bps and two bps — 0.01 paisa and 0.02 paisa — per rupee of transaction for debit and credit cards respectively. They must also contribute Rs 1 and Rs 3 for every new debit and credit card issued by them during the year. The RBI shall contribute to yearly shortfalls, if any.
- As the cost structure of acceptance devices vary, subsidy amounts shall accordingly differ by the type of payment acceptance device deployed. A subsidy of 30% to 50% of cost of physical PoS and 50% to 75% subsidy for Digital PoS shall be offered
- The subsidy shall be granted on a half-yearly basis, after ensuring that performance parameters are achieved, including conditions for 'active' status of the acceptance device and 'minimum usage' criteria, as defined by the AC. The minimum usage shall be termed as 50 transactions over a period of 90 days and active status shall be minimum usage for 10 days over the 90-day period.
- The subsidy claims shall be processed on a half-yearly basis and 75% of the subsidy amount shall be released. The balance 25% shall be released later subject to the status of the device being active in three out of the four quarters of the ensuing year.

The implementation of targets shall be monitored by the RBI with assistance from card networks, the Indian Banks' Association (IBA) and the Payments Council of India (PCI).

13. The Supreme Court has clarified the position of law on the interplay of vertical and horizontal reservations.

What are vertical and horizontal reservations?

- Reservation for Scheduled Castes, Scheduled Tribes, and Other Backward Classes is referred to as **vertical reservation**. It applies separately for each of the groups specified under the law.

- **Horizontal reservation** refers to the equal opportunity provided to other categories of beneficiaries such as women, veterans, the transgender community, and individuals with disabilities, cutting through the vertical categories.

The horizontal quota is applied separately to each vertical category, and not across the board. For example, if women have 50% horizontal quota, then half of the selected candidates will have to necessarily be women in each vertical quota category — i.e., half of all selected SC candidates will have to be women, half of the unreserved or general category will have to be women, and so on.

The issue

The interlocking of the two types of reservation throws up a host of questions on how certain groups are to be identified. For example, would an SC woman be put in the category of women or SC? Since quotas are fixed in percentages, what percentage of quota would be attributed to each?

In the present case adjudicated by the Supreme Court: Sonam Tomar and Rita Rani had secured 276.5949 and 233.1908 marks respectively. They had applied under the categories of OBC-Female and SC-Female respectively. OBC and SC are vertical reservation categories, while Female is a horizontal reservation category.

The two candidates did not qualify in their categories. However, in the General-Female (unreserved-female) category, the last qualifying candidate had secured 274.8298 marks, a score that was lower than Tomar's.

The question before the court was that if the underlying criterion for making selections is “merit”, should Tomar be selected under General-Female quota instead of the OBC-Female category for having secured a higher score?

The government's argument

The government's policy was to restrict and contain reserved category candidates to their categories, even when they had secured higher grades. The court said this was tantamount to ensuring that the general category was ‘reserved’ for upper castes.

The Supreme Court's Decision

The court ruled against the Uttar Pradesh government, holding that if a person belonging to an intersection of vertical-horizontal reserved category had secured scores high enough to qualify without the vertical reservation, the person would be counted as qualifying without the vertical reservation, and cannot be excluded from the horizontal quota in the general category.

A similar question had arisen in the case of vertical reservations in the past, and the law had been settled similarly: If a person in the SC category secures a higher score than the cut-off for the general category, the person would be counted as having qualified under the general category instead of the SC quota.

The court's reasoning

Examining a number of hypothetical scenarios, it concluded that if both vertical and horizontal quotas were to be applied together — and consequently, a high-scoring candidate who would otherwise qualify without one of the two reservations is knocked off the list — then the overall selection would have candidates with lower scores.

On the other hand, if a high-scoring candidate is allowed to drop one category, the court found that the overall selection would reflect more high-scoring candidates. In other words, the “meritorious” candidates would be selected.

The ruling strikes at the heart of the debate on “merit versus reservation”, where reservation is sometimes projected as being anti-merit.

14. Recent surveys by the **Atomic Minerals Directorate for Exploration and Research** (AMD) have shown the presence of **lithium resources in Mandya district**, Karnataka.

Background: Preliminary surveys by the Atomic Minerals Directorate for Exploration and Research (AMD), an arm of the Department of Atomic Energy, are learnt to have shown the presence of **1,600 tonnes of lithium** resources in the igneous rocks of the **Marlagalla-Allapatna region of Karnataka’s Mandya district**.

Why is it important for India?

- This discovery comes at a time when India is facing bilateral challenges with China, a major source of lithium-ion energy storage products being imported into the country.
- Secondly it comes at a time when Electric Vehicles are predicted to be a sector ripe for disruption. Experts believe that 2021 is likely to be an inflection point for battery technology – with several potential improvements to the li-ion technology, and alternatives to this tried-and-tested formulation in advanced stages of commercialisation.

Over 165 crore lithium batteries are estimated to have been imported into India between 2016-17 and 2019-20 (up to November 30, 2019), at an estimated import bill of upwards of \$3.3 billion.

What is Lithium?

Lithium is the chemical element with **symbol Li** and **atomic number 3**. In the periodic table, it is located in group 1, among the **alkali metals**.

Lithium in its pure form is **a soft, silver white metal** that tarnishes and oxidizes very rapidly in air and water.

It is the **lightest solid element** and is primarily used in heat transfer alloys, in batteries and serves as a component in some drugs known as mood stabilizers.

Uses of Lithium

- The most important use of lithium is in **rechargeable batteries** for mobile phones, laptops, digital cameras and electric vehicles. Lithium is also used in some non-rechargeable batteries for things like heart pacemakers, toys and clocks.
- Lithium metal is made into **alloys with aluminium and magnesium**, improving their strength and making them lighter. A magnesium-lithium alloy is used for armour plating. Aluminium-lithium alloys are used in aircraft, bicycle frames and high-speed trains.
- Lithium oxide is used in special glasses and glass ceramics. Lithium chloride is one of the most hygroscopic materials known, and is used in air conditioning and industrial drying systems (as is lithium bromide).
- Lithium stearate is used as an all-purpose and high-temperature lubricant.
- Lithium carbonate is used in drugs to treat manic depression.
- Lithium hydride is used as a means of storing hydrogen for use as a fuel.

Extraction of Lithium

Lithium can be **extracted** in different ways, depending on the type of the deposit – it is generally done either through **solar evaporation of large brine pools** or **by hard-rock extraction of the ore**.

Sources of Lithium in India

In India, alongside the rock mining at Mandya, there is some potential for recovering lithium from the brines of Sambhar and Pachpadra in Rajasthan, and Rann of Kachchh in Gujarat. The major mica belts in Rajasthan, Bihar, and Andhra Pradesh, and the pegmatite belts in Odisha and Chhattisgarh apart from Karnataka, are the other potential geological domains.

15. Ministry for Environment, Forest and Climate Change has released **Management Effectiveness Evaluation (MEE)** of 146 national parks and wildlife sanctuaries in the country.

For the survey, 146 National Parks and Wildlife Sanctuaries across 29 states and Union territories were evaluated. According to the evaluation,

- **Tirthan Wildlife Sanctuary** and **Great Himalayan National Park** in Himachal Pradesh have performed the best among the surveyed protected areas.
- The **Turtle Wildlife Sanctuary** in Uttar Pradesh was the worst performer in the survey.

It was also announced that this year onwards, 10 best national parks, five coastal and marine parks and top five zoos in the country will be ranked and awarded every year.

Management Effectiveness Evaluation (MEE)

Management Effectiveness Evaluation (MEE) is the assessment of how well protected areas such as national parks, wildlife sanctuaries, conservation reserves, community reserves and tiger reserves are being managed and their effectiveness in conserving target flora and fauna. Management Effectiveness Evaluation of Protected Areas has emerged as a key tool that is increasingly being used by governments and international bodies to understand strengths and weaknesses of the protected area management systems.

India has systematically designated its Protected Areas in four legal categories — **National Parks, Wildlife Sanctuaries, Conservation Reserves and Community Reserves** under the **Wildlife (Protection) Act, 1972**.

Under this Act, India has **903 formally designated Protected Areas** with a total coverage 1,65,012.6 square km. Among these are **101 National Parks, 553 Wildlife Sanctuaries, 86 Conservation Reserves and 163 Community Reserves**.

16. Ministry of Power, in association with Bureau of Energy Efficiency (BEE), organised the 30th **National Energy Conservation Awards (NECA)**

During the event

- A virtual exhibition on achievements on Energy Efficiency was included. The awards were presented to the winners from different industries and sector establishments.
- Further, the **Standards and Labelling Programme** for Air Compressors and Ultra High Definition (UHD) TV on voluntary basis was initiated;
- **SAATHEE** (State-wise Actions on Annual Targets and Headways on Energy Efficiency) – A portal for State Designated Agency for state level activities was also launched.

The Star Labelling Programme

The Bureau of Energy Efficiency initiated the Standards & Labeling programme for equipment and appliances in 2006 to provide the consumer an informed choice about the energy saving and thereby the cost saving potential of the relevant marketed product. The energy efficiency labeling programs under BEE are intended to reduce the energy consumption of appliance without diminishing the services it provides to consumers.

The Star Labelling Programme for Air Compressor and UHD TV is launched on a voluntary basis and the energy consumption standards will be effective from 01st January 2021. This initiative is expected to save around 8.41 Billion Units of electricity for Air Compressors and 9.75 Billion Units for UHD TV till 2030.

Bureau of Energy Efficiency

The Bureau of Energy Efficiency is a statutory body under Ministry of Power which is mandated to implement policy and programmes in energy efficiency and conservation. The objective of such initiatives is to reduce energy intensity in our country by optimizing energy demand and reduce emissions of greenhouse gases (GHG) which are responsible for global warming and climate change.

The agency was created in March 2002 under the provisions of the nation's 2001 Energy Conservation Act.

- 17.** The second edition of the biennial pan-India **coastal defence exercise 'Sea Vigil-21'** was recently conducted.

The exercise was undertaken along the entire 7516 km coastline and Exclusive Economic Zone of India and it involved all the 13 coastal States and Union Territories along with other maritime stakeholders, including the fishing and coastal communities.

Significance of the Exercise

The Sea Vigil exercise began after the entire coastal security setup was re-organised after the 26/11 Terror attack at Mumbai which was launched via the sea route.

The scale and conceptual expanse of the exercise is unprecedented in terms of the geographical extent, the number of stakeholders involved, and the number of units participating and in terms of the objectives to be met. The exercise is a build up towards the major **Theatre level exercise TROPEX [Theatre-level Readiness Operational Exercise]** which Indian Navy conducts every two years.

SEA VIGIL and TROPEX together will cover the entire spectrum of maritime security challenges, including transition from peace to conflict. Assets of the Indian Navy, Coast Guard, Customs and other maritime agencies will participate in SEA VIGIL, the conduct of which is also being facilitated by the Ministries of Defence, Home Affairs, Shipping, Petroleum and Natural Gas, Fisheries, Customs, State Governments and other agencies of Centre/ State.

The Ministry of Defence has stated that while smaller scale exercises are conducted in coastal states regularly, including combined exercises amongst adjoining states, the conduct of a security exercise at national-level is aimed to serve a larger purpose. It provides opportunity, at the apex level, to assess our preparedness in the domain of maritime security and coastal defence. **Exercise 'SEA VIGIL 21' will provide a realistic assessment of our strengths and weaknesses and thus will help in further strengthening maritime and national security.**

- 18.** India has entered the **United Nations Security Council (UNSC) as a non-permanent member**

India has served in the UN Security Council seven times previously.

- In 1950-51, India, as President of UNSC, presided over the adoption of resolutions calling for cessation of hostilities during the Korean War and for assistance to Republic of Korea.

- In 1967-68, India co-sponsored Resolution 238 extending mandate of UN mission in Cyprus.
- In 1972-73, India pushed strongly for admission of Bangladesh into UN. The resolution was not adopted because of a veto by a permanent member.
- In 1977-78, India was a strong voice for Africa in the UNSC and spoke against apartheid. Then External Affairs Minister Atal Bihari Vajpayee spoke in UNSC for Namibia's independence in 1978.
- In 1984-85, India was a leading voice in UNSC for resolution of conflicts in the Middle East, especially Palestine and Lebanon.
- In 1991-92, PM P V Narasimha Rao participated in the first ever summit-level meeting of the UNSC and spoke on its role in maintenance of peace and security.
- In 2011-2012, India was a strong voice for developing world, peacekeeping, counter-terrorism and Africa. First statement on Syria was during India's Presidency at the UNSC.
- During the 2011-12 term, India chaired the UNSC 1373 Committee concerning Counter-Terrorism, the 1566 Working Group concerning threat to international peace and security by terrorist acts, and Security Council 751/1907 Committee concerning Somalia and Eritrea.

India played an active role in discussions on all issues related to international peace and security, including several new challenges which the UNSC was called upon to deal with in Afghanistan, Cote d'Ivoire, Iraq, Libya, South Sudan, Syria and Yemen. In view of the threat posed to international trade and security by piracy off the coast of Somalia, India promoted international cooperation against the pirates.

At India's initiative, the Security Council mandated international cooperation for release of hostages taken by pirates as well as for prosecution of those taking hostages and those aiding and abetting these acts.

India also worked for enhancing international cooperation in counter-terrorism, prevention of the proliferation of weapons of mass destruction to non-state actors, and the strengthening of UN peacekeeping and peacebuilding efforts.

Issues before India

- **UN REFORMS:** New Delhi has said it is essential that the Security Council is expanded in both the permanent and non-permanent categories. It says India is eminently suited for permanent UNSC membership by any objective criteria, such as population, territorial size, GDP, economic potential, civilisational legacy, cultural diversity, political system and past and ongoing contributions to UN activities — especially to UN peacekeeping operations.
- **TERRORISM:** The international effort against terrorism is a key priority for India in the UN. With the objective of providing a comprehensive legal framework to combat terrorism, India took the initiative to pilot a draft Comprehensive Convention on International Terrorism (CCIT) in 1996. A text of the Convention is being negotiated in the 6th Committee of the UN General Assembly.

India worked closely with its partners in the UNSC to ensure the listing of Pakistan-based terrorist Masood Azhar under the UNSC's 1267 Sanctions Committee (May 2019) concerning al-Qaida and ISIS and associated individuals and entities, which was pending since 2009.

India is entering the UNSC at a time when China is asserting itself at the global stage much more vigorously than ever. It heads at least six UN organisations — and has challenged the global rules. China's aggressive behaviour in the Indo-Pacific as well as the India-China border has been visible in all of 2020.

At Pakistan's behest, China has tried to raise the issue of Kashmir at the UNSC — but has not found much support. There is some discussion among the strategic community in New Delhi on raising the issues of Taiwan, Hong Kong and Tibet at the UNSC. New Delhi will weigh the pros and cons with partners on what steps to take in this direction.

But, the polarising politics inside India gives a window of opportunity to its rivals, and opens up the possibility of criticism — especially on human rights issues.

As New Delhi engages with allies and plays its cards at the UNSC, it will be mindful of veteran diplomat Gharekhan's advice about the Security Council in his book: "Nothing remains secret in this leakiest of all organisations."

19. The **Pradhan Mantri Fasal Bima Yojana (PMFBY)** has completed 5 Years of operations

The PMFBY is a **crop insurance scheme** that improved upon its predecessors

- to provide national insurance and financial support to farmers in the event of crop failure:
- to stabilise income, ensure the flow of credit and encourage farmers to innovate and use modern agricultural practices.

The scheme extends coverage for the entire cropping cycle from pre-sowing to post-harvest including coverage for losses arising out of prevented sowing and mid-season adversities. Individual farm level losses arising out of localized calamities and post-harvest losses are also covered due to perils such as inundation, cloudburst and natural fire.

Implementation of the Scheme

The Scheme is being implemented through a multi-agency framework by selected insurance companies under the overall guidance & control of the Department of Agriculture, Cooperation & Farmers Welfare (DAC&FW), Ministry of Agriculture & Farmers Welfare (MoA&FW), Government of India (GOI) and the concerned State in co-ordination with various other agencies

Under the scheme farmers pay a premium of 2% of the sum insured for all foodgrains and oilseeds crops of Kharif; 1.5% for all food grains and oilseeds crops of Rabi; and 5% for all horticultural crops. The difference between actuarial premium rate and the rate of insurance premium payable by farmers, which is called the Rate of Normal Premium Subsidy, is shared equally between the Centre and the states. However, states and Union Territories are free to extend additional subsidy over and above the normal subsidy from their budgets.

During 2018-19, about 5.64 crore farmers are enrolled with PMFBY for an insured sum of Rs 2,35,277 crore

Integration of land records with the PMFBY portal, Crop Insurance mobile-app for easy enrollment of farmers and usage of technology such as satellite imagery, remote-sensing technology, drones, artificial intelligence and machine learning to assess crop losses are some of the key features of the scheme. The scheme makes it easier for the farmer to report crop loss within 72 hours of occurrence of any event through the Crop Insurance App, CSC Centre or the nearest agriculture officer.

20. An international research team led by the University of Bonn has identified and further developed '**nanobodies**' against **SARS-CoV-2(COVID-19)**

Antibodies

Antibodies are an important weapon in the immune system's defense against infections. They bind to the surface structures of bacteria or viruses and prevent their replication. One strategy in the fight against disease is therefore to produce effective antibodies in large quantities and inject them into patients. However, producing antibodies is difficult and time-consuming; they are, therefore, probably not suitable for widespread use.

Nanobodies

The researchers instead focussed on another group of molecules, the nanobodies. "Nanobodies are **antibody fragments** that are so simple that they **can be produced by bacteria or yeast**, which is less expensive

The researchers first injected a surface protein of the coronavirus into an alpaca and a llama. In addition to complex normal antibodies, llamas and alpacas also produce a simpler antibody variant that can serve as the basis for nanobodies.

A few weeks later, the researchers took a blood sample from the animals, from which they extracted the genetic information of produced antibodies. This "library" still contained millions of different construction plans. In a complex process, they extracted those that recognise an important structure on the surface of the coronavirus, the spike protein.

The researchers **combined the nanobodies into potentially particularly effective molecules**. These attack different parts of the virus simultaneously. The approach **could prevent the pathogen from evading the active agent through mutations**.

21. **World food prices** rose for a seventh consecutive month in December

Context: The **Food and Agriculture Organization's (FAO) food price index**, which measures monthly changes for a basket of cereals, oilseeds, dairy products, meat and sugar, averaged 107.5 points last month versus 105.2 in November. For the whole of 2020, the benchmark index averaged 97.9 points, a three-year high and a 3.1% increase from 2019.

What is the Food Price Index?

The FAO Food Price Index (FFPI) is a measure of the monthly change in international prices of a basket of food commodities. It consists of the average of five commodity group price indices weighted by the average export shares of each of the groups over 2014-2016

Food and Agriculture Organization (FAO)

The FAO is the oldest permanent specialized agency of the United Nations. It was established in October 1945 with the objective of eliminating hunger and improving nutrition and standards of living by increasing agricultural productivity.

The FAO coordinates the efforts of governments and technical agencies in programs for developing agriculture, forestry, fisheries, and land and water resources. It also carries out research; provides technical assistance on projects in individual countries; operates educational programs through seminars and training centres; maintains information and support services, including keeping statistics on world production, trade, and consumption of agricultural commodities; and publishes a number of periodicals, yearbooks, and research bulletins.

The organization, which has more than 180 members, is governed by the biennial FAO conference, in which each member country, as well as the European Union, is represented. The FAO is headquartered in Rome, Italy.

- 22.** The Office of the **United States Trade Representative (USTR)** has stated that the **Digital services taxes** adopted by **India, Italy and Turkey discriminate against US companies** and are **inconsistent with international tax principles**.

Background: The Central government had moved an amendment in the Finance Bill 2020-21 imposing a **2 per cent digital service tax (DST)** on trade and services by non-resident e-commerce operators with a turnover of over Rs 2 crore, effectively expanding the scope of equalisation levy that, till last year, only applied to digital advertising services.

What is Digital Service Tax?

Digital taxes include policies that specifically target businesses which provide products or services through digital means using a special tax rate or tax base.

These include policies that extend existing rules to ensure a neutral tax policy toward all businesses, such as when a country extends its Value-added Tax to include digital services. They also include special corporate tax rules designed to identify when a digital company has a permanent establishment even without a physical presence.

The DST imposes a 2% tax on revenue generated from a broad range of digital services offered in India, including digital platform services, digital content sales, digital sales of a company's own goods, data-related services, software-as-a-service, and several other categories of digital services.

US Government's opposition

Broadly, the USTR report finds the DST to be discriminatory on two counts. First, it states that the DST discriminates against US digital businesses because it specifically excludes from its ambit domestic (Indian) digital businesses. And second, according to the report, the DST does not extend to identical services provided by non-digital service providers. While both these findings may seem justified at first glance, they are wholly misplaced and disregard the background and context in which the DST was introduced.

India's response

According to the Commerce and Industry Ministry, the 2 per cent equalisation levy is not discriminatory, instead seeks to ensure a level-playing field with respect to e-commerce activities undertaken by entities resident in India as well as those not residents in India or without permanent establishment in India.

Further it has also stated that the tax also does not have extra-territorial application as it applies only on the revenue generated from India

Moreover, the DST is a tax not on income, but revenue, which falls outside the scope of tax treaties with countries such as the United States.

- 23.** The **National Mission on Quantum Technologies & Applications (NM-QTA)** is nearly ready for implementation.

The National Mission on Quantum Technologies & Applications (NM-QTA) was announced in the 2020 Union budget with an outlay of Rs 8,000 crore for a period of **five years** to be implemented by the **Department of Science & Technology (DST)**.

The mission will develop and bring quantum computers, secure communications, quantum encryption and crypt-analysis and associated technologies within reach in India. It will also help prepare next-generation manpower, boost translational research and encourage entrepreneurship and start-up ecosystems.

The next generation transformative technologies that will receive a push under this mission

include quantum computers and computing, quantum communication, quantum key distribution, encryption, crypt-analysis, quantum devices, quantum sensing, quantum materials, quantum clock and so on

Quantum Technology

Quantum Technology is based on the principles of quantum theory, which explains the nature of energy and matter on the atomic and subatomic level. It concerns the control and manipulation of quantum systems, with the goal of achieving information processing beyond the limits of the classical world.

Quantum computers store and process information using quantum **two level systems (quantum bits or qubits)** which unlike classical bits, can be prepared in superposition states. This key ability makes quantum computers extremely powerful compared to conventional computers when solving certain kinds of problems like finding prime factors of large numbers and searching large databases.

Potential Applications of Quantum Technology

The range of quantum technologies is expected to be one of the major technology disruptions that will change entire paradigm of computation, communication and encryption. It is perceived that the countries who achieve an edge in this emerging field will have a greater advantage in garnering multifold economic growth and dominant leadership role.

The potential applications include those in aero-space engineering, numerical weather prediction, simulations, securing the communications & financial transactions, cyber security, advanced manufacturing, health, agriculture, education and other important sectors with focus on creation of high skilled jobs, human resources development, start-ups & entrepreneurship leading to technology lead economic growth.

- 24.** The auto industry has requested the government to **defer the implementation of Corporate Average Fuel Efficiency (CAFE-2) regulations and BS-VI stage II norms to April 2024**, given the impact of the lockdown measures.

Context: Currently, the **CAFE-2 norms** and **BS-VI stage II norms** are set to come into effect in **2022** and **April 2023 respectively**.

Corporate Average Fuel Efficiency (CAFE) regulations :

CAFE or Corporate Average Fuel Efficiency regulations aim at lowering fuel consumption (or improving fuel efficiency) of vehicles by lowering carbon dioxide (CO₂) emissions, thus serving the twin purposes of reducing dependence on oil for fuel and controlling pollution. They are in force in many advanced as well as developing nations, including India.

Corporate Average refers to sales-volume weighted average for every auto manufacturer. The norms are applicable for petrol, diesel, LPG and CNG passenger vehicles. CAFE regulations in India came into force from April 1, 2017. Under this, average corporate CO₂ emission must be less than 130 gm per km till 2022 and below 113 gm per km thereafter.

BS-VI norms

The **Bharat Stage (BS)** norms are instituted by the Government of India to define the output of permissible air pollutants from an internal combustion engine that power the motor vehicles. These emission norms and the timelines for their introduction are decided by the Central Pollution Control Board, which comes under the Ministry of Environment & Forests and climate change.

The Bharat Stage Emission Standards are based on European norms, which are commonly classified as 'Euro 2', 'Euro 3', et al. The regulations were first launched in India in 2000

and have seen several revisions in the last two decades. India 2000, which was based on the Euro 1 standards, was replaced with Bharat Stage II (BSII) norms in 2001. These were followed by BS3, while the latter was then replaced with BS4 standards.

India skipped the BSV norms and embraced BS VI norms from April 2020

The BS VI emission standards restrict tailpipe discharge from petrol cars to a Carbon Monoxide emission of 1.0 g/km, Hydro carbons+Nitrogen Oxides discharge of 0.16 g/km, and Respirable suspended particulate matter discharge of 0.05.

The diesel models can emit a peak carbon monoxide of 0.50 g/km, a nitrous oxide of 0.06 g/km, and Hydro carbons+Nitrogen Oxides discharge of 0.17 g/km. Also, the Sulphur content in the Bharat Stage VI-compliant fuels is be restricted to 10 PPM.

- 25.** Denmark has approved a plan to build an **artificial "energy island"** in the North Sea as part of its effort to switch to green energy.

The project is being called the largest construction project to be undertaken in Denmark's history with an estimated cost of DKK 210 billion.

Energy island

An energy island is based on a platform that serves as a **hub for electricity generation** from surrounding offshore wind farms. The idea is to connect and distribute power between Denmark and neighbouring countries. Denmark has already entered into agreements with the Netherlands, Germany and Belgium to begin the joint analysis of connections in the energy island.

In June 2020, the Danish Parliament decided to initiate the construction of two energy islands, which will export power to mainland Denmark and neighbouring countries. One of these islands will be located in the North Sea and the second island, called the island of Bornholm, will be located in the Baltic Sea.

The move has come after the EU announced its plans to transform its electricity system to rely mostly on renewables within a decade and to increase its offshore wind energy capacity by over 25-fold by the year 2050.

Estimates suggest that it will be able to store and produce enough green energy to cover the electricity requirements of over 3 million households in the European Union (EU).

According to the Danish Energy Agency, as part of the Climate Agreement for Energy and Industry, Denmark wants to become the first country in the world to begin working on such energy islands with a total capacity of about 5 GW offshore winds. The construction of both islands is expected to be complete by 2030.

- 26.** The University Grants Commission (UGC) has amended its regulations, allowing **Institutions of Eminence (IoEs) to set up campuses abroad** after receiving no objection certificates from the Ministry of External Affairs and Ministry of Home Affairs.

The move is in line with the government's new **National Education Policy**, which says that high performing universities should be encouraged to set up campuses abroad.

Institutions of Eminence Scheme

Institutions of Eminence scheme has been launched in 2017 in order to implement the commitment of the Government to empower the Higher Educational Institutions and to help them become world class teaching and research institutions

Under the scheme, Public Institutions of Eminence are eligible for a grant of Rs. 1,000 crore from the government and no funds will be given to Private Institutions of Eminence.

The IoEs will enjoy complete academic and administrative freedom.

27. Natural Capital Accounting and Valuation of the Ecosystem Services (NCAVES) India Forum-2021 was organised by the Ministry of Statistics and Programme Implementation (MoSPI).

What is NCAVES?

The NCAVES Project, funded by EU, has been jointly implemented by the United Nations Statistics Division (UNSD), the United Nations Environment Programme (UNEP) and the Secretariat of the Convention of Biological Diversity (CBD). India is one of the five countries taking part in this project - the other countries being Brazil, China, South Africa and Mexico.

In India, the NCAVES project is being implemented by the Ministry of Statistics and Programme Implementation (MoSPI) in close collaboration with the Ministry of Environment, Forest and Climate Change (MoEF&CC) and the National Remote Sensing Centre (NRSC). MoSPI has coordinated with all the stakeholders through a consultative process by setting in place a mechanism for linking the diverse stakeholders concerned - namely producers and the policymakers using the environmental accounts.

The objectives of the National Forum are:

- To present India's achievements in the domain of Natural Capital Accounting (NCA);
- To prioritize the emerging opportunities for NCA in India;
- To familiarize stakeholders with the work undertaken by the different international agencies in the area of NCA; and
- To provide a platform to selected Research Institutions to present their research conducted in the valuation of ecosystem services.

Significance:

The participation in the project has helped MOSPI commence the compilation of the Environment Accounts as per the UN-SEEA System of Environmental-Economic Accounting (SEEA) framework.

- The MOSPI has also released environmental accounts in its publication "**EnviStats India**" on an annual basis since 2018.
- Several of these accounts are closely related to the social and economic attributes, making them a useful tool for the Policy.

28. The Centre has objected to a petition seeking to discontinue with the provision of inviting objection from public while applying for marriage registration under the Special Marriage Act (SMA).

Background: All marriages done under the SMA requires publication of the names of the couple for inviting objections from public for 30 days. Within this period, anyone can object to the marriage on the ground that it would contravene one or more of the conditions specified in section 4 of the SMA. Some of the conditions include neither party has a spouse living; either of them is of unsound mind, incapable of giving a valid consent; and the man has completed twenty-one years and the woman eighteen years.

The Issue: The provision was challenged on the ground that the 30 days gestation period **discourages inter-faith marriages.**

Government's response

The Ministry of Law and Justice said that the intention behind the provision in SMA was to "keep adequate safeguards to the interest of various parties involved". Moreover, it also

stated that if any person raises objection to the said marriage within a period of 30 days, the marriage officer shall not solemnise the marriage until he has enquired into the matter of objection.

29. The US House of representatives **impeached President Donald Trump** for a second time

Impeachment of President of the United States

The Constitution of the United States gives Congress the authority to remove the president of the United States from office in two separate proceedings.

- The first takes place in the House of Representatives, which impeaches the president by approving articles of impeachment through a simple majority vote.
- Next the impeachment trial takes place in the Senate. There, conviction on any of the articles requires a two-thirds majority vote and would result in the removal from office (if currently sitting), and possible debarment from holding future office

Process of impeachment of the President of India

Article 61 of the Constitution lays down the condition for the removal (impeachment) of the President. Although the office of President is of respect and dignity, yet he/she can be removed from his/her office for violation of the Constitution.

The resolution to impeach can be moved in any one of the two Houses of the Parliament. This resolution should be **moved by at least one fourth of the total members of the House** and must be **passed by not less than two-third majority of the total members of the House**.

After being passed in one House, the resolution goes to the second House for investigation

The charges leveled against the President are investigated by the second House. President may defend him/her personally or through his counsel. If the second House also accepts the resolution by not less than the two third majority of the House, then the impeachment process succeeds and the President stands removed from his/her office on the date when it is passed in the second House.

30. Ministry of Skill Development and Entrepreneurship (MSDE) has launched the **Pradhan Mantri Kaushal Vikas Yojana (PMKVY) 3.0**, in nearly 600 districts

Under the scheme government will train 8 lakh candidates over next three months with an outlay of Rs 948.90 crore with focus on Covid-related skills. As per the plan, the Centre will strengthen district skill committees to identify and cater to local skilling needs under the scheme which will be demand based.

Pradhan Mantri Kaushal Vikas Yojana

The PMKVY is a flagship scheme for skill training of youth that is being implemented by the Ministry of Skill Development and Entrepreneurship through the National Skill Development Corporation (NSDC).

The objectives of Kaushal Vikas mission are as follows.

- To impart industry-related skills to the unemployed youth and school/college dropout
- To provide financial and placement assistance to trained candidates

The Kaushal Vikas Yojana scheme has three components:

- Short Term Training (STT): Basis this module, training is given to unemployed youths or school/college dropouts in line with the National Skills Qualification Framework (NSQF). Moreover, training centres offer PMKVY courses in Entrepreneurship and Financial and Digital Literacy. The duration of training varies as per the role of the job and can range from 150 to 300 hours.

- **Recognition of Prior Learning (RPL):** Under this module, assessment and certification is given to applicants with existing skills or a prior learning experience. In addition, Project Implementing Agencies (PIAs) may offer bridge courses to fill the gap between your knowledge and skills.
- **Special Projects:** This module has been designed to create a platform that facilitates training for special job roles in government, corporate or industrial bodies. Additionally, it also offers training for specific job roles that are not defined under the Qualification Packs /National Occupational Standards.

All in all, the Kaushal Vikas offers training for various PMKVY courses including good work ethics, behavioural change for cleanliness, personal grooming, and soft skills. These courses are offered for durations of 3 months, 6 months and 1 year, depending on the subject matter.

On its completion, an assessment agency approved by the SSC evaluates the person. If the person clears the assessment and possess a valid Aadhaar card, they will get a skill card and also be awarded a government certificate that is valid throughout the country. In case they don't clear the assessment, they can reapply for evaluation as many times as you wish to, however, they will have to bear the evaluation fees. In addition to paying the course fees, the government also offers financial aid and placement assistance via employment fairs.

31. Archaeologists discover the **world's oldest known cave art in Indonesia.**

The cave painting uncovered in South Sulawesi consists of a figurative depiction of a warty pig, a wild boar that is endemic to this Indonesian island. The researchers noted that the Sulawesi warty pig painting, dated to at least **45,500 years ago**, is part of a rock art panel located above a high ledge.

The previously oldest dated rock art 'scene' at least 43,900 years old, was a depiction of hybrid human-animal beings hunting Sulawesi warty pigs and dwarf bovids. It was discovered by the same research team at a nearby limestone cave site.

The team sampled the art for **Uranium-series dating**, a technique to determine the age of calcium carbonate materials.

Rock Art

Rock art, that is paintings and carvings on natural rock formations, is one of the earliest forms of creative expression and a universal phenomenon among prehistoric societies. An instrument of communication rather than simply art, it is an assemblage of material culture which provides a glimpse into the lives of people who painted them.

Rock art is the primary source to study the culture, rituals, traditions, and lives of prehistoric societies. In a multidisciplinary approach, scientists attempt to date the paintings while artists seek the meaning behind them.

There are three distinct categories of rock art:

- **Petroglyphs:** carvings, sculpting or engravings on the surface of the rock.
- **Pictographs:** paintings or drawings on rocks and the inside of the rock shelters.
- **Petroforms:** designs, patterns or sculptures made by aligning or stacking rocks.

Oldest Cave Art in India

Bhimbetka, located in Madhya Pradesh, contains more than 600 rock shelters adorned with prehistoric cave paintings some of which date back 30,000 years.

These paintings are not from one era. Instead, there are many which are superimposed on older ones, giving evidence of the caves being used by humans through various periods. This allows historians to study continuity in human evolution and civilization.

- The oldest drawings are from the Upper Paleolithic Era and are in hues of green and red. Large animals like bison, elephants and tigers are depicted.
- The paintings from the Mesolithic Era bring in the addition of humans hunting such animals with weapons like spears, bow and arrows and sticks.
- Depictions of communal gatherings are also evident, including scenes of dances and pregnant women. These suggest that it was largely a hunter-gatherer economy in this period.
- As time went on, the paintings showed trade and religion. The colours changed to red, white and yellow and tunic-like dresses adorned the humans now. The most recent set of paintings are more geometric and schematic.
- One particular painting shows a horse, which leads historians to believe it is only a few thousand years old as horses are not native to India.

32. India's first indigenous 9mm Machine Pistol, named **Asmi**, has been jointly developed by DRDO and Indian Army.

The weapon has been developed by Infantry School, Mhow and DRDO's Armament Research & Development Establishment (ARDE), Pune.

3D printing technology has been used in designing and prototyping of various parts, including trigger components which have been made by metal 3D printing.

The Potential for Asmi:

The weapon has huge potential in Armed forces as personal weapon for heavy weapon detachments, commanders, tank and aircraft crews, drivers/dispatch riders, radio/radar operators, Closed Quarter Battle, counter insurgency and counter terrorism operations etc. This is also likely to find huge employability with the central and state police organizations as well as VIP protection duties and Policing. The Machine Pistol is likely to have production cost under rupees 50000 each and has potential for exports.

What is 3D Printing?

3D printing or additive manufacturing is a process of making three dimensional solid objects from a digital file.

In an additive process an object is created by laying down successive layers of material until the object is created. Each of these layers can be seen as a thinly sliced cross-section of the object.

33. Two of the ten indigenously built **Doppler weather radars** which will closely monitor the weather changes over the Himalayas have been commissioned.

Covering the central and western Himalayas, these dual polarised radars will gather atmospheric variations and pick signals of extreme weather events

Importance of Doppler weather Radars:

Both Uttarakhand and Himachal Pradesh are highly prone to cloud bursts, landslides, heavy rain and snowfall. Timely weather forecasts and warnings would ensure the governments make advance plans and initiate rescue measures. Further, it will also play a significant role in agriculture and tourism in the region.

Doppler weather radars

"The IMD must now utilise the latest digital technology and work towards developing mobile-friendly weather applications, especially in regional languages," Rajeevan added.

Mrutyunjay Mohapatra, director general, IMD, said the Met department will strive to detect every severe weather event, issue advance forecasts and warnings and work towards minimising losses.

A joint venture with the Indian Space Research Organisation (ISRO), the Union minister launched a Multi-Mission Meteorological Data Receiving and Processing System. This new system will capture, process and make available for use satellite data within seven minutes as opposed to 20 minutes taken by earlier systems.

Doppler Weather Radars

Weather Radars are the basic and most important tool for a Meteorologist for Nowcasting and Forecasting of various severe weather events.

Doppler Weather radars detect the motion of rain droplets in addition to the intensity of the precipitation. Data is analyzed to determine the structure of storms, wind pattern and their potential to cause severe weather. It is used to locate precipitation, calculate its motion, and estimate its type (rain, snow, hail etc.).

By **measuring the shift (or change) in phase between** a transmitted pulse and a received echo, the target's movement directly toward or away from the radar is calculated. This then provides a velocity along the direction the radar is pointing. This effect is similar to the "**Doppler shift**" observed with sound waves.

34. Department of Food & Public Distribution notified modified scheme **to enhance ethanol distillation capacity** in the country for producing **1st Generation (1G) ethanol** from feed stocks such as cereals (rice, wheat, barley, corn & sorghum), sugarcane, sugar beet etc.

Under the scheme ,

- Government would bear interest subvention for five years including one year moratorium against the loan availed by project proponents from banks @ 6% per annum or 50% of the rate of interest charged by banks whichever is lower for setting up of new distilleries or expansion of existing distilleries or converting molasses based distilleries to dual feedstock.
- For production of ethanol, there is sufficient availability of feed stocks; & Government has also fixed remunerative prices of ethanol derived from various feed stocks.
- Moreover, OMCs being the assured buyer for ethanol has given comfort for purchase of ethanol from distilleries for next 10 years. As such the upcoming ethanol projects are viable.

Advantages of the scheme:

This scheme would not only facilitate diversion of excess sugar to ethanol but would also encourage farmers to diversify their crops to cultivate particularly maize/corn which needs lesser water compared to sugarcane and rice. It would enhance production of ethanol from various feed stocks thereby, facilitate in achieving blending targets of ethanol with petrol and would reduce import dependency on crude oil , thereby, realizing the goal of Atmanirbhar Bharat. It will also enhance income of farmers as setting up of new distilleries would not only increase demand of their crops but would assure farmers of getting better price for their crops.

Biofuels

Biofuels are liquid or gaseous fuels primarily produced from biomass, and can be used to replace or can be used in addition to diesel, petrol or other fossil fuels for transport, stationary, portable and other applications. Crops used to make biofuels are generally either high in sugar (such as sugarcane, sugarbeet, and sweet sorghum), starch (such as maize and tapioca) or oils (such as soybean, rapeseed, coconut, sunflower).

Biofuels are generally classified into three categories. They are

1. **First generation biofuels** - First-generation biofuels are made from sugar, starch, vegetable oil, or animal fats using conventional technology. Common first-generation biofuels include Bioalcohols, Biodiesel, Vegetable oil, Bioethers, Biogas.
2. **Second generation biofuels** - These are produced from non-food crops, such as cellulosic biofuels and waste biomass (stalks of wheat and corn, and wood). Examples include advanced biofuels like biohydrogen, biomethanol.
3. **Third generation biofuels** - These are produced from micro-organisms like algae.

35. The Finance Ministry has extended the bidding deadlines for the **strategic disinvestment** of Pawan Hans by a month

Background: In December 2020, the government had invited expressions of interest from bidders for its 51% stake in **mini-Ratna PSU Pawan Hans**, with January 19 as the deadline. The balance 49% stake in the firm is owned by ONGC, and the successful bidder would get an option to buy out the oil major's stake on similar price and terms as agreed for the Centre's stake.

What is strategic disinvestment?

When the government decides to **transfer the ownership and control of a public sector entity** to some other entity, either private or public, the process is called strategic disinvestment.

It is important to note that selling **minority** shares of Public Enterprises, to another entity be it public or private is **disinvestment**. In this the **government retains ownership** of the enterprise. On the other hand, when the government sells **majority** shares in an enterprise, which is **strategic disinvestment/sale**. Here, the government gives up the ownership of the entity as well. Government carefully chooses enterprises to be put up for sale.

Experts have noted that strategic sales of public sector firms like Air India and BPCL are unlikely to conclude this year, nor is the plan to list the Life Insurance Corporation of India on the bourses likely to take off by March 31, 2021, as amendments are needed to the LIC Act of 1956.

36. The Department of Telecommunications (DoT) has sought inputs from telcos and other industry experts on the **sale and use of radio frequency spectrum over the next 10 years**, including the 5G bands.

Background: India had, in 2018, planned to start 5G services as soon as possible, with an aim to capitalise on the better network speeds and strength that the technology promised.

5G Technology

5G or fifth generation is the latest upgrade in the long-term evolution (LTE) mobile broadband networks. 5G mainly works in 3 bands, namely low, mid and high frequency spectrum — all of which have their own uses as well as limitations.

- While the low band spectrum has shown great promise in terms of coverage and speed of internet and data exchange, the maximum speed is limited to 100 Mbps (Megabits per

second). This means that while telcos can use and install it for commercial cellphone users who may not have specific demands for very high speed internet, the low band spectrum may not be optimal for specialised needs of the industry.

- The mid-band spectrum, on the other hand, offers higher speeds compared to the low band, but has limitations in terms of coverage area and penetration of signals. Telcos and companies, which have taken the lead on 5G, have indicated that this band may be used by industries and specialised factory units for building captive networks that can be moulded into the needs of that particular industry.
- The high-band spectrum offers the highest speed of all the three bands, but has extremely limited coverage and signal penetration strength. Internet speeds in the high-band spectrum of 5G has been tested to be as high as 20 Gbps (giga bits per second), while, in most cases, the maximum internet data speed in 4G has been recorded at 1 Gbps.

37. India's trade deficit with China falls in 2020, currently at five-year low

According to new statistics released by China's General Administration of Customs (GAC)

- The two-way trade in 2020 reached \$87.6 billion, down by 5.6%.
- India's imports from China accounted for \$66.7 billion, declining by 10.8% year-on-year and the lowest figure since 2016.
- India's biggest import in 2019 was electrical machinery and equipment, worth \$20.17 billion. Other major imports in 2019 were organic chemicals (\$8.39 billion) and fertilisers (\$1.67 billion), while India's top exports were iron ore, organic chemicals, cotton and unfinished diamonds.
- The past 12 months saw a surge in demand for iron ore in China with a slew of new infrastructure projects aimed at reviving growth after the COVID-19 slump. China's total iron ore imports were up 9.5 per cent in 2020.

What is Trade Deficit?

A trade deficit occurs when the value of a country's imports exceeds the value of its exports—with imports and exports referring both to goods, or physical products, and services.

Effects of Trade Deficit: Initially, a trade deficit is not necessarily bad.

- It can raise a country's standard of living because residents can access a wider variety of goods and services for a more competitive price.
- It can also reduce the threat of inflation since it creates lower prices.

Over time, a trade deficit can cause more outsourcing of jobs to other countries. As a country imports more goods than it buys domestically, then the home country may create fewer jobs in certain industries. At the same time, foreign companies will likely hire new workers to keep up with the demand for their exports.

38. The India Meteorological Department (IMD) states that **western disturbance is likely to affect the Himalayan region** soon.

A Western Disturbance(WD), labelled as an extra-tropical storm originating in the Mediterranean, is an area of low pressure that brings moisture.

A WD is associated with rainfall, snowfall and fog in northern India. Upon its arrival in Pakistan and northern India, clouds along with rain and snow also arrive. The moisture which WDs carry with them comes from the Mediterranean Sea and/or from the Atlantic Ocean.

WD **brings winter and pre-monsoon rain** and is important for the development of the **Rabi crop** in the Northern subcontinent. However, The WDs are not always the harbingers of good weather. Sometimes **WDs can cause extreme weather events** like floods, **flash floods, landslides**, dust storms, hail storms and **cold waves** killing people, destroying infrastructure and impacting livelihoods.

39. The **United Kingdom** has invited Indian Prime Minister as a guest to attend the 47th **G7 summit** that is scheduled to be held in **June 2021**.

The G7 (or Group of Seven) is an organisation made up of the **world's seven largest advanced economies**: Canada, France, Germany, Italy, Japan, the United Kingdom and the United States.

The initial group of six first met in 1975 "to exchange ideas on possible solutions" to a global economic crisis. Canada joined the following year.

Ministers and civil servants from the G7 countries meet throughout the year to discuss matters of mutual interest.

Other such Groupings are explained below:

- **The Group of Ten (G10)** refers to the group of countries that have agreed to participate in the General Arrangements to Borrow (GAB), a supplementary borrowing arrangement that can be invoked if the IMF's resources are estimated to be below a member's needs. The GAB was established in 1962, when the governments of eight IMF members—Belgium, Canada, France, Italy, Japan, the Netherlands, the United Kingdom, and the United States—and the central banks of two others, Germany and Sweden, agreed to make resources available to the IMF for drawings by participants and, under certain circumstances, for drawings by nonparticipants. The G10 was strengthened in 1964 by the association of Switzerland, then a nonmember of the IMF, expanding its membership to 11, but the name of the G10 remained the same.
- **The Group of Fifteen (G15)** was established at the Ninth Non-Aligned Summit Meeting in Belgrade, then Yugoslavia, in September 1989. It is composed of countries from Latin America, Africa, and Asia with a common goal of enhanced growth and prosperity. The G15 focuses on cooperation among developing countries in the areas of investment, trade, and technology. The membership of the G15 has since expanded to 17 countries but the name has remained unchanged.
- **The Group of 20 (G20)** is a group of key advanced and emerging market economies. In the aftermath of the financial crises in the late 1990s, the G20 was created in 1999 to strengthen policy coordination between its members, promote financial stability, and modernize the international financial architecture. The membership of the G20 includes the heads of state and government, and finance ministers and central bank governors of the G7, 12 other key countries, and the European Union, which is represented by the rotating Council Presidency and the European Central Bank.
- **The Group of Seventy-Seven (G77)** was established on June 15, 1964, by the "Joint Declaration of the Seventy-Seven Developing Countries" issued at the end of the first session of the United Nations Conference on Trade and Development (UNCTAD) in Geneva. It was formed to articulate and promote the collective economic interests of its members and to strengthen their joint negotiating capacity on all major international economic issues in the United Nations system. The membership of the G77 has since expanded to 134 member countries but the original name has been retained because of its historical significance.

40. Nepal has raised the **Kalapani boundary dispute** with India during the Joint Commission meeting

The **dispute over Kalapani**, which lies on the easternmost corner of Uttarakhand's Pithoragarh district, between Nepal and India was revived in November 2019 when India published a revised political map showing the newly created Union Territories of Jammu and Kashmir and Ladakh. Both India and Nepal lay claim to Kalapani. The map showed Kalapani as part of Pithoragarh district. Nepal protested immediately and drew attention to the lingering issue.

Historical Background:

The Kalapani region derives its name from the river Kali. Nepal's claims to the region is based on this river as it became the marker of the boundary of the kingdom of Nepal following the **Treaty of Sugauli** signed between the Gurkha rulers of Kathmandu and the East India Company after the Gurkha War/Anglo-Nepal War (1814-16). The treaty was ratified in 1816. According to the treaty, Nepal lost the regions of Kumaon-Garhwal in the west and Sikkim in the east. According to Article 5, the King of Nepal gave up his claims over the region west of the river Kali which originates in the High Himalayas and flows into the great plains of the Indian subcontinent. According to the treaty, the British rulers recognised Nepal's right to the region that fell to the east of the river Kali. Here lies the historic origin of the dispute. According to Nepal's experts, the east of the Kali river should begin at the source of the river. The source according to them is in the mountains near Limpiyadhura, which is higher in altitude than the rest of the river's flow. Nepal claims that a land mass, high in the mountains that falls to the east of the entire stretch starting from Limpiyadhura downwards, is theirs. India on the other hand says the border begins at Kalapani which India says is where the river begins. The dispute is mainly because of the varying interpretation of the origin of the river and its various tributaries that slice through the mountains. While Nepal's claim of the territory east of Kali is based on the Limpiyadhura origin, India says the river actually takes the name Kali near Kalapani.

Significance of the location

Kalapani shares a border on the north with the Tibet Autonomous Region of China and Nepal in the east and south. The region resembles a slice of cake wedged in between Limpiyadhura, Lipulekh and Kalapani. The area is in India's control but Nepal claims the region because of historical and cartographic reasons. The area is the largest territorial dispute between Nepal and India consisting of at least 37,000 hectares of land in the High Himalayas.

The region juts into the Himalayas and is connected to the other side of the mountain range through the **Lipulekh pass**, which has been used for centuries by Hindu and Buddhist pilgrims and tourists on their way to Kailash Mansarovar. The nearby markets have been used by various mountain communities. The Himalayas have several passes that connect the Gangetic region with the Tibetan plateau but Lipulekh is strategically located as it is nearest to the heart of the Indian state or the National Capital Region and can be of particular concern in case of an armed conflict with China.

The importance of Himalayan passes with the Tibetan plateau was amply highlighted in the **1962 war**. During that war, Chinese forces used the pass of Se La in Tawang and reached the Brahmaputra plains in the east. The military defeat in the east clearly demonstrated that weakly guarded passes were a major vulnerability of Indian military preparedness against China. In comparison to Se La which was somewhat fortified, Lipulekh was vulnerable.

41. The US Government has declassified a sensitive document on the U.S. strategic framework for the Indo-Pacific' from 2018.

Background: The document was declassified 20 years ahead of time. The US stated that the official reason for the early declassification of the document, was to communicate to the American people and to allies and partners, the enduring commitment of the United States to keeping the Indo-Pacific region free and open long into the future.

The document outlines objectives and strategies with regard to China, North Korea, India and other countries in the Indo-Pacific region. The document states that :

- Maintaining “U.S. strategic primacy” in the region and promoting a “liberal economic order” while stopping China from establishing “illiberal spheres of influence” is the U.S.’s first national security challenge.
- Ensuring that North Korea does not threaten the U.S. and advancing U.S. economic leadership globally while pushing “fair and reciprocal” trade.
- On Russia, it says the country will “remain a marginal player” in the region relative to the U.S., China and India. The U.S. expects that India and Japan will increase defence investment due to security competition driven by shifting regional power balances.

With regard to India the document states:

- one of the ‘desired end states’ of the U.S.’s strategy is for the U.S. to be India’s preferred partner on security issues and for the two countries to “cooperate to preserve maritime security and counter Chinese influence” in South Asia, Southeast Asia and other regions of “mutual concern”.
- The U.S. aims to help India become a net security provider in the region, solidify a lasting strategic partnership with India “underpinned by a strong Indian military able to effectively collaborate with” the U.S and its regional partners.
- These objectives it plans to achieve via enhanced defence cooperation and interoperability; working with India “toward domestic economic reform” and greater leadership roles for India in the East Asia Summit and ASEAN Defence Ministers’ Meeting Plus.
- **With regard to the India-China issue** the US has offered of support to India via military, diplomatic and intelligence channels “to help address continental challenges such as the border dispute with China and access to water, including the Brahmaputra and other rivers facing diversion by China.”
- The U.S. also seeks to bolster common principles, including the peaceful resolution of disputes and the transparent infrastructure-debt practices (a reference to alternatives to financing by China’s Belt Road Initiative which has led to untenable debt positions in borrowing countries), as per the Indo Pacific strategy.

With regard to **India's ‘Act East’ policy** the document states that the U.S. aims to support India’s “Act East” policy and “its aspiration to be a leading global power, highlighting its compatibility with the U.S., Japanese and Australian vision” of the Indo-Pacific,

“A strong India, in cooperation with like-minded countries, would act as a counterbalance to China,” is one of the underlying assumptions of the strategy, which expects Chinese military, economic and diplomatic influence will continue to increase in the short term. Further states that “China aims to dissolve U.S. alliances and partnerships across the region. China will exploit vacuums and opportunities created by these diminished bonds,” the document says.

42. The Central Vigilance Commission (CVC) has directed all Ministries/Departments of the Union government to strictly adhere to the time limits for various stages of disciplinary proceedings in vigilance cases

The commission stated that

- Undue delay on one hand provided prolonged opportunities to a corrupt public servant to indulge in inappropriate activities.
- On the other hand, any unwarranted delay in the conclusion of vigilance related matters is detrimental for an honest public servant, who may have got involved in a vigilance case, due to various reasons

Central Vigilance Commission (CVC)

The CVC was established in 1964, as an apex body for exercising general superintendence and control over vigilance administration, through an Executive order of the Government of India. The main mandate of the Commission was based on the report of the **Committee on Prevention of Corruption**, popularly known as the **Santhanam Committee**.

Subsequently, the Government promulgated an Ordinance in 1998. The Ordinance of 1998 conferred **statutory status** to the CVC

The Parliament has enacted the Central Vigilance Commission Act of 2003 in such a way that the Commission exercises all powers and functions entrusted to it under the Government of India Resolution, so that it will not be inconsistent with this Act.

Jurisdiction: The Vigilance Commission has advisory jurisdiction and powers in respect of matters to which the executive power of the Centre extends. It can undertake any inquiry into any transaction in which a public servant is suspected or alleged to have acted for an improper or corrupt purpose; or cause such an inquiry or investigation to be made into any complaint of corruption, gross negligence, misconduct, recklessness, lack of integrity or other kinds of mal-practices or misdemeanours on the part of a public servant.

Functions: The commission's main concern is matters regarding corruption, misconduct, lack of integrity or other kinds of malpractices or misdemeanours from the side of the Government servants. The commission has only advisory jurisdiction. It **cannot perform adjudicatory functions**. The commission cannot investigate or enquire into complaints of corruption except to a limited extent.

Membership: The CVC has a **Central Vigilance Commissioner** and a **maximum of two Vigilance Commissioners**. The members are **appointed by the President of India** based on the recommendation of a **three member committee** comprising of the - **Prime Minister, Minister of Home Affairs and Leader of opposition of the Lok Sabha**.

Their term of Office is Four years or if they attain 65 years of age (whichever is earlier). After they retire, they are not eligible for reappointment in any central or state government agency.

43. Reserve Bank of India (RBI) Governor has recently agreed to look at the proposal for the creation of a bad bank.

Technically, a bad bank is an **asset reconstruction company (ARC)** or an **asset management company** that takes over the bad loans of commercial banks, manages them and finally recovers the money over a period of time. The **bad bank is not involved in lending and taking deposits**, but helps commercial banks clean up their balance sheets and resolve bad loans. The takeover of bad loans is normally below the book value of the loan and the bad bank tries to recover as much as possible subsequently.

Background: The idea gained currency during Rajan's tenure as RBI Governor. The RBI had then initiated an asset quality review (AQR) of banks and found that several banks had suppressed or hidden bad loans to show a healthy balance sheet. However, the idea remained on paper amid lack of consensus on the efficacy of such an institution. ARCs have not made any impact in resolving bad loans due to many procedural issues.

The idea of a bad bank was discussed in 2018 too, but it never took shape. During the pandemic, banks and India Inc were also pitching for one-time restructuring of loans and NPA reclassification norms from 90 days to 180 days as relief measures to tackle the impact of the lockdown and the slowdown in the economy. Currently, loans in which the borrower fails to pay principal and/or interest charges within 90 days are classified as NPAs and provisioning is made accordingly.

Now, with the pandemic hitting the banking sector, the RBI fears a spike in bad loans in the wake of a six-month moratorium it has announced to tackle the economic slowdown.

How serious is the NPA issue in the wake of the pandemic?

Bad loans in the system are expected to balloon in the wake of contraction in the economy and the problems being faced by many sectors. The RBI noted in its recent Financial Stability Report that the gross NPAs of the banking sector are expected to shoot up to 13.5% of advances by September 2021, from 7.5% in September 2020, under the baseline scenario, as "a multi-speed recovery is struggling to gain traction" amidst the pandemic. The report warned that if the macroeconomic environment worsens into a severe stress scenario, the ratio may escalate to 14.8%. Among bank groups, the NPA ratio of PSU banks, which was 9.7% in September 2020, may increase to 16.2% by September 2021 under the baseline scenario.

The K V Kamath Committee, which helped the RBI with designing a one-time restructuring scheme, also noted that corporate sector debt worth Rs 15.52 lakh crore has come under stress after Covid-19 hit India, while another Rs 22.20 lakh crore was already under stress before the pandemic. This effectively means Rs 37.72 crore (72% of the banking sector debt to industry) remains under stress. This is almost 37% of the total non-food bank credit.

Will a bad bank solve the problem of NPAs?

Despite a series of measures by the RBI for better recognition and provisioning against NPAs, as well as massive doses of capitalisation of public sector banks by the government, the problem of NPAs continues in the banking sector, especially among the weaker banks. As the Covid-related stress pans out in the coming months, proponents of the concept feel that a professionally-run bad bank, funded by the private lenders and supported the government, can be an effective mechanism to deal with NPAs. The bad bank concept is in some ways similar to an ARC but is funded by the government initially, with banks and other investors co-investing in due course. The presence of the government is seen as a means to speed up the clean-up process. Many other countries had set up institutional mechanisms such as the Troubled Asset Relief Programme (TARP) in the US to deal with a problem of stress in the financial system.

44. In the News: advisory on the rooftop solar scheme.

To generate solar power by installing solar panels on the roof of the houses, **Ministry of New and Renewable Energy**, Government of India is implementing **Grid-connected Rooftop Solar Scheme (Phase-II)**.

The scheme, which aims at achieving total rooftop solar power generation capacity of 40,000 megawatt (MW) by 2022, has two components.

1. The first component involves setting up 4,000 MW grid-connected rooftop solar plants in the residential sector with central financial assistance.
2. The second component involves incentives to discoms based on achievement for installing additional grid-connected rooftop capacity in all sectors over and above the base level, with the incentives being limited to the first additional 18,000 MW of rooftop capacity added.

Under this scheme Ministry is providing **40% subsidy for the first 3 kW** and **20% subsidy beyond 3 kW and upto 10 kW**. The scheme is being implemented in the states by local Electricity Distribution Companies (DISCOMs).

The government is working on a target to achieve **175 gigawatt (GW) of renewable energy generation capacity by 2022**. That includes **100 GW of solar, 60 GW of wind, 1 GW of biomass-based plants, and 5 GW of small hydro projects**. The solar power capacity target includes **40 GW of rooftop solar projects**.

- 45.** The Delhi High Court has ordered the Health Ministry to explore “**crowdfunding**” to help two children, who are suffering from a rare disease known as **Duchenne Muscular Dystrophy**

The HC held that ‘**Right to Health and Healthcare**’ is a **fundamental right** which has been recognised by the Supreme Court to be a part of the ‘**Right to life**’ under **Article 21** of the Constitution.

Crowdfunding:

Crowdfunding is a method of raising capital through collective effort of friends, family, customers and individual investors. This approach taps into the collective efforts of large pool of individuals primarily online via social media and crowdfunding platforms. Apart from raising capital, crowdfunding is also a way to create awareness among the masses and support for a project from the people around you.

Duchenne muscular dystrophy

It is a genetic disorder characterized by the progressive loss of muscle. It is a multi-systemic condition, affecting many parts of the body, which results in deterioration of the skeletal, heart, and lung muscles.

Duchenne is caused by a change in the dystrophin gene. Dystrophin is a protein that is essential to the proper functioning of our muscles. Without dystrophin, muscles are not able to function or repair themselves properly. The loss of muscle then results in a loss of strength and function.

Because the dystrophin gene is found on the **X-chromosome**, it primarily affects males, while females are typically carriers. Duchenne can be passed from parent to child, or it can be the result of random spontaneous genetic mutations, which may occur during any pregnancy.

- 46.** The Reserve Bank of India (RBI) has retained State Bank of India, ICICI Bank and HDFC Bank as **domestic systemically important banks (D-SIBs)**

Domestic systemically important banks (D-SIBs) are banks that are considered as “**too big to fail**” - a phrase used to describe a bank or company that’s so entwined in the economy that its failure would be catastrophic.

The D-SIB framework requires the Reserve Bank to disclose the names of banks designated

as D-SIBs starting from 2015 and place these banks in appropriate buckets depending upon their systemic importance scores (SISs). Based on the bucket in which a D-SIB is placed, an additional common equity requirement has to be applied to it.

The framework classifies the banks under **five buckets** depending on order of importance.

ICICI Bank and HDFC Bank are in bucket one while **SBI falls in bucket three**. Based on the bucket in which a D-SIB is, an additional common equity requirement applies.

47. NITI Aayog has recently released the **India Innovation Index Report 2020**

Karnataka has been ranked the most innovative among major states by the NITI Aayog while Delhi topped the category among Union Territories. Delhi also stood out as the top performer among both states and UTs.

India Innovation Index

The exercise was initiated in 2019 and is on the lines of the Global Innovation Index (GII), which ranks countries annually.

The Innovation Index is divided into three categories—major states, Union Territories, and hill and North East states.

- Delhi has scored the highest on the index in the country with a score of 46.6, while Lakshwadeep has the lowest score at 11.7. Delhi recorded the highest number of trademark and patent applications, along with the establishment of new start-ups and companies in the last financial year.
- Amongst the major states, Karnataka topped with a score of 42.5 for the second year running. The state's success has been attributed to a high number of venture capital deals, registered GIs and ICT exports, and high FDI inflow.
- Maharashtra follows with a score of 38, while Bihar finishes last at 14.5. Four southern states – Karnataka, Tamil Nadu, Telangana and Kerala —occupy the top positions on the index, apart from Maharashtra.
- Amongst North East and hill states, Himachal Pradesh has the highest score of 25.

The indicators that the survey uses includes the level and quality of education especially in research, number of PhD students, enrolment in engineering and technology, number of highly skilled professionals, investment in R&D, FDI inflows, internet subscribers, knowledge-intensive employment, number of patents and trademark applications filed, business environment, and safety and legal environment, among others.

Global Innovation Index (GII)

The **GII** is an annual ranking of countries by their **capacity for, and success in, innovation**. It provides detailed metrics about the innovation performance of 131 countries and economies around the world. Its 80 indicators explore a broad vision of innovation, including political environment, **education**, **infrastructure** and business sophistication.

It is published by Cornell University, INSEAD, and the World Intellectual Property Organization, in partnership with other organisations and institutions, and is based on both subjective and objective data derived from several sources, including the International Telecommunication Union, the World Bank and the World Economic Forum. The index was started in 2007 by INSEAD and *World Business*, a British magazine. The GII is commonly used by corporate and government officials to compare countries by their level of innovation.

In 2015, India ranked 81 among 141 countries in the GII. By 2020 it ranked 48 among 131 countries.

48.The **National Green Tribunal** stated that there were HUGE GAPS in compliance of electronic waste-management rules

Context: In 2018, the environment ministry had told the tribunal that 95 per cent of e-waste in India is recycled by the informal sector and scrap dealers unscientifically dispose it by burning or dissolving it in acids.

Data shared by Central Pollution Control Board (CPCB) with the NGT shows India generated more than 10 lakh tonnes of e-waste in 2019-20, an increase from 7 lakh tonnes in 2017-18. Against this, the e-waste dismantling capacity has not been increased from 7.82 lakh tonnes since 2017-18.

National Green Tribunal(NGT)

The NGT was established on 18th October 2010, under the National Green Tribunal Act 2010. The aim of the National Green Tribunal Act 2010, is to come up with an effective disposal of cases relating to the environment, hence, reducing the burden of litigation on higher courts.

The aim of the tribunal is to work on the disposal of cases related to environmental protection, conservation of forests and other natural resources. As per the mandate, NGT is set up at five places of sittings including Bhopal, Pune, Kolkata and Chennai, However, New Delhi is the main place for the sitting of Tribunal. This is aimed to make NGT more accessible.

49.In the News: **Vaccine Diplomacy**

Context: India to ship out lakhs of doses of the novel coronavirus vaccine to neighbouring countries, with the first batches expected to reach Bhutan and the Maldives among several countries by special planes as a grant or gift.

Background:

India is already known as pharmacy of the world. It is the largest producer of generic medicines, accounting for 20 percent of their global production. It meets 62 percent of the global demand for vaccines. Since the coronavirus pandemic began, the country has been at the forefront of supplying medicines and generic drugs to others. India received requests from more than 100 countries for hydroxychloroquine (once thought to help treat COVID-19) and paracetamol (a painkiller), and sent supplies to Brazil, the United States, and Israel. By May 2020, India was spending \$16 million on pharmaceuticals, test kits, and other medical equipment for about 90 countries.

Even before multilateral organizations got on board, New Delhi also consistently supported measures to temporarily suspend COVID-19 vaccine intellectual property rights—which would mean it could produce generic versions at lightning speed whenever a vaccine was created—and sponsored a WHO resolution calling for international cooperation to ensure global access to the vaccine.

India will need more than a billion doses to protect its own population. But it also aims to offer 20 million doses to neighboring countries Nepal, Bangladesh, Sri Lanka, Afghanistan, the Seychelles, and Mauritius by this spring. It will then distribute vaccines to Latin America, Africa, and the former Soviet Republics. Many of the recipient countries have signed so-called vaccine pacts with India on a government-to-government basis to finalize the number of doses and determine whether they will be provided under grant assistance or under commercial terms. While commercial overseas shipments are likely to start around March, India has already sent 3.2 million free doses of the vaccine Bangladesh, Nepal, Bhutan, and the Maldives.

Significance of Vaccine Diplomacy

Vaccine diplomacy provides an opportunity for India to resolve outstanding issues with Nepal. Relations between the two countries recently hit a new low when they entered into a heated exchange over the Kalapani territorial dispute—an area situated at the strategic China-Nepal-India tri-junction. In Indian Ocean countries like the Maldives and Mauritius, India's vaccine diplomacy can help foster stronger ties in the region, and offset China's growing influence attributable to its financial investments and social-development projects.

India's vaccine diplomacy puts it in direct competition with China—which has made no secret that vaccine distribution is wrapped up in its broader geopolitical ambitions. In fact, it has even explicitly included vaccine distribution in its broader Health Silk Road initiative, which aims to bolster China's international soft power.

50. Question Hour, which had been **suspended by the government during the monsoon session**, to resume in the **budget session of the Parliament**.

Question Hour:

Question Hour is the liveliest hour in Parliament. It is during this one hour that Members of Parliament ask questions of ministers and hold them accountable for the functioning of their ministries. The questions that MPs ask are designed to elicit information and trigger suitable action by ministries.

Over the last 70 years, MPs have successfully used this parliamentary device to shine a light on government functioning. Their questions have exposed financial irregularities and brought data and information regarding government functioning to the public domain. With the broadcasting of Question Hour since 1991, Question Hour has become one the most visible aspects of parliamentary functioning.

Asking questions of the government has a long history in our legislative bodies. Prior to Independence, the first question asked of government was in 1893.

Regulation of the Question Hour

Parliament has comprehensive rules for dealing with every aspect of Question Hour. And the presiding officers of the two houses are the final authority with respect to the conduct of Question Hour. For example, usually Question Hour is the first hour of a parliamentary sitting. In 2014, Rajya Sabha Chairman Hamid Ansari shifted Question Hour in the House from 11 am to 12 noon. The move was to prevent the disruption of Question Hour.

Guidelines for asking Questions

Parliamentary rules provide guidelines on the kind of questions that can be asked by MPs. Questions have to be limited to 150 words. They have to be precise and not too general. The question should also be related to an area of responsibility of the Government of India. Questions should not seek information about matters that are secret or are under adjudication before courts. It is the presiding officers of the two Houses who finally decide whether a question raised by an MP will be admitted for answering by the government.

How does Parliament manage to get so many questions answered?

To streamline the answering of questions raised by MPs, the ministries are put into five groups. Each group answers questions on the day allocated to it. For example, in the last session, on Thursday the Ministries of Civil Aviation, Labour, Housing, and Youth Affairs and Sports were answering questions posed by Lok Sabha MPs. This grouping of ministries is different for the two Houses so that ministers can be present in one house to answer questions, So the minister of Civil Aviation was answering questions in Rajya Sabha on

Wednesday, during the Budget session.

MPs can specify whether they want an oral or written response to their questions. They can put an asterisk against their question signifying that they want the minister to answer that question on the floor. These are referred to as starred questions. After the minister's response, the MP who asked the question and other MPs can also ask a follow-up question. This is the visible part of Question Hour, where you see MPs trying to corner ministers on the functioning of their ministries on live television. Seasoned parliamentarians choose to ask an oral question when the answer to the question will put the government in an uncomfortable position.

How do ministers prepare their answers?

Ministries receive the questions 15 days in advance so that they can prepare their ministers for Question Hour. They also have to prepare for sharp follow-up questions they can expect to be asked in the House. Government officers are close at hand in a gallery so that they can pass notes or relevant documents to support the minister in answering a question.

When MPs are trying to gather data and information about government functioning, they prefer the responses to such queries in writing. These questions are referred to as unstarred questions. The responses to these questions are placed on the table of Parliament.

Is there a limit to the number of questions that can be asked?

Rules on the number of questions that can be asked in a day have changed over the years. In Lok Sabha, until the late 1960s, there was no limit on the number of unstarred questions that could be asked in a day. Now, Parliament rules limit the number of starred and unstarred questions an MP can ask in a day. The total number of questions asked by MPs in the starred and unstarred categories are then put in a random ballot. From the ballot in Lok Sabha, 20 starred questions are picked for answering during Question Hour and 230 are picked for written answers. Last year, a record was set when on a single day, after a gap of 47 years, all 20 starred questions were answered in Lok Sabha.

51. The **Reserve Bank of India (RBI)** has proposed a tighter regulatory framework for **non-banking financial companies (NBFCs)** by creating a four-tier structure with a progressive increase in intensity of regulation.

the RBI has said the regulatory and supervisory framework of NBFCs should be based on a four-layered structure: Base Layer, Middle Layer, Upper Layer and a possible Top Layer. It has also proposed classification of non-performing assets (NPAs) of base layer NBFCs from 180 days to 90 days overdue. NBFCs in lower layer will be known as NBFC-Base Layer (NBFC-BL). NBFCs in middle layer will be known as NBFC-Middle Layer (NBFC-ML). An NBFC in the Upper Layer will be known as NBFC-Upper Layer (NBFC-UL) and will invite a new regulatory superstructure. There is also a Top Layer, ideally supposed to be empty.

Once an NBFC is identified as NBFC-UL, it will be subject to enhanced regulatory requirement at least for four years from its last appearance in the category, even where it does not meet the parametric criteria in the subsequent year. "Hence, if an identified NBFC-UL does not meet the criteria for classification for four consecutive years, it will move out of the enhanced regulatory framework," it said. The NBFC sector has seen tremendous growth in recent years. In last five years alone, size of balance sheet of NBFCs (including HFCs) has more than doubled from Rs 20.72 lakh crore (2015) to Rs 49.22 lakh crore (2020).

The RBI paper said regulatory framework anchored on proportionality can be introduced.

- **BASE LAYER:** If the framework is visualised as a pyramid, the bottom of the pyramid,

where least regulatory intervention is warranted, can consist of NBFCs, currently classified as non-systemically important NBFCs (NBFC-ND), NBFCP2P lending platforms, NBFCAA, NOFHC and Type I NBFCs.

- **MIDDLE LAYER:** As one moves up, the next layer can consist of NBFCs currently classified as systemically important NBFCs (NBFC-ND-SI), deposit taking NBFCs (NBFC-D), housing finance companies, IFCs, IDFs, SPDs and core investment companies. The regulatory regime for this layer will be stricter compared to the base layer. Adverse regulatory arbitrage vis-à-vis banks can be addressed for NBFCs falling in this layer in order to reduce systemic risk spill-overs, where required, the RBI said.
- **UPPER LAYER:** Going further, the next layer can consist of NBFCs which are identified as systemically significant among. This layer will be populated by NBFCs which have large potential of systemic spill-over of risks and have the ability to impact financial stability. There is no parallel for this layer at present, as this will be a new layer for regulation. The regulatory framework for NBFCs falling in this layer will be bank-like, albeit with suitable and appropriate modifications, it said.
- **TOP LAYER:** It is possible that considered supervisory judgment might push some NBFCs from out of the upper layer of the systemically significant NBFCs for higher regulation/supervision. These NBFCs will occupy the top of the upper layer as a distinct set. Ideally, this top layer of the pyramid will remain empty unless supervisors take a view on specific NBFCs. In other words, if certain NBFCs lying in the upper layer are seen to pose extreme risks as per supervisory judgement, they can be put to higher and bespoke regulatory/supervisory requirements, it said.

In view of the recent stress in the sector, it has become imperative to re-examine the suitability of this regulatory approach, especially when failure of an extremely large NBFC can precipitate systemic risks, the RBI paper said. The regulatory framework for NBFCs needs to be reoriented to keep pace with changing realities in the financial sector, it said.

52. India has recently released a **draft Arctic Policy**

The draft document outlines **five pillars of India's Arctic policy**: scientific research, economics and human development; connectivity; global governance and international cooperation; and development of Indian human resource capabilities.

The document has also listed a wide range of activities – diplomatic, economic, as well as scientific – that India seeks to pursue in the Arctic,

Arctic Region

The Arctic is essential for the stability of the earth's climate, arguably even more than the Antarctic. Its sea ice helps moderate the global climate. In turn, it is also very sensitive to changes in climate. Consequently, the Arctic is warming more rapidly than the global average, and its sea ice has decreased dramatically since the late 1970s.

Climate change has meant that seasons in the Arctic influence tropical weather. The Arctic influences atmospheric, oceanographic and biogeochemical cycles of the earth's ecosystem. The loss of sea ice, ice caps, and warming of the ocean and atmosphere would lower salinity in the ocean, increase the temperature differential between land and oceans in the tropical regions, dry subtropical areas and increase precipitation at higher latitudes.

But the sea ice melting has also opened up the fabled Northwest Passage, significantly shortening the route between the Atlantic and Pacific Oceans. In addition, Arctic seabed is

now accessible for oil and gas extraction and deep-sea mining. As an estimated 40% of current global oil and gas reserves are in this region, there is a scramble over shipping lanes and resources, especially between the Arctic states. But other countries are also staking claim over the region's resources, especially China.

India and the Arctic region

India launched its first scientific expedition to the Arctic in 2007 and set up a research station 'Himadri' in the international Arctic research base at Ny-Ålesund in Spitsbergen, Svalbard, Norway. It has two other observatories in Kongsfjorden and Gruvebadet. Himadri is manned for about 180 days a year.

Since its establishment, over 300 Indian researchers have worked in the station. India has sent 13 expeditions to the Arctic since 2007 and runs 23 active projects.

The Arctic may be the northernmost part of the world, geographically far from India. However, the impact of climate change across the coasts of India and the economic fallout should bring up the Arctic more in discussion. Politically and strategically, the Arctic can no longer be perceived as too far.

The Arctic Council

Five Arctic littoral states — Canada, Denmark (Greenland), Norway, Russia and the USA (Alaska) — and three other Arctic nations — Finland, Sweden and Iceland — form the Arctic Council. The Arctic is home to almost four million inhabitants, of which approximately one-tenth are considered as indigenous people.

India became an Observer in the Arctic Council for the first time in 2013; its membership in that body was renewed for a second five-year term in 2018.

- 53.** A committee set up by the Insurance Regulatory and Development Authority of India (Irdai) has proposed that a **"traffic violation premium"** should be added to the vehicle insurance policy

The working group on linking traffic violations to insurance premium has recommended inserting a fifth section to motor insurance called "traffic violation premium" in addition to motor own damage insurance, basic third-party insurance, additional third party insurance and compulsory personal accident premium.

The report has recommended a system of calculating traffic violation points basis frequency and severity of different traffic offences. Insurance Information Bureau of India (IIB) will coordinate with various States' Traffic Police and National Informatics Centre to capture the traffic violation data, calculate violation points of each violating vehicle and make this information available to all general insurers through IT system integration with insurers.

This means if the vehicle is involved in traffic violations, premium will rise.

Why is it required?

According to Ministry of Road Transport, Road Accidents Report issued in 2018, India witnessed 4.67 lakh road accidents that killed 1.51 lakh citizens. India ranks first in the number of road accident deaths across the 199 countries reported in the World Road Statistics, 2018 followed by China and US.

- 54.** The 24th **Hunar Haat** was recently conducted

The **Minority Affairs Ministry** had launched Hunar Haat in FY17 as a component of the **Upgrading the Skills and Training in Traditional Arts/ Crafts for Development (USTAD) scheme**

The **USTTAD scheme** aims to promote and preserve the rich heritage of the traditional arts & crafts of the minority communities.

Hunar Haat aims to **provide market exposure and employment opportunities to artisans, craftsmen and traditional culinary experts**. It envisages **boosting the skills of craftsmen, weavers and artisans** who are already engaged in the traditional ancestral work.

55. A new report by Oxfam has found that the **Covid pandemic deeply exacerbated existing inequalities** in India and around the world.

The report, titled **'The Inequality Virus'**, has found that as the pandemic stalled the economy, forcing millions of poor Indians out of jobs, the richest billionaires in India increased their wealth by 35 per cent.

The report further noted that the increase in wealth of the top 11 billionaires of India during the pandemic could sustain the NREGS scheme for 10 years or the health ministry for 10 years

Oxfam details how the pandemic aggravated all manners of inequalities.

- Sectorally, India's large informal workforce was the worst hit as it made up 75 per cent of the 122 million jobs lost. Informal workers had relatively fewer opportunities to work from home and suffered more job loss compared to the formal sector. The 40-50 million seasonal migrant workers, typically engaged working in construction sites, factories etc. were particularly distressed, notes the report.
- Over the past year as education shifted online, India saw the digital divide worsening inequalities. On the one hand, private providers such as BYJU's (currently valued at \$10.8 billion) and Unacademy (valued at \$1.45 billion) experienced exponential growth yet, on the other, just 3 per cent of the poorest 20 per cent of Indian households had access to a computer and just 9 per cent had access to the internet.
- In terms of healthcare, Oxfam found that since India does not report case data desegregated by socio-economic or social categories, it is difficult to gauge the distribution of the disease amongst various communities. But India currently has the world's second-largest cumulative number of COVID-19 positive cases and globally, the poor, marginalised and vulnerable communities have higher rates of COVID-19 prevalence.
- The unemployment rate among women rose from already high 15 per cent before Covid to 18 per cent. "This increase in unemployment of women can result in a loss to India's GDP of about 8 per cent or \$218 billion
- Beyond income and job losses, poorer women also suffered healthwise because of the disruption in regular health services and Anganwadi centres.

Oxfam India's findings are part of the Oxfam International report released on the opening day of the World Economic Forum's "Davos Dialogues".

Oxfam has argued the urgent need for policymakers to tax the wealthy individuals and rich corporates and use that money to "invest in free quality public services and social protection to support everyone, from cradle to grave".

56. The latest **World Economic Outlook** was released by the International Monetary Fund (IMF)

The highlights of the Update are as follows:

- Last October, it had projected an 8.8 per cent real GDP growth for India in FY22, highest globally. For the current fiscal, however, the IMF had forecast a record 10.3 per cent contraction.
- The IMF revised its forecast and stated that Indian economy will stage a strong rebound and grow as much as 11.5 per cent on year in FY22 and in FY23, the economy will likely grow 6.8 per cent.
- The IMF predicted that China would grow 8.1 per cent in 2021, followed by Spain (5.9 per cent) and France (5.5 per cent).

World Economic Outlook

The World Economic Outlook (WEO) is a report by the International Monetary Fund that analyzes key parts of the IMF's surveillance of economic developments and policies in its member countries. It also projects developments in the global financial markets and economic systems. The WEO is usually prepared twice a year and is used in meetings of the International Monetary and Financial Committee.

The World Economic Outlook (WEO) presents the IMF's analysis and projections of global economic developments and classifies their analysis by region and stage of economic development.

International Monetary Fund

IMF came into operation on 27th December 1945 and is today an international organization that consists of 189 member countries. Headquartered in Washington, D.C., IMF focuses on fostering global monetary cooperation, securing financial stability, facilitating and promoting international trade, employment, and economic growth around the world. The IMF is a specialized agency of the United Nations.

Apart from the World Economic Outlook report, the IMF also releases the **Global Financial Stability Report** every year.

57. The Centre plans to notify a system of imposing **“green tax” on older vehicles** in a move to disincentivise the use of polluting vehicles, and to curb pollution in the country.

The Centre stated the following

- Vehicles like strong hybrids, electric vehicles and those running on alternate fuels like CNG, ethanol and LPG will be exempted while the revenue collected through the green tax will be utilised for tackling pollution,
- Transport vehicles older than eight years could be charged green tax at the time of renewal of fitness certificate at the rate of 10 to 25 per cent of road tax.
- Personal vehicles are proposed to be charged green tax at the time of renewal of registration certification after 15 years; public transport vehicles, such as city buses, will be charged lower green tax; higher green tax (50 per cent of road tax) will be levied on vehicles being registered in highly polluted cities, the government statement said.
- According to the ministry, the revenue collected from the green tax will be kept in a separate account and will be used for tackling pollution.
- Listing the benefits of the green tax, the ministry said that it will dissuade people from using vehicles which damage the environment and motivate them to switch to newer,

less polluting vehicles. “Green tax will reduce the pollution level, and make the polluter pay for pollution,” it added.

Green Tax

Green tax is also called as pollution tax or environmental tax and is excise duty levied on all the goods that cause environmental pollution.

According to Economic theory, charging taxes on emissions that cause pollution will lower environmental impairment in a cost-effective manner by encouraging behavioural changes in households and firms that need to decrease their pollution.

58. The Supreme Court has questioned the government over delay in action on **Collegium** recommendations

Collegium System is a system under which appointments and elevations of judges and lawyers to the Supreme Court and the High Courts, and also transfer of judges to High Courts and the Supreme Court are decided by a forum of the Chief Justice of India and 4 senior most judges of the Supreme Court.

Current System

Judges of the Supreme Court and High Courts are appointed by the President under Articles 124(2) and 217 of the Constitution. The President is required to hold consultations with such of the judges of the Supreme Court and of the High Courts as he may deem necessary.

Evolution of the Collegium System

The collegium system has its genesis in a series of Supreme Court judgments called the ‘Judges Cases’. The collegium came into being through interpretations of pertinent constitutional provisions by the Supreme Court in the Judges Cases.

FIRST JUDGES CASE: (S P Gupta Vs Union of India, 1981)

- the Supreme Court by a majority judgment held that the concept of primacy of the Chief Justice of India was not really to be found in the Constitution.
- It held that the proposal for appointment to a High Court can emanate from any of the constitutional functionaries mentioned in Article 217 and not necessarily from the Chief Justice of the High Court.
- The Constitution Bench also held that the term “consultation” used in Articles 124 and 217 was not “concurrence” – meaning that although the President will consult these functionaries, his decision was not bound to be in concurrence with all of them.
- The judgment tilted the balance of power in appointments of judges of High Courts in favour of the executive. This situation prevailed for the next 12 years.

SECOND JUDGES CASE: (The Supreme Court Advocates-on-Record Association Vs Union of India, 1993)

- A nine-judge Constitution Bench overruled the decision in S P Gupta, and devised a specific procedure called ‘Collegium System’ for the appointment and transfer of judges in the higher judiciary.
- The majority verdict in the Second Judges Case accorded primacy to the CJI in matters of appointment and transfers while also ruling that the term “consultation” would not diminish the primary role of the CJI in judicial appointments.
- Ushering in the collegium system, the court said that the recommendation should be made by the CJI in consultation with his two seniormost colleagues, and that such

recommendation should normally be given effect to by the executive.

- It added that although it was open to the executive to ask the collegium to reconsider the matter if it had an objection to the name recommended, if, on reconsideration, the collegium reiterated the recommendation, the executive was bound to make the appointment.

THIRD JUDGES CASE: 1998,

- President K R Narayanan issued a Presidential Reference to the Supreme Court over the meaning of the term “consultation” under Article 143 of the Constitution (advisory jurisdiction). The question was whether “consultation” required consultation with a number of judges in forming the CJI’s opinion, or whether the sole opinion of CJI could by itself constitute a “consultation”.
- In response, the Supreme Court laid down nine guidelines for the functioning of the coram for appointments and transfers – this has come to be the present form of the collegium, and has been prevalent ever since.
- This opinion laid down that the recommendation should be made by the CJI and his four seniormost colleagues, instead of two. It also held that Supreme Court judges who hailed from the High Court for which the proposed name came, should also be consulted.
- It was also held that even if two judges gave an adverse opinion, the CJI should not send the recommendation to the government.

Criticism of the collegium system

Critics argue that the system is non-transparent, since it does not involve any official mechanism or secretariat. It is seen as a closed-door affair with no prescribed norms regarding eligibility criteria or even the selection procedure. There is no public knowledge of how and when a collegium meets, and how it takes its decisions.

Lawyers too are usually in the dark on whether their names have been considered for elevation as a judge.

Efforts to address these concerns

The Government had appointed the Justice M N Venkatachaliah Commission in the year 2000 to opine whether there was need to change the collegium system.

The Commission favoured change, and prescribed a National Judicial Appointments Commission (NJAC) consisting of the CJI and two seniormost judges, the Law Minister, and an eminent person from the public, to be chosen by the President in consultation with the CJI.

In 2015, a five-judge Constitution Bench declared as unconstitutional the constitutional amendment that sought to create the NJAC, which had envisioned a significant role for the executive in appointing judges in the higher judiciary.

The Bench sealed the fate of the proposed system with a 4:1 majority verdict that held that judges’ appointments shall continue to be made by the collegium system in which the CJI will have “the last word”.

- 59.** The government has **raised less than 3% of budgeted revenues from disinvestment in 2020-21**. As a result, the **fiscal deficit** for the current year is **set to worsen**.

Through this agreement, the Indian government endeavours to take necessary steps to encourage and promote strategic and technical cooperation in the energy sector in the

identified areas, the ministry added.

What is strategic disinvestment?

When the government decides to transfer the ownership and control of a public sector entity to some other entity, either private or public, the process is called strategic disinvestment. According to the Department of Investment and Public Asset Management (DIPAM), which comes under the Finance Ministry, Strategic disinvestment would imply the sale of a substantial portion of the Government shareholding of a central public sector enterprises (CPSE) of up to 50%, or such higher percentage, along with transfer of management control.

Motivations behind disinvesting in PSUs

1. **To improve the overall efficiency of their functioning.** - By disinvesting (or reducing the government stake), an attempt is made to make such a PSU more efficient as it would not be accountable to people and entities other than the government. The underlying hope is that private or corporate ownership will result in more efficient management.
2. **to plug the government's deficit.** Indian governments perennially run budget deficits. In other words, the government is unable to meet its expenditures just from its tax revenues. In times of extreme monetary stress, governments have thought of selling off their stake in PSUs to raise funds and meet the gap between its expenses and revenues

How are these revenues generated?

All PSUs work under different departments and ministries within the government. However, the Department of Investment and Public Asset Management (DIPAM) under the Ministry of Finance is tasked with managing the Centre's investments in the PSUs. Sale of the Centre's assets falls within the mandate of DIPAM.

Each year, the Finance Minister sets a "disinvestment target". Accordingly, bids are invited, or as in the case of LIC, public offerings are made and the PSU is privatised partially or fully.

60. In the News: Mutations of Viruses

Context: SARS-CoV-2 variants have emerged independently in several countries, and research published over the past week indicates that the virus is changing more quickly than was once believed — and that it may continue to develop towards evading currently available vaccines.

Why do viruses mutate?

Like all life, viruses carry a genetic code in the form of nucleic acids — either DNA or RNA. When cells multiply, the DNA within them replicates as well, to make copies for the new cells. During replication, random errors are introduced into the new DNA, much like spelling errors when we write. Just as we can spell-check, our cells carry enzymes to 'proofread' and correct these mistakes to maintain the fidelity of our genetic material.

While the errors in DNA virus genomes can be corrected by the error-correcting function of cells in which they replicate, there are no enzymes in cells to correct RNA errors. Therefore, RNA viruses accumulate more genetic changes (mutations) than DNA viruses.

Evolution requires not just mutations, but also selection. While most mutations are deleterious to the virus, if some allow a selective advantage — say better infectivity,

transmission, or escape from immunity — then the new viruses out-compete the older ones in a population. The mutations can be synonymous (silent) or non-synonymous (non-silent); the latter also changes an amino acid (protein building block) at that position in the coded protein.

How are vaccines tested for effectiveness against emerging variants?

Indirect tests are done in laboratories to assess if an emerging variant might escape antibodies developed after a natural infection or vaccination.

Serum (the blood components that contain antibodies) from recovered patients or vaccinated people, and antibodies known to neutralise the original virus, are tested to determine whether the variant viruses evade antibodies. Serial dilutions of the serum or antibodies are separately mixed with a fixed amount of the original and variant viruses, and the mixture is added to cells in culture. After a period of incubation, cells are washed and stained. Cells infected and killed by viruses multiplying within them appear as clear zones (plaques) on a dark background.

The effectiveness of a serum or antibody is expressed as an inhibitory concentration (IC) or plaque reduction neutralisation titer (PRNT) value. The IC₅₀ or PRNT₅₀ value is the reciprocal dilution of serum or antibody that neutralises 50 per cent viruses in the sample. Since infectious viruses require containment facilities (called biosafety level 3; BSL3), these assays are sometimes done with pseudoviruses. These are constructed to carry the SARS-CoV-2 Spike protein on another virus background, and contain reporters that are easily visualised (e.g., green fluorescent protein) or quantified (e.g., luciferase).

Are the emerging variants susceptible to vaccines?

A number of lab studies suggest that some SARS-CoV-2 variants evade antibodies triggered by vaccines and natural infection. An international team tested six people who had recovered from Covid-19 before the emergence of the new variant in South Africa. Convalescent antibodies in these people were six to 200 times less effective in neutralising the variant virus.

Interestingly, wild type viruses grown in the presence of vaccine-elicited antibodies gave rise to the same mutations, driving home the point that variant viruses evolved following immune selection in patients recovering from infection.

The consensus from these recent laboratory studies is that emerging variants, especially the one from South Africa, could pose a challenge to current vaccines. However, these studies have only tested antibody responses, whereas vaccines also raise cellular immunity to eliminate infection.

Can new vaccines be developed to fight variants?

The evidence at this time suggest that the existing vaccines offered reduced protection against the South African variant. Researchers are reported to be working on developing fresh vaccines to cover these variants.

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