

ELITE IAS

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Science and Technology

Border Security Force

Why in News?

The Union Home Ministry has enhanced the powers of the Border Security Force (BSF) to “arrest, search and seize” within 50 km from the international boundary in Assam, West Bengal and Punjab.

Background

- Earlier, BSF’s limit was fixed up to 80 km from the international boundary in Gujarat and 15 km in Rajasthan, Punjab, West Bengal and Assam.
- The Ministry of Home Affairs (MHA) claims that recent drone droppings of weapons from across the border have prompted this expansion in the jurisdiction of the BSF.
- Section 139 of the Border Security Force Act, 1968 empowers the Center to notify from time to time the area and extent of operation of the Border Security Force.
- The Union Home Ministry has issued a notification modifying the ‘Schedule’ of the border areas, where the BSF will have the powers of search, seizure, and arrest under Acts like Passport Act, NDPS Act, and Customs Act.

About BSF

- The **Border Security Force (BSF)** is India’s border guarding organisation on its border with Pakistan and Bangladesh. It is one of the five Central Armed Police Forces of India, and was raised in the wake of the 1965 War on 1 December 1965, “for ensuring the security of the borders of India and for matters connected there with
- It comes under the Ministry of Home Affairs
- It currently stands as the world’s largest border guarding force. BSF has been termed as the First Line of Defence of Indian Territories.

Trans- Himalayan region becoming one of the promising astronomical sites globally (PIB)

Why in News?

The Indian Astronomical Observatory (IAO) located at Hanle near Leh in Ladakh is becoming one of the promising observatory sites globally, said a recent study.

Analysis

- This is due to its advantages of **more clear nights, minimal light pollution, background aerosol concentration, extremely dry atmospheric condition, and uninterrupted by monsoon.**
- The Hanle site is as dry as Atacama Desert in Chile and much drier than Merak (Ladakh), and Devasthal (Nainital) and has around 270 clear nights in a year.
- This is **because water vapour absorbs electromagnetic signals and reduces their strength.**

Himalayan Chandra Telescope

- The optical-infrared Himalayan Chandra Telescope (HCT) at the Indian Astronomical Observatory (IAO), which has been scanning the night sky in search of stellar explosions, comets, asteroids, and exo-planets, at 4,517 meters above sea level in the village of Hanle, in Ladakh, **was the world's highest** astronomy observatory when established.
- University of Tokyo Atacama Observatory, in the Atacama Desert, Chile is the highest astronomy observatory.
- The telescope is **remotely operated** using a dedicated satellite communication link from the Centre for Research & Education in Science & Technology (CREST), Indian Institute of Astrophysics (IIA), Hosakote, about 35 km northeast of Bangalore.
- Astronomers always try to locate their telescopes in areas with **low population densities to reduce the visibility problems caused by light pollution.**

Tea & banana waste used to develop non-toxic activated carbon (PIB)

Why in News?

A team of scientists have used tea and banana waste to prepare non-toxic **activated carbon**, which is useful for several purposes like **industrial pollution control, water purification, food and beverage processing, and odour removal.**

Analysis

- **Conversion to activated carbon involves use of strong acid and bases, making the product toxic and hence unsuitable for most uses.**
- **So a non-toxic method of conversion was needed to overcome this challenge.**
- Oxygenated potassium compounds contained in the banana plant extract (activating agent) help in activating the carbon prepared from tea waste.
- The most preferred banana for this is called 'Bheem Kol' in Assamese. Bheem Kol is an indigenous variety of bananas found only in Assam and parts of North East India.
- The reason for the use of tea as a precursor for the synthesis of active carbon is that in tea structure, the carbon atoms are conjugated and having polyphenols bond.
- This makes the quality of activated carbon better compared to other carbon precursors.
- **Activated carbon**, also called **activated charcoal**, is a form of carbon processed to have small, low-volume pores that increase the surface area available for adsorption or chemical reactions.
- Activated Carbons are a very versatile group of adsorbents, with capability for selectively adsorbing thousands of organic, and certain in-organic, materials.

Tranquillisation

Why in News?

After a 22-day-long operation, a tiger — nicknamed MDT23 — believed to have been responsible for the death of two herders in the Mudumalai Tiger Reserve and Gudalur, was tranquillised by the Forest Department.

Analysis

Factors affecting anaesthesia response

- **Age:** Young and much older animals are more sensitive to anaesthesia in comparison to an adult animal. Young animals require more and older animals usually require less doses.
- **Size and body weight:** The small size animals with higher metabolic rate need higher doses of anaesthesia.
- **Sex:** Sex of the animal may influence drug dose response. Males require higher doses than the females.
- **Species:** Choice of drug, doses and animal response vary between species. Therefore, it is essential to know the species of interest, feeding habit, seasonality in reproduction and response to particular drugs if known.
- **Physical condition:** A sick, malnourished or debilitated animals require lower dose of anaesthesia than a healthy, well-fed animal.
- **Pregnancy:** Pregnant animals are more susceptible to anaesthesia due to high metabolic rate. However, animals in late pregnancy require more doses for anaesthesia.

Tuberculosis (TB)

Why in News?

The COVID-19 pandemic has reversed years of global progress in tackling tuberculosis and for the first time in over a decade, TB deaths have increased, according to the 2021 **Global TB report released recently by the World Health Organization (WHO)**.

Analysis

- Worse, India (41%) was on the list of countries that topped those which contributed most to the global reduction in TB notifications between 2019 and 2020.
- India, along with Indonesia (14%), the Philippines (12%), China (8%) and 12 other countries, accounted for 93% of the total global drop in notifications.

What is TB? How does it spread? How is it treated?

- Tuberculosis (TB) is caused by bacteria (*Mycobacterium tuberculosis*) that **most often affect the lungs**.
- TB commonly presents as a disease of the lungs. However, the infection can spread via blood from the lungs to all organs in the body.
- This means that you can develop tuberculosis in the **pleura** (the covering of the lungs), in the **bones**, the **urinary tract** and **sexual organs**, the **intestines** and even in the **skin**.
- **Lymph nodes** in the lung root and on the throat can also get infected.

- **Tuberculous meningitis** is sometimes seen in newly infected children. This form of the disease is a life-threatening condition.
- Non-lung TB is an important cause of skin, bowel and gynaecological problems.
- ❖ **Non-Lung TB:** Infected milk or dairy products can cause the mycobacterium to set up infections in the gastro-intestinal tract and also affect the reproductive systems in men and women.
- Tuberculosis is curable and preventable.
- **TB is spread from person to person through the air. When people with lung TB cough, sneeze or spit, they propel the TB germs into the air.**
- A person needs to inhale only a few of these germs to become infected.
- About one-third of the world's population has **latent TB**, which means people have been infected by TB bacteria but are not (yet) ill with disease and cannot transmit the disease.

Tb Harega Desh Jeetega' Campaign

- It has been launched by the **Ministry of Health and Family Welfare**.
- The new TB campaign aims to improve and expand the reach of TB care services across the country, by 2022.
- "TB Harega, Desh Jeetega" campaign targets to achieve the Sustainable Development Goal target related to TB by 2025, five years ahead of the global target of 2030.

Rooftop Solar Photovoltaics (RTSPV)

Why in News?

A global study has found that India is the most cost-effective country for generating rooftop solar energy at \$66 per megawatt-hour, while the cost in China is marginally higher at \$68 per megawatt-hour.

Analysis:

- Due to the lower cost, rooftop solar photovoltaics (RTSPV) technology, such as roof-mounted solar panels used in homes, and commercial and industrial buildings, is currently **the fastest deployable energy generation technology**.
- This is projected to fulfil up to 49% of the global electricity demand by 2050.
- According to the study, India has a significant solar rooftop potential of 1.7 petawatt-hour per year.
- **In grid connected rooftop** solar photovoltaic (SPV) system, the DC power generated from solar panel is converted to AC power using power conditioning unit/Inverter and is fed to the grid.
- Solar PV Modules/Solar Panels – The Solar PV modules/Solar Panels convert solar energy to DC (direct current) electrical energy.
- **They are available in different technologies such as crystalline silicon, thin film silicon, CIGS, CdTe, HIT, etc.**
- **Crystalline Silicon Solar PV panels are most commonly used in solar rooftop system.**

Army Air Defence steps up procurement

Why in News?

After several delays in its modernisation process, the Army Air Defence (AD) is looking at major progress in the next few months in terms of deals and trials.

Analysis

- These include additional indigenous Akash surface-to-air missile (SAM) systems, the under-development medium range surface-to-air missile (MRSAM) and Igla-S very short range air defence (VSHORAD) systems from Russia.
- Akash is the indigenously designed and developed medium-range SAM system with a range of 25 km.
- In addition, the Army variant of the MRSAM (which can engage targets up to a range of 70 km), being jointly developed by the Defence Research and Development Organisation (DRDO) and Israel Aerospace Industries (IAI), is nearing induction with the final stage of trials scheduled to be held in the next few months.
- Air defence functions at three levels – gun/missile system, medium range and high range.
- Within this, the AD guns are of two types: AD gun missile system and the AD self-propelled guns.
- The Army is looking for guns in both the categories. In the medium segment, it has the indigenous Akash SAM, while MRSAM fits in the high range.

Use of Zeolites

Why in News? An editorial.

Analysis

- Zeolites are highly porous, 3-D meshes of **silica and alumina**. In nature, they occur where volcanic outflows have met water.
- **Synthetic zeolites** have proven to be a big and low-cost boon.
- Synthetic frameworks of silica and alumina with nanometer-size pores that are rigid and inflexible are used in the oxygen concentrators.
- They are packed into two cylindrical columns in an oxygen concentrator.
- Being highly porous, zeolite beads have a surface area of about 500 square meters per gram.
- Zeolite beads separate oxygen from nitrogen in air by tightly binding to hydrogen, while oxygen remains free and is thus enriched.
- Air has 78% nitrogen, 20.9% oxygen and smaller quantities of argon, carbon dioxide, etc. Once nitrogen is under arrest, what flows out from the column is 90%-plus oxygen.
- After this, lowering the pressure in the column releases the nitrogen, which is flushed out, and the cycle is repeated with fresh air.

Vaccine for Malaria

Why in News?

In October 2021, the World Health Organization made a historic announcement, endorsing the first-ever malaria vaccine, RTS,S, among children in sub-Saharan Africa.

Analysis

Why is this significant?

- Malaria is a life-threatening disease caused by micro-organisms that belong to the genus Plasmodium, and is transmitted by infected female Anopheles mosquitoes.
- About 67% of the deaths were among children aged under five, the group most vulnerable to malaria.
- Furthermore, 94% of the cases and deaths due to malaria occurred in the WHO African region, a disproportionately high share of the burden.

What path did the RTS,S vaccine take?

- RTS,S/AS01 is a recombinant protein-based vaccine that acts against P. falciparum, believed to be the deadliest malaria parasite globally and the most prevalent in Africa.
- It reportedly offers no protection against P.vivax malaria, found in many countries outside Africa.
- In July 2015, the European Medicines Agency authorised the use of the vaccine, concluding that the benefits of the vaccine outweighed the risks. Known side-effects include pain and swelling at the injection site and fever, similar to the other children's vaccines.
- It is associated with an increased risk of febrile seizures within seven days of administration.

Exercise MITRA SHAKTI (PIB)

Why in News?

- The 8th Edition of joint military exercise between the Indian Army and the Sri Lankan Army, Exercise MITRA SHAKTI which was conducted from 04 - 16 October 2021, culminated at Combat Training School, Ampara.
- Exercise Mitra Shakti, based on counter insurgency and counter terrorism operations in semi urban terrain is the largest bilateral exercise being undertaken by the Sri Lankan Army and it forms a major part of India and Sri Lanka's growing defence partnership.

Explained | The Open Network for Digital Commerce that's on the anvil for online retailers (PIB)

Why in News?

The Union Minister of Commerce & Industry reviewed the progress on Open Network for Digital Commerce (ONDC) initiative of **Department for Promotion of Industry and Internal Trade (DPIIT)**.

Analysis

- The Union government is working on setting up an Open Network for Digital Commerce (ONDC) to "democratise e-commerce" and "to provide alternatives to proprietary e-commerce sites".

- The initiative is seen as a step towards ending the dominance of platforms such as Amazon and Flipkart, which have been accused of wielding monopoly power and breaking the law.
- **Quality Council of India (QCI)** has established a team of experts for execution of the project in a mission mode.

What is the Open Network for Digital Commerce?

- The government wants to change the fundamental structure of the e-commerce market from the current “platform-centric model to an open-network model”.
- The ONDC project is modelled around the Unified Payments Interface (UPI) project that is seen as a success by many.
- The UPI project allows people to send or receive money irrespective of the payments platforms on which they are registered.
- Similarly, the government wants to ensure that buyers and sellers of goods in the e-commerce market can transact regardless of the platforms on which they are registered.
- So, under ONDC, a buyer registered on Amazon, for example, may directly purchase goods from a seller who sells on Flipkart.

National Cyber Security Coordinator (NCSC) (TH, pg 14)

Why in News?

Cybersecurity organisations in the country highlighted that no central body responsible for safety in the online space.

Analysis

- National Cyber Security Coordinator (NCSC) Col. Rajesh Pant also said the proposed national cybersecurity strategy will address this gap in the security framework.
- National Cyber Security Coordinator (NCSC) under National Security Council Secretariat (NSCS) coordinates with different agencies at the national level for cyber security matters.

Other Legislative, technical and institutional measures for addressing issues related to cyber security in India

- National Cyber Security Policy (2013), enactment of Information Technology (IT) Act, 2000 and setting up of **Indian Computer Emergency Response Team (CERT-In)**.
- Information Technology Act, 2000 was enacted to provide legal recognition for electronic communication, electronic commerce and cyber crimes etc.
- IT Act has deterrent provisions to deal with cyber threats and cyber attacks.
- The Indian Computer Emergency Response Team (CERT-In) issues alerts and advisories regarding latest cyber threats and countermeasures on regular basis.
- **National Critical Information Infrastructure Protection Centre (NCIIPC)** has been established for protection of critical information infrastructure in the country.
- Cyber security exercises are being conducted regularly to enable assessment of preparedness of organizations in Government and critical sectors.

- Guidelines have been issued for **Chief Information Security Officers (CISOs)** regarding their key roles and responsibilities for securing applications / infrastructure and compliance.
- **Cyber Swachhta Kendra (Botnet Cleaning and Malware Analysis Centre)** has been launched for detection of malicious programs and provide free tools to remove the same.

National Cyber Coordination Centre (NCCC)

- It has set up to generate necessary situational awareness of existing and potential cyber security threats and enable timely information sharing for proactive, preventive and protective actions by individual entities.
- All the new government websites and applications are audited prior to their hosting and on regular basis after hosting.

Security ink based on nano-materials developed (PIB)

Why in News?

Indian Scientist has developed a highly stable and non-toxic security ink from nano-materials.

Analysis

- Luminescent ink is generally used as covert tags to combat the counterfeiting.
- Most of the security inks available today are based on luminescent materials that absorb a high energy photon and emit low energy photon, technically called downshifting, where covert tag is invisible under daylight, and it becomes visible under UV light.
- However, these single emission-based tags are prone to replication.
- To overcome this, luminescent ink with excitation-dependent luminescent properties (downshifting and upconversion) are advised.
- This is because increasing the number of parameters required to decode the tag decreases the possibility of decoding and replication.
- However, most of the materials reported recently for this purpose are based on fluorides which are less stable and highly toxic.
- The luminescent security ink developed by the researcher is based on **lanthanide** ions.

Radio over Internet Protocol System (ROIP) (PIB)

Why in News?

The Radio over Internet Protocol (ROIP) System at Syama Prasad Mookerjee Port, Kolkata (SMP, Kolkata), was inaugurated recently.

Analysis

- Radio over Internet Protocol (RoIP) is essentially the same technology as Voice over IP (VoIP), except that RoIP adds push-to-talk (PTT) capability to voice communications over the internet.
- ROIP system is being introduced as a marine communication mode, **for the first time** in any Major Indian Port.
- With this facility, vessels at Sandheads can be directly communicated via Radio, from Kolkata, specially during storms and inclement weather.

- At least one node in an RoIP network is a radio, which is connected to other nodes in the network via IP.
- These nodes can be any communication device that's accessible over IP, including two-way radios, dispatch consoles, smartphones, and computer applications.
- The benefits of RoIP solutions fall into one of the following three categories:
 - Larger service area
 - Greater reliability
 - More base station users

What is AY.4.2?

Why in News?

Two samples from Karnataka were retrospectively found to be infected with AY.4.2.

Analysis

- AY.4.2 is termed as **sub-lineage of the Delta variant of SARS-CoV-2**.
- B.1.617 was a genetic mutation of the **SARS-CoV-2** and which was later named as **delta** by the World Health Organization.
- These are all labels given to branches of the COVID evolutionary tree to illustrate their relatedness.
- **Such variants are overseen by the Pango network**, a joint team of researchers from the universities of Edinburgh and Oxford, who act as the custodians of lineages and handle the assignment of new ones.
- Variants are distinguished by the different mutations that they have in their genetic material.
- AY is a further evolutionary step forward from the delta variant. Here the mutation is within an “antigenic supersite” of the spike protein, a part of the protein that antibodies frequently recognise and target.
- The spike protein is a key part of the virus's outer surface, and is the part of its structure that it uses to get inside cells.

Pango Network

- The Pango nomenclature is being used by researchers and public health agencies worldwide to track the transmission and spread of SARS-CoV-2, including variants of concern.
- **SOFTWARE Pangolin** was developed to implement the dynamic nomenclature of SARS-CoV-2 lineages, known as the Pango nomenclature.
- It allows a user to assign a SARS-CoV-2 genome sequence the most likely lineage (Pango lineage) to SARS-CoV-2 query sequences.

Integrated Guided Missile Development Programme (IGMDP) and India's Nuclear Doctrine (PIB)

Why in News?

A successful launch of the Surface-to-Surface **Ballistic Missile**, Agni-5, was carried out from APJ Abdul Kalam Island, Odisha.

Integrated Guided Missile Development Programme (IGMDP)

- Integrated Guided Missile Development Programme (IGMDP) was started in 1983 and completed in March 2012.
- It was conceived by **Dr. A P J Abdul Kalam** to enable India attain self-sufficiency in the field of missile technology.
- The missile, which uses a **three-stage solid fuelled engine**, is capable of striking targets at ranges up to 5,000 kilometres with a very high degree of accuracy.
- The successful test of Agni-5 is in line with India's stated policy to have '**credible minimum deterrence**' that underpins the commitment to '**No First Use**'.

Reduction of CO₂ into value-added products (PIB)

Why in News?

Indian Scientists have designed a cost-effective metal-free catalyst to convert carbon dioxide to methane by absorption of visible light.

Analysis

- Ongoing research is making a significant effort to reduce CO₂ into value-added products, methane (CH₄) could be one of the value-added products with significant uses as the cleanest burning fossil fuel and can directly be used in fuel cells as a hydrogen carrier.
- It is also the main component of natural gas and has the potential to replace coal for electricity generation and furnishing flexible supply to reinforce intermittent renewable generators.

Indian SARS-CoV-2 Genomics Consortium (INSACOG)

Why in News?

The **Indian SARS-CoV-2 Genomics Consortium (INSACOG)**, jointly initiated by the Union Health Ministry of Health, and Department of Biotechnology (DBT) with Council for Scientific & Industrial Research (CSIR) and Indian Council of Medical Research (ICMR).

Analysis

- The network carries out whole genome sequencing of SARS-CoV-2 virus across the nation, aiding the understanding of how the virus spreads and evolves, and provide information to aid public health response.
- INSACOG also aims to focus on sequencing of clinical samples to understand the disease dynamics and severity.

Metaverse

- Facebook chief Mark Zuckerberg announced that the parent company's name is being changed to "Meta" to represent a future beyond just its troubled social network.
- The new handle comes as the social media giant tries to fend off one its worst crises yet and pivot to its ambitions for the "metaverse" virtual reality version of the Internet that the tech giant sees as the future.

Pneumococcal 13-valent Conjugate Vaccine (PCV)

Why in News?

Union Health Minister launched a nationwide expansion of Pneumococcal 13-valent Conjugate Vaccine (PCV) under the Universal Immunisation Programme (UIP).

Analysis

- **It was for the first time in the country that PCV would be available for universal use.**
- Pneumonia was a leading cause of death among children under five, globally and in India.
- Around 16% of deaths in children occur due to pneumonia in India. The nationwide roll-out of PCV will reduce child mortality by around 60%.
- **Pneumococcal disease refers to any illness caused by pneumococcal bacteria.**
- These bacteria can cause many types of illnesses, including pneumonia, which is an infection of the lungs.
- The disease is spread from person to person by droplets in the air. The pneumococci bacteria are common inhabitants of the human respiratory tract.
- **Pneumococcal bacteria are one of the most common causes of pneumonia.**
- **PCV13 protects against 13 types of bacteria that cause pneumococcal disease.**
- **Infants and young children usually need 4 doses of pneumococcal conjugate vaccine at ages 2, 4, 6 and 12-15 months respectively.**
- **A dose of PCV13 is also recommended for adults and children 6 years or older.**
- Besides pneumonia, pneumococcal bacteria can also cause:
 - Ear infections
 - Sinus infections
 - Meningitis (infection of the tissue covering the brain and spinal cord)
 - Bacteremia (infection of the blood)

Polity and Social Issues

Elderly Population in India and associated issues (PIB)

Why in News?

As per the latest industry reports, the share of elders, as a percentage of the total population in the country, is expected to increase from around 7.5 percent in 2001 to almost 12.5 percent by 2026, and surpass 19.5 percent by 2050.

Analysis

- Govt of India has created the **Senior Citizen Welfare Fund** in 2016 to fund activities that would bring significant change in the lives of the elderly in India.
- The Fund is expected to use Rs. 9,000 Cr of unclaimed deposits in the employee provident fund (EPF) and other public funds.
- The **Rashtriya Vayoshri Yojana** is funded through this.

Rashtriya Vayoshri Yojana (RVY)

- The **Ministry of Social Justice and Empowerment** is implementing the **Central Sector Scheme** of ‘Rashtriya Vayoshri Yojana (RVY).’
- Its objective is to provide senior citizens, **belonging to BPL category** and suffering from age related disabilities/ infirmities, with such physical aids and assisted living devices which can restore near normalcy in their bodily functions.
- Under the Scheme, aids & assisted living devices viz. walking sticks, elbow crutches, artificial dentures and spectacles are distributed **free of cost** to the eligible senior citizens beneficiaries.
- The Scheme is entirely funded from the Senior Citizens’ Welfare Fund (SCWF).
- At present, a total of 326 districts from all State/UTs Administration have been selected for the implementation of RVY.
- The Scheme is being implemented through ‘Artificial Limbs Manufacturing Corporation (ALIMCO)’, **as the sole implementing Agency.**

What are Bypolls or By-elections?

Why in News?

Bypoll in the Bhabanipur Assembly constituency in West Bengal.

What are Bypolls?

- By-elections or bypolls are used to fill elected offices that have become vacant between general elections.
- Under the following circumstances, bypolls can occur for a seat:
 - When the incumbent dies or resigns.
 - When the incumbent becomes ineligible to continue in office.
 - When a constituency election is invalidated by voting irregularities.
 - When a candidate wins a seat after the bypolls he or she will **remain in office till the Lok Sabha/Assembly dissolves.**

Time limit for By-elections

- According to Section 151A of Representation of the People Act 1951, **the time limit for a bypoll to fill vacancies either for parliament or legislative assembly is six months from the date of occurrence of vacancy** provided that nothing contained in this section shall apply if –
 - the **remainder of the term of a member** in relation to a vacancy is **less than one year;**
 - or
 - the Election Commission in consultation **with the Central Government certifies that it is difficult to hold the by election within the said period** (the Election Commission had postponed Rajya Sabha polls, byelections and civic body elections in the wake of the pandemic).
- A Panchayat/Municipality reconstituted after premature dissolution shall continue for the remainder of the period.

- But if the remainder of the period is **less than 6 months**, it shall not be necessary to hold elections.
- **A person cannot be a member of both Houses of Parliament at the same time under the Representation of People Act (1951).**

Qualifications of High Court Judges

Why in News?

In a month of marathon recommendations to fill up long-pending vacancies in the High Courts, the Supreme Court Collegium led by Chief Justice of India has suggested the names of 16 judicial officers and advocates to the government for appointment as judges in four different High Courts.

Analysis

- A person to be appointed as a judge of a high court, should have the following qualifications:
- He should be a citizen of India.
- (a) He should have held a judicial office in the territory of India for ten years; or
- (b) He should have been an advocate of a high court (or high courts in succession) for ten years.
- From the above, it is clear that **the Constitution has not prescribed a minimum age** for appointment as a judge of a high court.
- Moreover, unlike in the case of the Supreme Court, the Constitution makes no provision for appointment of a distinguished jurist as a judge of a high court.

Political parties in India

- **Context:** An editorial.

Analysis

- Political parties in India are **extra-constitutional**.
- Section 29A(5) of the Representation of the People Act, 1951 is the **only major statutory provision** dealing with political parties in India.
- It orders that a political party shall bear true faith and allegiance to the Constitution of India as by law established.
- The Indian Constitution is the one of the longest Constitutions in the world. It even elaborately deals with the co-operative societies.
- The right to form co-operative societies is a fundamental right under Article 19 (1)(c), **but the right to form political parties is not.**

Bifurcating Meghalaya

Why in News?

Meghalaya is envisaged to be divided into States. One of the States would be for the Garos and the other for the Khasi-Jaintia communities.

Analysis

- It is mentioned that unlike many other states in India that were created on linguistic basis, Meghalaya was carved out from Assam on the basis of ethnic identity.
- Though the state was created it continued to witness intolerance among various ethnic groups and between tribal and non-tribal population.
- The present demand for division of the state by Garos is another form of intolerance among ethnic groups within the state on linguistic basis.
- Garos feel that they are neglected and deprived by the Khasis, the major ethnic group in the state.

Meaning and scope of the Writ Jurisdiction of the Supreme Court and the High Courts

Why in News?

A writ of **mandamus** is sought to the Centre and the State Governments to set up a mechanism for scrutinising and auditing the bills of COVID-19 patients who have complaints of being overcharged.

Analysis

- The Constitution has constituted the Supreme Court as the guarantor and defender of the fundamental rights of the citizens.
- The Supreme Court is empowered to issue writs including *habeas corpus*, *mandamus*, **prohibition**, *quo warranto* and *certiorari* for the **enforcement of the fundamental rights** of an aggrieved citizen.
- In this regard, the Supreme Court has **original jurisdiction** in the sense that an aggrieved citizen can directly go to the Supreme Court, not necessarily by way of appeal.
- However, the writ jurisdiction of the Supreme Court is **not exclusive**.
- The high courts are also empowered to issue writs for the enforcement of the Fundamental Rights.
- It means, when the Fundamental Rights of a citizen are violated, the aggrieved party has the option of moving either the high court or the Supreme Court **directly**.
- Therefore, the original jurisdiction of the Supreme Court with regard to federal disputes is different from its original jurisdiction with regard to disputes relating to fundamental rights.
- In the first case, it is exclusive and in the second case, it is concurrent with high courts' jurisdiction.
- Moreover, the parties involved in the first case are units of the federation (Centre and states) while the dispute in the second case is between a citizen and the Government (Central or state).
- The Supreme Court (under Article 32) and the high courts (under Article 226) can issue the writs of *habeas corpus*, *mandamus*, prohibition, *certiorari* and *quo-warranto*.
- Further, the Parliament (under Article 32) can empower any other court to issue these writs.
- Since no such provision has been made so far, only the Supreme Court and the high courts can issue the writs and not any other court.
- Before 1950, only the High Courts of Calcutta, Bombay and Madras had the power to issue the writs.
- Article 226 now empowers all the high courts to issue the writs.
- These **writs are borrowed from English** law where they are known as 'prerogative writs'.

The writ jurisdiction of the Supreme Court differs from that of a high court in three respects:

1. The Supreme Court can issue writs **only for the enforcement of fundamental rights** whereas a high court can issue writs not only for the enforcement of Fundamental Rights but also for any other purpose.
 - a. The expression ‘for any other purpose’ refers to the enforcement of an ordinary legal right.
 - b. Thus, **the writ jurisdiction of the Supreme Court, in this respect, is narrower than that of high court.**
2. The Supreme Court can issue writs against a person or government throughout the territory of India whereas a high court can issue writs against a person residing or against a government or authority located within its territorial jurisdiction only or outside its territorial jurisdiction only if the cause of action arises within its territorial jurisdiction.
 - a. Thus, **the territorial jurisdiction of the Supreme Court for the purpose of issuing writs is wider than that of a high court.**
3. A remedy under Article 32 is in itself a Fundamental Right and hence, the Supreme Court may not refuse to exercise its writ jurisdiction.

India and the Global Hunger Index 2021

Why in News?

The Global Hunger Index 2021, a peer-reviewed report released annually by Irish aid agency Concern Worldwide and German organisation Welthungerhilfe, has been released.

Analysis

- The Government challenged India’s poor ranking in the Global Hunger Index 2021 and the methodology used calling it “devoid of ground reality and facts”.
- The latest Index ranked India at 101 position of 116 countries.
- India ranked 94 among 107 countries in the Global Hunger Index (GHI) released last year.
- India is also among the 31 countries where hunger has been identified as serious.
- According to the Index, only 15 countries fare worse than India.
- India was also behind most of the neighbouring countries.
- Pakistan was placed at 92, Nepal and Bangladesh at 76 and Sri Lanka at 65.
- The GHI scores are based on the values of four component indicators — undernourishment, child wasting, child stunting and child mortality.
- India has the **highest prevalence of wasted children under five years in the world**, which reflects acute undernutrition.

What are ‘Tipraland’ and ‘Greater Tipraland’?

Why in News?

‘Tipraland’ was a demand of the Indigenous People’s Front of Tripura (IPFT), which is now in power in Tripura in alliance with the Bharatiya Janata Party.

Analysis

- The concept of Greater Tipraland does not restrict simply to the Tripura Tribal Areas Autonomous District Council (TTAADC) areas.
- It demands that every indigenous area or village which is today outside the TTAADC be included in Greater Tipraland.
- ‘Greater Tipraland’ has been a political demand on the lines of ‘Greater Nagalim’, and seeks to – in a democratic manner – cater to the aspirations of Tripuris in Mamit of Mizoram, Kachar and Hailakandi in Assam, and even in Khagrachari, Bandarban, and Chittagong of Bangladesh.
- Tripuris are 19 indigenous clans, most of whom live in the TTAADC areas which make up two-thirds of the state’s geographical area.



Do existing laws prevent State flags in India?

Why in News?

The resumption of peace talks between the Centre and two sets of extremist groups has put the focus back on the Naga flag and the Yehzabo, or the Naga Constitution.

Analysis

- Under the Constitution, a flag is not enumerated in the **Seventh Schedule (the three Lists)**.
- In terms of legislative power-sharing, **Article 246** of the Constitution confers legislative powers on the Parliament and the State Legislatures on the subjects enumerated in the Seventh Schedule.
- It is significant to note that recent amendments to the Constitution have introduced **Article 246A** that makes special provisions for the levy of the Goods and Services Tax (‘GST’), which falls outside the list framework in the Seventh Schedule.
- **Article 248** confers residuary powers on the Parliament while **Article 254** also resolves issues of repugnancy in favour of the Parliament.

- **Article 249** of the Constitution gives the Parliament the power to enter the legislative domain of states if it is necessary or expedient in national interest.
- **Article 252** enables the Parliament to legislate for two or more States by consent, with the law applying to such States and to any other State by which it is adopted afterwards by resolution.
- **Article 253** recognises the power of the Parliament to make law for giving effect to international agreements.
- Under **Article 250**, during an emergency, Parliament has the power to legislate with respect to any matter in the State List.
- However, **Article 51A** ordains that every citizen shall abide by the Constitution and respect its ideals and institutions, the national flag, and the national anthem.
- There is no other provision regulating hoisting of flags, either by the States or by the public.
- It is clear that **there is no prohibition under the Constitution to hoist any flag other than the national flag.**

India is not a federation

- People argue that other countries have different flags.
- Therefore, these federal units cannot aspire to have distinct political symbols that compete with national political symbols; **the markers of cultural diversity are already given suitable representation.**
- Political symbolism has a unity of purpose which has served India well in the last 75 years. There is no compelling argument in favour of changing it.
- **The S.R. Bommai v. Union of India (1994) judgment**, which is being cited to make the case for a separate flag for States, revolved around arbitrary actions of the Union against the States and provided a much-needed safeguard to them.

National Population Register (NPR)

Why in News?

The latest form of the **National Population Register (NPR)** appears to have retained contentious questions such as “mother tongue, place of birth of father and mother and last place of residence”.

Analysis

- The Home Ministry said earlier that data collected under NPR are shared with States and used by Central government for various welfare schemes at individual level.
- The NPR already has an electronic database of more than 119 crore residents. Along with Census, NPR will also be updated digitally for the first time.
- The exercise under NPR **is different from the decennial Census.**
- The census involves a detailed questionnaire — there were 29 items to be filled up in the 2011 census — aimed at eliciting the particulars of every person, including age, sex, marital status, children, occupation, birthplace, mother tongue, religion, disability and whether they belonged to any Scheduled Caste or Scheduled Tribe.
- On the other hand, the NPR collects basic demographic data and biometric particulars.
- The objective of the NPR is to create a comprehensive identity database of **every usual resident** in the country.

- The database would contain **demographic as well as biometric** particulars.
- The exercise was conducted earlier in two phases in 2010 and 2015.
- **For the purpose of NPR, a usual resident is defined as** a person who has resided in a local area for six months or more **or** a person who intends to reside in that area for the next six months or more.
- **It is mandatory** for every usual resident of India to register in the NPR.

National Export Insurance Account (NEIA) (PIB)

Why in News?

The Government has recently approved capital infusion to National Export Insurance Account (NEIA) over a period of five years, i.e. from FY 2021-2022 to FY 2025-2026.

Analysis

- NEIA Trust was established in 2006 to promote project exports from India that are of strategic and national importance.
- The corpus commitment of GOI is Rs.4000 crore and Maximum Liability Permissible is 20 times of the actual corpus
- Its impact in enabling project exports has been most significant in Africa and South Asia.

What are the objectives of NEIA?

- National Export Insurance Account (NEIA) has been set up by the Government of India to facilitate medium and long-term exports.
- NEIA aims to ensure the availability of credit risk cover for projects and other high-value exports.

The following types of export transactions are eligible for inclusion under NEIA:

- Only such medium and long-term export projects which are viable and for which reinsurance is not available.
- Exports to countries which are not likely to be covered on purely commercial considerations or are beyond country-exposure limits, acceptable credit terms/period prescribed by ECGC.
- These transactions could be in the nature of a Buyer's credit, Line of Credit, Supplier's Credit, and those involving deferred terms of payments.
- This apart, transactions involving investments by Indian companies in overseas markets can be covered for the protection of their investments against expropriation risks and limited recourse.

Compulsory Retirement

Why in News?

Five officials of the Central Bureau of Investigation (CBI), including a senior Public Prosecutor, have been compulsorily retired by the government under clause 56(j) of the Fundamental Rules.

Analysis

- The Government has the absolute right to retire Government officials prematurely on the ground of lack of integrity and ineffectiveness.
- **These rules lay down the policy of periodic review and premature retirement of Government servants, which is a continuous process.**
- Based on this rule, **the President**, if he is of the opinion that it is in the public interest to do so, can retire the officials who are corrupt or inefficient with immediate effect.

Service before 35 years of age and have attained 50 years of age.

- A review is carried out on a quarterly basis, including of officials and employees facing serious allegations of corruption.
- If the review committee finds the allegations to be true, it recommends compulsory retirement and the order is then signed by the President.
- The compulsorily retired officials should be served a notice of not less than three months in writing or three months' pay and allowances in lieu of such notice calculated at the same rate at which s/he was drawing them immediately before retirement.
- **Such an action is considered as a penalty and the government believes that it will act as a deterrent for others flirting with corruption.**
- At present, the retirement age for the union government is 60 years.

Demand for Separate State- Gorkhaland

Why in News?

West Bengal Chief Minister Mamata Banerjee recently urged political parties in Darjeeling hills to come up with a plan for a “permanent solution” to the issues faced by the region.

Analysis

- Since the 1980s, politics in the Darjeeling hills has been centred around the demand for creation of a separate State — Gorkhaland.
- The Constitution authorises the Parliament to form new states or alter the areas, boundaries or names of the existing states without their consent.
- In other words, the Parliament can redraw the political map of India according to its will.
- Hence, the territorial integrity or continued existence of any state is not guaranteed by the Constitution.
- Therefore, India is rightly described as ‘an indestructible union of destructible states.
- The Union Government can destroy the states whereas the state governments cannot destroy the Union.
- According to Article 3 of the Indian Constitution the Parliament may:
 - (a) form a new state by separation of territory from any state or by uniting two or more states or parts of states or by uniting any territory to a part of any state;
 - (b) increase the area of any state;

- (c) diminish the area of any state;
- (d) alter the boundaries of any state; and
- (e) alter the name of any state.
- However, Article 3 lays down two conditions in this regard:
 - one, a bill contemplating the above changes can be introduced in the Parliament only with the prior recommendation of the President; and
 - two, before recommending the bill, the President has to refer the same to the state legislature concerned for expressing its views within a specified period.
- Further, the power of Parliament to form new states includes the power to form a new state or union territory by uniting a part of any state or union territory to any other state or union territory.

Economic Advisory Council to the Prime Minister (EAC-PM)

Why in News?

The government has reconstituted the **Economic Advisory Council to the Prime Minister (EAC-PM)**, under current Chairman Bibek Debroy, for a period of two years.

Analysis:

- While V. Anantha Nageswaran has been dropped, Rakesh Mohan, Poonam Gupta and T.T. Ram Mohan have been appointed as part-time members of the reconstituted EAC-PM.
- The other part-time members of the Council include Sajid Chenoy, Neelkanth Mishra and Nilesh Shah.
- According to the notification, the terms of reference of the Council include to analyse any issue, **economic or otherwise**, referred to it by the Prime Minister and advising him hereon.
- Besides, addressing issues of macroeconomic importance and presenting views thereon to the Prime Minister.
- This could either suo-motu or on reference from the Prime Minister or anyone else.
- The EAC-PM is an independent body constituted to advise the government, especially the prime minister, on economic and related issues.
- The Council works closely with the Reserve Bank of India on monetary policy and fiscal framework.
- The EAC-PM can also opt for professional consultation from private sector and other key stakeholders to find solutions to India's economic troubles.

Unlawful Activities (Prevention) Amendment Act, 2019

Why in News?

The Supreme Court held that “mere association” with a terrorist organisation as a member or otherwise is not sufficient to attract an offence under the draconian Unlawful Activities (Prevention) Act of 1967.

Analysis

Unlawful Activities (Prevention) Amendment Act, 2019

- The Act **provides special procedures to deal with terrorist activities**, among other things.
- **Approval for seizure of property by NIA:**
 - Under the Act, an investigating officer is required to obtain the prior approval of the Director General of Police to seize properties that may be connected with terrorism.
 - However, if the investigation is conducted by an officer of the National Investigation Agency (NIA), the approval of the Director General of NIA would be required for seizure of such property.

Investigation by NIA:

- Under the Act, investigation of cases may be conducted by officers of the rank of Deputy Superintendent or Assistant Commissioner of Police or above.
- The **Amendment Act** additionally empowers the officers of the NIA, of the rank of Inspector or above, to investigate cases.

Child Welfare Committees (CWCs)

Why in News?

Individuals who receive foreign aid in their personal capacity or as members of an organisation will not be eligible for the membership of Child Welfare Committees (CWCs), the Centre has proposed.

Analysis

- The Juvenile Justice (Care and Protection of Children) Act, 2015 makes it mandatory to establish one Child Welfare Committee in each district as the final authority
 - to dispose of cases for the care, protection, treatment, development and rehabilitation of children in need of care & protection and
 - to provide for their basic needs and protection of human rights.
- The Child Welfare Committee (CWC) consists of a chairperson, and four other members as the State Government may think fit to appoint, of whom at least one is a woman and another, an expert on matters concerning children.
- No person shall be appointed as a member of the Committee unless such person has been actively involved in health, education or welfare activities pertaining to children for atleast seven years or is a practicing professional with a degree in child psychology or psychiatry or law or social work or sociology or human development.
- No person shall be appointed for a period of more than three years as a member of the Committee.
 - The Committee shall meet at least twenty days in a month.
 - The Child Welfare Committee is required to conduct at least two inspection visits per month of residential facilities for children.
- The Ministry of Women and Child Development also invited comments from stakeholders to the draft amendments to Juvenile Justice Model Rules, 2016.
- This follows the passage of the Juvenile Justice (Care and Protection of Children) (JJ) Amendment Bill, 2021, in Parliament earlier this year to empower District Magistrates (DMs) to issue adoption orders which would ensure speedy disposal of cases.

Supplementary Budgetary Allocations

Why in News?

The Centre's flagship rural employment scheme (Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) scheme).

Analysis

- In addition to the budget, various other grants are made by the Parliament **under extraordinary or special circumstances**.

Supplementary Grant

- It is granted when the amount authorised by the Parliament through the appropriation act for a particular service for the current financial year is **found to be insufficient for that year**.

Additional Grant

- It is granted when a need has arisen during the current financial year for additional expenditure upon some **new service not contemplated in the budget** for that year.

Excess Grant

- It is granted when **money has been spent on any service during a financial year in excess of the amount granted for that service** in the budget for that year.
- It is **voted** by the Lok Sabha after the financial year.
- Before the demands for excess grants are submitted to the Lok Sabha for voting, they must be approved by the Public Accounts Committee of Parliament.

Vote of Credit

- It is granted for meeting an **unexpected demand upon the resources of India**, when on account of the magnitude or the indefinite character of the service, the demand cannot be stated with the details ordinarily given in a budget.
- Hence, it is like a **blank cheque given to the Executive** by the Lok Sabha.

Personal Data Protection Bill

Why in News?

The Unique Identification Authority of India (UIDAI) has asked for exemption from the Personal Data Protection (PDP) Law.

Analysis

- UIDAI functionaries said the authority is already being governed by the Aadhaar Act and there cannot be duplicity of laws.
- Ironically, it was making Aadhaar compulsory for many key services including the banks that first triggered the data privacy debate.
- The genesis of this Bill lies in the report prepared by a Committee of Experts headed by Justice B.N. Srikrishna.

- The committee was constituted by the government in the course of hearings before the Supreme Court in the right to privacy case (Justice K.S. Puttaswamy v. Union of India).
- The **Personal Data Protection (PDP) Bill 2019** has a contentious section 35, which invokes “sovereignty and integrity of India,” “public order”, “friendly relations with foreign states” and “security of the state”.

Geography and Agriculture

Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR) and Marine Protected Areas (MPAs) (PIB)

Why in News?

India has extended support for protecting the Antarctic environment and for co-sponsoring the proposal of the European Union for designating East Antarctica and the Weddell Sea as Marine Protected Areas (MPAs).

Analysis

- The proposal to designate East Antarctica and the Weddell Sea as MPAs was first put forth to the CCAMLR in 2020 but could not reach a consensus at that time.
- Since then, substantial progress has been made with **Australia, Norway, Uruguay and the United Kingdom agreeing to co-sponsor the proposal.**
- By the end of October 2021, India would join these countries in co-sponsoring the MPA proposals.
- This is **the first time** India is considering co-sponsoring an MPA proposal at the CCAMLR
- An MPA is a marine protected area that provides protection for all or part of its natural resources.
- Certain activities within an MPA are limited or prohibited to meet specific conservation, habitat protection, ecosystem monitoring, or fisheries management objectives.

Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR)

- The Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR) is an international treaty to manage Antarctic fisheries to preserve species diversity and stability of the entire Antarctic marine ecosystem. CCAMLR came into force in April 1982.
- CCAMLR is an international commission with **26 Members**, and a further 10 countries have acceded to the Convention.

Unusual Weather in India and Monsoon

Why in News?

While September is usually the month that marks the beginning of the end of the monsoon’s four-month sojourn over India, **both 2020 and 2019 have seen rain spikes during the month.**

Analysis

- In 2019, September rain was a staggering 152% or close to 25 cm, close to what the country gets in August (26 cm), considered the second rainiest of the monsoon months.
- D.S, Pai, Head, Climate Research Services, IMD, Pune said while three Septembers of excess monsoon rains was unusual, it wasn't yet indicative of a trend.
- September rainfall was expected to be good on the back of transitioning temperatures in the Central Pacific Ocean where a **La Nina — characterised by colder than normal sea surface temperatures** — was taking shape.
- **Other factors that contributed to strong September rains were** favourable conditions in the Indian Ocean as well as a rain-bearing system in the Bay of Bengal that resulted in Cyclone Gulab that passed through Andhra Pradesh but whose effects were felt as far as Maharashtra, bringing in torrential rain in the State.
- Across the regions, central India saw 83% more rain than normal, northwest India 40% and southern India 24% above normal.
- However, **northeastern and eastern India saw a 30% reduction**. Heavy rains in central India correspond to weaker rains in the northeast because of the movement of the monsoon system.
- The country recorded an average of nearly 87 cm of rainfall, just short of the nearly 88 cm it normally receives during the monsoon.
- The quantum of rainfall during the monsoon is counted as that received between June 1 and September 30.

Climate Finance

- **Context:** An editorial.

Analysis

- In the run-up to the 26th Conference of the Parties of the UN Framework Convention on Climate Change (UNFCCC), media reports have claimed that developed countries are inching closer to the target of providing \$100 billion **annually** in climate finance to developing countries by 2025 (the original target was 2020).
- This view has been bolstered by the Organisation for Economic Co-operation and Development (OECD), which claimed that climate finance provided by developed countries had reached \$78.9 billion in 2018.

Flawed claims

- These claims are erroneous. First, the OECD figure **includes private finance and export credits**.
- Developing countries have insisted that developed country climate finance should be from public sources and should be provided as grants or as concessional loans. Significantly, the final figure comes by adding loans and grants.
- Between 2013 and 2018, the share of loans has continued to rise, while the share of grants decreased.

- The OECD reports on climate finance have long been **criticised for inflating climate finance figures by including funds for development projects such as health and education** that only notionally target climate action.

Fifth National Family Health Survey

- **Context:** An editorial.

Analysis

- The health of a country's agri-food systems determines the health of its people. The findings from the first round of the **Fifth National Family Health Survey** suggest that nutrition-related indicators have worsened in most States.
- **World Food Day** marks the foundation day of the Food and Agriculture Organization (FAO).
- FAO has enjoyed valuable partnership with India since it began operations in 1948.
- In January 2021, FAO in collaboration with NITI Aayog and the Ministry of Agriculture convened a National Dialogue to evolve a framework for the transition to a more sustainable agri-food systems by 2030 and identify pathways for enhancing farmers' income and achieving nutritional security.

National Family Health Survey

- The main objective of successive rounds of the NFHS is to provide reliable and comparable datasets on health, family welfare and other emerging issues.
- Four rounds of NFHS (1992–93, 1998–99, 2005–06 and 2015–16) have been successfully completed in India.
- All the rounds of NFHS have been conducted by the International Institute for Population Sciences (IIPS), Mumbai, as the national nodal agency.
- Earlier the Health Ministry itself used to conduct District Level Health Survey (DLHS) and Annual Health Survey (AHS).
- MoHFW has decided to conduct integrated NFHS with a periodicity of three years in lieu of different surveys from 2015-16 onwards to meet the evolving requirements for frequent, timely and appropriate data at the National, State and District levels.

Agriculture Infrastructure Development Cess (AIDC) (PIB)

Why in News?

The Budget for 2021-22 may have refrained from tinkering with your taxes, but it has proposed a **new levy — Agriculture Infrastructure Development Cess** to be collected on specific imported and excisable goods.

Analysis

- Cess is a kind of **special-purpose tax** which is levied over and above basic tax rates.

- The **purpose** of the new AIDC is to raise funds to finance spending on developing agriculture infrastructure aimed at not only boosting production but also in helping conserve and process farm output efficiently.
- Considering that **not much private investment is forthcoming for agriculture**, the Centre now seeks to raise a dedicated fund to meet these expenses.
- The new cess **will be levied on 29 products**, prominent among which are gold, silver, imported apple, imported alcohol (excluding beer), imported pulses, imported palm oil, imported urea, and petrol/diesel including branded ones (as an additional duty of excise).
- While Basic Custom Duty (BCD) has been lowered on 25 of these products, Basic Excise Duty (BED) and Special Additional Excise Duty (SAED) have been lowered on unbranded and branded petrol-diesel.
- The new cess will only offset the reduction in customs or excise duty and thus will not raise the tax incidence for consumers.

Kunming Declaration on Biodiversity Conservation (DTE)

Why in News?

The Kunming Declaration, adopted by over 100 countries at the end of the **UN Biodiversity Conference's** latest High Level Segment, which took place in Kunming, China, calls on the States Parties to **act urgently on biodiversity protection in decision-making and recognise the importance of conservation in protecting human health.**

Analysis

- Key elements of the accord include **phasing out and redirecting harmful subsidies and recognizing the full and effective participation of local communities and indigenous peoples, in helping monitor and review progress.**
- It calls upon the parties to “mainstream” biodiversity protection in decision-making and recognise the importance of conservation in protecting human health.
- By adopting this, the nations have committed themselves to support the development, adoption and implementation of an effective post-2020 implementation plan, capacity building action plan for the **Cartagena Protocol on biosafety.**
- The **theme of the declaration** is Ecological Civilization: Building a Shared Future for All Life on Earth.
- The **UN Biodiversity Conference** consists of three concurrent meetings.
- In addition to COP15 (15th meeting of the Conference of the Parties to the United Nations **Convention on Biological Diversity**), meetings of the Parties to the **Cartagena Protocol on Biosafety**, and the **Nagoya Protocol on access and sharing of genetic resources**, are also taking place.

Mélange: The glue that holds the ice shelves together (DTE)

Why in News?

When an iceberg split off from Antarctica's Larsen C ice shelf in July 2017, the scientific fraternity dived in to look for answers.

Analysis

- The answer is in the ice-shelf behaviour — but peddled by the massive changes to Antarctic that can only be attributed to global warming.
- The study found that **mélange** — a collection of windblown snow, broken icebergs and sea ice lodged in and around ice shelves and which is critical in holding ice shelves together — may cause the shelves to break up even faster due to rising air temperatures.
- When this layer of mélange (which has natural properties similar to glue: It fills cracks or gaps and sticks to ice and rock and **helps the ice stick to the shelf**) **gets thinner, is when the cracks in the ice shelf grow bigger.**
- This meant that the melting of glacial ice alone is not enough to explain why the shelves are breaking up more rapidly, as has been the case in the Antarctic.
- The layers of mélange melt by coming in contact with the ocean water below, according to the study.
- So, this process continues through the year, and the mélange becomes too thin to keep holding the ice shelf together.

Sela Pass and Snow Line (PIB)

Why in News?

- Recently, government announced the plan to build a tunnel through the Sela Pass which will ensure faster movement of troops in Tawang, a strategically- located town in Arunachal Pradesh bordering China.

Analysis

- The Sela pass is located between the **Tawang and West Kameng districts** of Arunachal Pradesh and considered crucial from strategic perspective.
- On completion, Sela Tunnel will be the longest bi-lane road tunnel in the world at an altitude above 13,800 feet.
- This unique tunnel is much below the snow line allowing all weather travel without the challenges of snow clearance.
- It reduces travel time and provides all weather connectivity to Tawang.
- The Raksha Mantri made special mention of the construction of Atal Tunnel, Rohtang, which is world's longest highway tunnel at 10,000 feet and Umlingla Pass, the highest motorable pass in the world at 19,300 feet in Eastern Ladakh.

Snow line

- **Snow line** is the **lower** topographic limit of permanent snow cover.
- The snow line is an irregular line located along the ground surface where the accumulation of snowfall equals ablation (melting and evaporation).

- This line varies greatly in altitude and depends on several influences.
- On windward slopes and those facing the afternoon sun, the snow line may be as much as a kilometre (more than half a mile) higher than on opposite slopes.

Saline soil reclamation works wonders in Sunderbans

Why in News?

In the last week of May 2021, when large areas of the Sunderbans were inundated by saline water under the impact of Cyclone Yaas, farmers across the region had given up hope for fresh crop this season.

Soil texture

- It refers to the proportion of different size of particles (sand, silt and clay) that comprise soil.
- Soil, according to the particle size, can be classified as sandy, silty, loamy and clayey.
- Big size particles present in the soil are known as 'sand'. The diameter of sand particles is 0.2–2 mm.
- When the size of soil particles is between 0.2 and 0.002 mm, it is called 'silt'.
- **Clay is the finest particle**, having a diameter of less than 0.002 mm.
- **Loamy and clayey soils** have adequate water-holding capacity and are more suitable for the cultivation of crops.

Soil pH or acidity of soil

- Soil pH shows the potentiality of H^+ ions.
- It determines acidic or alkaline reaction of the soil.
- More hydrogen ion (H^+) concentration shows the acidic nature of soil, while the concentration of more hydroxyl (OH^-) ions represents its alkaline nature.
- Neutral condition is produced by an equal concentration of H^+ and OH^- ions.
- **Slightly acidic soils are more suitable for plant growth.**

pH scale

- pH scale has a range of 0–14 with 7 as the neutral point, which indicates the equal concentration of H^+ and OH^- ions.
- As the value decreases, it indicates higher concentration of H^+ ions.
- Soils with minimum pH are more acidic in nature.
- Similarly, as the pH goes above 7, the alkaline reaction of the soil increases with the concentration of OH^- ions.
- Some of the effects of soil pH on plant growth are:
- In general, soil pH of 6.5 to 7.5 is considered optimum for maximum availability of plant nutrients.
- Low pH (<6.0) results in an increase in aluminium content in the soil. Its excess may be toxic to plants.
- In general, the availability of toxic metals is more in acidic soils. This affects the activity of soil microorganisms.

- Na⁺ in alkali soils are replaced by Ca⁺ after the addition of gypsum.
- **Cation Exchange Capacity (CEC)** of the soil is higher if it has more clay and humus content.
- Highly fertile soils, containing high organic matter, have more cation exchange capacity. Soil fertility increases with an increase in cation exchange capacity.

Mullaperiyar Dam and the Periyar River

Why in News?

The Kerala Government has objected in the Supreme Court to the Supervisory Committee's view that the Mullaperiyar dam will hold at 142 feet of water level.

Analysis

- Mullaperiyar is over-a-century-old dam **located along the Periyar Tiger Reserve**.
- The major rivers through the reserve are the Mullayar, Periyar, Pamba and Azhutha Rivers.
- The dam, located in Idukki district of Kerala, was built with the intention of diverting the West-flowing Periyar river eastwards to the arid rain shadow region of Madurai (Tamil Nadu).
- Kerala and Tamil Nadu are in a constant tussle regarding the strength of the dam and hence the level of water that should be maintained in the dam.
- Mullaperiyar dam is located on river Periyar.
- Like many dams in India, **the Mullaperiyar** is located in one state (Kerala), but operated by another (Tamil Nadu).
- Mullaperiyar dam is located in Kerala and is owned by Tamil Nadu.

The Periyar River

- It flows into the Arabian Sea.
- It is one of the few **perennial rivers** in the region.
- Tamiraparani river also has a perennial flow. It flows into the **Gulf of Mannar and lies entirely in Tamil Nadu**.
- The Periyar river is the **longest** but the **second largest river** of Kerala. Its catchment area is 5,243 sq. km (Source: NCERT, class 11).
- The longest river of Kerala, Bharathapuzha (west flowing) rises near Annamalai hills. It is also known as Ponnani. It drains an area of 5,397 sq. km.
- Periyar River originates from Sivagiri hills of Western Ghats and flows through Periyar National Park into Periyar Lake, a 55 km² artificial reservoir created in 1895 by the construction of a dam across the river.
- Water is diverted from the lake into the **Vaigai River in Tamil Nadu** via a tunnel through the Western Ghats.
- The water from Periyar Lake then flows into the Vembanad Lake and then finally to the Arabian Sea.
- It **lies entirely** in the territory of State of **Kerala**.

Wakhan Corridor

Why in News?

China will take full control of a former Soviet military base in Tajikistan near **China-Tajikistan-Afghanistan tri-junction and the Wakhan Corridor**, where China shares a less than 100 km border with Afghanistan.

Analysis

- Russia and India are among countries that already have a military presence in bases in Tajikistan.



Environment and biodiversity

World Energy Outlook (WEO) (DTE)

Why in News?

The International Energy Agency (IEA), which advises governments on energy policy, released its annual World Energy Outlook (WEO) report, just weeks before the United Nations COP26 summit in Glasgow.

Analysis

- Investment in renewable energy will need to triple by the end of this decade if the world's climate pledges are to be met, the **Paris-based agency** said.
- The widely watched annual outlook shapes expectations among governments, companies and investors over the future use of coal, oil and gas.

Two scenarios

- The IEA analyzed two possible scenarios.
- The **first scenario** looks at the measures and policies that governments have already put in place.
- Despite the measures, annual worldwide emissions would still be the same as developing countries build up their infrastructure, the agency said.
- Under this scenario, temperatures in the year 2100 would be 2.6 C higher than preindustrial levels.
- The **second scenario** looks at governments' pledges to achieve net-zero emissions, potentially doubling clean energy investment over the next decade.
- If countries manage to implement these pledges in time, the global average temperature increase would be around 2.1 C by the year 2100.

Global Fund for Coral Reefs (GFCR) (DTE)

Why in News?

The Global Fund for Coral Reefs (GFCR) and International Union for Conservation of Nature (IUCN) have joined forces, combining their mutually beneficial strengths to scale up reef conservation.

IUCN

- Formed in 1948, the IUCN is a union composed of most of the world's governments as well as a range of civil society and other organisations.

The GFCR

- Launched in September 2020, the GFCR is the **first UN fund dedicated to SDG14 (Life Below Water)** and the **only global blended finance instrument devoted to coral reefs**.
- The Fund is driven by a coalition of private philanthropies, Member States, UN agencies, and impact investors with the aim to mobilize \$625 million for coral reefs over the next 10 years.

Understanding carbon neutral, carbon negative, net zero, climate positive – What's the difference?

Why in News?

In order to meet the 1.5°C global warming target in the Paris Agreement, a number of countries have made commitments to move to a net zero emissions economy.

Carbon neutral

- You're carbon neutral if the amount of CO₂ emissions you put into the atmosphere is the same as the amount of CO₂ emissions you remove from the atmosphere. Your impact is neutral, zero.
- Putting it bluntly, you're maybe not making it actively worse, but you're not making it better either.

Carbon negative

- Carbon negative takes that idea a step further. You're carbon negative if the amount of CO₂ emissions you remove from the atmosphere is bigger than the amount of CO₂ emissions you put into the atmosphere.
- Your impact is positive, meaning you're actively doing something to better the climate.

Net zero, net zero emissions

- Net zero is broadly the same as carbon neutral: Emissions are still being generated, but they're offset by the same amount elsewhere.
- The "net total" of your emissions is then zero.

Zero emissions

- You're creating zero emissions when there's no CO₂ released at all.
- In our current system, however, no technology is truly zero emissions. Even the greenest of tech has so
- called **embedded emissions**. These are emissions that are created in the manufacturing of technology.
- **Low emissions, low carbon:** You're "low emissions" when you create less CO₂ than would be considered business as usual.
- **Carbon positive, climate positive:** Both slightly confusing terms are used to talk about what scientists would just call carbon negative.

Lumding Reserve Forest

Why in News?

A month after a violent eviction drive that claimed two lives, the Assam Government has taken the counselling route to remove encroachers from Lumding Reserve Forest.

Analysis

- Lumding Reserve Forest in Nagaon district is already a part of Dhansiri- Lungding Elephant Reserve.
- **On the basis of administration, the forests in India are of three categories:**
- **Reserved Forests**
 - An area so constituted under the provisions of the Indian Forest Act or other State Forest Acts, having full degree of protection.
 - In Reserved forests all activities are prohibited unless permitted.
 - These forests are under the direct supervision of the government and no public entry is allowed for collection of timber or grazing of cattle. About 53 per cent of the total forest area falls in this category.

Protected Forests

- An area notified under the provisions of the Indian Forest Act or other State Forest Acts, having limited degree of protection.
- In protected forest all activities are permitted unless prohibited.

- These forests are looked after by the government, but the local people are allowed to collect fuel-wood/timber and graze their cattle without causing serious damage to the forests. These forests occupy about 29 per cent of the total forest area of the country.

Unclassified Forests

- The unclassified forests are those in which there is no restriction on the cutting of trees and grazing of cattle. About 18 per cent of the total forest area of the country falls under this category.

Economy

Deadline to renew FCRA registration extended (TH, pg 1)

Why in News?

The Ministry of Home Affairs (MHA) has extended the deadline till December 31 for NGOs to apply for renewal of their Foreign Contribution (Regulation) Act (FCRA) registration certificates.

- The registration is mandatory for associations and NGOs to receive foreign funds.
- The FCRA registration is renewed every five years.
- The NGOs also have to compulsorily open an account with the SBI in Delhi to receive funds.

Analysis

The Foreign Contribution (Regulation) Act (FCRA)

- The FCRA is applicable to all associations, groups and NGOs which intend to receive foreign donations.
- Under the Act, both the NGOs and the donors can be placed on a 'watch list' or in the 'prior permission' category, barring them from sending money to associations without the MHA's clearance.
- Any NGO or association that intends to receive foreign funds has to compulsorily register under the Foreign Contribution Regulation Act (FCRA), **monitored by the Ministry of Home Affairs (MHA)**.
- Registered NGOs can receive foreign contribution **for five purposes** — social, educational, religious, economic and cultural.
- All the members and office bearers of an NGO will have to file an affidavit making it mandatory for it to report "any violation" of the FCRA provisions by the applicant organisation.
- Filing of annual returns, on the lines of Income Tax, is compulsory.
- NGOs are required to give an undertaking that the acceptance of foreign funds is not likely to prejudicially affect the sovereignty and integrity of India or impact friendly relations with any foreign state and does not disrupt communal harmony.
- **The Foreign Contribution (Regulation) Amendment Act, 2020 has amended the Foreign Contribution (Regulation) Act, 2010.**
- It extends to the whole of India, and it shall also apply to—

(a) citizens of India outside India; and

(b) associate branches or subsidiaries, **outside India**, of companies or bodies corporate, registered or incorporated in India.

- Every person who has been granted a certificate or given prior permission shall receive foreign contribution in a **single account** only through such **one of the branches** of a bank.
- No funds other than foreign contribution shall be received or deposited in such account or accounts.
- However, such person may open one or more accounts in one or more banks for utilising the foreign contribution received by him.

Who can accept Foreign Contribution?

- Organizations working for definite **cultural, social, economic, educational or religious programs** can accept foreign contribution but first, they've to get permission from the Ministry of Home Affairs.
- They also have to maintain a separate account book listing the donation received from foreigners and get it audited by a Chartered Accountant and submit it to Home Ministry every year

Why is FCRA Act in news in the recent past?

- The government has amended (retrospectively) the FCRA, allowing foreign-origin companies to finance non-governmental organisations and thus political parties by changing the definition of "foreign companies".
- Political parties in India can receive political donations from Indians living abroad as well as foreign companies with subsidiaries in India.
- Any foreign company can donate any amount of money to Indian political parties through their subsidiaries in India by purchasing electoral bonds.
- Electoral bonds are promissory notes that can be encashed by a registered political party through a designated bank account.
- Bonds would allow anonymous, digital donations to parties.

Current Account Deficit V/S Capital Account Deficit (TH, pg 11)

Why in News?

India's current account balance saw a far lower surplus of \$6.5 billion (0.9% of GDP) in the first quarter ended June 30, compared with a surplus of \$19.1 billion (3.7% of GDP) a year earlier.

Analysis

- The **balance of payments** records a country's economic transactions with the rest of the world within a given period of time (one year).
- The country, in this context, includes the government, private entities and citizens.
- A nation's balance of payments is bifurcated into the **current account and the capital account**.

Current Account

- The **current account** includes the transaction of goods, services, primary income, and secondary income between the residents and the rest of the world.
- The current account balance is largely driven by the movement of goods and services.
- The current account is a log of a nation's **exports of goods, services and transfers (remittances, tourism receipts etc.)** and its imports of the same.
- It also includes **net factor income**, which is the income received from **interest and dividend payments**, and **net transfer payment** in the form of **loans and grants**.
- The current account runs a deficit when the imports exceed exports; hence, there is a net outflow of foreign exchange.

Capital Account

- The **capital account** is the summation of **foreign direct investment, portfolio investment, other investment (trade credit, loans and deposits), and reserve accounts**.
- A capital account deficit implies that financial outflows exceed inflows.
- A current account deficit is financed through a surplus on the capital account, showing that the additional investment funds support the imports that are in excess of exports.
- Most sovereign states run a current account deficit which is backed by a positive capital account.
- Developing nations typically run very large current account deficits in proportion to their GDP, which are financed by loans and grants on the capital account.
- *Capital Account = Change in the foreign ownership of domestic assets – Change in domestic ownership of foreign assets*
- While capital account deals with the change in ownership of a country's assets, the current account reflects the change in a country's net income.

Capital Account Convertibility

- The RBI Governor recently said that (November 2020) India will continue to approach capital account convertibility as a process rather than an event.
- He also pointed out that capital account transactions in the rupee are already convertible to a great extent.

What Is a Government Shutdown?

- A government shutdown happens when nonessential U.S. government offices can no longer remain open due to a lack of funding.
- The lack of funding usually occurs when there is a delay in the approval of the federal budget that will finance the government for the upcoming fiscal year. The shutdown remains in effect until funding legislation is passed.
- During a government shutdown, many federally run operations will halt. Some organizations may still stay
- open by running on cash reserves, but once these funds run out, they will also close.
- While shutdowns can also occur within the state, territorial, and local levels of government, the term "government shutdown" is usually used to refer to the federal government.

Aluminium industry rings alarm bells over coal shortage

- The aluminium industry has sent an SOS to Coal India, demanding the immediate resumption of supplies for survival of the industry that is facing an ‘alarming’ situation following coal shortage.
- The current acute coal crunch has created an immensely precarious situation, majorly for the highly power-intensive industries like aluminium wherein coal accounts for about 40% of the production cost.

Production Linked Incentive (PLI) Scheme for Telecom and Networking Products (PIB)

Why in News?

Production Linked Incentive (PLI) Scheme for Telecom and Networking Products has been launched.

Analysis

- In order to boost domestic manufacturing and cut down on import bills, the central government in March 2020 introduced the Production-Linked Incentive (PLI) Scheme that aims to give companies incentives on incremental sales from products manufactured in domestic units.
- Unlike the previous schemes brought to boost domestic manufacturing, this one aim to give all the sops and benefits only if the companies are able to prove that they had incremental sales every year for the next five years.
- Apart from inviting foreign companies to set shop in India, the scheme also aims to encourage local companies to set up or expand existing manufacturing units.
- The focus is to promote manufacturing not only for the domestic market but also for the world by achieving a certain scale and quality.
- The objective is really to make India more compliant with our WTO (World Trade Organisation) commitments and also make it non-discriminatory and neutral with respect to domestic sales and exports.
- According to experts, the idea of PLI is important as the government cannot continue making investments in these capital-intensive sectors as they need longer times for start giving the returns. Instead, what it can do is to invite global companies with adequate capital to set up capacities in India.

India's position in the global pharmaceuticals sector (PIB)

Why in News?

Globally, India ranks 3rd in terms of pharmaceutical production by volume and 14th by value.

What is a Sunrise Industry?

- A sunrise industry is a new business or business sector showing potential for substantial and rapid growth.

- Notable characteristics of sunrise industries include high-growth rates and a lot of start-ups and venture capital funding.
- As a sunrise industry develops, it may transition to the maturity stage and then to the sunset stage.
- To remain relevant and on an upward trajectory, sunrise industries must prove their viability and sustainability.
- Examples of sunrise industries include the alternative energy industry between 2003 and 2007 and social media and cloud computing industries in 2011 and 2012.
- A sunrise industry is often characterized by a high degree of innovation, and its rapid emergence may threaten to push into obsolescence a competing industry sector that is already in decline.
- Because of its dim long-term prospects, the competing industry sector is referred to as a sunset industry.

Kishanganga Hydro-Electric Project (KHEP) (PIB)

Why in News?

Union Minister of Power, New & Renewable Energy, visited Dam site of 330 MW NHPC Kishanganga power station at Gurez in Bandipora District of the UT of Jammu & Kashmir.

Analysis

- Kishanganga is a tributary of the **Jhelum river**.
- It is a **“run of the river” project**.
- Run-of-the-river facilities produce electricity by diverting river flow through turbines that spin generators - before returning water back to the river downstream.
- Kishanganga Project is a **successful example of an “inter-basin” transfer of water from the Gurez Valley to the Kashmir Valley**.
- KHEP diverts water from the Kishanganga, uses it to generate electricity, and then sends it back through a different route to the river at the point
- where it merges with the Jhelum in Pakistan Occupied Kashmir.
- Pakistan challenged this Project as well as another project **on the Chenab**, the 850 MW **Ratle project**, which it claimed were violations of the Indus Waters Treaty.

‘Green’ crackers: Characteristics, components, toxicity

Why in News?

Tamil Nadu Chief Minister M.K. Stalin wrote to his counterparts in Delhi, Haryana, Odisha and Rajasthan, urging them to reconsider the blanket ban on the sale of firecrackers in their respective States.

Analysis

- ‘Green crackers’ are low-emission fireworks permitted by the Supreme Court **for celebrations to a moderate degree during festivals**, relaxing the ‘complete ban’ on fireworks previously imposed in 2017.
- These green crackers, researched and developed by experts at the CSIR-NEERI (Council of Scientific & Industrial Research - National Environmental Engineering Research Institute), a government-funded research institute in the field of environmental science, **have a small shell size compared to normal crackers**.
- These green crackers are **produced with less harmful raw materials**, in accordance with instructions issued by the top court, and are made in a way that **suppresses the dust** when they are burnt – thus **reducing emissions**.
- They also do not contain harmful chemicals such as lithium, arsenic, barium, and lead and instead **release water vapour that does not allow the dust to rise**.
- Although **still impactful on the climate to an extent**, these green crackers are believed to cause 30 per cent less particulate matter pollution than traditional crackers and are thus considered generally less harmful than their conventional alternatives.

What are green crackers?

- Green crackers are “**reduced emission crackers**”.
- According to the Council of Scientific and Industrial Research, firecrackers that cause 30-35% lower emission of particulate matter (PM10 and PM2.5) and 35-40% lower emission of sulphur dioxide (SO₂).
- QR codes on green cracker packages will help consumers scan and identify counterfeits.
- Supreme Court in 2018 banned the sale, use and manufacture of crackers that weren’t ‘green’. **It banned the use of barium nitrate, a key pollutant in crackers** (among others).
- The National Environmental Engineering Research Institute (NEERI), a part of the Council of Scientific and Industrial Research (CSIR), was asked by SC to facilitate the development of green crackers.

Characteristics of Green Crackers:

- ‘Green’ crackers have a small shell size compared to traditional crackers.
- Use of barium salt and ash as a drying agent is banned for such crackers.
- They have low content of aluminium.
- They are produced **using less harmful raw materials**.
- They **have additives which reduce emissions by suppressing dust/ reducing** particulate matter.
- They **don't contain banned chemicals** such as lithium, arsenic, barium and lead. (Banned on directions of SC)
- They couldn’t be loud beyond a certain limit.
- Their clinical composition of fireworks will have to be reviewed by the Petroleum and Explosives Safety Organisation (PESO)

International Monetary and Finance Committee (IMFC)

Why in News?

Finance Minister Nirmala Sitharaman attended the Plenary Meeting of the International Monetary and Financial Committee of the Board of Governors of the International Monetary Fund (IMF) held in Washington D.C.

Analysis

- The International Monetary and Finance Committee (IMFC) directs the International Monetary Fund (IMF) and sets its agenda.
- Selected Finance ministers and central bankers constitute as the members of this committee,
- **The IMFC advises and reports to the IMF Board of Governors on the supervision and management of**
- **the international monetary and financial system, including on responses to unfolding events that may disrupt the system.**
- It also considers proposals by the Executive Board of the IMF to amend the Articles of Agreement and advises on any other matters that may be referred to it by the Board of Governors.
- **IMFC has no formal decision-making powers**, in practice, it has become a key instrument for providing strategic direction to the work and policies of the Fund.
- The IMFC usually meets twice a year.
- The IMFC has 24 members who are central bank governors, ministers, or others of comparable rank and who are usually drawn from the governors of the Fund's now 190 member countries.
- Each member country and each group of member countries that elects an Executive Director appoints a member of the IMFC.
- The IMFC operates by consensus, including on the selection of its chairman.
- A number of international institutions, **including the World Bank, participate as observers in the IMFC's meetings.**

India's Coal Crisis?

Why in News?

India relies on coal to meet over 70% of its power needs, and Coal India Limited (CIL) supplies over 80% of the total coal.

What has caused it?

- The current crisis in the availability of coal has been the result of lacklustre domestic production and a sharp drop in imports over the last few years.
- Many factors have been blamed for the insufficient supply of coal this year.
- These include short-term issues like flooding in coal-mining areas, transport issues, labour disruptions in major coal-mining countries and the sudden rise in power demand as the economy revives from the pandemic.

- But it should be noted that deeper structural problems have plagued the power industry in general for long.
- Populist politics has ensured that the price that many consumers pay for power is not commensurate with the production costs.
- In FY19, for instance, the revenues of distribution companies covered only about 70% of their total costs.
- This has discouraged private investment in power generation and distribution even as the demand for power continues to rise each year.
- It has also increased the debt burden on public sector distribution companies as they have not been compensated for the losses they incur while selling power at subsidised rates.

Central Consumer Protection Authority (CCPA) (PIB)

Why in News?

In a run-up to the festive season, The **Central Consumer Protection Authority (CCPA)** under Department of Consumer Affairs, Ministry of Consumer Affairs, Food and Public Distribution took stringent action to safeguard consumer interests.

Central Consumer Protection Authority

- The central government will set up a Central Consumer Protection Authority (CCPA) to promote, protect and enforce the rights of consumers.
- It will regulate matters related to violation of consumer rights, unfair trade practices, and misleading advertisements.
- CCPA will carry out the following functions, including:
 - (i) inquiring into violations of consumer rights, investigating and launching prosecution at the appropriate forum;
 - (ii) passing orders to recall goods or withdraw services that are hazardous, reimbursement of the price paid, and discontinuation of the unfair trade practices, as defined in the Act;
 - (iii) issuing directions to the concerned trader/ manufacturer/ endorser/ advertiser/ publisher to either discontinue a false or misleading advertisement, or modify it;
 - (iv) imposing penalties, and;
 - (v) issuing safety notices to consumers against unsafe goods and services.
- CCPA can also prohibit the endorser of a misleading advertisement from endorsing that particular product or service for a period of up to one year.

Asian Infrastructure Investment Bank (AIIB) (PIB)

Why in News?

Union Minister of Finance participated in the 6th Annual Meeting of the Board of Governors of Asian Infrastructure Investment Bank (AIIB).

Analysis

- The Asian Infrastructure Investment Bank (AIIB) is a multilateral development bank **established by an international treaty** with a mission to improve social and economic outcomes in Asia.
- **Headquartered in Beijing**, it began operations in January 2016 and have now grown to approx. 103 approved members worldwide (Aug 2020).
- Every year at the Annual Meeting, the Board of Governors meets to take key decisions on important matters relating to AIIB, and its future vision.
- India is a **Founding Member** and the **second largest shareholder** in AIIB.
- India also **has one of the largest project portfolios** within AIIB.
- This year's Annual Meeting has been jointly organized by AIIB and the Government of United Arab Emirates on the **theme** of "Investing Today and Transforming Tomorrow".
- By investing in sustainable infrastructure and other productive sectors **in Asia and beyond**, it aims to better connect people, services and markets.
- Projects should support sustainable infrastructure, cross-border connectivity and private capital mobilization.

What is the nature of AIIB's membership?

- AIIB is open to shareholders who are dedicated to promoting economic and social development **across Asia and beyond**.
- Its membership is open to members of the International Bank for Reconstruction and Development or the Asian Development Bank.

Are there any specific features that differentiate AIIB from the other multilateral development banks (MDBs)?

- Projects can be based in any member shareholder, as long as the project will deliver benefits to the Asian region.
- All financings must meet the conditions set out in AIIB's Environmental and Social Framework (ESF), which ensures that all projects are contributing to sustainable development.
- AIIB has not put any hard limits on investments by sector as long as AIIB's risk exposure remains within allowed limits.

Chief Economic Adviser (CEA)

Why in News?

The Centre has invited applications for the post of chief economic adviser (CEA) to replace K.V. Subramanian, who will complete his three-year tenure next month.

Analysis

- Chief Economic Adviser (CEA) is a post under Department of Economic Affairs, Ministry of Finance.
- Apart from giving timely advice on the state of the economy and economic reforms, the CEA is responsible for bringing out the Economic Survey every year ahead of the budget.
- **Economic Survey of India preceding the Union Budget every year is released by Chief Economic Advisor.**

- **Note: Chief Economic Adviser and Office of the Economic Adviser (OEA) are different.**
- Office of the Economic Adviser (OEA) is an attached office of the Department for Promotion of Industry and Internal Trade, Ministry of Commerce & Industry.
- The main functions of the Office of Economic Adviser include, inter alia, the following:
- **Policy Functions**
 - Rendering advice relating to formulation of Industrial Policy, Foreign Trade Policy with respect to industrial sector in general with thrust on manufacturing,
 - Analysis of trends of industrial production and growth.
- **Statistical Functions**
 - Compiling and releasing monthly Wholesale Price Indices.
 - Compiling and releasing monthly Index of Core Industries Production
 - Developing other Indices on experimental basis, e.g. select business service price indices.

Fiscal deficit and other economy related terms

Why in News?

The union government's fiscal deficit has worked out to be ₹5.26 lakh crore or 35% of budget estimates at the end of September, as per the data released by the Controller General of Accounts (CGA).

Analysis

- **Fiscal Deficit (FD)** is the difference between the total non-debt creating receipts (the Revenue Receipts plus Non-Debt Capital Receipts (NDCR)) and the total expenditure.
- The difference between the total expenditure of Government by way of revenue, capital and loans net of repayments on the one hand and revenue receipts of Government and capital receipts which are not in the nature of borrowing but which accrue to Government on the other, constitutes gross fiscal deficit.
- FD is reflective of the total borrowing requirement of Government.
- **Net fiscal deficit** can be arrived at by deducting net domestic lending from **gross fiscal deficit**.
- **Revenue Deficit** refers to the excess of revenue expenditure over revenue receipts.
- Revenue deficit signifies that government's own earning is insufficient to meet normal functioning of government departments and provision of services.
- An increase in the ratio of revenue deficit to gross fiscal deficit indicates an increase in the utilization of borrowed funds for revenue purposes.
- It indicates increase in liabilities of the Central Government *without increase in the assets of that Government*.
- The difference between fiscal deficit and revenue deficit is the government's capital expenditure.

Effective Revenue Deficit

- In the 2012-13 budget, the concept of **effective revenue deficit** was introduced that excluded grants for the creation of capital assets from conventional revenue deficit.

- Effective Revenue Deficit is the difference between revenue deficit and grants for creation of capital assets.
- Grants for creation of capital assets are defined as “the grants-in-aid given by the Central Government to the State Governments, constitutional authorities or bodies, autonomous bodies and other scheme implementing agencies for creation of capital assets which are owned by the said entities”.
- The concept of effective revenue deficit has been suggested by the **Rangarajan Committee on Public Expenditure**.
- It is aimed to deduct the money used out of borrowing to finance capital expenditure.
- The concept has been introduced to ascertain the actual deficit in the revenue account after adjusting for expenditure of capital nature.
- Focusing on this will help in reducing the consumptive component of revenue deficit and create space for increased capital spending.

International Relations

Can China join Quad initiatives?

Why in News?

The **Quadrilateral Security Dialogue (Quad)** is a partnership among “like-minded” countries and is not ‘designed’ to be a security alliance.

Analysis

- Addressing journalists after his return from the U.S. where a **security alliance consisting of the U.S., the U.K. and Australia — AUKUS** — was launched, Mr. Morrison said members of the **Quad are not in the business of containing China**.
- Under the AUKUS deal, announced in September 2021, Australia would get nuclear-powered submarines from the U.S. and the U.K. Australia will also host American bombers on its territory and get access to advanced missile technology.
- Quad, which has been around for some time, **hasn’t acquired any security dimension yet**.
- AUKUS, on the other side, is Washington’s most emphatic effort to rebalance to the Indo-Pacific, a move that would harden the belief in Beijing that the U.S. was seeking to contain China.
- Mr. Morrison said their objective of working together is to **ensure that we promote a free and open Indo-Pacific**.

Quadrilateral Security Dialogue (Quad)

- The **Quadrilateral Security Dialogue (QSD)**, also known as the Quad) is an informal strategic dialogue between the **United States, Japan, Australia and India**.
- The dialogue was initiated in 2007 by Prime Minister **Shinzo Abe of Japan**.
- The idea of the Quad was born in 2007, but was shelved when former Australian Prime Minister Kevin Rudd withdrew his country’s participation.
- The Quad made a comeback in November 2017 with a formal consultation meeting in Manila involving the four countries.

Countries under China's hidden debt

Why in News?

Chinese banks have used “debt rather than aid to establish a dominant position in the international development finance market”.

Analysis

- A new study has found under-reported debts to the tune of \$385 billion in projects carried out in dozens of countries under China's Belt and Road Initiative (BRI), with a rise in “hidden” debt on account of an increasing number of deals struck not directly between governments but structured through often opaque arrangements with a range of financing institutions.
- The total debt, the study added, was “systematically under-reported to the **World Bank's Debtor Reporting System (DRS)** because, in many cases, central government institutions in LMICs [low and middle income countries] are not the primary borrowers responsible for repayment”.
- The big difference between China and other prominent sources of overseas financing was that Chinese banks have used “debt rather than aid to establish a dominant position in the international development finance market”.

Horizon Europe (2021-2027) (PIB)

Why in News?

The European Union has recently launched “Horizon Europe (2021-2027)”, which is a planned 7-year European Union scientific research initiative and the EU is approaching Indian scientific agencies for its participation in Horizon Europe.

Analysis

- India is willing to participate in this programme provided some of the concerns on issues related to IPR Sharing, scope of the joint call, Signing of Model Grant Agreement and Joint Evaluation are addressed at the satisfaction of both the sides.

What is Horizon Europe?

- Horizon Europe is the EU's key funding programme for research and innovation with a budget of €95.5 billion.
- It tackles climate change, helps to achieve the UN's Sustainable Development Goals and boosts the EU's competitiveness and growth.
- Legal entities from the EU and associated countries can participate.

Turkey slams Russia, U.S. after Syria attacks

- Turkey warned that she had “no patience left” with **Syrian-based Kurdish militias** it blames for cross-border rocket strikes and attacks against its personnel.

- It accused the U.S. and Russia of failing to adequately police a buffer zone in northern Syria, set up under two agreements in 2019, and aimed at pushing the Kurdish forces away from Turkey.
- Turkey has blamed the reported attacks on Kurdish People's Protection Units (YPG), which Ankara views as the Syrian branch of the outlawed Kurdistan Workers' Party (PKK).
- Washington relied heavily on the YPG to defeat Islamic State group jihadists who overran large swathes of Syria and neighbouring Iraq in 2014. The PKK is proscribed as a terrorist organisation by the U.S. and the EU.
- Ankara wants Washington to cut its ties with the YPG and fully back Turkey's campaigns in Syria.

U.S.-India ministerial dialogue adds focus on climate finance

Why in News?

Finance Minister of India and U.S. Treasury Secretary recently met for the eighth ministerial meeting of the U.S.-India Economic and Financial partnership.

Analysis

- In the run-up to the **UN Climate Change Conference (COP26) in Glasgow** at the end of the month, India has been pushing for rich countries to meet their Paris Accord climate finance commitment of \$100 billion per year.
- India and U.S. intend to engage further on addressing climate change through the Finance Mobilization pillar of the recently launched **Climate Action and Finance Mobilization Dialogue** under the U.S.-India Climate and Clean Energy Agenda 2030 Partnership.
- India has been under pressure, including from the U.S. and U.K., to provide a deadline to reach 'Net Zero' emissions.
- India has so far not made commitments beyond its Paris-related goals and has argued that rich countries must move towards 'net minus' commitments.

New Delhi to host NSAs on Afghan issue

Why in News?

According to sources, New Delhi has reached out to countries that participated in the **"Regional Security Dialogue"** in Tehran ..

Analysis

- In another development, Lok Sabha Speaker Om Birla included Pakistan's Senate Chairperson in an invitation to parliamentary leaders of Commonwealth nations for the **centennial celebration of the**
- **creation of the Public Accounts Committee of Parliament in early December.**
- The Ministry of External Affairs has confirmed that India will send a senior official to the Moscow format conference, which includes delegations from Afghanistan, India, Iran, China

and Pakistan. Taliban officials said a delegation led by its Deputy Prime Minister Abdul Salam Hanafi would attend.

16th East Asia Summit (EAS), Indo-Pacific Ocean's Initiative (IPOI) and Ha Noi Declaration (PIB)

Why in News?

Prime Minister Shri Narendra Modi participated in the 16th East Asia Summit (EAS) via videoconference.

Analysis

- **ASEAN's Outlook on the Indo-Pacific** is based on – inclusivity, openness, and a region based on rule of law, good governance, and respect for international law, including the 1982 UN Convention on the Law of the Sea.
- The 16th East Asia Summit was **hosted by Brunei** as EAS and ASEAN Chair.
- PM reaffirmed "ASEAN centrality" in the Indo-Pacific and highlighted the synergies between **ASEAN Outlook on Indo-Pacific (AOIP)** and **India's Indo-Pacific Oceans Initiative (IPOI)**.

Indo-Pacific Ocean's Initiative (IPOI)

Why in News?

At the East Asia Summit in Bangkok in 2019, India proposed setting up of the **Indo-Pacific Ocean's Initiative (IPOI)** to conserve and sustainably use the maritime domain and to make meaningful efforts to create a safe and secure maritime domain.

East Asia Summit

- Established in 2005, the East Asia Summit is a unique Leaders-led forum of 18 countries of the Asia-Pacific region formed to further the objectives of regional peace, security and prosperity.
- It has evolved as a forum for strategic dialogue and cooperation on **political, security and economic issues**.
- The membership of EAS consists of **ten ASEAN Member States** (i.e., Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Singapore, Thailand, the Philippines and Vietnam), **Australia, New Zealand, China, India, Japan, Republic of Korea, Russian Federation and the USA**.

The United Nations Convention on the Law of the Sea (UNCLOS)

Why in News?

India is committed to respecting the rights of all nations as laid down in the UN Convention on the Law of Seas (UNCLOS), Indian Defence Minister Rajnath Singh said, while reiterating that India is determined to protect its legitimate maritime rights and interests.

Analysis

- It is an international treaty which was adopted and signed in 1982.
- Both India and China have signed and ratified the Convention.
- The Convention has created three new institutions on the international scene:
 - the International Tribunal for the Law of the Sea,
 - the International Seabed Authority,
 - the Commission on the Limits of the Continental Shelf.

Some of the key features of the Convention are the following:

- Coastal States exercise sovereignty over their territorial sea up to a limit not to exceed 12 nautical miles;
- foreign vessels are allowed "innocent passage" through those waters; • States bordering the straits used for international navigation can regulate navigational and other aspects of passage;
- Coastal States have sovereign rights in a 200-nautical mile exclusive economic zone (EEZ) with respect to natural resources;
- All other States have freedom of navigation and overflight in the EEZ, as well as freedom to lay submarine cables and pipelines;
- Land-locked and geographically disadvantaged States have the right to participate on an equitable basis in exploitation of an appropriate part of the surplus of the living resources of the EEZs;
- Highly migratory species of fish and marine mammals are accorded special protection; • Coastal States have sovereign rights over the continental shelf (the national area of the seabed) for exploring and exploiting it;

Coup in Sudan & African Union

Why in News?

Anti-coup protests continue in Sudan, PM is held under guard in his house after the coup by military.

Analysis

- Sudan shares borders with seven countries including Libya and Egypt to the North, Chad to the West, the Central African Republic to the South-West, South Sudan to the South, Ethiopia to the South-East and Eritrea to the East.
- The White and Blue Niles meet in Khartoum, the capital city of Sudan, and merge to become the Nile River that flows all the way to the Mediterranean Sea via Egypt.
- **Sudan has a Sahelian belt with the desert in the far north**, fertile land in the Nile valleys, the Gezira and across the rest of the country from Darfur to Kassala via Blue Nile and Kordofan States for farming and livestock herding.
- For most of its independent history, the Sudan has been beset by internal conflicts that weakened its ability to play a leadership role in the region.
- Under the terms of a comprehensive peace agreement in 2005, South Sudan seceded from Sudan in 2011 and became the 54th independent State of Africa.

- **Agenda 2063:** Agenda 2063 calls for greater collaboration and support for African led initiatives to ensure the achievement of the aspirations of African people.

CAASTA and its implications for India (TH)

Why in News?

Key lawmakers continue to voice their support for a sanctions waiver for India for its purchase of the S-400 missile defence system from Russia.

- India is likely to begin taking delivery of the S-400 in November, potentially activating U.S. sanctions under a 2017 law, Countering America's Adversaries Through Sanctions Act (CAATSA).

CAATSA

- *CAATSA (Countering America's Adversaries through Sanctions Act) is an Act of U.S. which places sanctions on countries having significance interests in Russian, Iranian, and North Korean defence or intelligence sectors.*
- CAATSA was passed unanimously by the US Congress and signed reluctantly by US President Donald Trump in 2017.
- Title II of the Act primarily deals with sanctions on Russian interests such as its oil and gas industry, defence and security sector, and financial institutions, **in the backdrop of its military intervention in Ukraine and its alleged meddling in the 2016 US Presidential elections.**

Art and Culture

Banni festival in Kurnool

Why in News?

Sixty people were injured, four of them critically, during the Banni festival. As per the tradition, people take part in **stick fight during the festival.**

Analysis

- Dussehra festival in **Mala Malleswara Swamy temple** located at Devaragattu near Aluru in Kurnool district of Andhra Pradesh is celebrated in a unique way every year.
- People of the villages surrounding the temple form two separate groups and fight with each other with the wooden sticks to claim the idol of their deity on the occasion of Vijayadashami. This festival is popularly known as the Banni festival.
- The locals tell a story of two demons, Mani and Mallasura, who lived in nearby hillocks and tortured saints. The saints, in turn, prayed to Malamma (Parvati) and Malleshwara Swamy (Shiva) to rescue them.
- The Lord is then said to have appeared on a stone atop the hillock in the form of Kumaravatharam and eliminated the demons on the night of Dussehra.
- Before dying at Rakshapada, the demons prayed to the Lord to give them human sacrifice every year. But the Lord refused their request and assured a fistful blood at the place where they died.

- Since then, the villagers offer prayers to Sri Mala Malleswara Swamy and Parvati Devi and carry the idols down the hillock.
- **The festival was celebrated by people under Vijayanagara Empire.**

Haifa: Indian soldiers' liberation of an Israeli coastal city

Why in News?

External Affairs Minister **lays wreath at cemetery for Indian soldiers in Israel** who laid down their lives in the region during the World War I in **Talpiot, Jerusalem.**

Analysis

- About 900 Indian soldiers are interred in cemeteries across Israel in **Jerusalem, Ramle and Haifa.**
- The **Indian Army commemorates September 23 every year as Haifa Day** to pay its respects to the three brave Indian Cavalry Regiments – Mysore, Hyderabad and Jodhpur Lancers – that helped liberate the city of Haifa from the Ottoman rule in what most war historians consider **“the last great cavalry campaign in history”.**
- Indian cavalry regiments armed with spears and swords had displayed the highest tradition of valour and cleared the enemy from the rocky slopes of **Mount Carmel.**
- Captain Aman Singh Bahadur and Dafadar Jor Singh were awarded the Indian Order of Merit (IOM) and Captain Anop Singh and Second Lieutenant Sagat Singh were awarded the Military Cross (MC) as recognition for their bravery in this battle.
- Major Dalpat Singh, widely known as the Hero of Haifa, was awarded a military cross for his bravery.

Puppetry in India – Types and Key

Why in News?

Odisha's lone woman filmmaker Lipika Singh Darai is in the news again. The four-time National Award winner's latest film Backstage, on Odisha's fading forms of puppetry, has been chosen for four major international film festivals in Italy, the U.S., Taiwan and India.

- It portrays the life and struggles of the puppeteers of **Odisha, the only State where all four forms of puppetry** — glove, string, rod, and shadow — are practised.
- **Analysis**
- *Srimad Bhagavata*, the great epic depicting the story of Lord Krishna in his childhood say that with three strings-*Satta*, *Raja* and *Tama*, the God manipulates each object in the universe as a marionette.
- The earliest reference to the art of puppetry is found in Tamil classic '*Silappadikaaram*' written around the 1st or 2nd century B.C.
- **Silappathikaram**, (Tamil: “The Jeweled Anklet”), the earliest epic poem in Tamil, written in the 5th–6th century AD by Prince Ilanko Adikal (Ilango Adigal). Its plot is derived from a well-known story.

Kathakali

Why in News?

The Kerala Kalamandalam Deemed University of Art and Culture has opened its doors to women, and will be given admission to the Kathakali acting course from this academic year.

Analysis

- **Kathakali or ‘story play’** took shape in Kerala in southern India in the seventeenth century under the patronage of the prince of Karnataka, who wrote plays for performance drawn from the epic Ramayana in Malayalam, the language of the region.
- Stories from the Ramayana and Mahabharata provide the content of most Kathakali plays.
- Kathakali categorizes its characters according to their nature and employs make-up and costume to build them up as symbolic personalities.
- The main feature of the costume is a large, billowing skirt for male characters and various elaborate headdresses.
- The actor’s performance in a Kathakali plays is **completely speechless**: the ‘libretto’ is sung by two singers on the stage who keep time on gong and cymbals, while a pair of drummers also on the stage play the Chenda.
- The story is enacted using a vocabulary of facial expressions and hand-gestures.
- A traditional performance of Kathakali **starts in the evening** after preliminaries that include an invocatory drumming on the Maddalam, and concludes only at daybreak.

Schemes

PM Gati Shakti - National Master Plan for multi-modal connectivity (PIB)

Why in News?

Prime Minister of India launched **PM Gati Shakti**, a national master plan for synchronising connectivity infrastructure projects across modes of transport, and said it will help India realise its dream of becoming the “business capital” of the world.

Analysis

- It will incorporate the infrastructure schemes of various Ministries and State Governments like Bharatmala, Sagarmala, inland waterways, dry/land ports, UDAN etc.
- Economic Zones like textile clusters, pharmaceutical clusters, defence corridors, electronic parks, industrial corridors, fishing clusters, agri zones will be covered to improve connectivity & make Indian businesses more competitive.
- It will also leverage technology extensively including spatial planning tools with ISRO imagery developed by BiSAG-N (Bhaskaracharya National Institute for Space Applications and Geoinformatics).
- The multi-modal connectivity will provide integrated and seamless connectivity for movement of people, goods and services from one mode of transport to another.
- It will facilitate the last mile connectivity of infrastructure and also reduce travel time for people.

PM GatiShakti is based on Following pillars:

- (i) **Comprehensiveness:** It will include all the existing and planned initiatives of various Ministries and Departments with one centralized portal.
- (ii) **Prioritization:** Through this, different Departments will be able to prioritize their projects through cross-sectoral interactions.
- (iii) **Optimization:** The National Master Plan will assist different ministries in planning for projects after identification of critical gaps. For the transportation of the goods from one place to another, the plan will help in selecting the most optimum route in terms of time and cost.
- (iv) **Synchronization:** Individual Ministries and Departments often work in silos. There is lack of coordination in planning and implementation of the project resulting in delays. PM GatiShakti will help in synchronizing the activities of each department, as well as of different layers of governance, in a holistic manner by ensuring coordination of work between them.
- (v) **Analytical:** The plan will provide the entire data at one place with GIS based spatial planning and analytical tools enabling better visibility to the executing agency.

Green Grids Initiative-One Sun One World One Grid Initiative (PIB)

Why in News?

Union Minister for Power and New and Renewable Energy (MNRE), Government of India, addressed the Ministerial session of the **Green Grids Initiative-One Sun One World One Grid** Northwest Europe Cooperative Event.

Analysis

- The idea for the **One Sun One World One Grid (OSOWOG) initiative** was put forth by the Prime Minister of India at the First Assembly of the International Solar Alliance (ISA) in October 2018, in which **countries trade large volumes of renewable energy across borders and across time zones to tackle local variability.**
- According to the draft plan prepared by the MNRE, the ambitious OSOWOG will connect 140 countries through a common grid that will be used to transfer solar power.
- For this initiative, besides the World Bank, ISA has found willing partners in the private sector.
- **Green Grids Initiative** to be jointly launched (by India and UK) at the UK-hosted UN Climate Change Conference (COP26) climate summit in Glasgow in November 2021 **for countries to work together on interconnected grids for renewable energy**, to help deliver India's vision of "One Sun One World One Grid".
- **Glasgow** is the most populous city in Scotland and the fourth-most populous city in the United Kingdom.
- Both sides (UK and India) have also agreed joint action through the Coalition for Disaster Resilient Infrastructure (CDRI), which the **UK and India co-chair.**
- Exploring enhanced partnerships with major private finance leaders, including with the **Climate Finance Leadership Initiative**, to mobilise both public and private finance for green development and a new phase of collaboration on the **India Energy Security Scenarios Calculator initiative** to support climate policy and planning are among the other plans on the UK-India climate action agenda.

- Both sides commended businesses that have recently made Net Zero carbon commitments through the UN's "Race to Zero" campaign.
- India aims to achieve 450 GW of installed renewable energy capacity by 2030. India is well on its way to achieving its **Nationally Determined Contributions (NDCs)** relating clean energy and emission reduction well ahead of the target date.

Climate Resilience Information System and Planning (CRISP-M) (PIB)

Why in News?

Government of UK and Ministry of Rural Development, Government of India jointly launched Climate Resilience Information System and Planning (CRISP-M) **tool for integration of climate information in Geographic Information System (GIS) based watershed planning** under Mahatma Gandhi NREGA.

Analysis

- This tool will be used in seven states where in Government of UK and Ministry of Rural Development, Government of India are jointly working towards climate resilience.
- The states are Bihar, Jharkhand, Uttar Pradesh, Madhya Pradesh, Chhattisgarh, Odisha and Rajasthan.

Nutrient Based Subsidy Scheme (PIB)

Why in News?

The Union Government has brought Potash Derived from Molasses (PDM) under Nutrient Based Subsidy (NBS) scheme for the first time since its inception in 2010 to give a push to its manufacturing by Sugar Mills as a byproduct.

Analysis

- The **Nutrient Based Subsidy (NBS) Policy** is being implemented from 2010 by the **Department of Fertilizers, Ministry of Chemicals & Fertilizers** and under the said policy, **a fixed amount of subsidy decided on annual basis**, is provided on each grade of subsidized Phosphatic & Potassic (P&K) fertilizers depending on its Nutrient Content.
- The fertilizer companies are required to print Maximum Retail Price (MRP) along with applicable subsidy on the fertilizer bags clearly.
- Any sale above the printed MRP will be punishable under the Essential Commodities Act.
- The Government of India has declared fertilizer as an essential commodity under the Essential Commodities Act, 1955 (ECA).
- 20% of the price decontrolled fertilizers produced/imported in India has been kept under the Movement Control under the Essential Commodities Act 1955 (ECA) so as to bridge the supplies in underserved areas.
- There would be no separate subsidy on sale of customized fertilizers and mixture fertilizers.

Bureau of Indian Standards (BIS), ISI mark and Eco Mark (PIB)

Why in News?

Bureau of Indian Standards (BIS) celebrated the World Standards Day (14th October).

- The Union Minister of Consumer Affairs, Food & Public Distribution virtually presides over the Governing Council meeting of the **Bureau of Indian Standards**.
- The Bureau of Indian Standard has already formulated various Indian Standards comparable with the International Standards such as the Electric vehicles, Fuel blends, Smart City Digital Infrastructure Internet of Things (IoT), Smart Manufacturing, Technical Textiles, Aerial Ropeways, etc.

Krishi UDAN 2.0 (PIB)

Why in News?

Union Minister of Civil Aviation released **Krishi UDAN 2.0**.

- The scheme proposes to facilitating and incentivizing movement of Agri-produce by air transportation.

Analysis

- The enhanced version of the Krishi UDAN scheme was formulated with support from AAI Cargo Logistics and Allied Services Company Limited (AAICLAS) - a 100% subsidiary of the Airports Authority of India and Invest India, India's national Investment Promotion & Facilitation Agency, under the Ministry of Commerce and Industry.
- It offers full waiver of Landing, Parking, TNLC and RNFC charges for Indian freighters and P2C at selected Airports of Airport Authority of India primarily, focusing on NER, Hilly and Tribal region.
- The Ministry of Civil Aviation plans to be pilot the scheme for 6 months at 53 airports across the country, and, will introduce amendments based on results of the evaluation & consultations with other stakeholders.

NITI Aayog's Women Entrepreneurship Platform (WEP) (PIB)

Why in News?

With labour force participation rate of 21%, the working women in India are half of the global average of 47%.

Analysis

- The **Women Entrepreneurship Platform (WEP)** was launched on 8 March, 2018 on the occasion of the International Women's Day as NITI Aayog's flagship initiative.
- The initiative is aimed at building an ecosystem for women across India to realize their entrepreneurial aspirations, scale-up innovative initiatives and chalk-out sustainable, long-term strategies for their businesses.
- This will be done through an enabling network of industry collaborations, partnerships, mentors and peer-to-peer connect.

- WEP has pan India coverage and does not have state specific programme/s.
- Registration on the portal and all subsequent services are provided free of cost for WEP users.
- WEP caters to both aspiring and well-established women in the space of entrepreneurship.

Biotech Krishi Innovation Science Application Network (Biotech KISAN) (PIB)

Why in News?

In 2017, the **Department of Biotechnology (DBT)** launched a farmers-centric Mission Programme known as **Biotech Krishi Innovation Science Application Network (Biotech KISAN)**.

Analysis

- Biotech KISAN is a scientist-farmer partnership scheme with an objective to connect science laboratories with the farmers to find out innovative solutions and technologies to be developed and applied at farm level.
- The programme provides funding to establish the Biotech KISAN Hub in each of 15 **agro-climatic zones** of the country.
- Biotech KISAN Hub will also have a **Tinkering Laboratory**.
- The aim of the programme is to work with small and marginal farmers especially the woman farmers for better agriculture productivity through scientific intervention and evolving best farming practices.
- The programme has now been scaled up and expanded its activities covering about **105 Aspirational Districts** in the country.

Pradhan Mantri Formalisation of Micro food processing Enterprises (PM-FME) Scheme (PIB)

Why in News?

Ministry of Food Processing Industries, in association with NAFED, launches ‘Dilli Bakes’ – First ‘One District, One Product’ (ODOP) brand under PMFME Scheme.

Analysis

- Launched under the Aatmanirbhar Bharat Abhiyan, the **Pradhan Mantri Formalisation of Micro food processing Enterprises (PM-FME) Scheme** is a **centrally sponsored scheme** aims to enhance the competitiveness of existing individual **micro-enterprises** in the **unorganized segment** of the food processing industry and promote formalization of the sector and provide support to Farmer Producer Organizations, Self Help Groups, and Producers Cooperatives along their entire value chain.
- With an outlay of Rs. 10,000 crore over a period of five years from 2020-21 to 2024-25, **the scheme envisions to directly assist the 2,00,000 micro food processing units** for providing financial, technical, and business support for upgradation of existing micro food processing enterprises.

- The scheme being **implemented by the Ministry of Food Processing Industries (MoFPI)** is a **landmark initiative under Aatma Nirbhar Bharat Abhiyan** to support Micro Level Food Entrepreneurs, FPOs/SHGs/ Co- operatives.
- **The Scheme adopts One District One Product (ODOP) approach to reap the benefit of scale** in terms of procurement of inputs, availing common services and marketing of products.
- **The State Government would identify the food product for a district, keeping in perspective the focus of the scheme on perishables.**