TATHASTU
Institute of Civil Services

CURRENT AFFAIRS June Month 2022

Table of Contents

Editorials of the Month

Death Penalty and Challenges associated with it

News: The Court's recent judgment in Manoj and Ors. Vs State of MP seeks to address the long ignored yet critical aspect of death penalty sentencing. This Specific attempt must be seen with the Court's apparent discomfort over the last year with procedural unfairness in sentencing being carried out by the lower courts. Supreme Court has recognised Socio-economic circumstances as a mitigating factor by courts in various death penalty cases.

About:

- Capital punishment or death penalty, is the execution of an offender sentenced to death after conviction by a court of law of a criminal offence. It is the highest penalty awardable to an accused.
- Generally, it is awarded in extremely severe cases of murder, rapes, treason etc.
- The death penalty is seen as the most suitable punishment and effective deterrent for the worst crimes.
- Those who oppose it, however, see it as inhumane. Thus, the morality of the death penalty is debatable and many criminologists and socialists all across the globe, have been long demanding abolition of the death penalty.

What is the process of awarding a Death Penalty?

- In trial court, after the proceedings as specified by the Code of Criminal Procedure, the judge pronounces the judgment.
- After the decision by the Session Court, a high court needs to confirm the death sentence.
- The high court may confirm the death sentence or pass any other sentence or annul the conviction.
- The High Court also has the power to withdraw a case pending before a subordinate court and conduct the trial and may award the sentence of death.
- Special leave petition-After the death sentence is confirmed by the High Court, an appeal by Special Leave Petition under Article 136 of the Constitution may be filed with the Supreme court.
- Under Article 136, the Supreme Court decides whether the special leave petition deserves to be heard as an appeal or not.
- Curative petition - The Supreme Court may allow a curative petition to reconsider its judgment or order if it is established that there was a violation of principles of natural justice or suspicion of bias in the role of a judge. The curative petition would be circulated before the same bench which decided on the review petition.
- Mercy Petition - Articles 72 and 161 of the Constitution give power to the President of India and the Governor to grant pardons and to suspend, remit or commute sentences in certain cases.
- The president or the governor may consider the case of the convict and may pardon the death sentence.
- Death warrant- In cases where the death sentence is awarded, the convict should be allowed to use all the legal remedies available such as appeal, review and mercy petitions. The Supreme Court guidelines are needed to be followed before issuing the death warrant.
- Execution - Death sentence or death penalty is a punishment approved for committing the offence. The act of carrying out a death sentence is known as an execution.

Why Death Penalty is necessary?

- Capital punishment is often justified with the argument that by executing convicted murderers, we will deter murderers from killing people.
- People should get what they deserve in proportion to the severity of their crime. This argument states that real justice requires people to suffer for their wrongdoing and to suffer in a way appropriate for the crime.

- It is often argued that the death penalty provides closure for victims' families.

What are the arguments against Death Penalty?

- The statistical evidence doesn't confirm that deterrence works. Some of those executed may not have been capable of being deterred because of mental illness or defect.
- Death has been prescribed in rape cases since 2013 (Sec. 376A of IPC), still, rapes continue to happen and in fact, the brutality of rapes has increased manifold, which question death penalty as an effective deterrent.
- Execution of the Innocent - The most common argument against capital punishment is that sooner or later, innocent people may get killed, because of mistakes or flaws in the justice system.
- In most of the developed countries death has been abolished as a form of punishment.
- Capital punishment doesn't rehabilitate the prisoner and return them to society.
- Death penalty does not give another chance to person to work on his mistakes.

Supreme Court Rulings:

- **Jagmohan Singh vs State of UP 1973 case**
  - SC held that according to Article 21 deprivation of life is constitutionally permissible if that is done according to the procedure established by law.
  - Death sentence imposed after a trial in accordance with legally established procedures under Cr.PC and the Indian Evidence Act 1872 is not unconstitutional under Article 21.
- **Bachan Singh vs State of Punjab 1980 case**
  - SC propounded the 'rarest of rare cases' according to which death penalty is not to be awarded except in the 'rarest of rare cases' when the alternative option is unquestionably foreclosed.
- **Machhi Singh vs State of Punjab 1983 case**
  - The Supreme Court laid down certain considerations for determining whether a case falls under the category of rarest of rare cases or not.

What is the Rarest of Rare cases principle?

- When the murder is committed in an extremely brutal, ridiculous, diabolical, revolting, or reprehensible manner so as to awaken intense and extreme indignation of the community.
- When total depravity and cruelty are the motives behind a murder.

Way Forward

- The Law Commission in 2015, headed by Justice A P Shah proposed to abolish capital punishments. However, the commission had made the proposal only to non-terrorism case.
- The fundamental right to life and dignity enshrined under Article 21 of the Constitution also means the right to die with dignity.
- The principle laid down in cases like Bachan Singh or Machhi Singh has to be strictly followed so that the person convicted for an offense of identical nature is awarded a punishment of an identical degree.
- There must be a very high degree of fairness in a system that is interested in subjecting individuals to the experience of death row, and ultimately taking lives through the instrumentality of law. With that as the starting point, the criminal justice system needs to do all it can to ensure that systems are created for procedural fairness.
- Instead of merely enhancing punishment, tackling crimes against women and children requires broader social reforms, sustained governance efforts and strengthening investigative and reporting mechanisms.

Open Network for Digital Commerce (ONDC)

News: The government's Digital India initiative, the vibrancy of the information technology sector and the urgency highlighted by the pandemic make now an opportune time to establish and promote expansion to digital commerce by the digital enablement of a wide cross-section of businesses. The Open Network for Digital Commerce (ONDC) has the potential to usher in a disruptive change in this regard.

What is ONDC?

- ONDC is a globally first-of-its-kind initiative that aims to democratise digital commerce, moving it from a platform-centric model (where the buyer and seller must use the same platform or application to be digitally visible and do a business transaction) to an open network.

- It is based on open-sourced methodology, using open specifications and open network protocols, and is independent of any specific platform.

Rise and Growing acceptance of Digitization in India:

- India has the world's highest fintech adoption rate of 87%, as compared with the global average of 64%.
- The e-commerce market in India has doubled between 2017 and 2020.
- Three of the largest public digital platforms in the world are from India - Aadhaar is the largest unique digital identity platform, Unified Payments Interface (UPI) is the largest digital payments ecosystem, and Co-Win is the largest vaccination platform.
- India has utilised a financial technology stack in which a unified, multi-layered set of public sector digital platforms combine to provide substantial benefits to the population, from promoting financial inclusion and increasing efficiency to enhancing financial stability.

How government is working towards democratizing digital commerce?

- The Department for Promotion of Industry and Internal Trade (DPIIT) has issued orders appointing an advisory committee for its Open Network for Digital Commerce (ONDC) Project to curb 'digital monopolies'. This is in the direction of making e-commerce processes open source, thus creating a platform that can be utilised by all online retailers.
- Once ONDC gets implemented, all e-commerce companies and online businesses in India will have to operate using the same processes and standards.
- According to reports, this could mean a complete revamp of systems for e-commerce players; they could end up losing control over their user interface, and, even more importantly, consumer behaviour insights.
- This could be problematic for larger e-commerce companies, which have their own processes and technology deployed for these segments of operations.
- However, this would also give a huge booster shot to smaller online retailers and new entrants.

What will be the impact of ONDC?

- ONDC is expected to digitise the entire value chain, standardise operations (like cataloguing, inventory management, order management and order fulfilment), promote the inclusion of suppliers, derive efficiency in logistics, and enhance value for consumers.
- The platform envisages equal-opportunity participation and is expected to make e-commerce more inclusive and accessible for consumers as they can potentially discover any seller, product or service by using any compatible application/platform, thus increasing their freedom of choice.
- It will enable transactions of any denomination, thus making ONDC a truly 'open network for democratic commerce'.
- ONDC would enable small businesses to use any ONDC-compatible applications instead of being governed by specific platform-centric policies.
- It would also encourage easy adoption of digital means by those currently not on digital commerce networks.

What factors must be kept in mind while creating an ONDC platform?

There are three "layers" of an open digital ecosystem which provide a useful conceptual framework to think of both adoption and safeguards. These layers are:

- **Technology Layer** - It should be designed for minimalism and decentralisation.
  - The ONDC platform should be built on 'privacy by design' principles.
  - It should collect minimal amounts of data (especially personal) and store it in a decentralised manner so that there is no honeypot for hackers.
  - Data exchange protocols should be designed to minimise friction but be based on clear rules that protect the consumer interest.
  - Tools like blockchain could be used to build technical safeguards that cannot be overridden without active consent.
- **Community Layer** - It should foster a truly inclusive and participatory process. This may be achieved by making civil society and the public active contributors by seeking wide feedback on drafts of the proposal. Also, ensuring quick and time-bound redressal of grievances will help build trust in the system.
- **Governance Layer** - It should allay business' fears of excessive state intervention in e-commerce.
  - Any deployment of standards or tech should be accompanied by law or regulation that lays out the scope of the project.

- If collection of any personal data is envisaged, passing the data protection bill and creating an independent regulator should be a precondition.
- To assure the industry of fairness, the government could hand over the stewardship of the standards or platform to an independent society.

Way Forward:
- In order to drive the adoption of an open e-commerce platform or standards in a sector with entrenched incumbents, compelling the suppliers or consumers to use it is inadvisable.
- A viable solution would be creating non-mandatory 'reference applications', and financial or non-financial incentives.
- Useful learnings can be drawn from the adoption of UPI. The government supported the rollout of BHIM as a reference app, and offered financial rewards through a lottery scheme to drive early adoption.
- It is timely that India is exploring innovative ways to bridge the gaps in e-commerce markets. But the boldness of this vision must be matched by the thoughtfulness of the approach.

Cutting Crude Import Bill is no Easy Task

India's energy needs are enormous with a daily consumption of around 5 million barrels and a refining capacity of 250 mmtpa (million metric tonnes per annum), which is the third-largest in the world. To maintain energy security and to fulfill the objective of providing energy justice to each of its citizens, Indian energy companies buy from all major oil producers in the world. On an average, India has the unique distinction of servicing 60 million visitors at its petrol pumps every single day.

As the Russia-Ukraine crisis continues to impact the world globally and on oil prices in particular. However, the surge in oil prices does not imply a decline in requirements. Thus, it makes it important for government to ensure access to affordable energy to our citizens. We have two viable alternatives, we can focus on encouraging domestic production of oil and transition towards alternate sources of energy.

Steps taken by Government in this regard:
- Urja Sangam 2015 was launched by the PM which was the then the biggest global hydrocarbon meet aimed at shaping India's energy security. All the stakeholders were urged to increase the domestic production of oil and gas to reduce import dependence from 77% to 67% by 2022 and further to 50% by 2030.
- The government has also introduced various policies for increasing domestic production of oil and natural gas under the Production Sharing Contract (PSC) Regime, Discovered Small Field Policy, Hydrocarbon Exploration and Licensing Policy (HELP), New Exploration Licensing Policy (NELP), etc. However, projects under domestic oil production have a long gestation period. Pricing and tax policies are not stable and the oil and gas business requires huge capital, which means high risks for investors.
- The Government of India promotes the Ethanol Blending Programme (EBP) with the aim of reducing the country's dependence on crude oil imports, cutting carbon emissions and boosting farmers' incomes. The Government has advanced the target for 20% ethanol blending in petrol (also called E20) to 2025 from 2030.

What else can be done to reduce India's Oil Import Dependence?
- **Increase the share of Domestic Production**
  - As India aims for 10% GDP growth we must realise that our demand for oil is only going to increase.
  - The only way we can reduce our dependence on imports is to increase the size of India-owned exploration and production assets overseas. We can learn from China in this regard.
  - It is crucial that we back ONGC as it takes steps to increase the production by redeveloping its existing matured fields. The government also needs to support by investing in oil recovery technologies.
- **Focus on Green Energy**
  - With COP26 commitments in place, the demand for Renewable energy is at an all-time high, which calls for substantial capacity addition.
  - The wind sector is gaining momentum however the solar sector is taking leap forward as it continues to be backed by global supply of solar cells and modules at favorable prices.

- **Realising the potential of Wind Energy**
    - While both solar and wind are susceptible to intra-day and seasonal variability, from a technological and resource perspective as well as from the commercial angle, wind is a better bet in helping India achieve its RE aspirations.
    - However, lately, there is a policy overdrive in favour of solar, which is resulting in a decline in wind capacity addition. While there is a short-term tariff advantage, in the long term it is essential to have a balanced diversified resource mix.
    - Wind is more desirable in India's power basket due to higher capacity utilisation and throughout the day generation of power. It also complements solar, providing a more consistent and viable generation profile.

Way Forward:

Despite the initiatives taken to reduce India's oil import dependence, the situation remains dismal. India must rework on this reality. The strategy should be that key energy uses, like for cooking and transport, shift to other sources like green energy. On their part, the policymakers have to ensure that all stakeholders are on board and there is no policy flip-flop.

Greening India through Cooperatives

With the rise in global temperature and extra people-contradictions all over the globe, there is a need to find innovative solutions to mitigate the major impact of climate change. Here, the cooperative societies with their unique solutions at the local level could provide alternative solutions to mitigate the risk of climate change. There is a need to support their role by the government with adequate funding and policy support.

What are the Co-operatives?

- They are people-centered enterprises owned, controlled and run by and for their members to realize their common, social and cultural needs and aspirations.
- Co-operatives function on true democratic principles. They are democratically managed by the 'one member, one vote' rule. Members share equal voting rights regardless of the amount of capital they bring in.

What role do they play in mitigating climate change?

- Cooperatives have the potential of solving real-world problems with their innovative skills like alternative sources of clean water for communities and helping to accomplish sustainable goals of energy access, energy efficiency, and reduced emissions.
- Cooperatives contribute to the sustainable management of natural resources in several ways.
- Cooperatives collectively provide solutions to the looming impact of rising temperature, loss of jobs, depletion of water resources, degradation of land and forest resources and accumulation of wastes leading to health hazards.

Success stories of co-operatives in India:

- Dhundi village in the Kheda district of Gujarat had formed the world's first solar irrigation cooperative as Dhundi Saur Urja Utpadak Sahakari Mandali (DSUUSM) in 2016.
  The members of this cooperative society are often called solar entrepreneurs who are harvesting solar energy. This has enabled them to reap a better harvest and they are connected to the grid for additional income.
- Indian Farm Forestry Development Co-operative (India), the umbrella co-operative, is turning wasteland back into the forest in three north-central States of India, Rajasthan, Uttar Pradesh and Madhya Pradesh.
- There are also examples from leading cooperatives giants like AMUL, IFFCO and NAFED etc, diversified into organic farming by supporting the cooperatives for production certification, adherence to food safety and linking to the market-driven value chains. The initiatives of this kind have made cooperatives oriented towards natural and organic farming and are all set to cater to the demand for organic produce.
- Self Employed Women's Association's (SEWA's) interventions regarding the environment, climate, water, clean energy, and spreading awareness are apt in the current times and support our national goals (sustainable development goals) to be achieved by 2030.

Challenges faced by the Co-operatives:
- The role of cooperatives has been overlooked by policymakers at various levels due to their lack of visibility.
- Whether public or private sector, both are not showing any amount of confidence in this sector, as there is little or no financial support for cooperatives, so this harms their potential.
- In some cooperatives, due to the lack of understanding of the market and poor level of skill set of workers, many cooperatives underperform and are not able to provide the desired results.

Way Forward:
- Reaching out to cooperatives for raising awareness about environmental problems, training on adaptation and mitigation, forging alliances to work together, and investing in cooperative enterprises and innovations are required to have a green agenda for a sustainable future.
- The government needs to work upon enhancing their capabilities by providing them with proper guidance and support from market and business communities so that they can get the desired level of skill set and knowledge of running an enterprise and can further utilize these capabilities to solve environmental problems.

Many Virtues of Wetlands

Climate Change estimates for India indicate rising temperatures, sea-level, intensified rainfall and more catastrophic events. Conservation and wise use of wide diversity of inland and coastal wetlands can be a powerful climate change response. However, according to the Global Wetland Outlook by the Ramsar Convention, wetlands - one of the world's most economically valuable ecosystems and regulators of the global climate, are disappearing three times faster than forests. Yet, while a lot is known about their importance, the utility of wetlands is not fully understood.

What are Wetlands?
- Wetlands are areas where water is the primary factor controlling the environment and the associated plant and animal life. They occur where the water table is at or near the surface of the land, or where the land is covered by water.
- They are the lands transitional between terrestrial and aquatic eco-systems where the water table is usually at or near the surface or the land is covered by shallow water.

Importance of Wetlands:
- **Sequester Carbon**
  - Wetlands' microbes, plants and wildlife are part of global cycles for water, nitrogen and sulphur. Wetlands store carbon within their plant communities and soil instead of releasing it to the atmosphere as carbon dioxide.
  - Salt marshes and mangrove swamps are known to accumulate soils vertically.
- **Home to Migratory Birds**
  - Millions of migratory birds flock to India, and wetlands are critical to this annual phenomenon. Ecologically dependent on wetlands, migratory water birds connect continents, hemispheres, cultures, and societies through their seasonal movements.
  - A diversity of wetland communities offers essential stopovers for birds.
- **They help in fight against Climate Change**
  - Wetlands assist in stabilising CO_2 (Carbon dioxide), CH_4 (Methane), N_2O (Nitrous oxide) and Greenhouse Gas (GHG) concentrations by minimising climate and land-use-mediated GHG releases and by boosting the potential to actively collect CO_2 from the atmosphere and sequester carbon.
  - Wetlands also help reduce the risk of disasters such as floods, by protecting coastlines.
- **Cultural and Tourism Importance**
  - Wetlands have deep connection with Indian culture and traditions.
  - For example, The Loktak Lake in Manipur is revered as 'Ima' (Mother) by locals. The North Indian festival of Chhath is one of the most unique expressions of the association of people, culture, water and wetlands.
  - The Dal Lake in Kashmir, Nainital Lake in Uttrakhand are popular tourist destinations.
- **Importance of Peatlands**
  - The term 'peatland' refers to the peat soil and the wetland habitats growing on the surface.

- They account for just 3% of the world's land surface but store twice as much carbon as forests, thus playing a crucial role in delivering global commitments on the climate crisis, sustainable development, and biodiversity.
- Peatlands are sparse in India and require immediate attention.

Threats to existence of Wetlands:

- Wetlands near urban centres are under increasing developmental pressure for residential, industrial and commercial facilities. Areas surrounded by urbanised wetlands are expected to lead to a coastal squeeze in the face of sea-level rise ultimately leading to wetland loss.
- Climate change and linked drivers and pressures are highly likely to increase vulnerability of wetlands. Increased air temperature, shifts in precipitation, increased frequency of storms, droughts, and floods, increased atmospheric CO2 concentration and sea level rise could also affect wetlands.
- As per the Intergovernmental Science – Policy Platform on Biodiversity and Ecosystem Services' (IBPES) global assessment, wetlands are the most threatened ecosystem due to human activities and global warming.
- Other threats include Overgrazing, removal of sand from beds, deforestation, pollution, agricultural runoff, domestic waste, industrial effluents etc.

Steps taken by India to protect its Wetlands:

- In India, the wetlands are regulated under the Wetlands (Conservation and Management) Rules, 2017.
- The Ministry of Environment, Forest and Climate Change (MoEFCC) supports the implementation of management action plans for over 250 wetlands under schemes such as National Plan for Conservation of Aquatic Ecosystems, Mangroves and Coral Reefs, and Integrated Development of Wildlife Habitats.
- Under India's commitment towards Ramsar convention, India has designated 49 Ramsar Sites as of now.

Way Forward:

- India's emission pledges at the Glasgow Summit include net zero emissions by 2070. We can integrate our domestic wetlands conservation policies with our global goals. As Wetlands are a significant storehouse of blue carbon we may increase efforts to conserve them.
- In order to counter unplanned urbanization and a growing population, management of wetlands has to be an integrated approach in terms of planning, execution and monitoring.
- Spreading awareness by initiating awareness programs about the importance of wetlands and constant monitoring of wetlands for their water quality would provide vital inputs to safeguard the wetlands from further deterioration.

Recognising the 'compulsory' woman worker

India is celebrating and commemorating the progressive 75 years of India after independence with 'Azaadi Ka Amrit Mahotsav' and promulgating the mission of warranting women as 'Empowered women- Empowered Nation'. A report by "The Centre for Monitoring Indian Economy" shows the labour participation rate of rural women was only 9.92% in March 2022 as compared to 67.24% for men.

With continuous dodging between different types of work to earn livelihood, even with low pay and tough working conditions, one can refer to such women workers as 'Compulsory Workers; whose work never ends'.

Challenges faced by Rural Woman Workers:

- **Mechanization of Rural Economy**
  - With the arrival of hi-tech machines in the agriculture sector, operations have become less labour intensive and resulted in a decrease in working days to less than 3 months/year. It forced many rural women to migrate and become part time construction workers.
- **Gender Pay Parity**
  - In the field of manual labour work, women are being paid less than men in terms of piece rate due to physical constraints in lifting heavy weights. For example: In Kalaburagi district of Karnataka which focuses on creation of percolation ponds. Since the digging of ponds required lifting about 3,000kg of mud a day and women were not able to meet the targets, they did not get the piece rate of ₹309; they got only ₹280 to ₹285.

- **Limitations of MGNREGA**
  - The Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), a labour demand-driven programme, is limited to providing only 100 days of paid labour on public works projects per year. For the rest of the year, women workers have to continuously look for alternative source of income meet expenses.
- **Missing out on Nutritious Food**
  - The high prices of essential commodities have led to a huge cut in women's consumption of vegetables and pulses. The deprivation of nourishment that women face due to high prices and low incomes is another dimension of the 'compulsory' woman worker's life.
  - Due to a patriarchal society, boys are given relatively more nutritious food as they are deemed breadwinners of the family, especially if the family is poor and is not in a position to provide nutritious food to all the children.
- **Faulty Presentation of Data**
  - Women who stopped looking for work due to the belief that 'no work is available' are wrongly described as women 'dropping out' or 'Leaving the market', showcasing as a 'choice', rather than a compulsion forced upon them, hence rural economy suffers.

What initiatives are taken by the government to help Rural Woman Workers?
- **The Mahila Kisan Sashaktikaran Pariyojana**
- **Pradhan Mantri Kaushal Vikas Yojana**
- **Pradhan Mantri Jan-Dhan Yojana**
- **Pradhan Mantri Matru Vandana Yojana**
- **Pradhan Mantri Garib Kalyan Ann Yojana**
- **E-Shram Portal**

All the schemes mentioned above in a way or the other seeks to help rural woman workers. While some focus on improving skilled workforce, some focus on seeking financial inclusion of the woman, some offer to recognize and integrate rural workforce in the formal economy. Each and every in a way seeks to strengthen rural economy with woman at the core of it.

What more needs to be done?
- Widespread surveys of poor rural women and how they spend their time are an urgent necessity.
- One of the greatest barriers to the sustainable development of women is their lack of access to quality adult education and training. Capacity building and adult training range from providing adult education, life, and social skills training.
- The annual cash transfer of ₹6,000 to landowning farmers under PM-KISAN Scheme can be extended to rural landless labourers also.
- There should be strict implementation of minimum wages with piece rates fixed for different types of women's labour.

A new Global Standard for AI Ethics

What is Artificial Intelligence?
- AI leverages computers and machines to mimic the problem-solving and decision-making capabilities of the human mind. From predicting what we want to see as we scroll through social media to helping us understand weather patterns to manage agriculture, AI is everywhere.

What is the potential of AI?
- The global AI market size was valued at USD 93.5 billion in 2021 and is projected to expand at a compound annual growth rate (CAGR) of 38.1% from 2022 to 2030. The share of AI in the Indian market is valued at USD 7.8 billion in 2021.
- Thus, with the rise in the market for AI, there arises a need to have global regulations and agreements on Ethics of Artificial Intelligence to ensure that AI is developed with common, humanistic values at its core.

In November 2021, 193 countries reached a groundbreaking agreement at UNESCO on 'Ethics of Artificial Intelligence'. It sets the first global normative framework while giving States the responsibility to apply it at their level.

What are the Objectives of the Agreement?

- **It seeks to maintain Balance of Power** – It talks about giving priority to human interests in how these technologies are developed.
- **Regulate entire AI Life Cycle** – The agreement talks about ensuring women and minority groups are fairly represented in designing entire AI system i.e. 'research-design-development-deployment and use'
- **Assuring Data Privacy and Access to information** - It establishes the need to keep control over data in the hands of users, allowing them to access and delete information as needed.
- **Banning Social scoring and Mass Surveillance** - It explicitly bans the use of AI systems for social scoring and mass surveillance. It stresses that when developing regulatory frameworks, Member States should consider that ultimate responsibility and accountability must always lie with humans and that AI technologies should not be given legal personality themselves.
- **Role in Protecting Environment** - It asks governments to assess the impacts such as carbon footprint, energy consumption and the environmental impact of raw material extraction for supporting the manufacturing of AI technologies.

What are the Benefits of AI?

- **Potential in Agriculture Sector**
  - Farmers can analyse factors like weather conditions, temperature, water usage or soil conditions collected from their farm to better inform their decisions.
  - Precision agriculture uses AI technology to aid in detecting diseases in plants, pests, and poor plant nutrition on farms.
  - AI sensors can detect and target weeds and then decide which herbicides to apply within the right buffer zone.
- **Role in the Pandemic**
  - For the Covid-19 response, an AI-enabled Chatbot was used by MyGov for ensuring communications.
  - The Indian Council of Medical Research (ICMR) deployed the Watson Assistant on its portal to respond to specific queries of frontline staff and data entry operators from various testing and diagnostic facilities across the country on Covid-19.
- **Policing**
  - With the help of AI, one can match facial recognition with the central database, predict the pattern of crime, analyze CCTV footage which are available across the country to identify suspects.
  - Government is digitising all the records, especially the crime records, putting it into one single place called CCTNS where all the data including the image, biometrics, or the criminal history of a convict or suspect is available.
- **Healthcare**
  - Application of AI can be beneficial in precision medicine predicting what treatment protocols are likely to succeed on a patient based on various patient attributes and the treatment context.

Concerns associated with AI

- **Biased outcomes**
  - The data used to feed into AI often aren't representative of the diversity of our societies, producing outcomes that can be said to be biased or discriminatory.
- **Racial Bias of Facial Recognition Technologies**
  - Facial recognition technologies, which are used to access our phones, bank accounts and apartments, and are increasingly employed by law enforcement authorities, in identifying women and darker skinned people
  - For three such programs released by major technology companies, the error rate was 1% for light skinned men, but 19% for dark skinned men, and up to 35% for dark skinned women. Biases in facial recognition technologies have led to wrongful arrests.

- **It may compromise Privacy**
    - AI systems get better by analyzing more and more data. They keep adapting through continuous modelling of interaction data and user feedback. This may in turn lead to compromise on right to privacy due to unauthorized access to one's data activity.
- It shouldn't be forgotten that AI systems are created by humans, who can be biased and judgmental. Thus, AI can promote prejudices and inequalities, if initial training of the AI algorithms is biased.
- Technology giants are investing heavily in regard to artificial intelligence, both at the scientific/engineering and also at the commercial and product development level. These big players have an unmatched advantage when compared to any ambitious competitor out there which is a symptom of data-oligarchic society.

Government initiatives to promote Ethical AI:

- In 2018, NITI published a discussion paper titled **'National Strategy for Artificial Intelligence #AI4ALL '**, which demonstrates how AI can be successfully applied to five principal sectors in India: healthcare, agriculture, education, smart cities and infrastructure, smart mobility and transportation, to benefit the country's general population.
- **RAISE 2020** - Responsible AI for Social Empowerment (RAISE) 2020 is a first of its kind, global meeting of minds on Artificial Intelligence to drive India's vision and roadmap for social transformation, inclusion and empowerment through responsible AI.
- India also joined the **Global Partnership on Artificial Intelligence** (GPAI) as a founding member to support responsible and Human centric use of AI.

General Studies – 1

Indian Heritage and Culture

1. Indian culture will cover the salient aspects of Art Forms, Literature and Architecture from ancient to modern times.

History

2. Modern Indian history from about the middle of the eighteenth century until the present significant events, Personalities, Issues.
3. The Freedom Struggle — Its various stages and Important contributors / contributions from different parts of the country.
4. Post-independence consolidation and reorganization within the country.
5. History of the world will include events from 18th century such as Industrial revolution, World wars, Redrawal of national boundaries, Colonization, decolonization, Political philosophies like communism, capitalism, socialism etc.— their forms and effect on the society

Society

6. Salient features of Indian Society, Diversity of India.
7. Role of women and women's organization, Population and associated issues, Poverty and developmental issues, Urbanization, their problems and their remedies.
8. Effects of globalization on Indian society.
9. Social empowerment, Communalism, regionalism & secularism.

Geography

10. Salient features of world's physical geography.
11. Distribution of key natural resources across the world (including South Asia and the Indian sub-continent) Factors responsible for the location of primary, secondary, and tertiary sector industries in various parts of the world (including India).
12. Important Geophysical phenomena such as earthquakes, Tsunami, Volcanic activity, cyclone etc., Geographical features and their location-changes in critical geographical features (including water-bodies and ice-caps) and in flora and fauna and the effects of such changes

History & Culture

Sant Tukaram

News: Prime Minister Narendra Modi will inaugurate the Sant Tukaram Shila Mandir in the temple town of Dehu in Pune district.

About:

- He was the contemporary of Shivaji.
- He is considered as the greatest Maratha Bhakti reformer.
- He made the Vithoba cult popular.
- He composed devotional songs on Vithalswamy called as Abhangs.
- He preached the message of equality and universal brotherhood.
- Sant Tukaram and his work are central to the Warkari sect spread across Maharashtra.
- Sant Tukaram is credited with starting the Wari pilgrimage.
- His master was Saint Chaitanya Mahaprabhu of the Bhakti movement.

What Social Reforms did he initiate?

- Tukaram accepted disciples and devotees without discriminating gender.
- Tukaram taught that 'pride of caste never made any man holy', 'the Vedas and Shastras have said that for the service of God, castes do not matter', 'castes do not matter, it is God's name that matters'.

Kapilavastu Relics

News: Four Holy Relics of Lord Buddha are being taken from India to Mongolia for an 11-day exposition to coincide with Mongolian Buddha Purnima celebrations.

- These relics are to be displayed at the Batsagaan Temple in Gandan Monastery complex in Ulaanbaatar.
- The four relics come from among 22 Buddha relics, currently housed at Delhi's National Museum. Together, they are known as the 'Kapilvastu Relics' since they are from a site in Bihar believed to be the ancient city of Kapilvastu. The site was discovered in 1898.

What are Relics?

- Relics are sacred objects associated with holy individuals. It may include body parts (teeth, hair, bones) or objects which the holy person used or touched.
- Many traditions believe relics have special powers to heal, grant favors, or to keep away demons.

About Sacred Relics of Buddha:

- At the age of 80, according to Buddhist beliefs, Buddha attained salvation in Uttar Pradesh's Kushinagar district.
- The Mallas of Kushinagar cremated his body with ceremonies befitting a universal king.
- His relics from the funeral pyre were collected and divided into eight shares to be distributed among the Ajathsatrus of Magadha, the Licchavis of Vaishali, the Sakyas of Kapilavastu, Mallas of Kushinagar, Bullies of Allakappa, the Mallas of Pava, the Koliyas of Ramagrama and a Brahmana of Vethadipa.
- The purpose was to erect stupas over the sacred relics.

Sital Sasthi

News: Week-long Sital Sasthi festival is being celebrated in Odisha.

About:

- Sital Sasthi is a sacred Hindu festival is being celebrated in Odisha. This week-long special festival highlights the marriage of Lord Shiva and Goddess Parvati. According to the Hindu calendar, Sital Sasthi is observed on the sixth day of the Jyestha month during the Shukla Paksha.
- People observing this festival believe that Lord Shiva represents the scorching heat of summer while Goddess Parvati signifies the first rain. So, this holy and lavish wedding is observed for a good monsoon.
- Sital Sasthi is a celebration wherein Lord Shiva and Goddess Parvati are adopted by two families, and their wedding is solemnised with the involvement of rituals. After the marriage is performed, the God and Goddess are then carried around the city via a procession
- During the week-long festival, devotees in large numbers take part in the most famous Sitala Sasthi Yatra that is conducted at Sambalpur in Western Odisha.

Kranti Gatha

News: Prime Minister Narendra Modi inaugurated 'Kranti Gatha' a newly created Gallery of Indian Revolutionaries inside an underground British - era bunker at Raj Bhavan in Mumbai and Jal Bhushan, the new residence and office of the Governor of Maharashtra.

About:

- The Gallery of Indian Revolutionaries has been created in the bunker that was discovered below Raj Bhavan in 2016 by the then Governor of Maharashtra N Vidyasagar Rao. Built before the First World War, it was used by the British to store arms and ammunition.
- The bunker has 13 rooms of various sizes and the different cells in it were known as 'Shell Store', 'Gun Shell', Cartridge Store, Shell Lift, Central Artillery Room, Workshop etc. Many of these rooms as well as the wall in the hallway have now been used for the 'Kranti Gatha - Gallery of Revolutionaries'.
- The 'Kranti Gatha' gallery commemorates many revolutionaries from Maharashtra from the First War of Independence in 1857 to the Naval uprising in Mumbai in 1946.
- In this Vasudev Balwant Phadke, Chaphekar brothers, Lokmanya Bal Gangadhar Tilak, Veer Savarkar, Babarao Savarkar, Krantiguru Lahuji Salve, Anant Laxman Kanhere, Rajguru, Madam Bhikaji Cama feature prominently.

Society

Why Petchiammal disguised as Muthu Master?

Petchiammal's story

- Barely 15 days after her marriage to Shiva, who died of a heart attack, Petchiammal from Sokkalingapuram in Tuticorin district realized she was pregnant. She gave birth to a baby girl and was working in a charcoal factory to eke out a living.

Which incident changed her life forever?

- One day when she was walking to the factory late in the evening a truck driver pulled her over. Forcing her to get into the vehicle, but she refused. He uttered her a nasty word. This incident had completely shaken her.
- Lost in her thoughts she started pondering what could be done. She took a decision to change her attire and turned into a man. She left for a different city and started working in an eatery in Tuticorin.

What was her response when she was asked was it not tiring to hide her femininity in a man's body?

- She said she wanted to remain a widow and raise her daughter as a single parent. But what was the minimum safety this society could guarantee her?
- She felt vulnerable as a widow. She asks if someone rapes her, can the society give her a fair verdict without discrediting her?
- Muthu concludes that she was happy being a man.

What made her reveal her true identity?

- She had to reveal her identity when to avail her old age widow pension and to receive other government benefits.
- Her life is an example how women have been treated in the Indian society and the issues that single woman/mother face.

You may refer to the following link to know more about Petchiammal's story and the struggle she has had to overcome:

https://timesofindia.indiatimes.com/city/chennai/tamil-nadu-meet-muthu-master-alias-petchiammal/articleshow/92025955.cms

Norms to protect child participation in Entertainment Industry

News: The National Commission for the Protection of Child Rights (NCPCR) has published draft Guidelines to Regulate Child Protection within the Entertainment Industry.

- The 'Guidelines to Regulate Child Participation in the Entertainment Industry' were issued by the Commission in 2011.
- The new draft increases the scope of the guidelines to cover social media and Over the Top (OTT) platforms for the first time.

Key Highlights of New Guidelines:

- **Registration** - It has mandated that child artists and children being used in entertainment need to be registered with the District Magistrate.
- **Disclaimer** - Producers will also have to run a disclaimer saying measures were taken to ensure there has been no abuse, neglect or exploitation of children during the entire process of the shooting.
- **Accountability** - Parents, who are using children to make money, have to be held accountable. Provisions under the Juvenile Justice Act, 2015, Child Labour Amendment Act, 2016, Protection of Children from

Sexual Offences Act, 2012, Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021, etc., have been included in the guidelines.

- **Guardian** - At least one parent or legal guardian or a known person has to be present during a shoot, and for infants, a registered nurse needs to be present along with the parent or legal guardian.
- **Child education and Health** - The producer also needs to ensure the child's education under the RTE Act, to ensure no discontinuity from school or lessons as well as adequate and nutritious food, and water to the children during the process of production and medical facilities.
- **Adequate work hours** - A child shall only participate in one shift per day, with a break after every three hours.
- At least 20 per cent of the income earned by the child from the production or event shall be directly deposited in a fixed deposit account in a nationalized bank in the name of the child which may be credited to the child on attaining majority.
- Content created by the child or his family/guardian shall be treated as children working in a family enterprise as provided under Section 3(2)(a) of the Child Labour and Adolescent Labour Act, 1986.
- **Child specific consideration** - The guidelines prohibit children from being cast in roles or situations that are inappropriate; consideration has to be given to the child's age, maturity, emotional or psychological development and sensitivity.
- Every person involved in the production who may be in contact with children will have to submit a medical fitness certificate ensuring that they are not carrying an obvious contagious disease and police verification of the staff also needs to be carried out.

Roe vs Wade Judgement overturned

News: In a significant curtailment of women's rights, the U.S Supreme Court overturned Roe Vs Wade, a 1973 landmark decision giving women in America the right to have an abortion before the foetus is viable outside the womb before the 24-28-week mark.

- Abortion rights, which have been available to women for over two generations will now be determined by individual States.
- Also overturned on Friday was Planned Parent-hood v. Casey, a 1992 case that upheld Roe.

What is the Roe Vs Wade judgement?

- In 1973, in the landmark Roe Vs Wade judgment, the Supreme Court of the United States made the right to abortion a constitutional right, establishing a benchmark for abortion laws across the world.
- US Supreme Court struck down laws that made abortion illegal in several states and ruled that abortion would be allowed up to the point of foetal viability, that is, the time after which a foetus can survive outside the womb.
- Foetal viability was around 28 weeks (7 months) at the time of the Roe judgment; experts now agree that advances in medicine have brought the threshold down to 23 or 24 weeks (6 months or a little less).
- Foetal viability is often seen as the point at which the rights of the woman can be separated from the rights of the unborn foetus.
- Abortion laws across the world rely on this metric but those opposing abortions argue that this is an arbitrary timeframe that legislation and the court in Roe adopted.

Odisha's Mo Bus

News: Mo Bus, the bus service of Odisha's Capital Region Urban Transport (CRUT) authority, has been recognised by the United Nations as one of 10 global recipients of its annual Public Service Awards for 2022 for its role in 'promoting gender-responsive public services to achieve the SDGs (Sustainable Development Goals)'.

About:

- The Mo Bus facilitates with real time technologies like live tracking, travel planner and e-ticketing.
- E-rickshaw system called 'Mo E-Ride' has been introduced as a last-mile feeder service.
- 57 per cent of the city's commuters now use the Mo Bus.

- Mo E-Ride is estimated to reduce pollution by 30-50 per cent.
- 40 per cent of Mo Bus conductors are women and 100 per cent of Mo E-Ride drivers are women, transgender people, and people from disadvantaged communities.

What is the UN Public service award?

- It is the 'most prestigious international recognition of excellence in public service'.
- It is intended to reward 'the creative achievements and contributions of public service institutions that lead to a more effective and responsive public administration in countries worldwide'.

Geography

Indus Water Treaty

News: India and Pakistan have begun another round of the Permanent Indus Commission meeting that is held annually under Indus Water Treaty (IWT) 1960.

About:

- Under the provisions of the treaty, the two sides are required to meet at least once every year, alternately in India and Pakistan.
- It is a Water-Distribution Treaty, signed in Karachi on 1960, between India (Pm Jawaharlal Nehru) and Pakistan (President Ayub Khan), brokered by the World Bank.
- Under the provisions of the Indus Waters Treaty, signed between India and Pakistan in 1960, all the waters of the eastern rivers-the Sutlej, Beas, and Ravi-amounting to around 33 MAF (million acre-feet) annually is allocated to India for unrestricted use.
- The waters of western rivers - Indus, Jhelum and Chenab amounting to around 135 MAF annually are largely for Pakistan.
- Under the Treaty, India has been given the right to generate hydroelectricity through a run of the river projects on the western rivers subject to specific criteria for design and operation.
- It also gives the right to Pakistan to raise concerns on the design of Indian hydroelectric projects on western rivers.
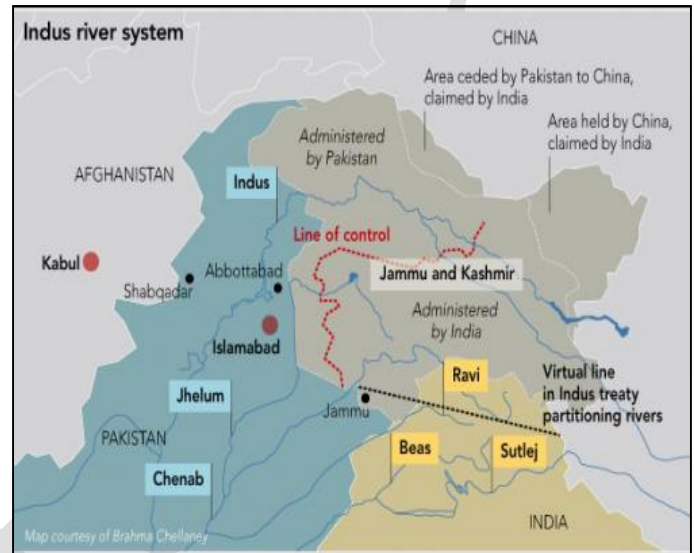
Functions of the Commission:

- To study and report to the two Governments on any problem relating to the development on the waters of the rivers.
- To solve disputes arising over water sharing.
- To arrange technical visits to projects' sites and critical river head works.
- To undertake, once in every five years, a general tour of inspection of the Rivers for ascertaining the facts.
- To take necessary steps for the implementation of the provisions of the treaty.

UN-Habitat

News: The UN-Habitat has identified issues associated with Jaipur city like multi hazard vulnerabilities, weak mobility and Green-Blue economy and has laid out a plan to increase sustainability in the city.

Key Findings:

- Jaipur got an overall sustainability rating of three on the Urban Sustainability Assessment Framework (USAF) based on the information collected for 87 of its 131 parameters.
- The UN-Habitat highlighted the following problems which are faced by the city:
    - Weak access to a public transportation system, with less number of buses and poor route delineation.
    - Extreme levels of drought during summer and also urban floods.
    - Lack green cover which has resulted in the urban heat island effect that has disrupted biodiversity.

Recommendations of UN-Habitat:

- Experts recommended measures to increase green cover, strengthen urban biodiversity, and thereby enhance the quality of life for citizens.

- To address the challenges of urban sprawling, the UN-Habitat emphasised the idea of a compact city with re-development and re-densification of the existing urban areas.
- To improve the situation of public transportation, fare integration for different modes of transport and enhancing the non-motorised transport infrastructure would make movement convenient and reduce traffic and vehicle emissions.
- The 800 dry wells in Jaipur's Walled City could be used for rainwater harvesting and raising the water table, mitigating urban floods and ensuring efficient utilisation of water resources.
- Eco-trails with plantations along natural drainage channels and railway tracks are recommended in the city.
- Experts from the Tourism & Wildlife Society of India (TWSI) said that the urban development authorities should measure oxygen produced and carbon dioxide released each day in each urban complex and plan the green cover accordingly and also select the species of plants with utmost caution since only indigenous, broad-leaved and tap-root trees produce more shade and oxygen.

About UN-Habitat:

- The United Nations Human Settlements Programme is the United Nations programme for human settlements and sustainable urban development.
- UN-Habitat maintains its headquarters at the United Nations Office at Nairobi, Kenya.
- It is mandated by the United Nations General Assembly to promote socially and environmentally sustainable towns and cities with the goal of providing adequate shelter for all.
- It is a member of the United Nations Development Group. The mandate of UN-Habitat derives from the Habitat Agenda, adopted by the United Nations Conference on Human Settlements (Habitat II) in Istanbul, Turkey, in 1996.

Avulsions across Kosi River

News: Recently a research study reported that instability in Kosi River has been observed after the construction of embankments on either side of it.

What are avulsions?

- Avulsion refers to the phenomenon of change in the course of river flow causing the abandonment of the old established river channel and formation of a new channel.

Where are we likely to see Avulsions?

- Rivers lining tropical and desert regions are more prone to avulsions.
- Avulsions occur less frequently, only once a decade or century, or even less.
- The rare occurrence of avulsions makes them less discussed despite their catastrophic effects as compared to more frequent extreme weather events and the continuous effect of sea-level rise.

Key Findings of the Research:

- 113 avulsions have been documented worldwide as per the satellite imagery from 1973-2020 and historical maps.
- Rivers altered routes in the mountain bases while descending onto unconfined valleys or open oceans in 33 instances. Kosi river falls under this category.
- The change can also occur in the delta regions. One is along backwater zones, part of the river that flows differently because of

the effects of the downstream sea.

- Along some of the world's largest waterways, such as the Orinoco, Yellow, Nile and Mississippi Rivers, 50 instances occurred on low sloping deltas.
- In 30 instances, avulsions occurred in rivers with extreme sediment load. River beds are filled-up with the sediments causing the rivers to seek new channels during floods.

To read more about history of Kosi River and Projects along the same do refer this article:

https://www.firstpost.com/long-reads/a-dammed-history-of-the-kosi-5221841.html

Theri Kaadu

News: Recent news has highlighted the desert in Tamil Nadu. It has dunes that are red. The red dunes are called theri in Tamil. They consist of sediments dating back to the Quaternary Period and are made of marine deposits.

Features of the Dunes:

- They have very low water and nutrient retention capacity.
- The dunes are susceptible to aerodynamic lift.
- Reason for Red colour - The iron-rich heavy minerals like ilmenite, magnetite, garnet, hypersthene, and rutile present in the soil had undergone leaching by surface water and were then oxidized because of the favourable semi-arid climatic conditions giving them distinct red colour.

What are theories behind their formation?

- **Theory 1**- The present-day theris might have been formed by the confinement of beach sand locally, after the regression of the sea. When high-velocity winds from the Western Ghats blew east, they induced migration of sand grains and accumulation of dunes.
- **Theory 2** - Another view is that these are geological formations that appeared in a period of a few hundred years.
- **Theory 3** - The red sand is brought from the surface of a broad belt of red loam in the plains of the Nanguneri region by southwest monsoon winds during May-September. The southwest monsoon winds, after draining the moisture behind the Mahendragiri hill and the Aralvaimozhi gap of the Western Ghats, become dry and strike the plains in the foothills, where vegetation is sparse. This churns red loam and is driven east in huge columns of red sand, till they are met by sea breeze near the coastal tract of Tiruchendur and get deposited there. The sand deposited thus also forms a further obstruction, causing more sand to be deposited and the process goes on. Thus, in the due course of time, a dune is formed.

Aeolian Process - These processes of erosion, transport, and deposit of sediments that are caused by wind at or near the surface of the earth, are called Aeolian processes. They lead to continual sand redistribution.

Earthquake in Afghanistan

News: Deadliest Afghanistan quake in decades kills over 1,000 people. The quake originated near the city of Khost, which is close to the country's border with Pakistan and about 160 kilometres (100 miles) south of the Afghan capital, Kabul.

What makes Afghanistan prone to such deadly earthquakes?

- Much can be attributed to the Hindu-Kush geography.
- Afghanistan is earthquake-prone because it's

located in the mountainous Hindu Kush region, which is part of the Alpide belt which is the second most seismically active region in the world after the Pacific Ring of Fire.

- Slow collisions between the Indian subcontinent and the Eurasian tectonic plate are thought to be the cause of the extremely-common earthquakes in this region.
- The United States Geological Survey (USGS) has called the Hindu Kush region 'one of the most seismically hazardous regions on earth', boasting one of the highest rates of deep earthquakes in the world.
- It is equally important to consider that infrastructure in Afghanistan is weak, people live in the remotest mountain villages. Thus rescue efforts become difficult and combine it with the fact seismic events of such nature can cause enormous devastation.

Why does Earthquake happen?

- Primary reason is the tectonic movements.
- These are large, thin plates that comprise the Earth's crust and the upper mantle (commonly called the lithosphere) and are constantly moving. Earthquakes occur along fault lines, cracks in Earth's crust where tectonic plates meet. They occur where plates are subducting, spreading, slipping, or colliding.

Salt Industry in India

News: The salt industry in India is facing several challenges to produce salt and meet the market demand. Salt farmers are also in distress as they are not getting MSP like other food crops produced by farmers. The farmers are demanding proper wage system along with social security.

How much Salt does India produce?

- India is the **third-largest producer** of salt in the world after the USA and China. In India, nearly 30 million tonne of salt is produced every year.
- India exports nearly 10 million tonne of salt from its total production while industries consume about 12.5 million tonne and retail customers consume the rest.
- Sea salt constitutes about 70% of the total salt production in the country. Thus, salt is mainly produced through a **solar-evaporation process of seawater.**
- With accounting for over **76 % of total salt production**, **Gujarat tops the list** followed by Rajasthan, Tamil Nadu, Andhra Pradesh and Maharashtra.
- The business thrives in Gujarat's Kharaghoda (Surendranagar district), Bhavnagar, Porbandar and the Rann of Kutch.
- Salt is harvested by mining in Himachal and Rajasthan while other states produce it by a solar-evaporation process of seawater.

Why lesser production of Salt this year?

- In Gujarat, the salt harvesting season starts in March, but due to the extended monsoon in the coastal areas, it was started quite late.
- As the state witnessed rain until first week of October, salt pan operators have had less time for harvesting.
- The top layer is used for consumption for being the purest product and remained layers are cleaned and sent to chemical industries before the arrival of the next monsoon.

What are the demands within the Salt Industry?

- **Need for MSP and Recognition as agricultural product**
  - The Indian Salt Manufacturers' Association (ISMA) has demanded the classification of salt production as agricultural activity under the ministry of agriculture instead of its current status as an industry governed by the ministry of industries & mines.
  - Mining produces hardly 0.5% salt. 99.5% of salt is produced either from sea water or from sub soil water and the whole process is done by seeding, farming and harvesting.
  - Unseasonal rains and floods are resulting in demand for Minimum Support Price.
- **Wages and Social Security**
  - Companies have replaced cooperatives and they decide the wages of these workers and the production of farmers. Most of them are migrant labourers.
  - The cooperative sector is more or less passive. Workers are going through serious health issues and economic distress with no minimum wages or social security.

Way Forward:

- Salt is a **Central subject** and land is a State subject. Salt has two parents and no one is taking care of salt. Responsibility has to be fixed on governments and manufacturers. What we need is a new Salt Act as a common policy for the entire country.

General Studies – 2

Polity & Constitution

1. Indian Constitution—historical underpinnings, evolution, features, amendments, significant provisions and basic structure.
2. Functions and responsibilities of the Union and the States, issues and challenges pertaining to the federal structure, devolution of powers and finances up to local levels and challenges therein.
3. Separation of powers between various organs dispute redressal mechanisms and institutions
4. Comparison of the Indian constitutional scheme with that of other countries.
5. Parliament and State legislatures—structure, functioning, conduct of business, powers & privileges and issues arising out of these.
6. Structure, organization and functioning of the Executive and the Judiciary—Ministries and Departments of the Government; pressure groups and formal/informal associations and their role in the Polity.
7. Salient features of the Representation of People's Act.
8. Appointment to various Constitutional posts, powers, functions and responsibilities of various Constitutional Bodies.
9. Statutory, regulatory and various quasi-judicial bodies.

Social Justice

10. Government policies and interventions for development in various sectors and issues arising out of their design and implementation.
11. Development processes and the development industry —the role of NGOs, SHGs, various groups and associations, donors, charities, institutional and other stakeholders.
12. Welfare schemes for vulnerable sections of the population by the Centre and States and the performance of these schemes; mechanisms, laws, institutions and Bodies constituted for the protection and betterment of these vulnerable sections.
13. Issues relating to development and management of Social Sector/Services relating to Health, Education, Human Resources.
14. Issues relating to poverty and hunger.

Governance

15. Important aspects of governance, transparency and accountability, e-governance, applications, models, successes, limitations, and potential; citizens charters, transparency & accountability and institutional and other measures.
16. Role of civil services in a democracy.

International Relations

17. India and its neighborhood- relations.
18. Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests.
19. Effect of policies and politics of developed and developing countries on India's interests, Indian diaspora.
20. Important International institutions, agencies and fora- their structure, mandate

Polity & Governance

Jal Jeevan Mission (JJM)

News: 50% of rural households in India have now been covered under the Jal Jeevan Mission. At the time of launch of Jal Jeevan Mission in 2019, only 3.23 Crore households i.e. 17% of the rural population had access to drinking water through taps.

About:

- JJM envisages supply of 55 litres of water per person per day to every rural household through Functional Household Tap Connections (FHTC) by 2024.
- It is under the Ministry of Jal Shakti.
- It was launched in 2019.

What does the mission seek to do?

- Functionality of existing water supply systems and water connections.
- Water quality monitoring and testing as well as sustainable agriculture.
- Conjunctive use of conserved water.
- Drinking water source augmentation.
- Drinking water supply system, grey water treatment and its reuse.

Funding Pattern

Under the scheme, Union Territories without legislatures are **100% centrally funded**

The central-state **funding share is 90:10** for northeast states, Himalayan states and UTs with a legislature

It is a **50:50** fund-sharing pattern for all other states

Additional funding is also available for states that show good physical and financial progress

What else does it intend to do?

- Prioritizing provision of FHTCs in quality affected areas, villages in drought prone and desert areas, Sansad Adarsh Gram Yojana (SAGY) villages, etc.
- Providing functional tap connection to Schools, Anganwadi centres, Gram Panchayat buildings, Health centres, wellness centres and community buildings.
- Technological interventions for removal of contaminants where water quality is an issue.

Performance of the Scheme:

- Certain state and union territories such as Goa, Telangana, A&N Islands, D&N Haveli and Daman & Diu, Puducherry and Haryana have already achieved 100% household connections.
- Punjab, Gujarat, Himachal Pradesh and Bihar have coverage of more than 90% and are progressing fast towards attaining the status of 'Har Ghar Jal (water in every household)'.

Surrogacy Act

News: Petitioners in the Delhi High Court questioned why marital status, age, or gender were the criteria for being allowed to commission or not commission surrogacy in India.

About Surrogacy Act, 2021:

- It allows 'altruistic surrogacy' - wherein only the medical expenses and insurance coverage is provided by the couple to the surrogate mother during pregnancy.
- Creates a national board to lay down and implement a code of conduct for people working at IVF clinics.
- It intends to make genetic testing of the embryo mandatory before implantation for the benefit of the child born through ART.
- It also seeks to streamline the cryo-preservation processes for sperm, oocytes and embryos.
- It also proposes to constitute a national registry and registration authority to maintain a central database and assist the national board in its functioning.

What are eligibility conditions to get access to services of a surrogate mother?

- Any couple that has 'proven infertility'.
- The couple should be Indian citizens who have been married for at least five years.
- The female must be between 23 to 50 years and the male, 26 to 55 years.
- They cannot have any surviving children (biological, adopted or surrogate). However, this would not include a 'child who is mentally or physically challenged or suffers from life threatening disorder or fatal illness.'

Conditions necessary to be a surrogate mother:

- Only a close relative of the couple can be a surrogate mother, one who is able to provide a medical fitness certificate.
- She should have been married, with a child of her own, and must be between 25 and 35 years, but can be a surrogate mother only once.

Need for Surrogacy Act in India:

- India has emerged as a hub for infertility treatment. This attracted many underprivileged women to rent their wombs in exchange for money. However, unscrupulous middle men started exploiting such women. This called for a proper regulation.

Election of MPs to the Rajya Sabha

News: On June 10, the Assemblies of 4 states will elect 16 MPs to Rajya Sabha.

About:

- It is also called the Upper House and the Council of States.
- It is a permanent House and cannot be dissolved.
- To ensure continuity, one-third of its members retire after every second year, under Article 83(1) of the Constitution, and 'biennial elections' are held to fill these vacancies.
- A nominated member may join a party within six months of taking a seat.

Term:

- The term of a member is six years.
- Vacancies arising due to resignation, death or disqualification are filled up through bypolls, and those elected serve out the remainder of their predecessors' term.

Composition:

- Out of the 245 members, 12 are nominated by the President and 233 are representatives of the States and Union territories of Delhi and Puducherry.

Election:

- Rajya Sabha MPs are elected by MLAs through an indirect election.
- Article 80(4) provides that members shall be elected by the elected members of state Assemblies through a system of proportional representation by means of a single transferable vote.
- The Fourth Schedule to the Constitution provides for allocation of Rajya Sabha seats to the states and Union Territories, on the basis of the population of each state.

How are the Votes counted?

- The number of votes a candidate requires depends on the number of vacancies and the strength of the House.
- Under the Election Commission's Conduct of Election Rules, 1961:
    - If there is only one vacancy, the required quota is calculated by taking the number of votes polled, dividing it by 2, and adding 1.
    - If there is more than one vacancy, the equation is based on an assigned value of 100 for every first-preference vote. The values of the votes credited to all candidates are totalled. The total is divided by 1 more than the number of vacancies, and 1 is added to this quotient.
- For example, if 100 members of an Assembly vote for 3 Rajya Sabha vacancies, the required quota by any candidate would be

- $(100 \times 100)/(3 + 1) + 1 = 2501$.
- Second-preference votes:
    - If for any seat, candidates fail to get the specified number, the second-preference votes will be taken into account, but with a lower value.

What are the special powers enjoyed by Rajya Sabha?

- If it passes a resolution by a majority of not less than two-thirds of members present and voting, Parliament becomes empowered to make a law on a subject.
- When it passes a resolution recommending creation of one or more All India Services common to the Union and the states. Parliament becomes empowered to create such services.
- Emergency proclamation has to be approved by both Houses of Parliament within a stipulated period.
- If a proclamation is issued at a time when Lok Sabha has been dissolved or the dissolution of Lok Sabha takes place within the period allowed for its approval, then the proclamation remains effective, if the resolution approving it is passed by Rajya Sabha within the period specified under Articles 352, 356 and 360 of the Constitution.

National Air Sports Policy

News: The Union ministry of civil aviation (MoCA) announced the country's first national air sports policy (NASP 2022).

- It has been launched to improve the state of aero sports in India, with a vision to make India a hub for air sports in the world by 2030.
- It aims to provide a safe, affordable, accessible, and sustainable air sports ecosystem in India.

Key Highlights of the Policy

- It proposes a Four-Tier Governance Structure; it includes:
    - Air Sports Federation of India (ASFI) as the apex governing body
    - National Associations for individual air sports
    - Regional or state and union territory level units of the national air sports associations
    - District level air sports associations
- **Air Sports Federation of India**
    - The ASFI will be an autonomous body under the Ministry of Civil Aviation and will represent India at the Lausanne-headquartered Fédération Aéronaautique Internationale (FAI) and other global platforms related to air sports.
    - It will be chaired by the Secretary, Ministry of Civil Aviation.
    - It will provide governance over various aspects of air sports, including regulation, certification, competitions, awards and penalties, etc.
- **Rules and Functions of each air sports association**
    - Lay down its safety standards for equipment, infrastructure, personnel and training, and specify the disciplinary actions to be taken in case of non-compliance. Inability to do so may lead to penal action by the ASFI.
- **Coverage**
    - It will cover 13 air sports activities like aerobatics, aeromodelling, amateur-built and experimental aircraft, ballooning, drones, gliding, hang gliding, paragliding, microlighting, paramotoring, skydiving, and vintage aircraft.

Importance of the Policy:

- Besides the revenue from air sports activities, multiplier benefits in terms of growth in travel, tourism, infrastructure and local employment, especially in hilly areas of the country, are much greater.
- Creating air sports hubs across the country will bring in air sports professionals and tourists from across the world.

Zonal Councils

News: Recently, the Minister of Home Affairs chaired the 25th meeting of the Western Zonal Council at Diu.

About:

- They are statutory bodies established by an act of parliament, that is, States Re-Organization Act of 1956.
- The act divided the country into five zones- Northern, Central, Eastern, Western and Southern and provided a zonal council for each zone.
- In addition to the above mentioned Zonal Councils, a North-Eastern Council was created by a separate Act of Parliament, the North-Eastern Council Act of 1971.
- The Union Home Minister is the Chairman of each of these Councils.
- The Chief Ministers of the States included in each zone act as Vice-Chairman of the Zonal Council for that zone by rotation, each holding office for a period of one year at a time.
- Chief Minister and two other Ministers as nominated by the Governor from each of the States and two members from Union Territories included in the zone.
- Advisers are also included which include one person nominated by NITI Aayog for each of the Zonal Councils, Chief Secretaries and another officer/Development Commissioner nominated by each of the States included in the Zone.

What are functions of the council?

- Any matter of common interest in the field of economic and social planning,
- Any matter concerning border disputes, linguistic minorities or inter-State transport,
- Any matter connected with or arising out of, the reorganization of the States under the States Re-Organization Act.

What issues were discussed at the meeting?

- Improvement of banking services in rural areas.
- Monitoring of rape and sexual offences cases against women and children, implementation of Fast Track Courts for such cases.
- Verification of identity of Marine fishermen in high seas.
- Development of local contingency plan by coastal States for Mass Rescue Operation in high seas and encouragement of Make in India initiative through Preference in Public Procurement.
- Various issues related to boundary, security, infrastructure transport, and industries pertaining to western States.

Section 33(7) of the Representation of People's Act

News: Recently, the Election Commission of India asked the Union Law Ministry to consider limiting the seats from which a candidate can contest to just one.

Who can act upon such recommendations?

The Constitution allows the Parliament to make provisions in all matters relating to elections to the parliament and state legislatures. Accordingly, the parliament has enacted the following laws:

- Representation of People Act, 1950
- Representation of People Act, 1951
- Delimitation Commission Act, 1952

What is the Section 33(7) of the RPA Act, 1951?

- Section 33(7) of the Representation of People's Act permits a candidate to contest any election (Parliamentary, State Assembly, Biennial Council, or bye-elections) from up to two constituencies.
- The provision was introduced in 1996 prior to which there was no bar on the number of constituencies from which a candidate could contest.
- Section 70 bars candidates from representing two constituencies in the Lok Sabha/state.

Why candidates must be barred from contesting from more than one seat?

- One person, one vote & one candidate, one constituency is the dictum of democracy. However, as per the law, as it stands today, a person can contest the election for the same office from two constituencies simultaneously.
- When a candidate contests from two seats, it is imperative that he has to vacate one of the two seats if he wins both. This, apart from the consequent unavoidable financial burden on the public exchequer, government manpower and other resources for holding bye-election is also an injustice to the voters of the constituency which the candidate is quitting from.

What has the Election Commission recommended?

- The ECI has alternatively suggested that if existing provisions are retained then the candidate contesting from two seats should bear the cost of the bye-election to the seat that the contestant decides to vacate in the event of his/her winning both seats.
- The amount in such an event could be Rs 5 lakh for assembly election and Rs 10 lakh for parliament election.

Demolition Drives and Article 300A

News: The nation has been witnessing a frenzy of demolition drives for the past few weeks. Article 300A of the Indian Constitution categorically states 'No person shall be deprived of his property save by the authority of law'.

Concerns surrounding such Demolition Drives:

- The right to housing is a fundamental right recognized under Article 21 of the Indian Constitution.
- Article 11.1 of the International Covenant on Economic, Social and Cultural Rights (ICESCR) recognises 'the right of everyone to an adequate standard of living for himself and his family, including adequate food, clothing and housing, and to the continuous improvement of living conditions'.
- Article 17 of the International Covenant on Civil and Political Rights (ICCPR) also provides that everyone has the right to own property alone as well as in association with others and that no one shall be arbitrarily deprived of his property. Thus, arbitrary interference with an individual's property is a gross violation of the ICCPR.

Supreme Court Judgements in this context:

- In the Olga Tellis and others vs Bombay Municipal Corporation and others (1985) the Supreme Court opined that the eviction of pavement dwellers using unreasonable force, without giving them a chance to explain, is unconstitutional. It is a violation of their right to livelihood.
- In the Municipal Corporation, Ludhiana vs Inderjit Singh (2008), the apex court categorically stated that if the requirement of giving notice is provided under a municipal legislation, then this requirement must be necessarily complied with. The Apex Court of the country has made it unambiguously clear that no authority can directly proceed with demolitions, even of illegal constructions, without providing notice and an opportunity of being heard to the occupant.

Way Forward?

- As the custodian of India's constitutional order, it is high time that the judiciary acted and imposed necessary checks on the unbridled exercise of power by the executive.
- Any justification for a demolition drive, as a penal consequence to a criminal act is totally against established canons of criminal justice. The conduct of demolition drives, as a retaliatory measure, even with the avowed object to curb violence is a clear act of subversion of the principle of rule of law.

National e-Vidhan Application (NeVA) Project

News: A delegation of MLAs from Gujarat recently visited the Uttar Pradesh Legislative Assembly, to learn about the novel e-Vidhan system for paperless proceedings that has been recently adopted by the UP state assembly.

About:

- It is a Mission Mode Project (MMP) under the Digital India Programme.
- The Ministry of Parliamentary Affairs (MoPA) is the 'Nodal Ministry' for its implementation in all the 31 States/UTs with Legislatures. The funding for e-Vidhan is provided by the MoPA and technical support by the Ministry of Electronics and Information Technology (MietY).
- The funding of NeVA is through Central Sponsored Schemee. 60:40; and 90:10 for North East & hilly States and 100% for UTs.

Key Highlights of the Project:

- Paperless Assembly or e-Assembly is a concept involving electronic means to facilitate the work of Assembly.
- It enables automation of entire law making process, tracking of decisions and documents, sharing of information.
- Through the cloud technology (Meghraj), data deployed can be accessed anywhere at any time.
- Himachal Pradesh is already the first Digital Legislature of the country.

Trivia

- Nagaland became India's 1st paperless assembly. It became 1st legislative assembly where members can use NeVA app to participate in house proceedings.
- It enables automation of entire law making process, tracking decision and documents.

National e-Governance Service Delivery Assessment 2021 Report

News: The second edition of the National e-Governance Service Delivery Assessment 2021 was released recently.

About:

- Constituted in 2019 by the Department of Administrative Reforms & Public Grievances (DARPG).
- It is a biennial study that assesses States, Union Territories (UTs), and focuses on Central Ministries on the effectiveness of e-Governance service delivery.
- NeSDA 2021 covers services across seven sectors – Finance, Labour & Employment, Education, Local Governance & Utility Services, Social Welfare, Environment and Tourism sectors.

Key Highlights:

- Among the North-East and Hill States, Meghalaya and Nagaland are the leading State Portals with an overall compliance of more than 90% across all assessment parameters.
- Among Union Territories, Jammu & Kashmir ranked the highest with an overall compliance of nearly 90%.
- Among the Remaining States, Kerala, Odisha, Tamil Nadu, Punjab, Karnataka and Uttar Pradesh had a compliance of more than 85%.
- Amongst all the States and UTs, Kerala had the highest overall compliance score.

Ranking of Central Ministries:

- Among the focused Central Ministries, Home Affairs, Rural Development, Education, and Environment, Forest & Climate Change are the leading Ministry Portals with an overall compliance of more than 80% across all assessment parameters.
- The Ministry Portal of Home Affairs had the highest overall compliance score.
- The Central Public Procurement Portal, Digital Police Portal, and Bhavishya Portal are the leading Ministry Services Portals with an overall compliance of more than 85% across all assessment parameters.

Census Exercise

News: The census exercise, which was originally scheduled to take place in 2021, has been further pushed to 2023-24.

Why has it been postponed?
- Normally, before every Census, states are required to provide information on changes in the number of notified districts, villages, towns and other administrative units such as tehsils, talukas and police stations to the Registrar General of India (RGI).
- After this RGI freezes the administrative boundaries so that census tasks can begin.
- However, this time, RGI has extended the deadline for freezing administrative boundaries to December 31, 2022.
- Since the Census can only begin a few months after the administrative boundaries are frozen, the possibility of a Census in 2022 is ruled out.

More details about Census in India:
- Population Census is the total process of collecting, compiling, analysing and disseminating demographic, economic and social data pertaining, at a specific time, of all persons in a country or a well-defined part of a country.
- The first Non-Synchronous Census was conducted in India in 1872 during the reign of Governor-General Lord Mayo.
- The first Synchronous Census was taken under British rule on February 17, 1881, by C.Plowden (Census Commissioner of India).
- The decennial Census is conducted by the Office of the Registrar General and Census Commissioner, Ministry of Home Affairs.
- The population census is a Union subject under Article 246 of India Constitution. It is listed as serial number 69 of the seventh schedule of the constitution.

Census is conducted under which provisions?
- The Census is conducted under the provisions of the Census Act, 1948.
- The information collected during the population census is considered to be confidential and is not even accessible to the courts of law.
- The law specifies penalties for both public and census officials for non-compliance or violation of any provision of the Act.

Importance of Census:
- The Indian Census is the largest single source of a variety of statistical information on different characteristics of the people of India. Researchers and Demographers use census data to analyze growth and trends of population and make projections.
- The data collected through the census is used for administration, planning and policy making as well as management and evaluation of various programmes by the Government.
- Census data is also used for demarcation of constituencies and allocation of representation to Parliament, State legislative assemblies and the local bodies.
- The census data is also important for business houses and industries for strengthening and planning their business for penetration into areas, which had hitherto remained, uncovered.
- Finance Commission provides grants to the states on the basis of population figures available from the Census data.

16th Census (2021) – Postponed
- It will be the first digital Census, also with a provision for self-enumeration.
- It is for the first time that information about households headed by a person from the Transgender Community and members living in the family will be collected.
- Earlier there was a column for males and female only.

Agnipath Scheme

News: The government unveiled its new Agnipath scheme for recruiting soldiers across the three services.

About:

- Under the new scheme, around 45,000 to 50,000 soldiers (will be called 'Agniveers') will be recruited annually (for a short period, and most will leave the service in just four years. Of the total annual recruits, only 25 per cent will be allowed to continue for another 15 years under permanent commission.

Key Features of the Scheme:

- Aspirants between the ages of 17.5 years and 21 years will be eligible to apply. (Please note that amid widespread protests, the Union government has increased the upper age limit to 23 from 21 for recruitment under the scheme for the year 2022).
- The scheme is only applicable to personnel below officer ranks.
- Recruitment will be done twice a year through rallies. It will be done on 'all India, all class' recruitment to the services (from any caste, region, class or religious background). At present, recruitment is based on 'regiment system' based on region and caste bases.
- The training period will be of 6 months + deployment for three and a half years.

What are the benefits of the scheme?

The Scheme is both generous and attractive in terms of emoluments and pay-outs.

- **Disciplined Human resources**
  - Upon release from service, the Agniveers will revert to civil society as holders of special qualifying certificate and become the backbone of a confident and disciplined human resources available across the country.
- **Huge Corpus upon completion of service**
  - Apart from drawing a composite package of Rs.40,000 per month in the fourth year, they will each get Rs. 11.71 lakh through the Seva Nidhi package in which their contribution of 30% of monthly salary will be matched by an equal amount by the government.
  - This sum will also be exempt from income tax, which will help them pursue their future dreams, in addition to individual savings.
- **Social Security**
  - Life insurance cover of Rs. 48 Lakh, ex-gratia payment of Rs. 44 Lakh in case of death, and payment for the remainder of the four years of service in case of death, are huge plus points.
- **Leaner and younger armed forces**
  - For India's over 13-lakh strong armed forces, the current average age profile is 32 years. It is envisaged it will come down by about 4-5 years by implementation of this scheme.
  - The Indian army in 1978 was more youthful than at present at the level of Other Ranks (ORs), with sepoys comprising 72.6 % of total men. Today, the number of sepoys has fallen below 40%.
  - This is not desirable mix when it comes to physically strenuous deployments, especially on high-altitude areas.
- **Check on Budgetary Constraints**
  - Ballooning salary and pension bills have placed enormous stress on the availability of funds for modernization.
  - The emphasis of Agnipath in India is on ensuring a youthful and tech-savvy profile of the armed forces while reducing the overall burden on pensions and gratuities.
- **Tech-savvy and future ready soldiers**
  - Contactless warfare in the digital era means that future wars will be fought with Artificial Intelligence, autonomous systems, stand-off weapons, cyberspace and spaced based ISR playing a key-role.
  - The agniveers will inject additional skill sets into the armed forces, besides bringing down the average age by 4-5 years.
- **Learning lessons from the West**
  - The Israeli army has service of 30 months and 22 months respectively for men and women, yet it enjoys a reputation for being among the best in the world.

- The US and UK also have shorter duration contracts.
- The training for Agniveers will be comparable to the time-frame in many world-class armed forces. The argument that shorter duration service could compromise on training, morale and commitment rings hollow.

What are the Challenges?

- As clear and persistent threat looms across our Northern borders and a hostile neighbor to the West, India's military mind believe that the two-front danger is an increasingly real one. The main question about new policy is: Does it have a potential to create a better trained, more committed fighting force for India?
- All-India recruitment will require a massive organizational and cultural shift in the army. If we want to create new regimental cultures, sources of loyalty and discipline, we may need longer terms of service together rather than shorter ones.
- There is possible ramification on society as well. If the army experience is so fabulous that no civilian job after it matches up to its sense of purpose or working conditions, then we are potentially setting up a large numbers of young people to a life of frustration.
- The impact of changes such as hiring without the promise of lifelong benefits, the shortened training, and the opening out of regiments to AIAC can only be assessed in the coming years.

Way Forward:

- The most important aspect is to help Agniveers beyond their service tenure. The recent announcement of Ministry of Home Affairs (MHA) which has decided to reserve 10% vacancies for recruitment in CAPFs and Assam Rifles for Agniveers is a welcome step. More such steps need to be taken by various state governments as well to give opportunity in their State police services.
- No reform can be fool-proof and without teething troubles. But as Agnipath concerns national defence and security, the government will need to have a plan to anticipate and address the problems that lie beyond the bold step forward.

Judicial Overreach

News: Recently, a Supreme Court judge said that the apex court cannot and must not transcend its role by deciding issues requiring the involvement of elected representatives. He also said that thinking of the Supreme Court as a 'one-stop solution to resolve complicated issues of policy and society' is a reflection of the waning power of discourse and consensus-building.

What is Judicial overreach?

- It is when the judiciary starts interfering with the proper functioning of the legislative or executive organs of the government. Judicial Overreach is undesirable in a democracy as it breaches the principle of separation of powers.
- There have been several judgments of the Supreme Court wherein it has been foraying into areas which had long been forbidden to the judiciary by reason of the doctrine of 'separation of powers', which is part of the basic structure of the Constitution.

Some examples of Judicial overreach:

- The ban on the sale of alcohol along national and state highways.
- Imposition of Patriotism in National Anthem Case.
- Ban on Firecrackers.
- Order on sex workers
- The court ordering the exclusion of tourists in the core area of tiger reserves
- Supreme court banning diesel cabs in Delhi

Recent Instances of court interfering in legislative matters:

- Recently, Allahabad High Court, while allowing two criminal revisions pertaining to a dowry case, took cognizance of the misuse of Section 498A of the Indian Penal Code (IPC).
- It proposed certain safeguards and directed the State authorities of Uttar Pradesh to take the necessary steps for their implementation in a given time period.

- The directions include the constitution of a family welfare committee in each district under the District Legal Services Authority (DLSA), handing over the first information report to such a committee immediately after its registration, and no arrest to be made by the police during this 'cooling period' of two months.

Section 295A of IPC

News: The debate surrounding the comments by BJP spokespersons Nupur Sharma and Naveen Jindal have put the spotlight on the law that deals with criticism of or insult to religion.

About:

- India does not have a formal legal framework for dealing with hate speech. However, a cluster of provisions, loosely termed hate speech laws, are invoked. These are primarily laws to deal with offences against religions.
- Provisions in the Indian Penal Code (IPC), primarily Section 295A, define the contours of free speech and its limitations with respect to offences relating to religion.
- Section 295A defines and prescribes a punishment for deliberate and malicious acts, intended to outrage religious feelings of any class by insulting its religion or religious beliefs.
- Section 295A is one of the key provisions in the IPC chapter to penalise religious offences.
- The state often invokes Section 295A along with Section 153A of the Indian Penal Code, which penalises promoting enmity between different groups on grounds of religion, race, place of birth, residence, language, etc, and doing acts prejudicial to maintenance of harmony.

What is the Rangila Rasool case?

- Section 295A was brought in 1927. The amendment was a fallout of an acquittal under Section 153A of the IPC by the Lahore High Court in 1927 in Rajpaul v Emperor, popularly known as the Rangila Rasool case.
- Rangila Rasool was a tract brought out by a Hindu publisher that had made disparaging remarks about the Prophet's private life.

Registered Unrecognised Political Parties (RUPP)

News: The Election Commission ordered the deletion of 111 registered unrecognised political parties that it found to be 'non-existent' and referred three of the parties to the Department of Revenue for legal action for 'serious financial impropriety'.

- Chief Electoral Officers were directed to initiate action for enforcing due compliances by RUPPs for relevant sections 29A and 29C of the RP Act 1951.

Who are RUPP?

- Either newly registered parties or those which have not secured enough percentage of votes in the assembly or general elections to become a state party, or those which have never contested elections since being registered are considered unrecognised parties.
- Such parties don't enjoy all the benefits extended to the recognised parties.

What constitutes a recognized political party?

- A recognised political party shall either be a National party or a State party if it meets certain laid down conditions.
- To become a recognised political party either at the state or national level, a party has to secure a certain minimum percentage of polled valid votes or certain number of seats in the state legislative assembly or the Lok Sabha during the last election.
- The recognition granted by the Commission to the parties determines their right to certain privileges like allocation of the party symbols, provision of time for political broadcasts on the state-owned television and radio stations and access to electoral rolls.

Following conditions are necessary to secure status of Recognised Political Party:

National Party	State Party
Secure at least 6% of the valid vote in an Assembly or a Lok Sabha General Election in any four or more states and won at least 4 seats in a Lok Sabha General Election from any State or States.	Secure at least 6% of the valid vote & win at least 2 seats in an Assembly General Election
Win at least 2% of the total Lok Sabha seats in a Lok Sabha General Election and these seats have to be won from at least 3 states.	Secure at least 6% of the valid vote & win at least 1 seat in a Lok Sabha General Election
The party is recognized as a State Party in at least four states	Win at least 3% of the seats or at least 3 seats, whichever is more, in an Assembly General Election
	Win at least 1 out of every 25 seats from a state in a Lok Sabha General Election
	Secure at least 8% of the total valid vote in an Assembly or a Lok Sabha General Election

Central Institute of Educational Technology (CIET)

News: Central Institute of Educational Technology (CIET) wins UNESCO's King Hamad Bin Isa Al-Khalifa Prize for the year 2021.

About CIET:

- CIET is a constituent unit of National Council of Educational Research and Training (NCERT) under Department of School Education & Literacy.
- CIET has been awarded by United Nations Educational, Scientific and Cultural Organization (UNESCO) for use of ICT in Education under a comprehensive initiative called PM eVIDYA.

What is UNESCO's King Hamad Bin Isa Al-Khalifa Prize?

- Established in 2005 with the support of the Kingdom of Bahrain.
- This award recognizes innovative approaches in leveraging new technologies to expand educational and lifelong learning opportunities for all, in line with the 2030 Agenda for Sustainable Development and its Goal 4 on Education.

What are the efforts done by Ministry of Education?

Keeping in view the recommendations of NEP-2020, Ministry of Education through CIET, NCERT has been working tirelessly and meticulously in designing, developing and disseminating:

- A large number of eBooks, eContent - audios, videos, interactives, augmented reality contents, Indian Sign Language (ISL) videos, audiobooks, talking books, etc.,
- A variety of eCourses for school and teacher education,
- Organizing digital events like online quizzes primarily for students and teachers through leveraging Online/Offline, On-Air technology One Class-One Channel, DIKSHA, ePathshala, NISHTHA, school MOOCs on SWAYAM, etc.
- To further the objectives of NEP & Samagra Shiksha and address the aforementioned pillars, PM eVidya was launched in May 2020.
- The CIET was proactive in taking learning to the doorsteps of the children through the extensive, resilient, ethical, and coherent use of 12 PM eVidya DTH TV channels and nearly 397 radio stations, including community radio stations under PM eVidya program.
- These efforts were especially helpful in pandemic situations, when schools were closed, in reaching out to students.
- These efforts helped to a certain extent to bridge the learning gap between rural and urban students.

Governor's Power and the Floor Test

News: In Maharashtra's political crisis, the Governor's decision to call for the floor test has been in the spotlight once again.

What is a Floor test?

- It is a term used for the test of the majority. If there are doubts against the Chief Minister (CM) of a State, he/she can be asked to prove the majority in the House.
- In case of a coalition government, the CM may be asked to move a vote of confidence and win a majority.
- In the absence of a clear majority, when there is more than one individual staking claim to form the government, the Governor may call for a special session to see who has the majority to form the government.

Constitutional Provisions related to Governor's Role in calling an Assembly Session:

- Article 174 says that the Governor shall from time to time summon the House or each House of the Legislature of the State to meet at such time and place as he thinks fit. The provision also puts on the Governor the responsibility of ensuring that the House is summoned at least once every six months.
- Article 174(2)(b) of the Constitution gives powers to the Governor to dissolve the Assembly on the aid and advice of the cabinet. However, the Governor can apply his mind when the advice comes from a Chief Minister whose majority could be in doubt.
- According to Article 175(2), the Governor can summon the House and call for a floor test to prove whether the government has the numbers.
- However, the Governor can exercise the above only as per Article 163 of the Constitution which says that the Governor acts on the aid and advice of the Council of Ministers headed by the Chief Minister.
- When the House is in session, it is the Speaker who can call for a floor test. But when the Assembly is not in session, the Governor's residuary powers under Article 163 allow him to call for a floor test.

Supreme Court's view on the Governor's power in calling the Floor Test:

- **Nabam Rebia and Bamang Felix vs Deputy Speaker case (Arunachal Pradesh, 2016)**
    - The power to summon the House is not solely vested in the Governor and should be exercised with aid and advice of Council of Ministers and not at his own.
    - The Court highlighted the facts that the Governor is not an elected authority and is a mere nominee of the President, such a nominee cannot have an overriding authority over the representatives of the people, who constitute the House or Houses of the State Legislature.
- **Shivraj Singh Chouhan and Ors versus Speaker, Madhya Pradesh Legislative Assembly and Ors (2020)**
    - The SC upheld the powers of the Speaker to call for a floor test if there is a prima facie view that the government has lost its majority.
    - The Governor is not denuded of the power to order a floor test where on the basis of the material available to the Governor it becomes evident that the issue as to whether the government commands the confidence of the House requires to be assessed on the basis of a floor test.

Juvenile Justice Amendment Act

News: Child rights panels of three states (Bengal, Rajasthan and Punjab) joined the Delhi Commission for the Protection of Child Rights (DCPCR), appealing to the Union government to roll back an amendment in the Juvenile Justice Act that makes certain offences against children non-cognizable.

What are the provisions of JJ Amendment Act,2021?

- **Non-Cognizable Offence**
    - According to the amendment, the crimes under the special law, with punishment between three and seven years, have been reclassified as non-cognizable.

- **Increased Role of District Magistrate**
  - DMs and ADMs will monitor the functioning of various agencies under the JJ Act in every district-including the Child Welfare Committees, the Juvenile Justice Boards, and the District Child Protection Units and the Special Juvenile Protection Units.
  - The DM will also carry out background checks of CWC members which can also include keeping a check on possible criminal backgrounds.
  - The CWCs are also to report regularly to the DMs on their activities in the districts.
  - Instead of the court, the District Magistrate (including Additional District Magistrate) will now issue adoption orders.
- Serious offences will also include offences for which maximum punishment is imprisonment of more than seven years, and minimum punishment is not prescribed or is less than seven years.

What are concerns with the law?
- **Limits Reporting** - With this amendment, if anyone goes to the police station to register a complaint, the police will refer them to a magistrate for permission.
- **Discretion of Magistrate** - According to the Code of Criminal Procedure, once the crimes are rendered non-cognizable, the police will be able to register an FIR only on the directions of a magistrate and a complainant will first have to approach the magistrate concerned to start the process.
- **Loss of Wages** – Most of the children at Child Care Institutions (CCI) have parents who are daily wage labourers. They are unaware how to or not inclined to report the crimes to the police. They do not want to engage with the legal process because that would force them to take time off from work, resulting in loss of wages.
- Reporting instances of abuse and cruelty by staffers or persons in charge at child care institutions (CCI) is not easy.

What is the difference between cognizable and non-cognizable offence?

Cognizable Offence	Non-Cognizable Offence
Here, the police officer can arrest the convict without an arrest warrant and may start investigation without the permission of the court.	In case of Non-cognizable offence, the police cannot arrest the accused without a warrant as well as cannot start an investigation.
The offences here are serious in nature. For example, murder, rape, kidnapping, dowry death.	The crimes of forgery, cheating, defamation, public nuisance fall under this category.
A police officer can investigate without permission of magistrate.	Under this, a criminal complaint is lodged with the magistrate who is supposed to order the concerned police station to initiate an investigation.

Social Justice

Draft Anti-Trafficking Bill

News: Activists from different part of the country are planning to travel to the national capital and press for the passage of the Trafficking in Persons (Prevention, Care and Rehabilitation) Bill, 2021.

Key Highlights:

- The bill proposes stringent punishments for offenders, including hefty fines and seizing of their properties.
- The Bill also extends beyond the protection of women and children as victims to now include transgenders as well as any person who may be a victim of trafficking.
- The draft also does away with the provision that a victim necessarily needs to be transported from one place to another to be defined as a victim.
- Exploitation has been defined to include, at a minimum, the exploitation of the prostitution of others or other forms of sexual exploitation including pornography, any act of physical exploitation, forced labour or services, slavery or practices similar to slavery, servitude or forced removal of organs etc.

Whom does the law apply to?

- All citizens inside as well as outside India.
- Persons on any ship or aircraft registered in India wherever it may be or carrying Indian citizens wherever they may be.
- A foreign national or a stateless person who has his or her residence in India at the time of commission of offence under this Act.
- Every offence of trafficking in persons with cross-border implications.
- Defence personnel and government servants, doctors and paramedical staff or anyone in a position of authority.

Provisions relating to Trafficking in India:

- Trafficking in Human Beings or Persons is prohibited under the Constitution of India under Article 23(1).
- The Immoral Traffic (Prevention) Act, 1956 (ITPA) is the premier legislation for prevention of trafficking for commercial sexual exploitation.
- Criminal Law (amendment) Act 2013 has come into force wherein Section 370 of the Indian Penal Code has been substituted with Section 370 and 370A IPC which provide for comprehensive measures to counter the menace of human trafficking.

OBC Reservation

News: People from five OBC communities continued to block the Jaipur-Agra Highway at Aroda village in Rajasthan Bharatpur district, demanding a separate 12% quota in jobs and higher education institutions.

More About OBC Reservation:

- The Kalelkar Commission, set up in 1953, was the first to identify backward classes other than the Scheduled Castes (SCs) and Scheduled Tribes (STs) at the national level.
- The Mandal Commission Report, 1980 estimated the OBC population at 52% and classified 1,257 communities as backward.
- It recommended increasing the existing quotas, which were only for SC/ST, from 22.5% to 49.5% to include the OBCs.
- The central government reserved 27% of seats in union civil posts and services for OBCs [Article 16(4)].
- The quotas were subsequently enforced in central government educational institutions [Article 15 (4)].
- In 2008, the Supreme Court directed the central government to exclude the creamy layer (advanced sections) among the OBC.

- The 102nd Constitution Amendment Act, 2018 provided constitutional status to the National Commission for Backward Classes (NCBC), which was previously a statutory body under the Ministry of Social Justice and Empowerment. NCBC has the authority to examine complaints and welfare measures regarding socially and educationally backward classes.

What is Article 340 of the Indian Constitution?

- The President may by order appoint a Commission consisting of such persons as he thinks fit to investigate the conditions of socially and educationally backward classes within the territory of India and the difficulties under which they labour and to make recommendations as to the steps that should be taken by the Union or any State to remove such difficulties.
- A Commission so appointed shall investigate the matters referred to them and present to the President a report setting out the facts as found by them and making such recommendations as they think proper.
- The President shall cause a copy of the report so presented together with a memorandum explaining the action taken thereon to be laid before each House of Parliament.

World Mental Health Report

News: Recently the World Health Organization (WHO) released the World Mental Health Report.

About:

- According to the World Health Organization (WHO), mental health is a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community.'

Key Highlights of the Report:

- WHO has asked to emphasize more on mental health issues especially as the pandemic has contributed to the worsening of mental health.
- Almost a billion people, 14% of whom were adolescents, were living with some form of mental health issues in 2019. For some, this resulted in dying by suicide which accounted for one in 100 deaths, with more than half of them happening before the age of 50.
- Depression and anxiety spiked 25 % in the first year of the pandemic (2020).
- All 194 WHO member states have adopted the Comprehensive Mental Health Action Plan 2013–2030 but progress has been slow.
- Access to mental health services remains poor. Globally, 71% of psychosis patients don't receive treatment. High-income countries provide treatment to 70% psychosis patients and low-income countries manage the same for just 12%.
- WHO suggests focus on three key 'paths to transformation' to fasten the progress on the comprehensive mental health action plan. It includes investment in mental health, reshaping environments such as homes, communities, schools, workplaces and healthcare services that influence mental health.

Challenges:

- An estimated 150 million people across India are in need of mental health care interventions, according to India's latest National Mental Health Survey 2015-16.
- Lack of financial resource allocation of just over 1 percent of GDP on healthcare has created shortcomings in public access to affordable mental health.
- Poor awareness about the symptoms of mental illness, social stigma and abandonment of mentally ill, especially old and destitute, leads to social isolation and reluctance on part of family members to seek treatment for the patient.
- Low proportion of the mental health workforce in India (per 100,000 population) include psychiatrists (0.3), nurses (0.12), psychologists (0.07) and social workers (0.07).
- There is need for proper rehabilitation of the mentally ill person post his/her treatment which at the moment is not present.

Government initiatives:

- The National Mental Healthcare Act 2017 guarantees every affected person access to mental healthcare and treatment from services run or funded by the government.

- In 2020, the Ministry of Social Justice and Empowerment launched a 24/7 toll-free helpline 'Kiran' to provide support to people facing anxiety, stress, depression, suicidal thoughts and other mental health concerns.
- The initiative 'Manodarpan' was launched under Atmanirbhar Bharat Abhiyan. It is aimed to provide psychosocial support to students, family members and teachers for their mental well-being during the time of Covid 19.
- SC has held healthcare to be a fundamental right under Article 21 of the Constitution.

Way Forward:

- India needs a constant stream of funds for educating and creating awareness about mental health and chronic issues around it. The need of the hour is to provoke masses to learn about mental health through campaigns like Swachh Mansikta Abhiyan.

Global Trends Report 2021

News: The 2022 annual Global Trends Report was published by United Nations High Commissioner for Refugees (UNHCR). June 20 is designated as World Refugee Day by the UN. The theme for World Refugee Day 2022 is whoever, whatever, whenever. Everyone has got a right to seek safety.

About Global Trends Report:

- It presents key statistical trends and the latest numbers of refugees, asylum seekers, internally displaced and stateless persons worldwide as well as numbers of people who have returned to their countries or areas of origin.
- The report is published once a year and reflects on the previous year.
- The figures are based on data reported by governments, non-governmental organizations and UNHCR.

Major Findings of the Report:

- On Earth, 1 in every 78 people is now displaced.
- There were 23.7 million new internal displacements worldwide, due to disasters. It is a decrease of 23 percent as compared to the last year.
- The largest displacement occurred in China in 2021 (6 million), the Philippines (5.7 million), and India (4.9 million).
- By the end of May 2022, more than 100 million people were forcibly displaced worldwide. The reasons cited are violence, war in Ukraine, food insecurity, human rights abuses, climate crisis, and other emergencies from Africa to Afghanistan.
- In India's case, the report points out that around five million people were internally displaced. The reason cited is due to disasters and climate change in 2021.
- Low and middle-income countries hosted 83% of the world's refugees. Turkey hosted nearly 3.8 million refugees, the largest population worldwide.

What is Internal Displacement?

- Internal displacement describes the situation of people who have been forced to leave their homes but have not left their country.
- Millions of people are uprooted from their homes or places of habitual residence each year in the context of conflict, violence, development projects, disasters and climate change and remain displaced within their countries' borders.
- The Internally Displaced Persons (IDPs) can live under threat of physical attack, sexual- or gender-based violence, and run the risk of being separated from family members.
- They are frequently deprived of adequate shelter, food and health services, and often lose their property, land or their access to livelihoods.

One Nation One Ration Card

News: Assam has become the 36th State/UT to implement One Nation One Ration Card (ONORC). With this, the ONORC programme has been successfully implemented in all states and Union Territories, making food security portable throughout the country.

About:

- The ONORC scheme is being implemented under National Food Security Act (NFSA).
- This system allows all NFSA beneficiaries, particularly migrant beneficiaries, to claim either full or part foodgrains from any Fair Price Shop (FPS) in the country through existing ration card with biometric/Aadhaar authentication in a seamless manner.
- The system also allows their family members back home, if any, to claim the balance foodgrains on same the ration card.

Benefits of ONORC:

- **Right to Food**
    - Previously, ration cardholders can avail their entitlement of subsidised food grains under the National Food Security Act, only from the designated Fair price shop (FPS) within the concerned state. However, if a beneficiary were to shift to another state, he/she would need to apply for a new ration card in the second state.
    - Thus, ONORC envisages removing the geographical hindrance to social justice and enabling the right to food.
- **Check on Leakages**
    - The ONORC can reduce leakages, because the fundamental prerequisite of this scheme is deduplication. This will ensure that the same person does not figure as a beneficiary in two different locations of the country.
    - As the scheme is linked with Aadhaar and biometrics, this removes most possibilities of corruption.
- **Supports Migrant Labourers**
    - Nearly, 37% of the population is that of migrant labourers. The scheme is therefore important for anyone who is going to move from one place to the other.

Challenges:

- The digitisation of this PDS process, through Aadhaar-linked ration cards and smart cards, has been pushed in an effort to reduce leakages. However, there has been a rise of exclusion errors in post-Aadhaar seeding.
- An FPS receives the monthly quota of products strictly in accordance with the number of people assigned to it. The ONORC, when fully operational, would disrupt this practice, as some FPSs may have to cater to more numbers of cards even as others cater to less, owing to migration of people.
- Not only PDS, most of the anti-poverty, rural employment, welfare and food security schemes were historically based on domicile-based access and restricted people to access government social security, welfare and food entitlements at their place of origin.

How has the scheme fared so far?

- This is one-of-its-kind Citizen Centric initiative in the country, which is swiftly implemented in a short-span of time covering about 80 Crore beneficiaries, after being initiated in August 2019.
- Since 2019, about 71 crore portable transactions have taken place delivering foodgrains equivalent to about Rs 40,000 crore in food subsidy through portability.
- At present, a monthly average of about 3 crore portable transactions are being recorded, delivering the subsidised NFSA and free PMGKAY (Pradhan Mantri Garib Kalyan Anna Yojana) foodgrains with anywhere flexibility to the beneficiaries.

Mandatory Health Insurance for Surrogate Mothers

News: The government has issued fresh surrogacy rules, making it mandatory for couples who wish to become parents through surrogacy to buy health insurance plans for surrogate mothers for a period of 36 months.

Provisions:

- The government has also ensured that the number of attempts of any surrogacy procedure on the surrogate mother shall not be more than three times.
- A surrogate mother may be allowed for abortion during the process of surrogacy in case of any complication as advised by the doctors.
- Every private surrogacy clinic has to file an application for registration with a fee of ₹2 lakh which is non-refundable. However, facilities under government-run institutes are exempt from such fees.
- Surrogacy clinics shall have at least one gynaecologist, one anaesthetist, one embryologist and one counsellor.
- The couple should be married for more than five years.
- Under the Surrogacy Rules 2022, a surrogate mother has to give her consent through an agreement for giving up all her rights over the child and shall hand over the child/children as soon as she is permitted to do so by the hospital.

However, some experts have highlighted that health insurance coverage for 36 months which includes the postpartum expense for surrogate mother is a long period as it will unnecessarily burden the intending couple.

Please note, you may refer to the following link to read in depth about Surrogacy (regulation) Bill, 2019 and Assisted Reproductive Technology (Regulation) Bill, 2021- https://prsindia.org/billtrack/prs-products/issues-for-consideration

India State Support Programme for Road Safety

News: The World Bank has approved a USD 250 million loan for India State Support Program for Road Safety for seven States under which a single accident reporting number will be set up to better manage post-crash events.

Key Highlights:

- The project will establish a national harmonised crash database system in order to analyse accidents and use that to construct better and safer roads.
- It will be implemented in Andhra Pradesh, Gujarat, Odisha, Tamil Nadu, Telangana, Uttar Pradesh and West Bengal.
- It aims to fund network expansion of basic and advanced life support ambulances and training of first responder caregivers to road crash victims on the spot.
- The project will also provide incentives to the States to leverage private funding through Public Private Partnership (PPP) concessions and pilot initiatives.
- Women face the indirect brunt of road accidents. Recognizing this challenge, the project has a special focus on gender and will promote women's representation in management roles in the road safety sector. The project will also provide employment opportunities for women especially, in post-crash care command and control centers.

What are statistics concerning Road accidents in India?

- Road crashes cost the Indian economy between 5% to 7% of GDP a year.
- Official government data show that each year road accidents in India kill about 1,50,000 people and injure another 4,50,000. More than half of the victims are pedestrians, cyclists or motorcyclists.
- Poor households that account for over 70% of crash victims bear a higher proportion of the socio-economic burden of road crashes due to loss of income, high medical expenses and limited access to social safety nets.

What are the initiatives taken for Road Safety?
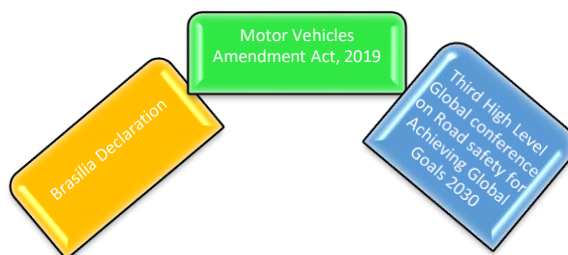
International Relations

Israel-UAE Free Trade Deal

News: Recently, Israel signed a free trade deal with the United Arab Emirates, its first with an Arab country, building on their US-brokered normalization of relations in 2020.

Significance of FTA:

- **It is a step forward on the deal brokered by US** – The Abraham Accords, normalized relations between Israel and four Muslim countries – The UAE, Bahrain, Morocco and Sudan.
- **Access to Markets and Lower Tariffs** - Businesses in both countries will benefit from faster access to markets and lower tariffs as these nations work together to increase trade, create jobs, promote new skills and deepen cooperation. The deal abolishes customs duties on 96% of the products exchanged between the two sides. The agreement also relates to regulatory and standardisation issues, customs, collaboration, government procurement, e-commerce and intellectual property rights.
- **Economic Potential** - Israel's relationship with the UAE has great economic potential due to the geographic and cultural proximity between the peoples, as well as the UAE's unique characteristics. The UAE is the second largest economy in the Arab world (after Saudi Arabia), with significant weight placed on technology products and advanced solutions, where Israel holds a relative advantage.
- **Improve Trade** - This deal will push the value of non-oil bilateral trade between Israel and the UAE beyond $10 billion. UAE-Israel trade will exceed $2 billion in 2022, rising to around $5 billion in five years, bolstered by collaboration in renewables, consumer goods, tourism and the life sciences sectors.

How does it help India?

- India recently has signed the Comprehensive Economic Partnership Agreement (CEPA) with the UAE. It has the potential for extensive trilateral cooperation and business partnership.
- It has also further created opportunities for collaborations in different fields with the US. These were made possible by the Abraham Accords, which have been a significant turning point in promoting peace and prosperity for all.
- Israel, India, the UAE, and the US are also part of a new grouping, West Asian Quad which was established as a forum for economic cooperation. They are pursuing a constructive agenda focused on the economy, especially infrastructure projects.

Way Forward

- Traditionally, the Gulf Countries have maintained distance with Israel owing to their infamous historic past. This trade agreement is a shift from the past which brings a new paradigm for the West Asian region, and represents the importance of building significant partnerships.
- It not only offers significant diplomatic ties in the near future but also helps in overcoming the long term conflicts in the Middle-east region between Israel and many countries of West Asia.

India-Taliban hold talks

News: For the first time since the Taliban takeover, India has sent an official delegation to Afghanistan, led by J.P. Singh, joint secretary at MEA.

Point of discussion:

- Resumption of stalled infrastructure projects, activation of diplomatic ties, and restarting the issue of visas for Afghan students and patients.

India's stance on Afghanistan post-Taliban takeover

- Under India's presidency, UNSC adopted resolution 2593. It stated that the territory of Afghanistan is not to be used to threaten any country or shelter terrorists.

- Participated in the UN High-Level Meeting on the Humanitarian Situation in Afghanistan held in September. In this meeting, India called for normalisation of regular commercial operations of Kabul airport which could help the flow of relief material to Afghans.
- India hosted the Delhi Regional Security Dialogue on Afghanistan in November 2021.

Why stability is desired in Afghanistan?

- Can have spill over to Neighbouring central Asian countries like Tajikistan, Uzbekistan etc
- Taliban resurgence will revive extremism in the region and the region can become a safe sanctuary for Let,ISIS etc.
- Civil war in Afghanistan will lead to a refugee crisis in Central Asia and beyond.
- Afghanistan's stability will help the Central Asian countries with the shortest access to the seaports of the Indian ocean.
- Afghanistan has been an important link in the regional trade, cultural, playing the role of a connecting bridge for Central and the rest of the world.

Why is India now engaging with Taliban?

- The Taliban holds a significant presence in Afghanistan. We cannot afford to ignore them anymore.
- India's investment in Afghanistan is worth around $3 Billion which makes it imperative to safeguard our investments and hence opening up communication lines with the Taliban.
- Taliban's constant engagement with Pakistan will be detrimental to peace in the region. To keep Pakistan at bay, we must engage with Taliban.
- If India does not engage now Russia, Iran, Pakistan and China will emerge as the shapers of Afghanistan's political and geopolitical destiny, which for sure will be detrimental to Indian interests.

Way Forward:

- There is a collective need to act for the safety of Afghan civilians by checking violence by Taliban
- Afghanistan should be given enough space in Central Asian architectures like SCO (Shanghai cooperation organisation)
- The USA, Iran, China, and Russia should actively involve India to maintain stability in Afghanistan.
- Unified action for the refugee crisis if it arises.
- Indian engagement with Taliban to maintain peace with immediate neighbors.

China and Pacific Island Countries

News: The Foreign Minister of China is currently on a visit to ten Pacific Island Countries (PICs) and has co-hosted with Fiji the Second China-Pacific Island Countries Foreign Ministers Meeting. However, China's effort to push through a comprehensive framework deal failed to gain consensus among the PICs at the meeting.

About PICs:

- The Pacific Island Countries are a cluster of 14 states which are located largely in the tropical zone of the Pacific Ocean between Asia, Australia and the Americas.
- They include Cook Islands, Fiji, Kiribati, Republic of Marshall Islands, Federated States of Micronesia (FSM), Nauru, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu.

What is the significance of the PICs?

- **Economic Potential**
    - Large EEZs have a great deal of economic potential since they can be used to exploit the wealth of fisheries, energy, minerals, and other marine resources present there. Hence, they prefer to be identified as Big Ocean States, rather than Small Island States.
    - In fact, Kiribati and FSM, both PICs, have EEZs larger than that of India.
- **Largest Exclusive Economic Zones (EEZs)**
    - The islands are divided on the basis of physical and human geography into three distinct parts — Micronesia, Melanesia and Polynesia.
    - Despite their small land area, the islands are spread out over a wide swath of the Pacific Ocean.

- As a result, though they are some of the smallest and least populated states, they have some of the largest Exclusive Economic Zones (EEZs) in the world.
- **Nuclear Weapon Sites**
  - Some of the major nuclear weapon test sites of the U.S., the U.K. and France were located here due to the remoteness of these islands from the Soviet Union and major population centres of the world.
- **Vote Bank**
  - The 14 PICs, bound together by shared economic and security concerns, account for as many votes in the United Nations, and act as a potential vote bank for major powers to mobilise international opinion.

India-PICs Relation

- India's interaction with the PICs is still largely driven by the presence of sizeable Indian Diaspora in the region. Nearly 40% of Fiji's population is of Indian origin and about 3000 Indians living in Papua New Guinea at present.
- In terms of institutional engagements, India participates in the Pacific Island Forum (PIF) as one of the key dialogue partners of the Forum.
- The most important development in facilitating India's interaction with the PICs in recent years has been the formation of an action-oriented Forum for India and Pacific Islands Cooperation (FIPIC). FIPIC, a multinational grouping, was launched in 2014.

In what areas can co-operation be enhanced?

- **Disaster Management**
  - Most of the Pacific Island countries are prone to a variety of natural disasters, with widespread social, economic and environmental consequences.
  - India can assist in building capacities of Disaster Risk Resilience. In September 2017, India launched Climate Early Warning Systems in seven PICs.
- **Climate Change and Sustainable Development**
  - The location of these island countries makes them vulnerable to the adverse effects of climate changes. Therefore, climate change and sustainable development are crucial areas of concern where a closer partnership can be developed for effective and concrete solutions.
- **Blue Economy**
  - The PICs can be attractive sources of natural resources like Liquified natural gas (LNG) and hydrocarbons to fuel India's growing economy. India can engage with these countries particularly, to help build on the concept of our own 'Blue Economy'

Way Forward

- While geographically small yet PICs have considerable economic, strategic and political significance in international affairs. India's approach towards the PICs emphasizes on a transparent, need-based approach and inclusive partnership based on shared values and a shared future.

Note – From Prelims perspective, focus on the location of these Island nations, which island nation is independent, whether it is overseas territory of any other nation. Questions can be expected from this region.

Indian VP's visit to Senegal

News: Recently, the Indian Vice President visited Senegal and three MoUs were signed in subjects ranging from cultural exchange, cooperation in youth matters and visa free regime.

Key Highlights:

- **Visa-Free Regime**
    - The first MoU pertains to visa free regime for diplomatic and official passport holders which would facilitate seamless travel of officials and diplomats.
- **Bilateral Cooperation in Youth matters**
    - As both nations have relatively younger population, a MoU in such matters is likely to increase sharing of information, knowledge and good practices.
- **Diversification of Trade Basket**
    - Indo-Senegalese trade saw a 37% increase to USD 1.5 billion during last one year despite Covid-19 pandemic. India called for diversifying trade basket, particularly in the sectors of Agriculture, Oil & Gas, Health, Railways, Mining, Defence, green energy etc.
    - In view of the large number of phosphates imported by India from Senegal, Indian companies, especially those producing heavy earth moving equipment, can offer their expertise in this area.
- **E-Vidya Bharati and E-Aarogya Bharati Initiative**
    - Recognizing that many African students come to India for higher studies, India called for enhanced cooperation with Senegal in implementing the E-Vidya Bharati and E-Aarogya Bharati (E-VBAB) initiative (tele-education and tele-medicine) for the larger benefit of Senegalese students.
- **UNSC membership**
    - Appreciating Senegal's support for India's permanent UNSC membership, India reiterated its unwavering support to the Common African Position, enshrined in the Ezulwini Consensus and the Sirte Declaration and underscored the need to rectify the historical injustice done to the African continent.
    - The Ezulwini Consensus (2005) is a position on international relations and reform of the United Nations, agreed by the African Union.

Trivia – Senegal recently won its First African Cup of Nations Title. It is a football tournament wherein African Nations participate and compete against each other.

Australia India Water Security Initiative (AIWASI)

News: The Union Cabinet has approved a MoU (Memorandum of Understanding) between India and Australia on Technical Cooperation for Australia –India water Security initiative (AIWASI).

About:

- AIWASI is a project Under South Asia Water Security Initiative (SAWASI) of Department of Foreign Affairs and Trade (DFAT), Australia.
- It aims to work towards the Water Sensitive City vision which is based on holistic management of the integrated water cycle.
- AIWASI will strengthen India's water governance and undertake investments that provide - urban water services, support to disadvantaged communities to access reliable, safe water and sanitation services.

What is Water Security and Challenges associated with the same in India?

- The definition of water security as proposed UN Water means the capacity of a population to safeguard sustainable access to adequate quantities of acceptable quality water for sustaining livelihoods, human well-being, and socio-economic development, for ensuring protection against water-borne pollution and water related disasters, and for preserving ecosystems in a climate of peace and political stability.

Challenges:

According to the Sustainable Development Goal Report (2019),

- 1 in 4 health care facilities lacks basic water services
- 3 in 10 people lack access to safely managed drinking water services.
- 6 in 10 people lack access to safely managed sanitation facilities.
- At least 892 million people continue to practice open defecation.
- Mostly, Women and girls are responsible for water collection in 80% of households without access to water on the premises.
- If the current trends of over-exploitation continue, India is set to become a water-scarce country in the not-too-distant future.
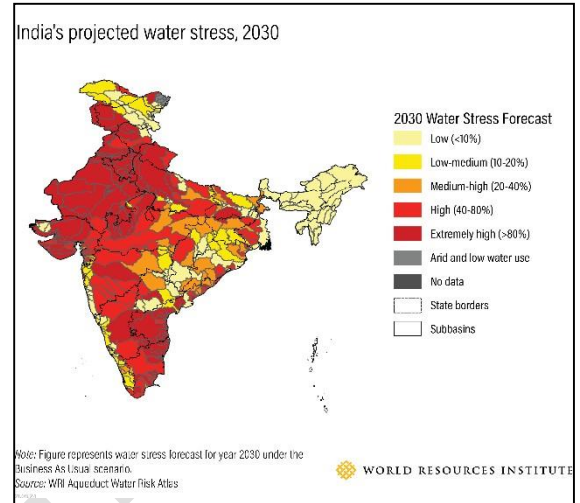
IAEA's resolution criticizing Iran

News: The International Atomic Energy Agency Board of Governors has passed a resolution calling on Iran to fully cooperate with the UN inspectors' investigation into three undeclared sites.

- The resolution was submitted by the UK, France, Germany and the US to the IAEA and was backed by 30 countries.
- Only Russia and China opposed the move. Iran condemned the resolution.

IAEA and its Functions:

- Set up as the world's 'Atoms for Peace' organization in 1957 within the United Nations family.
- It reports to both the United Nations General Assembly and Security Council.
- Its headquarters is in Vienna, Austria.
- It works with its Member States and multiple partners worldwide to promote the safe, secure and peaceful use of nuclear technologies.
- Seeks to promote the peaceful use of nuclear energy, and to inhibit its use for any military purpose, including nuclear weapons.

What are the various programs on which IAEA work on?

- Program of Action for Cancer Therapy (PACT).
- Human Health Program.
- Water Availability Enhancement Project.
- International Project on Innovative Nuclear Reactors and Fuel Cycles, 2000.

From Prelims perspective do read about the JCPOA and its signatories. As Iran is in news have a thorough knowledge about countries which share border with Iran and India's relation with the Iran.

India-Vietnam mark 50 years of Diplomatic Relations

News: Recently, Indian Defence Minister visited Vietnam, where he signed some Defence Agreements, which will significantly enhance the scope and scale of existing defence cooperation.

Highlights of the visit:

- **India-Vietnam Defence Partnership towards 2030**

- Both the Defence Ministers signed the 'Joint Vision Statement on India-Vietnam Defence Partnership towards 2030' to bolster bilateral defence cooperation.
- **Mutual Logistics Support**
  - A MOU was signed was signed on mutual logistics support. It is a major step towards simplifying procedures for mutually beneficial logistic support and is the first such major agreement which Vietnam has signed with any country.
- **Defence Line of Credit**
  - The two ministers agreed on the finalisation of the USD 500 million Defence Line of Credit extended to Vietnam with implementation of the projects under it adding substantially to Vietnam's defence capabilities and furthering the government's vision of 'Make in India, Make for the World.'
- **Simulators and Monetary Grant**
  - India will gift two simulators and a monetary grant towards setting up of Language and IT (Information Technology) Lab at the Air Force Officers Training School for capacity building of the Vietnamese Armed Forces.

India-Vietnam relations and areas of co-operation:
- **Historical Background**
  - India had established the Consul General's office in Hanoi as early as 1956.
  - India had stood by Vietnam in opposing US intervention in that country at the cost of embittering Indo-US relations.
- **Strategic Importance**
  - India finds Vietnam well placed in its vision of India's Indo-Pacific Oceans Initiative (IPOI) and the ASEAN's outlook on Indo-Pacific to achieve shared security, prosperity and growth for all in the region.
  - The China factor also weighs heavily in the respective strategic calculus of India and Vietnam. China aggressively continues to encroach in the territories of the two countries. Hence, it is natural for both the countries to come closer with a view to restrain China from its aggressive actions.
- **Economic Co-operation**
  - India is investing in development and capacity assistance for Vietnam through quick impact projects (QIP), proposals in the area of water resource management in Vietnam's Mekong Delta region, Sustainable Development Goals (SDGs), and digital connectivity.
  - India understands that Vietnam is a key regional player in the ASEAN region as it not only possesses political stability but also has good economic growth prospects.
- **Defence Cooperation**
  - While Vietnam is interested in modernising its armed forces, India is interested in developing defence capabilities of its South-East Asian partners sufficiently to maintain peace in the strategic region.
  - Vietnam is interested in India's Akash surface-to-air systems and Dhruv advanced light helicopters and Brahmos missiles.

Way Forward:
- In 2016 it was the first time in 15 years, an Indian Prime Minister visited Vietnam signaling India is no longer hesitant to expand its presence in China's periphery.
- India's foreign policy envisages India to play an anchor for peace, prosperity and stability in Asia and Africa, deepening ties with Vietnam will only strengthen this narrative.

West Seti Power Project

News: India will be taking over West Seti Hydropower Project nearly four years after China withdrew from it, ending a six-year engagement between 2012 and 2018.

About:
- It is a proposed 750-megawatt Hydropower Project, which is to be built on the Seti river in far-western Nepal, which has

remained on the drawing board for the last six decades. This storage or reservoir will fill up during the monsoon season and the water will be drawn to generate power during peak hours each day in the dry season.

- Its success is expected to restore India's image in Nepal and give it weightage in future considerations for hydropower projects, when competition is bound to be tough. West Seti, therefore, has the potential to be a defining model for Nepal India's power relations in future.

How have India-Nepal power relations worked over the years?

- Nepal is rich in power sources with around 6,000 rivers and an estimated potential for 83,000 MW.
- Mahakali treaty was signed back in 1996, to produce 6,480 MW, but India has still not been able to come out with the Detailed project Report.
- The Upper Karnali project, for which the multinational GMR signed the contract, has not made any headway for years.
- India's success in executing the 900-MW Arun Three project in eastern Nepal's Sankhuwa Sabha, and whose foundation was laid in 2018 and which is set for completion by 2023 has helped build faith in India recently.
- The PM in his visit in 2014 had stressed on the need to complete the projects in a time-bound manner.
- Nepal has a massive power shortfall as it generates only around 900 MW against an installed capacity of nearly 2,000 MW. Although it is currently selling 364 MW power to India, it has over the years been importing from India.

Way forward:

- Until India agrees to value Nepal's water and the existing focus on power is not reviewed, mutual distrust will continue to eclipse the potential for progress of both sides in the long term.
- Once the projects are made multi-purpose with flood control, navigation, fisheries, irrigation contributing to agricultural growth etc, giving due value to water the cost of power will be much lower compared to existing rates, and people on both sides will have multiple benefits.

14th BRICS summit

News: Recently, Prime Minister of India attended the 14th BRICS summit which was virtually hosted by China.

- Theme of the 14th BRICS Summit was **'Foster High-quality BRICS Partnership, Usher in a New Era for Global Development.'**
- BRICS Plus virtual conference was also held as part of the main meeting with ministers from countries, including the UAE, Saudi Arabia, Egypt, Kazakhstan, Indonesia, Argentina, Nigeria, Senegal, and Thailand.

What is BRICS?

- BRICS is an acronym for the grouping of the world's leading emerging economies, namely Brazil, Russia, India, China, and South Africa.
- In 2001, the British Economist Jim O'Neill coined the term BRIC to describe the four emerging economies of Brazil, Ratsia, India, and China.
- The grouping was formalised during the first meeting of BRIC Foreign Ministers' in 2006. South Africa was invited to join BRIC in December 2010, after which the group adopted the acronym BRICS.

What initiatives are taken by BRICS so far?

Initiatives
- Customs Agreement
- New Development Bank
- Contingent Reserve Agreement
- BRICS Payment System
- Launch of Remote Sensing Satellites

What are the Top 10 Highlights of the 14th BRICS Summit?

Partners in Blue Pacific

News: Recently, US and its allies- Australia, New Zealand, Japan and the United Kingdom have launched a new initiative called 'Partners in the Blue Pacific' for 'effective and efficient cooperation' with the region's small island nations.

About:

- The PBP is a five-nation 'informal mechanism' to support Pacific islands and to boost diplomatic, economic ties in the region.
- It speaks of enhancing 'prosperity, resilience, and security' in the Pacific through closer cooperation.
- It means that through the PBP, these countries together and individually will direct more resources towards the Pacific Island Countries to counter China's aggressive outreach.
- The initiative members will 'elevate Pacific regionalism', and forge stronger ties with the Pacific Islands Forum (PIF).

Areas where PBP seek to enhance cooperation:
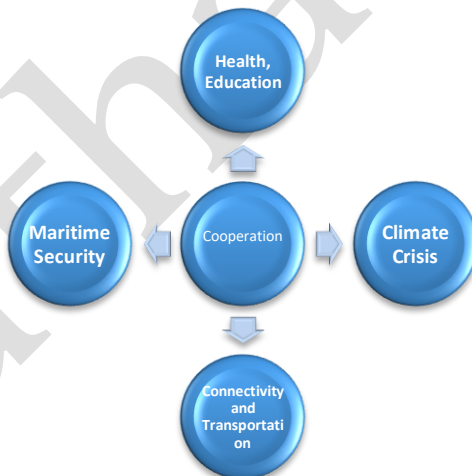
What is Pacific Island Forum?

- It is the region's premier political and economic policy organization.
- It was founded in 1971.
- It comprises of following members - Australia, Cook Islands, Federated States of Micronesia, Fiji, French Polynesia, Kiribati, Nauru, New Caledonia, New Zealand, Niue, Palau, Papua New Guinea, Republic of Marshall Islands, Samoa, Solomon Islands, Tonga, Tuvalu, and Vanuatu.

How is China gaining a stronghold in the Pacific?

- China's recent security pact with Solomon Islands, has raised some eyebrows among the neighboring regions. They look to get a military base in Southern Pacific, very close to the US island territory of Guam, and right besides Australia and New Zealand.
- China's quest to dominate crucial shipping lanes pushed 10 Pacific nations to endorse a game-changing agreement called the 'Common Development Vision'.
- Common Development Vision is a comprehensive strategic partnership featuring mutual respect and common development, to build a closer China-Pacific Island Countries community with a shared future.
- Apart from the vast marine richness of the PICs, the Taiwan factor plays a major role in China's Pacific calculus.
- The PICs are located geostrategically in what is referred to by China as its 'Far Seas', the control of which will make China an effective Blue Water Capable Navy, an essential prerequisite for becoming a superpower.

General Studies – 3

Economic Development

1. Indian Economy and issues relating to planning, mobilization, of resources, growth, development and employment.
2. Inclusive growth and issues arising from it.
3. Government Budgeting.
4. Major crops-cropping patterns in various parts of the country, - different types of irrigation and irrigation systems storage, transport and marketing of agricultural produce and issues and related constraints; e-technology in the aid of farmers.
5. Issues related to direct and indirect farm subsidies and minimum support prices; Public Distribution System- objectives, functioning, limitations, revamping; issues of buffer stocks and food security; Technology missions; economics of animal-rearing.
6. Food processing and related industries in India- scope' and significance, location, upstream and downstream requirements, supply chain management.
7. Land reforms in India.
8. Effects of liberalization on the economy, changes in industrial policy and their effects on industrial growth.
9. Infrastructure: Energy, Ports, Roads, Airports, Railways etc.
10. Investment models.

Technology

11. Science and Technology- developments and their applications and effects in everyday life.
12. Achievements of Indians in science & technology; indigenization of technology and developing new technology.
13. Awareness in the fields of IT, Space, Computers, robotics, nano-technology, bio-technology and issues relating to intellectual property rights.

Environment & Bio-diversity

14. Conservation, environmental pollution and degradation, environmental impact assessment.

Disaster Management & Security

15. Disaster and disaster management.
16. Linkages between development and spread of extremism.
17. Role of external state and non-state actors in creating challenges to internal security.
18. Challenges to internal security through communication networks, role of media and social networking sites in internal security challenges, basics of cyber security; money-laundering and its prevention.
19. Security challenges and their management in border areas - linkages of organized crime with terrorism.
20. Various Security forces and agencies and their mandate.

Economic Development

Infrastructure Projects in North-East

News: Recently, India's Finance Minister announced the execution of several rail, road and air connectivity projects worth Rs. 1,34,200 crore in the northeast.

What are the major projects?

- **Rail, Road and Air connectivity**
  - 4,000 km of roads, 20 railway projects for 2,011 km and 15 air connectivity projects are being developed.
- **Waterways Connectivity**
  - The cost of travel through water is least when compared to air, road and rail networks. The river systems of India and Bangladesh can be leveraged for all types of transportation.
  - National Waterways on the Ganges (NW-1), on the Brahmaputra (NW-2) and on the Barak (NW-16) are under development to provide better connectivity.
- **North-Eastern Region Power System Improvement Project (NERPSIP)**
  - It is a major step towards economic development of the North Eastern Region through strengthening of Intra-State transmission and distribution systems.
  - Government is also emphasizing on projects related to power transmission, distribution, mobile networks, 4G, and broadband connectivity.
- **Prime Minister's Development initiative for North East (PM-DevINE)**
  - Announced in Budget 2022-23, this will fund infrastructure in the spirit of PM Gati Shakti, and social development projects based on felt needs of the North-East.

Why North-East matters?

- **Links with South-East Asia**
  - With Association of Southeast Asian Nations (ASEAN) engagement becoming a central pillar of India's foreign policy direction, North-East states play an important role as the physical bridge between India and Southeast Asia.
  - The India's Act East Policy places the northeastern states on the territorial frontier of India's eastward engagement.
- **Strategic Location**
  - The North-East is strategically located at a junction with access to the traditional domestic market of eastern India, along with proximity to the major states in the east and adjacent countries such as Bangladesh and Myanmar.
- **Tourist Potential**
  - Northeast of India is home to many wildlife sanctuaries like Kaziranga National Park famous for the one horned rhinoceros, Manas National Park, Nameri, Orang, Dibru Saikhowa in Assam, Namdapha in Arunachal Pradesh, Balpakram in Meghalaya, Keibul Lamjao in Manipur, Intanki in Nagaland, Khangchendzonga in Sikkim.
- **Economic importance**
  - North-East accounts for around 34% of the country's water resources and almost 40% of India's hydropower potential.

Way Forward

- Investing in infrastructure would not only generate employment but it will also provide a major role in stabilizing the region which has historically suffered ignorance.
- India's North East is surrounded by national and international borders, so, national and international infrastructure development will be the best choice for inclusive development in India's Northeast.

Bad Bank

News: Recently, the Ministry of Finance has announced that the National Asset Reconstruction Company (NARCL) along with the India Debt Resolution Company (IDRCL) will take over the first set of bad loans from banks and try to resolve them.

About:
- A bad bank is a financial entity set up to buy Non-Performing Assets (NPAs), or Bad Loans, from banks. The aim of setting up a bad bank is to help ease the burden on banks by taking bad loans off their balance sheets and get them to lend again to customers without constraints.
- After the purchase of a bad loan from a bank, the bad bank may later try to restructure and sell the NPA to investors who might be interested in purchasing it.
- A bad bank makes a profit in its operations if it manages to sell the loan at a price higher than what it paid to acquire the loan from a commercial bank.
- However, generating profits is usually not the primary purpose of a bad bank - the objective is to ease the burden on banks, of holding a large pile of stressed assets, and to get them to lend more actively.

Advantages:
- **Single Entity** - It can help consolidate all bad loans of banks under a single exclusive entity. The idea of a bad bank has been tried out in countries such as the U.S., Germany, Japan and others in the past.
- **Availability of Free Capital** - By taking bad loans off the books of troubled banks, a bad bank can help free capital of over Rs 5 lakh crore that is locked in by banks as provisions against these bad loans. This will give banks the freedom to use the freed-up capital to extend more loans to their customers.
- **Improving Capital Buffer** - It can help improve bank lending not by shoring up bank reserves but by improving banks' capital buffers. To the extent that a new bad bank set up by the government can improve banks' capital buffers by freeing up capital, it could help banks feel more confident to start lending again.
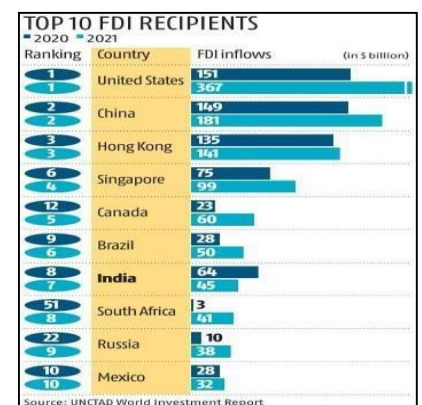
Limitations:
- **Mere Transfer of Ownership** - Bad bank backed by the government will merely shift bad assets from the hands of public sector banks, which are owned by the government, to the hands of a bad bank, which is again owned by the government. There is little reason to believe that a mere transfer of assets from one pocket of the government to another will lead to a successful resolution of these bad debts when the set of incentives facing these entities is essentially the same.
- **Moral Hazard** - Commercial banks that are bailed out by a bad bank are likely to have little reason to mend their ways. After all, the safety net provided by a bad bank gives these banks more reason to lend recklessly and thus further exacerbate the bad loan crisis.
- **Lack of Incentives to manage the crisis** - Unlike private banks, which are owned by individuals who have strong financial incentives to manage them well, public sector banks are managed by bureaucrats who may often not have the same commitment to ensuring these lenders' profitability. To that extent, bailing out banks through a bad bank does not really address the root problem of the bad loan crisis.

Annual World Investment Report

News: The United Nations Conference on Trade and Development's (Unctad) has released the annual World Investment Report.

Key Highlights of the Report:
- India is ranked seventh despite a 30% decline in foreign direct investment (FDI) into the country.
- The United States ($367 billion) remained the top recipient of FDI.
- China ($181 billion) and Hong Kong ($141 billion) also retained second and third position respectively.
- Among the top 10 host economies, only India saw a decline in its inflows.
- However, outward FDI from India rose 43 per cent to $15.5 billion in 2021.

TOP 10 FDI RECIPIENTS

Ranking	Country	FDI inflows (in $ billion)
1 / 1	United States	151 / 367
2 / 2	China	149 / 181
3 / 3	Hong Kong	135 / 141
6 / 4	Singapore	75 / 99
12 / 5	Canada	23 / 60
9 / 6	Brazil	28 / 50
8 / 7	India	64 / 45
51 / 8	South Africa	3 / 41
22 / 9	Russia	10 / 38
10 / 10	Mexico	28 / 32

Source: UNCTAD World Investment Report

About FDI:

- Foreign direct investment (FDI) is an investment from a party in one country into a business or corporation in another country with the intention of establishing a lasting interest. With FDI, foreign companies are directly involved with day-to-day operations in the other country.

About UNCTAD:

- It is a permanent intergovernmental body established by the United NationsGeneral Assembly in 1964.
- It is part of the UN Secretariat.
- It reports to the UN General Assembly and the Economic and Social Council, but has its own membership, leadership, and budget.
- It is also a part of the United Nations Development Group.

What are other reports published by UNCTAD?

- Trade and Development Report
- World Investment Report
- Technology and Innovation Report
- Digital Economy Report

Bond Yields

News: The Reserve Bank of India has hiked rates to rein in inflation, which is expected to remain above 7% until at least September. However, with this, the bond yields have also risen to their highest levels in three years.

How do we interpret this rise?

- The rise in yields means markets have already factored in the worst of the rate movements.
- The rise indicates that the cost of funds in the financial system is rising and so are interest rates.
- The rise means the government will have to pay more as yield (or return to the investors), leading to a rise in cost of borrowings.
- This will put upward pressure on general interest rates in the banking system.

What is the impact on different class of investors?

- The rise in yields means investors expect higher interest rates and are selling their bonds, because higher rates would result in a decline in the bond price of existing bonds (and thereby capital loss on sale before maturity).
- Debt investors are set to get impacted. When yields rise and bond prices fall, net asset values of debt funds, which hold a sizeable chunk of government securities in their portfolios, will also decline.
- It will also impact corporate bonds, which are priced higher than government bonds.
- Rising bond yields are generally not good news for equity investors as they raise the cost of funds for companies and start hurting their earnings.

What is the relationship between Bond Price and Yield?

- A bond's price moves inversely with its yield or interest rate; the higher the price of a bond, the lower the yield.
- The reason for the inverse relationship between price and yield is due, in part, to bonds being fixed-rate investments.
- Investors might sell their bonds if it's expected that interest rates will rise in the coming months and opt for the higher-rate bonds later on.
- Conversely, bond investors might buy bonds, driving the prices higher, if they believe interest rates will fall in the future because existing fixed-rate bonds will have a higher rate or yield.

Bond Yields VS Equity?

- Bond yields have an inverse relationship with equities as a rise in bond yields means that the risk premium on equities will have to go up.

Public Financial Management System (PMFS)

News: The Single Nodal Agency (SNA) Dashboard of PFMS (Public Financial Management System) was recently launched by the Union Ministry of Finance.

What is SNA Dashboard?

- It is a major reform initiated in 2021 with regards to the manner in which funds for Centrally Sponsored Schemes (CSS) are released, disbursed and monitored.
- Under this system, each state is required to identify and designate an SNA for every scheme.
- All funds for that State in a particular scheme are now credited in this bank account and all expenses by all other Implementing Agencies involved are affected from this account.

Importance:

- Ensures timely allocation of funds.
- Brought in greater efficiency in CSS fund utilization.
- Tracking of funds has become easier.

What is PFMS?

- It was previously known as Central Plan Schemes Monitoring System (CPSMS).
- It is a web-based online software application developed and implemented by the Office of Controller General of Accounts (CGA), Ministry of Finance.
- Objective - To facilitate a sound Public Financial Management System for the Government of India (GoI) by establishing an efficient fund flow system as well as a payment cum accounting network.
- Coverage - At present, the ambit of PFMS coverage includes Central Sector and Centrally Sponsored Schemes as well as other expenditures including the Finance Commission Grants.

Minimum Support Price

News: The Minimum Support Prices (MSP) for the Khari season 2022-23 were recently approved by the cabinet. The rates for 14 Kharif crops have been increased, the hikes ranging from 4% to 8%.

What is MSP?

- MSP is the rate at which the government buys grains from farmers. Currently, it fixes MSPs for 23 crops grown in both Kharif and Rabi seasons (Including FRP for sugarcane).
- The mandated crops include 14 crops of the kharif season, 6 rabi crops and 2 other commercial crops.

How is it calculated?

- The MSP is the rate at which the government purchases crops from farmers, and is based on a calculation of at least one-and-a-half times the cost of production incurred by the farmers.
- The Union Budget for 2018-19 had announced that MSP would be kept at levels of 1.5 the cost of production.
- The MSP is fixed twice a year on the recommendations of the Commission for Agricultural Costs and Prices (CACP), which is a statutory body and submits separate reports recommending prices for kharif and rabi seasons.

Which production costs are taken into consideration while fixing the MSPs?

- The CACP considers both 'A2+FL' and 'C2' costs while recommending MSP.
- A2 costs cover all paid-out expenses, both in cash and kind, incurred by farmers on seeds, fertilisers, chemicals, hired labour, fuel and irrigation, among others.
- A2+FL covers actual paid-out costs plus an imputed value of unpaid family labour.
- The C2 costs account for the rentals and interest forgone on owned land and fixed capital assets respectively, on top of A2+FL.

It is important to consider following points:

- CACP reckons only A2+FL cost for return.

- However, C2 costs are used by CACP primarily as benchmark reference costs (opportunity costs) to see if the MSPs recommended by them at least cover these costs in some of the major producing States.

Issues associated with MSP regime:

- **Limited Coverage** - As against the official announcement of MSP for 23 crops, only two, rice and wheat, are procured as these are distributed in NFSA (National Food Security Act). For the rest, it is mostly ad-hoc and insignificant.
- **Dependency on middlemen** - The MSP-based procurement system is also dependent on middlemen, commission agents and APMC officials, which smaller farmers find difficult to get access to.
- **Concerns with implementation** - The Shanta Kumar Committee, in its report in 2015, stated that only 6% of the MSP could be received by the farmers, which directly means that 94% of the farmers in the country are deprived from the benefit of the MSP.
- **Overproduction of Wheat and Paddy** - Skewed MSP dominated system of rice and wheat leads to overproduction of these crops and discourages farmers to grow other crops and horticulture products, which has higher demand and subsequently could lead to increase in farmer's income.
- The current MSP regime has no relation to prices in the domestic market. Its main purpose is to fulfil the requirements of NFSA making it effectively a procurement price rather than an MSP.

Way Forward:

- A true MSP requires the government to intervene whenever market prices fall below a predefined level, primarily in case of excess production and oversupply or a price collapse due to international factors.
- MSP can also be an incentive price for many of the crops which are desirable for nutritional security such as coarse cereals, and also for pulses and edible oils for which India is dependent on imports.

Neobanks

News: The RBI (Reserve Bank of India) is taking a hard look at the neobank business model where fintechs plug into a conventional bank's network and become customer-facing banking service providers.

About:

- They are kind of digital banks without any branches. Rather than being physically present at a specific location, they are entirely online. They provide customers a cheaper alternative to traditional banks.
- They use technology and AI to offer personalized services to customers while cutting down on operational costs.
- In India, they don't have bank license of their own but rely on bank partners to offer licensed services.
- Examples of Neobanks include RazorpayX, Jupiter, Niyo, Open etc.

How do the NeoBanks operate?

- Non-licensed FinTech firms that collaborate with conventional banks to have a mobile/Web platform and a wrapper around their partner banks' products.
- Traditional banks that are undertaking their digital initiatives.
- Licensed neobanks (usually with digital banking licences in those countries that allow it).

How are Neobanks different from Traditional Banks?

- The traditional banks have access to funding and possess more customer trust as compared to Neobanks. However, the former face the issue of adaptability to the growing needs of a tech-savvy generation.
- While the Neobanks may not have funds or a strong customer base, they do have ability to innovate. They can launch features and develop partnerships to serve their customers much more quickly than traditional banks.
- Neobanks can reach to places where a traditional bank may find it difficult. For example, Neobanks can cater to retail customers, small and medium sized businesses, which are generally underserved by traditional banks.

Challenges:

- The key to their success lies in fulfilling the needs of a segment of the market, and adopting the right technology, business strategy and work culture.

- Since the RBI doesn't yet recognise neobanks as such, officially customers may not have any legal recourse or a defined process in case of an issue.
- Since neobanks don't have a physical branch, customers don't have access to in-person assistance.
- Neobanks generally offer fewer services than traditional banks.

Way Forward:

- Neobanking can work as an extension of measures undertaken to solve the challenges of financial inclusion and bundling banking services with other financial services—for example, services like opening of bank accounts for immigrants, facilitated through new onboarding procedures not based on traditional documentation of identification. With narrow targets initially, neobanks could expand by adding more functionalities and services over time.

Cost Inflation Index

News: On June 14, the government released its annual cost inflation index number. For those who wish to save on long-term capital gains tax levied on debt mutual funds, property and other assets, the index is important.

What does CII Denote?

- CII values reflect the average change in the prices of goods and assets year-on-year due to inflation or deflation, as the case may be.
- If we take into consideration the CII value for FY23 i.e. 331, and the value for FY 2021-22 i.e. 337, it means there is an average increase of 4.42% in the prices of consumer goods and assets as compared to the previous year.
- It is important to note that it is not a flat increase in the price of all products you consume or assets you have. It is in fact, an average increase, which means the prices of few products may have increased more than others.
- There may also be instances where the prices of a few products have actually decreased.

Who notifies the cost inflation index?

- The Central board of Direct Taxes (CBDT)

How is it calculated?

- The formula to calculate inflation-adjusted cost price is - (CII of the year of sale/CII for the year of purchase) * Actual cost price.
- The government declared in Budget 2017 that the base year would be changed from 1981 to 2001 due to challenges in obtaining appropriate information by taxpayers. In the case of an asset purchased prior to April 1, 2001, the cost of the asset is regarded as the fair market value on April 1, 2001.

World Competitiveness Index 2022

News: Recently, the annual World Competitiveness Index was released by the Institute for Management Development (IMD). IMD is a Swiss foundation, based in Switzerland, dedicated to the development of international business executives at each stage of their careers.

About:

- The IMD World Competitiveness Yearbook (WCY), first published in 1989, is a comprehensive annual report and worldwide reference point on the competitiveness of countries.
- It analyzes and ranks countries according to how they manage their competencies to achieve long-term value creation.

Parameters taken into Consideration:

- Economic Performance
- Government Efficiency
- Business Efficiency
- Infrastructure

WHO STANDS WHERE		
2022	Country	**2021**
1	Denmark	3
2	Switzerland	1
3	Singapore	5
4	Sweden	2
5	Hong Kong	7
6	Netherlands	4
7	Taiwan, China	8
8	Finland	11
9	Norway	6
10	US	10
37	India	43

How did India fare on each parameter?

- India has witnessed the sharpest rise among the Asian economies, with a six-position jump from 43rd to 37th rank on the, largely due to gains in economic performance.
- On the economic performance, India has improved its rank from 37th in 2021 to 28th in 2022.
- As far as Business efficiency is concerned, India saw a huge improvement from 32nd rank in 2021 to 23rd in 2022.
- Regarding government efficiency, we saw a marginal improvement from 46th in 2021 to 45th in 2022.
- There was no change in ranking on infrastructure front.

What are the reasons behind India's improved rankings?

- Major improvements in the context of retrospective taxes in 2021
- Re-regulation of a number of sectors, including drones, space and geo-spatial mapping.
- Significant improvement in the competitiveness of the Indian economy
- India as a driving force in the global movement to fight climate change and India's pledge of net-zero by 2070 at the COP26 summit also sits in harmony with its strength in environment-related technologies in the ranking.
- The top five attractive factors of India's economy for business are a skilled workforce, cost competitiveness, dynamism of the economy, high educational level and open and positive attitudes.

What factors are affecting competitiveness of economies?

- The report found that inflationary pressures are affecting the competitiveness of national economies along with Covid, and the invasion of Ukraine by Russia.
- The three most important trends found to be impacting business in 2022 are inflationary pressures (50%), geopolitical conflicts (49%) and supply chain bottlenecks (48%) with covid being the fourth (43%).

Credit Card – UPI linkup

News: The Reserve Bank of India (RBI) has proposed to allow linking of credit cards with the Unified Payments Interface (UPI) platform.

About Credit Card and UPI:

- A credit card is a financial instrument issued by banks with a pre-set credit limit, help make cashless transactions. It enables cardholders to pay a merchant for goods and services based on her accrued debt.
- On the other hand, UPI is an advanced version of Immediate Payment Service (IMPS). UPI is a system that powers multiple bank accounts into a single mobile application (of any participating bank), merging several banking features, seamless fund routing and merchant's payments into one hood.

Importance of the move:

- It will deepen the reach and usage of credit cards. It is anticipated that credit card usage will be zooming up in India given UPI's widespread adoption.
- The arrangement is expected to provide an additional avenue for payment to customers and hence enhance convenience.
- It is expected to bolster transactions and acceptance at more merchant sites. People who generally prefer to pay by credit card so as to avail of a longer pay-back period or loans on credit-card outstanding, or who do not wish to touch their savings at the moment of purchase, can pay using credit cards via UPI.
- The move will provide a significant boost to overall spending via credit cards — currently, spending through the use of credit cards is more than double the average spend via debit cards. More spending is generally a force multiplier for the economy.
- Besides accelerating digital transactions this measure is also expected to affect the average ticket size of financial transactions. Currently the average ticket size per transaction is Rs 1,600 while it is Rs 4,000 in credit cards. So, with the new development the UPI transaction ticket size is likely to go up to somewhere around Rs 3,000 to Rs 4,000, analysts claim.

What are the possible challenges?

- It is not clear how the Merchant Discount Rate (MDR) will be applied to UPI transactions done through credit cards. The MDR is a fee that a merchant is charged by their issuing bank for accepting payments from their customers via credit and debit cards.
- According to a norm that has been in effect since January 2020, UPI and RuPay attract zero-MDR, meaning that no charges are applied to these transactions.
- Applicability of zero-MDR on UPI could also be a reason why other card networks such as Visa and Mastercard may not have been on boarded to UPI for credit cards yet.

# World Trade Organization

News: The World Trade Organization's 164 members (12th Ministerial Conference) in a historic step approved a series of trade agreements including commitments on fish, a partial waiver of intellectual property (IP) rights for COVID-19 vaccines, and pledges on health and food security.

What is the WTO and the Ministerial Conference?

- The World Trade Organization is the only international organization that deals with the rules of trade between countries.
- Founded in 1995, the WTO is run by its 164 members, and according to its rules, all decisions are taken through consensus and any member can exercise a veto.
- The Ministerial Conference is the WTO's top decision-making body and usually meets every two years. All members of the WTO are involved in the MC and they can take decisions on all matters covered under any multilateral trade agreements.

What agreements were reached?

- **Covid-19 vaccine production**
    - WTO members agreed to temporarily waive intellectual property patents on Covid-19 vaccines without the consent of the patent holder for 5 years. This move will ensure developing countries can now manufacture them domestically.
- **Curtailing harmful fishing subsidies**
    - The WTO passed a multilateral agreement that would curb 'harmful' subsidies on illegal, unreported and unregulated fishing for the next four years. This is done in order to protect global fish stocks.
    - Agreement on the same, which establishes new trading rules, is the second multilateral agreement in WTO's history.
    - It also intends to protect livelihoods of 260 million people who depend directly or indirectly on marine fisheries.
- **Food Security**
    - Members agreed to a binding decision to exempt food purchased by the UN's World Food Programme (WFP) for humanitarian purposes, from any export restrictions.
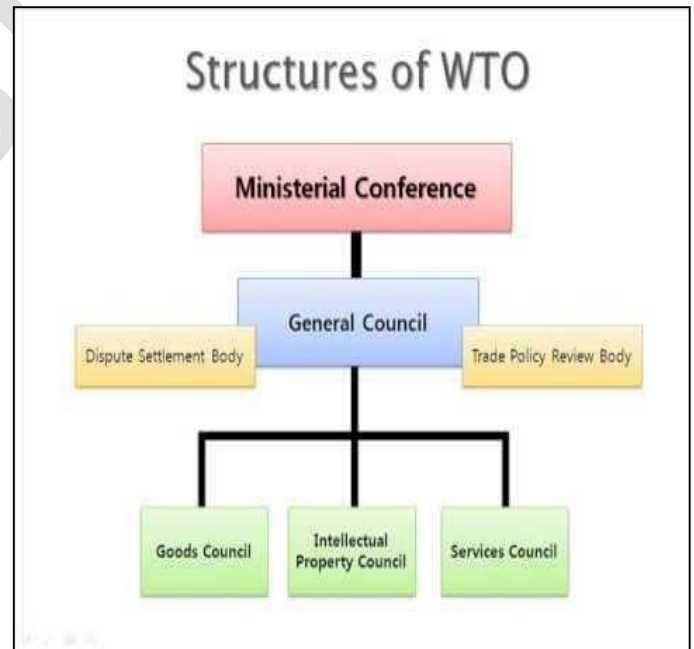
Role played by India:

- India has been able to secure a favourable outcome at the WTO after many years, despite a strong global campaign against Indian farmers and fishermen.

Payments Vision 2025

News: RBI governor has asked for regulation of Bigtech and Fintech companies. For this, with an aim to provide secure and affordable e-payments, the Reserve Bank of India (RBI) has come up with a document 'Payments Vision 2025'.

About:

As part of its Vision 2025, the RBI will attempt
- regulation of big tech and fintech in the payments space
- explore guidelines on payments that involve BNPL(buy now pay later) services
- work towards the introduction of CBDC (central bank digital currency)
- seek inclusion of rupee in continuous linked settlement (CLS) (CLS provides protection for cross-currency settlement in 18 currencies)

Need for such regulation:
- **To prevent systemic concerns**
  - Big Tech's play in lending activities using customer data and sophisticated algorithms can lead to 'systemic concerns' like over-leverage and inadequate quality assessment of borrowers.
- **Sensitive user data**
  - Big-tech and fintech companies offer sophisticated services which use sensitive data from various sources to issue loans to users, including those not having collateral or credit history.
- **Entry of Big Tech Firms**
  - The entry of firms like Google, Amazon and Meta, which are referred to as Big Tech, also poses concerns related to competition, data sharing, data protection and operational resilience of critical services in situations where banks and NBFCs utilise their services.
  - Also, risks relating to cybersecurity, software development limitations in transaction capacity, the privacy of customer data and data security.
- Decentralized Finance poses unique challenges to regulators as it is anonymous. The lack of a centralised governance body and legal uncertainties can make the traditional approach to regulation somewhat ineffective.
- The fintechs' require multiple regulators to work together because a single technology like blockchain or de-centralised finance (DeFi) can have multiple uses coming under different watchdogs' ambit.

What needs to be done?
- Authorities and regulators have to strike a fine balance between enabling innovation and preventing systemic risks.
- RBI will soon be issuing guidelines to make digital lending ecosystems 'safe and sound while enhancing customer protection and encouraging innovation'.
- There is a need for entity-based and outcome-based regulation.
- Globally coordinated regulatory approach and inter-regulatory coordination will enable comprehensive assessment of such activities and mitigation of risks.
- Use of artificial intelligence and machine learning to determine the creditworthiness of a borrower.
- The methodology of algorithms underpinning digital financial services has to be 'clear, transparent, explainable and free from exclusionary biases'.
- In the age of technological changes, banks should not just work like banking service firms but like technology companies.

RBI asks states to Stabilise Debt Levels

News: As per the Recent RBI study, five states -Bihar, Kerala, Punjab, Rajasthan and West Bengal are highly stressed states.

Key Facts:

- The Debt/GSDP is a metric that shows what a state owes with what it produces. In other words, it indicates that particular state's ability to pay back its debts.
- Punjab's Debt to GSDP ratio is projected to exceed 45% in 2026-27.
- Rajasthan, Kerala and West Bengal are projected to exceed the debt-GSDP ratio of 35 per cent by 2026-27. These states will need to undertake significant corrective steps to stabilize their debt levels.
- Ten states accounting for half of the total expenditure in India are Punjab, Rajasthan, Kerala, West Bengal, Bihar, Andhra Pradesh, Jharkhand, Madhya Pradesh, Uttar Pradesh and Haryana.

Why have these states fared poorly?

- Neglecting the targets set by the 15th FC - Among the ten states, Andhra Pradesh, Bihar, Rajasthan and Punjab exceeded both debt and fiscal deficit targets for 2020-21 set by the 15th Finance Commission.
- Higher revenue expenditure – Some states such as Kerala, Rajasthan, Punjab, WB spend around 90% on revenue accounts. This means poor expenditure quality, which is reflected in their high revenue spending to capital outlay ratios.
- High Committed Expenditure – It includes interest payments, pensions and administrative expenses, account for a significant portion (over 35 per cent) of the total revenue expenditure in states like Haryana, Uttar Pradesh, West Bengal, Kerala and Punjab, leaving limited fiscal space for undertaking developmental expenditure. Consequently, the share of developmental expenditure in these states is considerably lower than in the other states. Although it seeks to improve welfare, the impact of such expenditure is short lived. On the other hand, the impact of capital outlay is stronger and lasts longer.
- Fall in Own Tax Revenue - The own tax revenue of some of these 10 states such as Madhya Pradesh, Punjab and Kerala, has been declining over time, making them fiscally more vulnerable.
- After the UDAY scheme, the losses of DISCOMs were made part of state government liability. This further worsened the situation.

What measures are suggested by the Central Government?

- The Centre has urged chief secretaries of all states to keep a check on the increasing debt burden and fiscal deficit as their performance will have a huge bearing on the country's economy.
- The states are advised to adopt the best practices for crop diversification, discourage more paddy and wheat cultivation and rather focus on pulses and oilseeds.
- The states have been asked to fill vacancies of teachers, train them and equip them with latest technologies.
- Focus on slums redevelopment and cluster development
- Advance urban planning for Tier II and Tier III cities
- Urban development along the transit corridor

Please note that the NK Singh Committee (2016) recommended the Debt to GDP Ratio should be 7% for the central government, 20% for the state governments together by the FY 2022-23. The Fiscal Deficit by 2022-23 should be 2.5% of GDP.

India's emerging twin deficit concerns

News: In its latest 'Monthly economic review', the Ministry of Finance has painted an overall optimistic picture of the state of the domestic economy.

What does the report say?

- The world is looking at distinct possibility of widespread stagflation. India, however, is at low risk of stagflation, owing to its prudent stabilization policies.
- While the economic growth outlook is likely to be affected by ongoing factors going on around the world but the momentum of economic activities sustained in the first two months of the current financial year augurs well for India continuing to be the quickest growing economy among major countries in 2022-23.
- However, the report highlights two key areas of concerns: The Fiscal Deficit and the Current Account Deficit.

What is Fiscal Deficit?

- The fiscal deficit is essentially the amount of money that the government has to borrow in any year to fill the gap between its expenditures and revenues.
- Higher levels of fiscal deficit typically imply the government takes money from the market, thus leaving less money for private sector for its own investment needs (also called crowding out effect)
- The report says that 'as government revenues take a hit following cuts in excise duties on diesel and petrol, an upside risk to the budgeted level of gross fiscal deficit has emerged'.

What is Current Account Deficit (CAD)?

The CAD essentially refers to two sub-parts:

- Trade account which includes Import and Export of goods. If a country imports more goods than it exports, it is said to have a trade account deficit.
- The import and export of services is called the 'invisible account'.
- If the net effect of a trade account and the invisibles account is a deficit, then it is called a current account deficit or CAD. A widening CAD tends to weaken the domestic currency because a CAD implies more dollars (or foreign currencies) are being demanded than rupees.
- A deficit implies that more money is going out of the country than coming in via the trade of physical goods. Similarly, the same country could be earning a surplus on the invisibles account that is, it could be exporting more services than importing.

What needs to be done for Indian economy to emerge stronger?

- First and foremost, it is important to trim the revenue expenditure (the expenditure government incurs to meet its daily needs)
- Rationalizing non-capex expenditure, not only to support growth supportive capex but also to avoid fiscal slippages.
- Import cut of non-essential goods and make exports of Indian goods competitive.
- Reforming Indian market to make it attractive for FDI and FIIs.
- To achieve fiscal consolidation using tight monetary policy.

Economic impact of decisions of the SC and NGT

News: Recently, the report titled Economic Impact of Select Decisions of the Supreme Court and National Green Tribunal of India (NGT) has been submitted to the NITI Aayog.

- The study was conducted by CUTS (Consumer Unity and Trust Society) which was commissioned and fully funded by the NITI Aayog
- CUTS studies the economic impacts of various judicial orders which includes five environment-related major orders of the Supreme Court and the NGT.

Which cases were studied?

- The Goa Foundation Vs M/s Sesa Sterlite Ltd & Ors, 2018
- The Hanuman Laxman Aroskar vs Union of India (Mopa Airport Case), 2019
- The Tamil Nadu Pollution Control Board vs Sterlite Industries (I) Ltd (Sterlite Copper Plant Case), 2019
- The National Green Tribunal Bar Association Vs Ministry of Environment & Forests and Ors (Sand Mining Case), 2013
- The Vardhman Kaushik vs Union of India & Ors (NCR Construction Ban Case), 2016

Economic impacts of Environment Related Five judicial orders:

- The analysis of economic impacts due to five select environment-related court orders estimates that 75,000 persons were adversely impacted from mid-2018 to mid-2021 due to restrictive orders related to environment.
- The Government of India lost revenue worth Rs 8,000 crore from mid-2018 to mid-2021.
- If this revenue had been spent as capital expenditure, the economic returns would have been to the tune of Rs 20,000 crore.
- Of the five verdicts, the study estimated 16,000 persons lost their jobs.
- The industry lost close to Rs 15,000 crore in revenues and workers lost around Rs 500 crore of income.

Case study of Ban on Mining in Goa:

- Due to the ban on mining in Goa, the state public debt increased at a Compound Annual Growth Rate (CAGR) of 10.06% from 2007 through 2021.
- The market loans taken by the state increased at a CAGR of 19.93%, consequently due to mining suspension.
- The ban also resulted in revenue deficit to both centre and state, loss to mining companies and loss of employment (both direct and indirect).

Recommendations of the Study:

- It recommends the need to equip the judiciary and judges on how to **strike a balance** between the economy and the environmental factors.
- It highlighted the **need for subject specialists and experts** guiding the judges on cases that involved economic impacts. It recommended that selection procedures of judges should also be changed. However, it is equally important for judicial officers to be exposed to (basic) economic issues to recognize the need for a holistic and balanced decision and approach.
- It prescribed **accountability** for the judiciary to ensure higher standard of jurisprudence in decision making. Especially in cases where strict adherence to legal provisions may lead to substantive economic losses, **the decision-making of SC should be guided by the larger public good.**

Modernizing the Co-operative Banks

News: Cooperation Minister has highlighted that cooperative banks will not be given a 'second-grade' treatment but they should adopt modern and transparent banking methods to stay in the competition.

What is a Co-operative Bank?

- A Co-operative bank is a financial entity which belongs to its members, who are at the same time the owners and the customers of their bank.
- They are registered under the Cooperative Societies Act of the State concerned or the Multi-State Cooperative Societies Act, 2002 and governed under the Banking Regulations Act, 1949 and Banking Laws (Cooperative Societies) Act, 1955.

Why is there a need for Modernizing them?

- **Limited Participation**
  - There were more than 195 cooperative banks that were more than 100 years old. Despite this, the role of urban cooperative banks is negligible in the total banking sector in terms of deposit and advance payment.
  - UCBs account for only 3.25 per cent of the total bank deposits and 2.69 per cent of the total advances in the country.
- **Focus on small and marginal sections of society**
  - UCBs should be further strengthened so that they can better look after the needs of small and marginal sections of the society.
- There are 1,534 urban cooperative banks, and 54 scheduled urban cooperative banks but the development is uneven. The symmetric development of cooperative banks will help sustain competition in future.

What needs to be done?

- Adopt modern and transparent banking methods to stay in competition e.g. computerization of accounting process.
- Treating UCB equally in government policies in respect of taxation, BR Act [The Banking Regulation Act, 1949] or the Reserve Bank's norms.
- Cooperatives need to up their game to generate credibility, trustworthiness and earn people's faith as well as gain confidence from the RBI and the government.
- Institutional reforms such as transparency in recruitment and implementation of robust accounting system.
- Attract young, talented and motivated individuals to participate in management roles.

Participatory Notes

News: Investment in the Indian capital markets through Participatory notes (P-notes) dropped to Rs 86,706 crore till May-end, 2022.

About:

- P-notes are Offshore Derivative Instruments (ODIs) issued by registered Foreign Portfolio Investors (FPIs) to overseas investors who wish to be a part of the Indian stock markets without registering themselves directly.
- P-notes have Indian stocks as their underlying assets.
- FPIs are non-residents who invest in Indian securities like shares, government bonds, corporate bonds, etc.
- Though P-note holders have less stringent registration requirements, they have to go through a proper due diligence process of the Security and Exchange Board of India (SEBI).

Why have the investments dropped?

- There is still uncertainty around inflation levels and the US Federal Reserve's (Fed's) actions.
- Decline in P-Notes is being attributed due to the tightening of monetary policy by the US Fed which has been on a rate hiking spree to control inflation.
- Currency correction has happened to a large extent. A correction is a price rebound which can be observed after every trend impulse. After a correction takes place, the price returns to the trend. A correction on the currency market takes place due to the overselling or overbuying of instruments at the current moment in time.

Card Tokenisation

News: The Reserve Bank of India (RBI) extended the timeline for tokenisation of debit and credit cards by three months till 30th September, 2022 to avoid disruption and inconvenience to cardholders.

- After 30th September, no entity in the card transaction or payment chain, other than the card issuers and card networks, should store the CoF (Card-on-File data or storage of actual card data) and any such data stored previously will be done away with.

What is Tokenisation?

- It refers to replacement of actual credit and debit card details with an alternate code called the "token", which will be unique for a combination of card, token requestor and device.
- A tokenised card transaction is considered safer as the actual card details are not shared with the merchant during transaction processing.
- Customers who do not have the tokenisation facility will have to key in their name, 16-digit card number, expiry date and CVV each time they order something online.

What is card-on-file?

- A CoF transaction is a transaction where a cardholder has authorised a merchant to store the cardholder's Mastercard or Visa payment details.
- The cardholder then authorises that same merchant to bill the cardholder's stored Mastercard or Visa account.
- E-commerce companies and airlines and supermarket chains normally store card details in their system.

India's Gig Workforce

News: NITI Aayog has recommended steps to provide social security for the country's gig workforce, which is expected to grow to 2.35 crore by 2029-30. As per current studies, the number of Gig workers is estimated to be 77 lakh in 2020-21.

What is the Gig Economy?

- A Gig economy is a free market system in which temporary positions are common and organizations contract with independent workers for short-term engagements.
- A Gig Worker is person who performs work or participates in a work arrangement and earns from such activities outside of traditional employer-employee relationship.

What is the potential of this sector?

- An estimated 56% of new employment in India is being generated by the gig economy companies across both the blue-collar and white-collar workforce.
- While the gig economy is prevalent among blue-collar jobs in India, the demand for gig workers in white-collar jobs such as project-specific consultants, salespeople, web designers, content writers and software developers are also emerging.
- The gig economy can serve up to 90 million jobs in the non-farm sectors in India with a potential to add 1.25% to the GDP over the 'long term'.

Key Findings of Report:

- **Platformization of work**
  - It has given rise to a new classification of labour which is platform labour, that falls outside of the purview of the traditional dichotomy of formal and informal labour.
  - The report broadly classified gig workers into Platform workers and non-platform gig workers. Platform workers are those whose work is based on online software applications or digital platforms. Non-platform gig workers are generally casual wage workers and own-account workers in the conventional sectors, working part-time or full-time.

- **Medium Skilled jobs**
  - At present, about 47% of gig work is in medium-skilled jobs, about 22% in high-skilled, and about 31% in low-skilled jobs, the trend shows the concentration of workers in medium-skilled jobs is declining and that of the low skilled and high skilled is increasing.

- By 2029-30, gig workers are expected to form 7% of the non-agricultural workforce or 4.1% of the total livelihood workforce in India.

Issues raised by Report

- Accesibility and Job and Income Insecurity
- Occupational and safety Risk
- Issues faced due to Terms of Contract and Skills Mismatch

Key Recommendations:

- It recommended undertaking a separate enumeration exercise to estimate the size of the gig and platform workforce and collecting information during official enumerations (Periodic Labour Force Survey) to identify gig workers.
- It suggested gig firms adopt policies that offer old age or retirement plans and benefits and other insurance covers for contingencies such as injury arising from work that may lead to loss of employment and income.
- Apart from impetus through digitalisation, operating outside the traditional 'employer-employee' relationship enables platforms to scale within and across geographies as well as sectors.
- NITI Ayog recommended introducing a 'Platform India initiative' on the lines of the 'Startup India Initiative'.
- The report said that giving paid sick leave, health access and insurance to all workers will have positive implications.

Science & Technology

Liquid Nano Urea

News: PM Narendra Modi inaugurated the country's first liquid nano urea plant in Kalol, Gujarat. This patented product is expected to substitute imported urea and produce better results in farms.

How does it work?

- Urea artificially provides nitrogen to plants. Liquid nano urea, which contains 4% nitrogen by volume, comes in the form of a nanoparticle.
- The efficiency of liquid nano urea can be 85-90%, compared to 25% for conventional urea.
- Conventional urea is often applied incorrectly, and the nitrogen in it is vaporized or lost as gas. A lot of nitrogen is also washed away during irrigation.
- Liquid nano urea is sprayed directly on the leaves and gets absorbed by the plant.
- Indian Farmers Fertiliser Cooperative Ltd (IFFCO) advises that 2-4 ml of nano urea should be mixed with a litre of water and sprayed on crop leaves at active growth stages.
- Liquid nano urea has a shelf life of a year, and farmers need not worry about "caking" when it comes in contact with moisture.
- Apart from reducing the country's subsidy bill, it is aimed at reducing the unbalanced and indiscriminate use of conventional urea, increase crop productivity, and reduce soil, water and air pollution.

Is it cost effective?

- The liquid nano urea produced by IFFCO comes in a half-litre bottle priced at INR 240, without any subsidy at present.
- In contrast, a farmer pays around INR 300 for a 50KG bag of heavily subsidized urea.
- As per IFFCO, a bottle of nano urea can effectively replace at least one bag of conventional urea. The international market price of a bag of urea is between INR 3,500 and INR 4,000
- The government's fertilizer subsidy payout this FY will be Rs. 2 Lakh crore.

To read more about Nano Urea (Liquid) Fertilizer you may refer the following link:
https://iffco.indigo-consulting.co.in/en/nano-urea-liquid-fertilizer

Barcodes vs RFID

News: Baggage tags equipped with radio-frequency identification (RFID) will soon be available at Delhi's Indira Gandhi International Airport, marking a first of its kind for the country.

About RFID:

- It is a wireless tracking system that consists of tags and readers.
- Radio waves are used to communicate information/identity of objects or people.
- The tags can carry encrypted information, serial numbers and short descriptions.
- Active RFIDs use their own power source, mostly batteries.
- Passive RFIDs are activated through the reader using the electromagnetic energy it transmits.

How do they work?

- RFID tags use an integrated circuit and an antenna to communicate with a reader using radio waves at several different frequencies – low frequency (LF), high frequency (HF), and ultra-high frequency (UHF).

- The message sent back by the tag in form of radio waves is translated into data and analysed by the host computer system.
- Unlike Barcodes, RFIDs do not require direct line of sight to identify objects.

About Barcode:
- A barcode is a printed series of parallel bars or lines of varying width used for entering data into a computer system.
- The bars are black on a white background and vary in width and quantity depending on the application.
- The bars represent the binary digits zero and one, which represent the digits zero to nine processed by a digital computer.
- These barcodes are scanned using special optical scanners known as barcode readers.
- The majority of these codes use only two different widths of bars, however some use four.
- One of the most well-known examples of a barcode is the QR code.

	Barcode	RFID
1	Rely on the user to make contact to the reader, hence cannot be read from a distance	Do not require contact with reader, hence can be read from a distance.
2	In Barcode, only one card read at a time is allowed.	Multiple read at a time is permitted
3	Embedded information cannot be updated, hence the restriction of the repeated over-writing if the embedded election information for each card	Embedded information can be updated; this allows the repeated over-writing if embedded electronic information for each card.
4	It does not allow for the increase technologies like surveillance cameras to be activated with an employee being in the vicinity.	RFID has increased technologies like surveillance cameras to be activated in conjunction with an employee being in their vicinity.
5	It is slower and requires time of sight to function.	RFID is faster and does not require line of sight.
6	It has lower data storage transponder.	It has higher data storage.
7	This transponder is bogus, and cannot be incorporated in small items.	The transponder is miniaturized, and can be incorporate in other items. For example in 2009 researchers successfully glued RFID micro-transponder to live ants [1]

Electric Vertical Take-off and Landing (eVTOL) Aircraft

News: The Government of India is exploring the possibility of inviting manufacturers of Electric Vertical Take-off and Landing (eVTOL) aircraft to set up base in India.

About:
- An eVTOL aircraft is one that uses electric power to hover, take off, and land vertically.
- Most eVTOLs also use what is called as distributed electric propulsion technology which means integrating a complex propulsion system with the airframe.

What are its features?
- In order to maximize efficiency, and to also ensure safety, there are multiple motors.
- This is technology that has grown on account of successes in electric propulsion based on progress in motor, battery, fuel cell and electronic controller technologies and also fuelled by the need for new vehicle

technology that ensures Urban Air Mobility (UAM). Thus, eVTOL is one of the newer technologies and developments in the aerospace industry.

- There are an estimated 250 eVTOL concepts or more being fine-tuned to bring alive the concept of UAM. Some of these include the use of multi-rotors, fixed-wing and tilt-wing concepts backed by sensors, cameras and even radar.
- eVTOLs have been likened to a third wave in aerial revolution.

Challenges associated:

- **Crash Prevention System** - As the technology so far is a mix of unpiloted and piloted aircraft, the areas in focus include 'crash prevention systems'. These use cameras, radar, GPS (Global Positioning System) and infrared scanners.
- **Ensuring Safety** - There are also issues such as ensuring safety in case of power plant or rotor failure. Aircraft protection from cyberattacks is another area of focus.
- **Navigation** – Navigation and flight safety and the use of technology when operating in difficult terrain, unsafe operating environments and also bad weather.

How much is its market valued?

- The global market for eVTOLs was put at USD8.5 million in 2021 and is to grow to USD30.8 million by 2030.
- The demand will be on account of green energy and noise-free aircraft, cargo carrying concepts and the need for new modes of transport.

NoroVirus

News: At least two cases of norovirus have been found in Thiruvananthapuram among lower primary school students.

About:

- Norovirus is a highly contagious virus that is also sometimes referred to as the 'stomach flu' or the 'winter vomiting bug'.
- It can be transmitted through contaminated food, water, and surfaces. The primary route is oral-faecal. It is similar to diarrhoea-inducing rotavirus and infects people across age groups. One may get infected multiple times as the virus has different strains.

Symptoms:

- The initial symptoms of norovirus are vomiting and/or diarrhoea, which show up one or two days after exposure to the virus.
- Patients also feel nauseous, and suffer from abdominal pain, fever, headaches and body aches. In extreme cases, loss of fluids could lead to dehydration.
- Norovirus infection is associated with intestinal inflammation, malnutrition and may cause long-term morbidity.
- Diagnosis is done by real-time reverse transcription-polymerase chain reaction.

Preventive Measures:

- No vaccines are available for the disease.
- The basic precaution is repeatedly washing hands with soap after using the lavatory or changing diapers. It is important to wash hands carefully before eating or preparing food.
- During outbreaks, surfaces must be disinfected with a solution of hypochlorite at 5,000 parts per million.
- Those infected should avoid contact with others and avoid preparing food for others while sick and for two days after symptoms stop.

- Norovirus is resistant to many disinfectants and can withstand heat up to 60°C. Therefore, merely steaming food or chlorinating water does not kill the virus. The virus can also survive many common hand sanitisers.

Is there any treatment available?

- The disease is self-limiting. The infection normally lasts only two or three days, and most individuals who are not very young, very old, or malnourished can ride it out with sufficient rest and hydration.
- It is important to maintain hydration in the acute phase. In extreme cases, patients have to be administered rehydration fluids intravenously.

Biomass Electricity

News: Recently, a new biomass-based boiler technology was launched in India (Kurukshetra, Haryana) that claims to accommodate all kinds of agricultural residue as fuel and can be greener and may also help reduce the burden of stubble burning.

Features of the Biomass-Based Boiler:

- The new boiler had a capacity of 75 tonnes per hour and generated 15 megawatts of electricity. This new Denmark-based technology allows the plant to fire a wide range of fuels with less fuel preparation and handling.
- This combustion technology is advantageous because of the vibrating grate.
- The grate of a steam boiler supports the solid fuel in the furnace.
- Vibrating grate accommodates biomass of every density.
- The moisture content of the fuel, however, has to be 15-20%
- Since the vibrating grate supports firing agro residue of any size, it saves energy consumed for processing biomass for energy generation.

What are the advantages over Conventional Boilers?

- The existing conventional boilers are designed only for specific types of agro residue such as paddy husk, paddy straw, mustard, etc and thus restrict the biomass contribution in energy generation.
- While vibrating grate boiler technology can be a solution for firing any kind of biomass.

What is Biomass? What are the methods through which it can be converted to Electricity?

- It is a renewable organic material that comes from plants and animals. It is used for facility heating, electric power generation and combined heat and power.

Methods:

- **Combustion of Biomass Material** – It involves direct combustion of biomass material such as agricultural waste, woody materials.
- **Gasification** - It produces a synthesis gas with usable energy content by heating the biomass with less oxygen than needed for complete combustion.
- **Pyrolysis** - Pyrolysis yields bio-oil by rapidly heating the biomass in the absence of oxygen.
- **Anaerobic Digestion** - Anaerobic digestion produces a renewable natural gas when organic matter is decomposed by bacteria in the absence of oxygen. Very wet wastes, like animal and human wastes, are converted into a medium-energy content gas in an anaerobic digester.

Government Initiatives:

- Biomass power & cogeneration programme is implemented with the main objective of promoting technologies for optimum use of country's biomass resources for grid power generation.
- The Union Ministry of New and Renewable Energy (MNRE) announced central financial assistance for projects utilising biomass like bagasse, agro-based industrial residue, crop residues, wood produced through energy plantations, weeds as well as wood waste produced in industrial operations for power generation. The move was aimed at enhancing biomass combustion in a controlled environment for energy production.

Six-Fold rise in Heartattack Deaths in Mumbai

News: India's financial capital Mumbai witnessed a six-fold rise in deaths related to heart attacks in the first six months of 2021 when the city was under the grip of the second wave of Covid-19.

What were the factors behind this?

- **Post Covid Development of Thrombosis**
    - SARS-Cov-2 damages the heart and blood vessels in infected patients which leads to the development of clots, heart inflammation, arrhythmias, and heart failure.
    - Thrombosis occurs when blood clots block veins or arteries
    - Covid-19 can also cause microvascular damages, which may have also contributed to heart ailments
- **Additional Distress during Pandemic**
    - Anxiety and stress levels further added to the heart ailments.
- **Lifestyle Changes**
    - Life has become more sedentary with fewer options for socialisation and physical activities
    - Doctors have witnessed an increase in the prevalence of diabetes, hypertension, smoking, alcohol use and an unhealthy lifestyle in the last two years.
    - Indians have a genetic predisposition, smaller coronary arteries, a diet pattern with excessive consumption of trans fats and a sedentary lifestyle that puts them in a high-risk category for heart attacks
- During the second wave, many patients avoided hospitals due to fear of contracting Covid-19, which further delayed life-saving treatment.
- Reperfusion therapies like Thrombolytic therapy (that dissolves clots) and timely interventions like angioplasty (the procedure used to widen blocked or narrowed coronary arteries) were delayed.
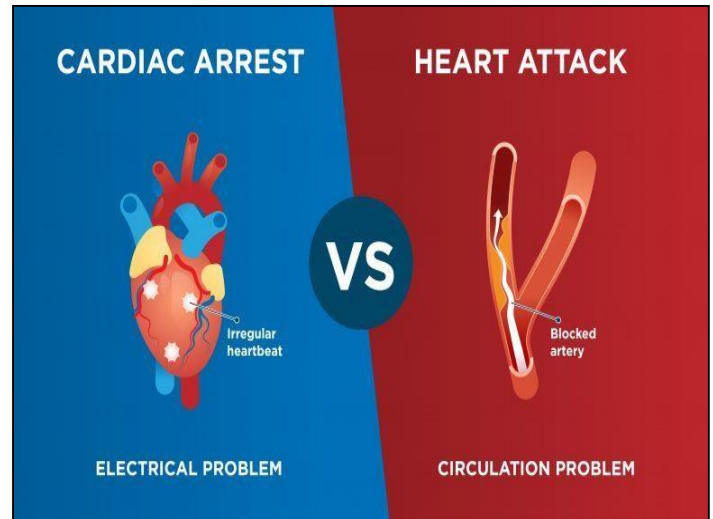
Virtual Private Network

News: Recently, Indian Computer Emergency Response Team (CERT-In) issued norms under which VPN providers have to record personal information of their customers, including the purpose of using the service, for five years.

What is VPN?

- VPN describes the opportunity to establish a protected network connection when using public networks.
- VPNs encrypt internet traffic and disguise the user's online identity. This makes it more difficult for third parties to track activities online and steal data. The encryption takes place in real time.
- A VPN hides the user's IP address by letting the network redirect it through a specially configured remote server run by a VPN host. This means that if a user is surfing online with a VPN, the VPN server becomes the source of data.
- Other third parties cannot see which websites the user visits or data sent and received online.
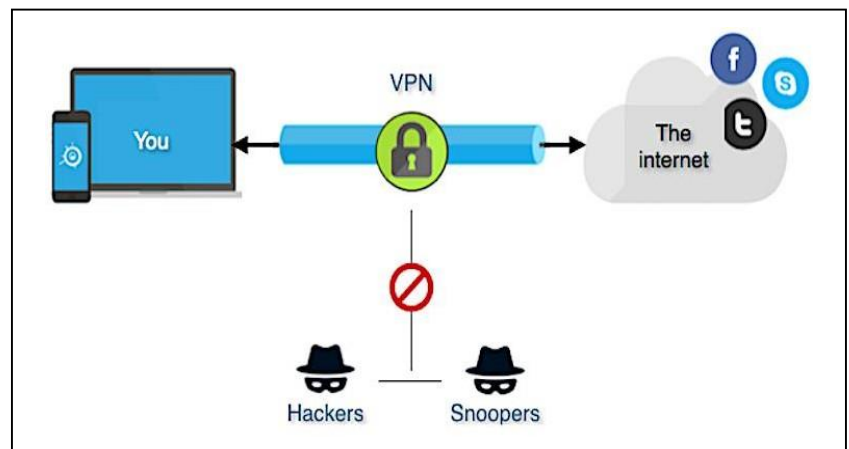
New Rules concerning VPN:

- The Union Ministry of Electronics and Information Technology issued new norms for VPN companies to record personal information of their users including names, email id, phone number and IP address for a period of five years. They also have to record usage patterns, purpose of hiring services and various other information.
- Apart from VPN companies, data centers, virtual service network providers, cloud service providers have also been asked to record and maintain similar data.
- Entities are also required to report cybersecurity incidents to CERT-In within six hours of becoming or being made aware of them.

Need for new rules:

- These rules will 'enhance overall cyber security posture and ensure safe & trusted internet in the country'.
- It noted that the Indian Computer Emergency Response Team (CERT-In), which serves as a safeguard against cyber-attacks, has identified 'gaps' in the way it analyses online threats due to which it has issued the new norms for reporting cyber incidents.
- In 2021, a Parliamentary Standing Committee, in a report to the Rajya Sabha, wanted the Ministry to block VPNs with assistance from internet service providers.

Issues concerning new norms:

- Customers will need to go through difficult KYC process while signing up for VPN and they also need to state their purpose of using the services.
- With the new rules the government will basically have access to the personal information of the customers which makes the use of a VPN redundant.
- Many VPN providers are mulling the implications of the new rules and some have even threatened to pull back their service from the country.

Environment & Bio-diversity

Cheetah Reintroduction Project

News: India will release cheetahs from South Africa and Namibia into the wild at Kuno Palpur in Sheopur district of Madhya Pradesh, possibly by the end of this year. Initially, there will be 12 cheetahs from South Africa and eight from Namibia. More would follow in subsequent years.

About:

- The project to translocate cheetahs from Africa to India is being implemented by the environment ministry with the help of the Wildlife Institute of India.
- The Supreme Court had appointed an expert panel, which approved Kuno Palpur as the possible location for cheetah relocation.

Why reintroduction right now?

- 'Reintroduction' of a species means releasing it in an area where it is capable of surviving.
- Reintroductions of large carnivores have increasingly been recognised as a strategy to conserve threatened species and restore ecosystem functions.
- The cheetah is the only large carnivore that has been wiped out completely, mainly by over-hunting in India in historical times.
- India now has the economic ability to consider restoring its lost natural heritage for ethical as well as ecological reasons.

More facts about Cheetah:

- The cheetah, Acinonyx jubatus, is one of the oldest of the big cat species, with ancestors that can be traced back more than five million years to the Miocene era.
- The cheetah is also the world's fastest land mammal.
- African Cheetah is listed as vulnerable in IUCN red listed species.
- The country's last spotted feline died in Chhattisgarh in 1947. Later, the cheetah which is the fastest land animal was declared extinct in India in 1952.
- The Asiatic cheetah is classified as a 'critically endangered' species by the IUCN Red List, and is believed to survive only in Iran.

Why did they become extinct?

- Man's interference is the primary reason. Issues such as human-wildlife conflict, loss of habitat and loss of prey, and illegal trafficking, have decimated their numbers.
- The advent of climate change and growing human populations have only made these problems worse.
- With less available land for wildlife, species that require vast home range like the cheetah are placed in competition with other animals and humans, all fighting over less space.

Stockholm Conference

News: The 50th anniversary of the Stockholm Conference is being observed.

About:

- The United Nations Conference on the Human Environment was held in Stockholm between June 5 to June 16, 1972.
- It was the first such worldwide convergence on planetary environment, with the theme 'Only One Earth'.
- It resulted in the Stockholm Declaration which contained principles and an Action Plan containing recommendations for environmental policy.

Dimensions of the conference:

- Countries agreeing not to 'harm each other's environment or the areas beyond national jurisdiction'.
- An action plan to study the threat to Earth's environment.

- Establishment of an international body called the UN Environment programme (UNEP) to bring in cooperation among countries.

Significance and outcomes of the Stockholm Conference:

- Until 1972, no country had an environment ministry.
- Norwegian delegates returned from the conference to set up a ministry for the environment.
- India set up its ministry of environment and forest in 1985.

Key Agreements of the Stockholm Declaration:

- Natural resources such as air, water, land, flora and fauna must be safeguarded through careful planning for the benefit of the present and future generations.
- The release of toxic substances and heat emissions should not be allowed to exceed the capacity of the environment.
- The poor and developing nations must be supported in their struggle against pollution.
- The environmental policies of the states should support the present or future development potential of developing countries.
- Appropriate steps should be taken by States and international organizations to reach an agreement on meeting the possible national and international economic consequences resulting from the application of environmental measures.
- According to the UN charter and principles of international law, the States have the sovereign right to exploit their own resources as per their own environmental policies. However, the states have this responsibility of making sure that activities within their jurisdiction or control do not cause any harm to the environment of other States or of areas beyond the limits of national jurisdiction.

Global Water Scarcity

News: According to a newly published book, unconventional water sources can help beat global water scarcity.

Methods of Unconventional Water Sources:

Enhancing Rain via Cloud-Seeding

- Global research on cloud-seeding technology indicates that precipitation can be increased up to 15% of the annual norm, depending on the available cloud resources and technical systems used.
- However, it was acknowledged that greater research was needed on the variability of the technology in different areas.

Ice-Bergs

- They account for World's largest source of freshwater.
- Climate Change is causing polar ice caps to melt and break, and scientists, scholars, and leaders have discussed 'towing' polar ice caps to countries with water shortages.
- UAE proposed a similar plan back in 2017 but no action was taken on this front.

Municipal Wastewater

- Ensuring proper treatment of municipal wastewater is already underway in several countries as a major resource of water for agriculture.
- Several countries have launched successful initiatives to treat wastewater to meet demand.

Ballast Water

- It is another transportable resource – freshwater or saltwater held in ballast tanks and cargo holds of ships to provide stability and maneuverability during a journey.
- Around 10 billion tonnes of ballast water is discharged globally every year in accordance to international norms, this water needs to be desalinated. When Desalination is used to treat ballast water, the end product (desalinated water) is free of invasive aquatic organisms and unhealthy chemical compounds, making it usable for public water supply and irrigation.

Drainage Water

- Drainage water used in irrigation in agriculture also has potential for reuse, but is hindered due to its high salinity. Careful management and promotion of salt-resistant crops can be the solution for this.

Fog Harvesting and Micro-Catchment Rainwater Harvesting

- Efficient Fog Harvesting systems wherein moisture in fog is collected through rocks, flora or mesh nets can yield within 20 litres per square metre, for a decade.
- Micro-catchments have also shown potential for households or farmlands in dry environments with low rainfall.

Current State of Water Scarcity in India

- Although India has 16% of the world's population, the country possesses only 4% of the world's freshwater resources.
- In recent times, the water crisis in India has become very critical, affecting millions of people across India.
- As many as 256 of 700 districts in India have reported 'critical' or 'overexploited' groundwater levels according to the most recent Central Ground Water Board data (from 2017).
- Three-fourths of India's rural families lack access to piped, drinkable water and must rely on unsafe sources.
- India has become the world's largest extractor of groundwater, accounting for 25% of the total. Some 70% of our water sources are contaminated and our major rivers are dying because of pollution.

Key Recommendations

- Promoting further research and practice on both technical and nontechnical aspects of unconventional water resources.
- Ensuring that unconventional waters provide benefits, not cost to the environment.
- Positioning unconventional waters as a reliable source of water in times of uncertainty.
- Supporting complementary and multidimensional approaches such as addressing water scarcity and climate change together.

Eco-Sensitive Zones (ESZs)

News: The Supreme Court has directed that every protected forest, national park and wildlife sanctuary across the country should have a mandatory eco-sensitive zone (ESZ) of a minimum one km starting from their demarcated boundaries.

What are ESZ?

- Eco-Sensitive Zones (ESZs) or Ecologically Fragile Areas (EFAs) are areas notified by the MoEFCC around Protected Areas, National Parks and Wildlife Sanctuaries.
- The purpose of declaring ESZs is to create some kind of 'shock absorbers' to the protected areas by regulating and managing the activities around such areas.
- They also act as a transition zone from areas of high protection to areas involving lesser protection.
- The Environment (Protection) Act, 1986 does not mention the word 'Eco-Sensitive Zones'.
- An ESZ could go up to 10 kilometres around a protected area as provided in the Wildlife Conservation Strategy, 2002.
- Moreover, in the case where sensitive corridors, connectivity and ecologically important patches, crucial for landscape linkage, are beyond 10 km width, these should be included in the ESZs.

What are the Directions given by the Court?

- In case any national park or protected forest already has a buffer zone extending beyond one km, that would prevail.
- In case the question of the extent of buffer zone was pending a statutory decision, then the court's direction to maintain the one-km safety zone would be applicable until a final decision is arrived at under the law.
- Mining within the national parks and wildlife sanctuaries shall not be permitted.
- The Principal Chief Conservator of Forests and Home Secretaries of States responsible for the compliance of the judgment.

State of Environment Report, 2022

News: Three of every four river monitoring stations in India posted alarming levels of heavy toxic metals such as lead, iron, nickel, cadmium, arsenic, chromium and copper, according to the State of Environment Report, 2022 from the environmental NGO, the Centre for Science and Environment (CSE).

About:

- The report is an annual compendium of environment-development data and is derived from public sources. Of the 588 water quality stations monitored for pollution, total coliform and biochemical oxygen demand was high in 239 and 88 stations across 21 States — an indicator of poor wastewater treatment from industry, agriculture and domestic households.
- India dumps 72% of its sewage without treatment. Ten States do not treat their sewage at all, as per the Central Pollution Control Board.
- Over a third of India's coastline that is spread across 6,907 km saw some degree of erosion between 1990 and 2018. West Bengal is the worst hit with over 60% of its shoreline under erosion.
- The reasons for coastal erosion include increase in frequency of cyclones and sea level rise and activities such as construction of harbours, beach mining and building of dams.
- While the global average of the Ocean Health Index, a measure that looks at how sustainably humans are exploiting ocean resources, has improved between 2012 and 2021, India's score in the index has declined over the same period.

Environment Performance Index

News: In the recently released Environment Performance Index-2022, India was at the bottom among 180.

About:

- The Environment Performance Index (EPI) is an international ranking system that measures environmental health and sustainability of countries.
- The EPI, a biennial index, was started in 2002 as Environmental Sustainability Index by the World Economic Forum in collaboration with the Yale Center for Environmental Law and Policy and the Columbia University Center for International Earth Science Information Network.

ENVIRONMENT PERFORMANCE INDEX

NEIGHBOURHOOD: WHERE INDIA STANDS

Afghanistan	81	Pakistan	176
Sri Lanka	132	Bangladesh	177
China	160	India	180
Nepal	162		
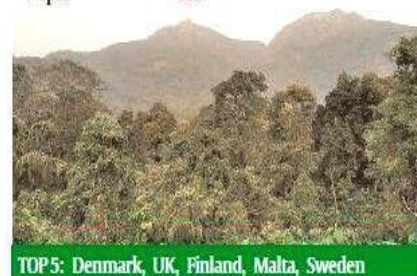
TOP 5: Denmark, UK, Finland, Malta, Sweden

SOME KEY INDICATORS, AND INDIA

Biodiversity	179	Green House Gas emissions	171
Protected Areas	177		
Species Protection Index	175	Biodiversity habitat index	170
Air Quality	179	PM 2.5	174
Climate Policy	165	Waste management	151
Ecosystem vitality	178		

Highlights of the Index:

- Denmark tops the 2022 rankings - an achievement rooted in strong performance across nearly all issues tracked by the EPI, with notable leadership in efforts to promote a clean energy future and sustainable agriculture.
- The United Kingdom and Finland place 2nd and 3rd, both earning high scores for slashing greenhouse gas emissions in recent years.
- The United States places 20th out of 22 wealthy democracies in the Global West and 43rd overall.
- With a paltry score of 18.9, India's 180th ranking comes after Pakistan, Bangladesh, Vietnam and Myanmar.
- India has also scored low on rule of law, control of corruption and government effectiveness, according to EPI.
- India was ranked 168th in EPI-2020, with a score of 27.6.
- In EPI-2020, Denmark has been ranked first in environmental health and sustainability.

Importance of EPI:

- EPI enables decision-makers to recognize the drivers of top-tier performance.

- Analysis of the EPI data demonstrates that financial resources, good governance, human development, and regulatory quality matter for elevating a country's sustainability.
- Highlighting these connections, the EPI helps to promote sustainable development in support of a more environmentally secure and equitable future.

Etalin Hydro Power Project

News: Wildlife scientists and conservationists in Arunachal Pradesh flagged threats to local biodiversity from the proposed Etalin hydroelectric (3,097 MW) project in Dibang Valley. To raise the issue, they approached the Forest Advisory Committee (FAC) under the Union Ministry of Environment, Forest and Climate Change (MoEF&CC).

Concerns Raised by Environmentalists:

- Conservationists highlighted that the FAC sub-committee ignored established tenets of forest conservation and related legal issues while recommending the proposal.
- FAC ignored the threat of forest fragmentation.
- Forest fragmentation results from ill-planned intrusion of developmental projects into contiguous landscapes with natural forests and threatens rare floral and faunal species in a biodiversity hotspot.
- FAC's site inspection report was also questioned for leaving out key details like number of grids across an altitudinal range inspected and the status of vegetation there, direct and indirect signs of wild animals listed in the various schedules of the Wildlife Protection Act, 1972 and overall appreciation of the ecological value of the area.
- The inadequacy of the Environment Impact Assessment report on Etalin was also highlighted.
- Wildlife officials ignored observations which include the threat to 25 globally endangered mammal and bird species in the area to be affected.
- The proposed mitigation measures like setting up butterfly and reptile parks are inadequate and insufficient.

Forest Advisory Committee:

- It is a statutory body which was constituted by the Forest Conservation Act, 1980
- It comes under the Ministry of Environment, Forests and Climate Change
- It considers questions on diversion of forest land for non-forest uses such as mining, industrial projects, townships and advises the government on the issue of granting forest clearances. However, its role is advisory.

Dibang River:

- The Project is based on the river Dibang and is proposed to be completed in 7 years.
- Dibang is a tributary of the Brahmaputra River which flows through the states of Arunachal Pradesh and Assam.
- It envisages construction of two dams over the tributaries of Dibang: Dir and Tangon.
- The Project falls under the richest bio-geographical province of the Himalayan zone and would be located at the junction of major biogeographic zones like Palearctic Zone and Indo-Malayan Zone.
- It is expected to be one of the biggest hydropower projects in India in terms of installed capacity.

Way Forward:

- While considering projects that are ecologically sensitive to the local tribal people and environment as such it is important to engage local community in the decision making process.
- A complete assessment of the impact of the project on the local environment should be studied comprehensively. Also crucial is to demarcate ecological sensitive areas which are at risk of loss of biodiversity.

Carbon Bombs

News: The usage of the term 'carbon bombs' picked up after an investigative project of The Guardian this year.

About:

- According to the Guardian, it is "an oil or gas project that will result in at least a billion tonnes of CO2 emissions over its lifetime."
- Around 195 such projects have been identified world over, including in the US, Russia, West Asia, Australia and India.
- According to the report, they will collectively overshoot the limit of emissions that had been agreed to in the Paris Agreement of 2015.

What is the plan for 'defusing' carbon bombs?

- The network working towards this goal is called Leave It in the Ground Initiative (LINGO)
- Its mission is to "leave fossil fuels in the ground and learn to live without them."
- It believes the root of climate change is the burning of fossil fuels, and the 100% use of renewable energy sources is the solution.
- LINGO aims to organize ground support for protesting such projects, challenge them through litigation, and conduct analysis and studies for the same.

Green Jobs

News: During his speech on the occasion of World Environment Day, PM Modi highlighted India's efforts to create 'green jobs'.

About:

- They are a class of jobs that directly have a positive impact on the planet, and contribute to the overall environmental welfare.
- They're aimed at reducing the negative environmental impact of economic sectors and furthering the process of creating a low-carbon economy.
- Jobs involving renewable energy, conservation of resources, ensuring energy efficient means are categorised under the same.

Green Jobs Initiative:

- The International Labour Organisation, the International Trade Union Confederation, the United Nations Environment Programme and the International Employers Organisation collectively launched the Green Jobs Initiative in 2008. It is aimed at bettering placements, training and creating opportunities for individuals to work in 'green jobs'.

What are India's effort in this regard?

- A Skill Council for Green Jobs has been launched on October 1, 2015.
- It was set up to be a not-for-profit, independent, industry-led initiative.
- It was aligned to the National Skill Development Missions.
- Promoted by the Ministry of New and Renewable Energy (MNRE) and the Confederation of Indian Industry (CII).
- It aims to help manufacturers and other service providers in India's 'green business' sector.

Importance:

- For India 'green jobs' can prove immensely useful to the country with sectors like renewable energy, waste management, green transport and urban farming all having great potential to employ a trained workforce.

Microplastics in Antarctica

News: Scientists have found Microplastics - plastic pieces smaller than a grain of rice in freshly fallen Antarctic snow for the first time, which can influence the climate by accelerating melting of ice.

Key Findings:

- Researchers gathered samples of snow from 19 different sites in the Ross Ice Shelf in Antarctica and discovered plastic particles in all of them.

- There were 13 different types of plastic found, with the most common being PET (Polyethylene Terephthalate), commonly used to make soft drink bottles and clothing. The possible sources of microplastics were examined.
- An average of 29 microplastic particles per litre of melted snow, which is higher than marine concentrations reported previously from the surrounding Ross Sea and in Antarctic sea ice.
- Microplastics may have travelled thousands of kilometres through the air, however it is likely that the presence of humans in Antarctica has established a microplastic 'footprint'.

What are implications of the recent findings?

- Microplastics can have harmful substances stuck on to their surfaces such as heavy metals, algae. So they can provide a way in which harmful species can make it into some remote and sensitive areas, that otherwise wouldn't get there.
- Humans inhale and ingest microplastics via air, water and food. High levels of ingested microplastics in the human body have the potential to cause harmful effects, including cell death and allergic reactions.
- Microplastics may also be increasing the impact of global warming. Snowfields, ice caps and glaciers around the world are already melting fast, and scientists say dark-coloured microplastics deposited at these locations can make things worse by absorbing sunlight and enhancing local heating.
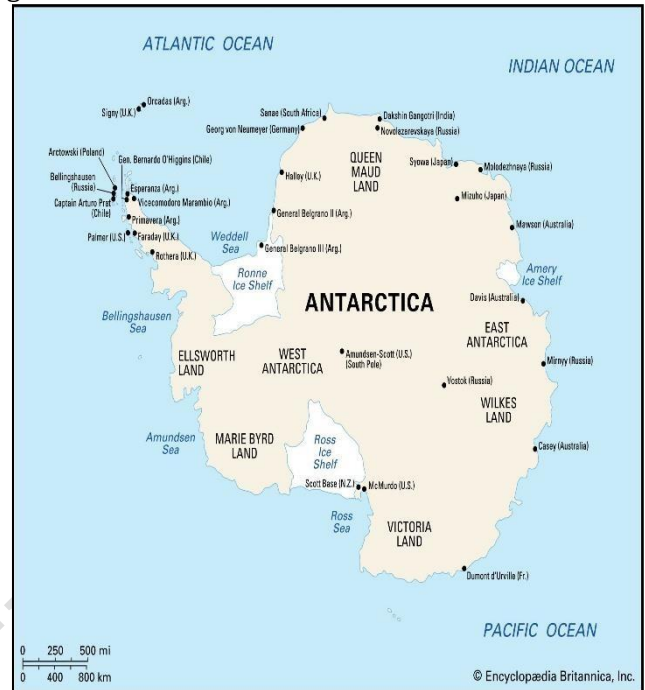
Renewable Energy Installations in 2021

News: India ranked third in renewable energy installations in 2021, after China and Russia, according to a Renewable 2022 Global status report published by REN21 (Renewable Energy Policy Network for the 21st Century).

About REN21:
- REN21 is the only global renewable energy community of actors from science governments, NGOs, and industry that keep track of global development in renewable sector.
- It was created in 2004 as an outcome of the Bonn2004 International conference on Renewable Energy.
- It enables the decision makers to make the shift to renewable energy happen now.

Key inputs from the Report:
- India installed 4 gigawatts (GW) of renewable energy projects in 2021
- India ranked fourth in total solar installations (60.4 GW) for the year overtaking Germany (59.2 GW) for the first time.
- Overall in the world, countries added around 3,146 GW of total installed renewable power capacity in 2021 which is a rise of 11% from the previous year.
- Despite the rise in installed capacity, the share of renewables in global energy use stagnated in 2021. The renewable energy capacities achieved so far come nowhere close to the targets required to keep the world on track to reach net-zero emissions by 2050.
- Despite the impacts of the COVID-19 pandemic, renewables saw a year of record growth in both investment and installation.
- The invasion of Ukraine added to the energy crisis. Governments, however, responded by increasing fossil fuel production and subsidies. This has caused a record surge in carbon dioxide emissions (up by 6%, adding more than two billion tonnes).

What are the steps taken by India to increase renewable energy installation?

- India has announced a target of 500 GW of renewable energy by 2030through sources such as solar photovoltaic (PV) energy, wind and hydropower.
- India extended its national solar production programme, which provides incentives to domestic and international companies for setting up battery manufacturing plants.
- In 2021, after India increased its cap on solar PV installations under its net metering scheme, the country's rooftop PV market hit a record high.
- Other government initiatives such as Production Linked Incentive Scheme, Green Term Ahead, Day ahead market and Green Open access rules (which facilitates the generation, purchase and consumption of green energy including that produced by waste-to-energy plants).

Atlantification

News: According to a study, it is stated that parts of the Arctic region near Norway are warming at as much as seven times the rate of warming in the rest of the world.

- The region around the northern Barents Sea has been warming two to two-and-a-half times the average warming of the Arctic region and five to seven times the warming in the rest of the world.
- Such intense warming has never been observed in the Arctic region before. This is leading to the phenomenon of Atlantification.

What is Atlantification?

- Scientists have discovered 'hotspots' where some parts of the Barents Sea have started to closely resemble the Atlantic. This phenomenon has been termed Atlantification.
- The north-flowing ocean currents transport the warm waters of the Atlantic into the Arctic Ocean through the Barents Sea.
- Unlike the Atlantic and Pacific, the upper waters of the Eurasian Arctic Ocean get warmer as they get deeper.
- The top of the ocean is typically covered by sea ice. Below this is a layer of cool freshwater, followed by a deeper layer of warmer, saltier water delivered to the Arctic from the Atlantic by ocean currents.
- According to NASA data, the total area covered by sea ice in this region has fallen by almost half since satellite records began in the early 1980s.
- One possible reason for this is that, when sea ice melts through the summer, it replenishes the freshwater layer that sits above the warmer Atlantic layer. With less sea ice around, the amount of freshwater dwindles, this, in turn, causes the ocean to mix together, drawing more Atlantic heat up towards the surface. This 'Atlantification' can, in turn, cause more ice to melt from below.
- Human-caused global climate change has been accelerating the Atlantification process and this will in turn significantly affect the weather patterns, ocean circulations, and the entire Arctic ecosystem.

Potential Impact of warming:

- The exceptional warming of the Arctic could lead to more extreme weather in North America, Europe and Asia. The Arctic is the fastest warming region in the world with estimates ranging from two to four times the rate of warming in the rest of the world. The reason for this is a closed loop of melting sea ice and faster warming.
- As the Arctic region warms, the sea ice melts and exposes the ocean surface below. The surface absorbs more energy than sea ice would have and enhances the warming, making more sea ice melt.
- Lightning strikes, which were once rare in the region, have increased by eight times in the last decade. Storms and lightning strikes usually don't form in the region as they need heat for the convection system to form. But rapid warming is now making heat available.
- The warming of the Barents Sea also led to an extreme snowfall event, often dubbed as the 'Beast from the East', across most of Europe in 2018. Around 140 gigatonnes of water evaporated from the Barents Sea and contributed 88% of the snow that fell across Europe during the event.

Way Forward:
- As Arctic Sea ice is a barometer for the health of the global environment, all countries need to support and commit to meaningful climate action such as COP 21 to reduce global temperature.
- The Arctic Council should seriously focus more on dealing with issues such as global warmuing, melting sea ice, plastic pollution and black carbon.

Single-Use Plastic

News: The Centre has banned the use of 'single-use-plastic' from July 1 and now defined a list of single-use plastic items that will be banned from this date.
- As per MoEFCC, the manufacture, import, stocking, distribution, sale and use of following single-use plastic, including polystyrene and expanded polystyrene, commodities shall be prohibited with effect from the 1st July, 2022.

What is Single-Use Plastic?
- It refers to plastic items that are used once and discarded. E.g., plastics used in packaging of items, bottles (shampoo, detergents, cosmetics), polythene bags, face masks, coffee cups, cling film, trash bags, food packaging etc.

Findings of Minderoo Foundation Report (2021)
- Single-use plastics account for a third of all plastic produced globally, with 98% manufactured from fossil fuels.
- India features in the top 100 countries of single-use plastic waste generation – at rank 94 (the top three being Singapore, Australia and Oman).
- India's domestic production of SUP is 8 million metric tonnes annually, and its import of 2.9 MMT.
- India's per capita generation is 4 kg.
- The largest share of single-use plastic is that of packaging with as much as 95% of single-use belonging to this category from toothpaste to shaving cream to frozen foods.
- Single-use plastic also accounts for the majority of plastic discarded – 130 million metric tonnes globally in 2019 all of which are burned, buried in landfills or discarded directly into the environment.
- On the current trajectory of production, it has been projected that single-use plastic could account for 5-10% of greenhouse gas emissions by 2050.

What items are being banned?
- Central Pollution Control Board (CPCB) have announced a ban on earbuds, balloon sticks, candy and ice-cream sticks, cutlery items including plates, cups, glasses, forks, spoons, knives, trays, sweet boxes, invitation cards, cigarette packs, PVC banners measuring under 100 microns and polystyrene for decoration.
- The Ministry had already banned polythene bags under 75 microns in September 2021, expanding the limit from the earlier 50 microns. From December 2022, the ban will be extended to polythene bags under 120 microns.
- According to the Plastic Waste Management Rules, 2016, there is also a complete ban on sachets using plastic material for storing, packing or selling gutkha, tobacco and pan masala.

9 REASONS TO REFUSE SINGLE-USE PLASTIC

1. Made from fossil fuels
2. Huge carbon footprint
3. Will still be here in hundreds of years
4. Only a tiny percentage is recycled
5. Leaches toxins into food & drink
6. Causes hormone disruption & cancers
7. Pollutes our oceans
8. Kills marine animals and birds
9. Enters our food chain

LESS PLASTIC.

WWW.LESSPLASTIC.CO.UK

How will the ban be monitored?
- The ban will be monitored by the CPCB from the Centre and by the State Pollution Control Boards (SPCBs) that will report to the Centre regularly.
- Directions have been issued at national, state and local levels to all petrochemical industries to not supply raw materials to industries engaged in the banned items.
- SPCBs and Pollution Control Committees will modify or revoke consent to operate issued under the Air/Water Act to industries engaged in single-use plastic items.

- Local authorities have been directed to issue fresh commercial licenses with the condition that SUP items will not be sold on their premises, and existing commercial licences will be cancelled if they are found to be selling these items.
- CPCB has issued one-time certificates to 200 manufacturers of compostable plastic and the BIS passed standards for biodegradable plastic.
- Those found violating the ban can be penalised under the Environment Protection Act 1986 which allows for imprisonment up to 5 years, or a penalty up to Rs 1 lakh, or both. Violators can also be asked to pay Environmental Damage Compensation by the SPCB.

Security & Disaster Management

Q. Analyse the multidimensional challenges posed by external state and non-state actors, to the internal security of India. Discuss measures required to combat these threats.

Q. Discuss the role of social networking sites in internal security challenges.

Q. Police reform is the need of the hour to make Indian justice delivery system more efficient. Comment.

Q. "India is one of the major hubs of illicit drug trade." Discuss the statement in light of drug abuse problems in India especially in border areas.

General Studies – 4

Ethics, Integrity & Aptitude

1. Ethics and Human Interface: Essence, determinants and consequences of Ethics in-human actions; dimensions of ethics; ethics - in private and public relationships. Human Values - lessons from the lives and teachings of great leaders, reformers and administrators; role of family society and educational institutions in inculcating values.
2. Attitude: content, structure, function; its influence and relation with thought and behaviour; moral and political attitudes; social influence and persuasion.
3. Aptitude and foundational values for Civil Service, integrity, impartiality and non-partisanship, objectivity, dedication to public service, empathy, tolerance and compassion towards the weaker-sections.
4. Emotional intelligence-concepts, and their utilities and application in administration and governance.
5. Contributions of moral thinkers and philosophers from India and world.
6. Public/Civil service values and Ethics in Public administration: Status and problems; ethical concerns and dilemmas in government and private institutions; laws, rules, regulations and conscience as sources of ethical guidance; accountability and ethical governance; strengthening of ethical and moral values in governance; ethical issues in international relations and funding; corporate governance.
7. Probity in Governance: Concept of public service; Philosophical basis of governance and probity; Information sharing and transparency in government, Right to Information, Codes of Ethics, Codes of Conduct, Citizen's Charters, Work culture, Quality of service delivery, Utilization of public funds, challenges of corruption.
8. Case Studies on above issues

Responsibility of celebrity endorsers

News: The Central Consumer Protection Authority (CCPA) notified guidelines for **'Prevention of Misleading Advertisements and Endorsements for Misleading Advertisements, 2022'.**
The guidelines, brought in with immediate effect, are applicable to all forms of advertisements.
- According to data released by AdEx India, a division of TAM (Television Audience Measurement) Media Research, celebrity endorsements saw a 44% rise in 2021 over 2020.

What are celebrity endorsements?
- The use of celebrities in order to increase the sales and/ or the recall value of a brand is called celebrity endorsement

Why are celebrities hired?
- Brand endorsers impact the buyers' purchasing decisions because of the celebrity's authority and/or relationship with the audience.
- When brand endorsers don't have an idea, so they just hire celebrities as buyers get influenced easily.
- To increase the sales.

What are Unethical Aspects of Celebrity Endorsement?

- **Authenticity** - Usage of by famous Celebrities may look unethical when he is a non-user of the product. Moreover, it is quite complex to find out whether a celebrity is a common user of the product. For example, Sunny Deol endorsing Lux Cozi undergarments or Saif Ali Khan endorsing Lakhani shoes.
- **Tarnished image**: Celebrity endorsements are unethical when the people involved in any controversies in their life endorse the product reflecting their negative image poorly on the brand so endorsed. For example, Malayalam Actor Dileep who is involved in sexual abuse case endorses many products
- **Unsafe or ineffective product endorsement**: Unethical aspects pave the way again when celebrities endorse some products which are hazardous to society. For example, Ajay Devgn, Shahrukh Khan and Akshay Kumar endorsing tobacco products (Vimal)
- **Compel to buy unwanted products**: There are chances wherein celebrities indirectly drive consumers' impulsive buying behaviour resulting in the purchase of unnecessary/harmful products. For example, Salman Khan endorsed Thumbsup (tagline as Aaj Kuch Toofani Karte hai)
- **Misleading information**: When celebrities say something deceptive or make false claims then the endorsement is lacking in ethics. For example, Fair and Lovely are endorsed by many celebrities as skin whitening creams.
- **Conflict of interest**: When a particular ad conflicts with the celebrity's image, principles, interests etc., the Celebrity is totally money-minded, hence the ethical implications can be very serious. For example, Akshay Kumar endorsed tobacco products and got backlashed for it later as he was initially against them.

However, not all love is lost. There are many celebrity actors, sportsperson who have acted based upon their conscience and refused unethical endorsements. Here's to name a few.

- **Virat Kohli** – In an interview with The Hindu, Virat Kohli claimed that he had turned down a multi-crore soft drink endorsement deal for a simple reason that he does not consume aerated drinks.
- **Pullela Gopichand and PV Sindhu** - After winning the All England Badminton Championship in 2002, Pullela Gopichand was offered a deal by a major cola company. Concerned about the health hazards of soft drinks, particularly among children, the badminton star turned down the offer. Following in her coach's footsteps, Olympic silver medallist PV Sindhu has also made it a point not to endorse soft drinks or any other products which have an adverse impact on the youth.
- **Randeep Hooda** – He had also refused to endorse fairness creams in the past, saying that India's obsession with white skin is a result of '**colonial hangover**'.

Short News for Prelims

Astra MK-I BVRAAM

News: Ministry of Defence has signed a contract with Bharat Dynamics Limited (BDL) for supply of ASTRA MK-I Beyond Visual Range (BVR) Air to Air Missile (AAM) and associated equipment for the Indian Air Force & Indian Navy at a cost of Rs 2,971 crore under Buy (Indian-IDDM) category.

About:

- Till now, the technology to manufacture missile of this class indigenously was not available.
- ASTRA MK-I BVR AAM has been Indigenously Designed & Developed by Defence Research and Development Organisation (DRDO) in coordination with the Indian Air Force (IAF).
- Air to Air missile with BVR capability provides large Stand Off Ranges to own fighter aircraft which can neutralise the adversary aircraft without exposing itself to adversary Air Defence measures, thereby gaining & sustaining superiority of the Air Space.
- This missile is technologically and economically superior to many such imported missile systems.
- The missile, for which successful trials have already been undertaken by the IAF, is fully integrated on the Su 30 MK-I fighter aircraft & will be integrated with other fighter aircraft in a phased manner, including the Light Combat Aircraft (Tejas).
- The Indian Navy will integrate the missile on the MiG 29K fighter aircraft.

INS Gomati

News: Recently, the Indian Navy Ship (INS) Gomati was decommissioned from the naval dockyard in Mumbai.

About:

- INS Gomati derives her name from the vibrant river Gomti. Gomati River, also called Gumti, tributary of the Ganga River.
- When decommissioned, INS Gomati was also the oldest of the guided-missile frigates in the Western Fleet.
- It was commissioned in 1988 at Mazagon Dock Ltd, Bombay.

In what operations has it participated?

- Operation Cactus (1988) – Under this the Indian armed forces have helped the government of Maldives in the neutralization of the coup attempt.
- Operation Parakram (2001) – It was launched in the wake of terrorist attack on Parliament. It was the first full scale mobilization since the 1971 Indo-Pak war.
- The Rainbow Initiative (2004) was launched to assist those affected by the Tsunami, in partnership with the Sri Lankan government.

Awards Given:

- Awarded twice the coveted Unit Citation, once in 2007-08 and again in 2019-20.

Mid-Air Refuelling

News: Hindustan Aeronautics Ltd, (HAL) will convert six Boeing-767 civilian aircraft into mid-air refuellers for the Indian Air Force (IAF), for which it had entered into an agreement with Israel Aerospace Industries (IAI) in April.

About:

- The IAI has expertise in undertaking such conversion. The overall process is expected to take at least three or four years. The IAF has been looking to procure mid-air refuellers for some time.
- Mid-air refuelling significantly enhances the range and payload of fighter jets.

- It also allows aircraft to stay in the air much beyond their normal limits allowing better exploitation of the platform's capabilities.

High Mobility Artillery Rocket System (HIMARS)

News: United States would send four HIMAR systems to Ukraine.

About:

- The M142 HIMARS, a light multiple rocket launcher, was developed for the US Army in the late 1990s. The High Mobility Artillery Rocket System (HIMARS) is mounted on a truck, and can carry a container with six rockets.
- The HIMARS can launch a medium-range rocket, but is also capable of firing a longer-range missile, the Army Tactical Missile System, which has a range of about 300 km.

BuffaloPox

News: The recent spread of monkeypox to non-endemic countries has trained the spotlight on reemerging viruses such as buffalopox, which was first identified in India. Since the first case in 1934 globally recorded in India, the country has seen several sporadic outbreaks.

About:

- It is a zoonotic disease endemic to India.
- It has its root in smallpox vaccines. Live virus used to inoculate buffaloes to produce the smallpox vaccine in India evolved into buffalopox over time.
- It is caused by buffalopox virus (BPXV); it is a Poxviridae for which the natural host is buffalo.
- It is classified in the Orthopoxvirus (OPV)

Symptoms

- It is associated with high morbidity (80%)
- The clinical symptoms of the disease are characterized by wartline lesions on the udder, teats, inguinal region, and over the parotid.
- In the severe form, generalized rash is observed.

Painted Leopard Gecko

News: Recently, researchers have identified a new colorful species of leopard geckos named Eublepharis pictus, also known as the Painted Leopard Gecko, earlier it was thought to belong to a known species.

About:

- The new species differs from all members of the genus Eublepharis except for E hardwickii. Eublepharis is a genus of terrestrial geckos native to eastern and southwestern Asia.
- The new species lives in dry evergreen forests mixed with scrub and meadows. It is strictly nocturnal, actively foraging along trails in the forest after dusk.
- Researchers had initially identified the specimen as an East Indian Leopard Gecko (Eublepharis hardwickii). This new species appears to be common in the forests of Andhra Pradesh and Odisha.
- The gecko genus Eublepharis now has 7 species. Based on IUCN (International Union for the Conservation of Nature) conservation prioritization criteria, the researchers suggested it to list as Near Threatened (NT).

Ancient City in Iraq unearthed

News: The ruins of a 3,400-year-old lost city have been unearthed in Iraq after extreme drought severely depleted water levels in the country's largest reservoir.

About:

- The settlement is thought to be the ancient city of Zakhiku, once a buzzing political center in the region.
- The Bronze Age settlement, long engulfed by the Tigris River, emerged earlier this year in the Mosul Dam.
- The city is located in the Kurdistan region at a site known as Kemune.
- The settlement was likely a key hub during the Mittani Empire, from 1550 to 1350 B.C.
- An earthquake likely destroyed much of the city in around 1350 B.C., but some of its ruins are preserved underneath collapsed walls.

Khaan Quest 2022

News: A multinational peacekeeping Exercise Khaan Quest 2022 featuring participation from military contingents from 16 countries including India commenced in Mongolia.

About:

- President of Mongolia Ukhnaagiin Khurelsukh inaugurated the exercise.
- The Indian Army is represented by a contingent from the LADAKH SCOUTS.
- The 14-day exercise is aimed at enhancing interoperability, building military to military relationships, and developing peace support operations and military readiness among participating nations.

Arignar Anna Zoological Park

News: The Arignar Anna Zoological Park (AAZP), Chennai has introduced a novel method to check the littering of plastic bottles inside its premises.

- Also known as Vandalur Zoo, it is a zoological garden located in Vandalur, in southwestern part of Chennai, Tamil Nadu.

What method have they introduced to curb plastic pollution?

- The authorities of the state's biggest zoo have begun collecting a deposit of ten rupees each for every bottle of water from the visitors. The money is refunded if they return the empty bottle. The officials say the initiative has begun yielding good results.
- Meanwhile, the state environment minister Siva. V. Meyyanathan and health minister Ma. Subramanian in Chennai distributed the traditional cloth bags called "Manchappai," which means 'yellow bags,' to promote use of environmentally friendly carry bags instead of the harmful plastic bags.

Exercise Sampriti – X

News: As part of the ongoing India Bangladesh bilateral defence cooperation, a joint military training exercise Ex SAMPRITI-X is being conducted at Jashore Military Station in Bangladesh from 05 June to 16 June 2022.

About:

- Exercise SAMPRITI is an important bilateral defence cooperation endeavour conducted alternately by both countries which aims to strengthen and widen the aspects of interoperability and cooperation between both the armies.
- During the joint military exercise Ex SAMPRITI-X, armies of both the Nations will share expertise in multiple simulated scenarios of Counter Terrorism, Humanitarian Assistance & Disaster Relief and UN Peacekeeping Force under UN mandate.

World's First Fishing Cat Census

News: The Chilika Lake, Asia's largest brackish water lagoon, has 176 fishing cats, according to a census done by the Chilika Development Authority (CDA) in collaboration with the Fishing Cat Project (TFCP). This is the world's first population estimation of the fishing cat done outside the protected area network.

About:

- About twice the size of a typical house cat, the fishing cat (Prionailurus viverrinus) is a feline known to even dive to catch fish. Wetlands are the favorite habitats of the fishing cat.
- In India, fishing cats are mainly found in the mangrove forests of the Sundarbans, on the foothills of the Himalayas along the Ganga and Brahmaputra river valleys and in the Western Ghats.
- The globally threatened cats are found in wetlands in major South and Southeast Asian river basins starting from the Indus in Pakistan till the Mekong in Vietnam and in Sri Lanka and Java.

Protection Status:

- IUCN Status – Endangered
- CITES lists the fishing cat on Appendix II part of Article IV
- In India, the fishing cat is included in Schedule I of the Indian Wildlife (Protection) Act, 1972.

Jan Samarth Portal

News: Prime Minister Narendra Modi urged bank chiefs to make it easier for people to get loans through the new Jan Samarth portal, a repository of a dozen credit-linked government schemes.

About:

- He said the new portal would make life easier for farmers, students and entrepreneurs as they could assess which scheme worked best for them, on that platform instead of visiting various websites.
- Finance and Corporate Affairs Minister Nirmala Sitharaman said as of now, 12 credit schemes that granted credit from banks were on the portal, to ensure that citizens need not answer the same questions whenever they applied for schemes.

Chief of Defense Staff (CDS)

News: Government has widened the CDS eligibility. It now includes serving or retired three-star Army Lt General, Air Marshal and Vice Admiral for the post.

About:

- The Ministry of Defence has issued three separate notifications amending the rules of the Army, the Navy and the Air Force for the appointment of the next Chief of Defence Staff CDS.
- Serving Three-star officers Lieutenant General in Army, Air Marshal in Air Force and Vice-Admiral in Navy or retired Service Chiefs or three-star officers can be appointed Chief of Defence Staff if considered necessary in the public interest.
- The Officers should not have attained the age of 62 years.
- The CDS post has been lying vacant since the passing away of General Bipin Rawat who lost his life in a chopper crash in Tamil Nadu on 8th December last year.

Sievierodonetsk
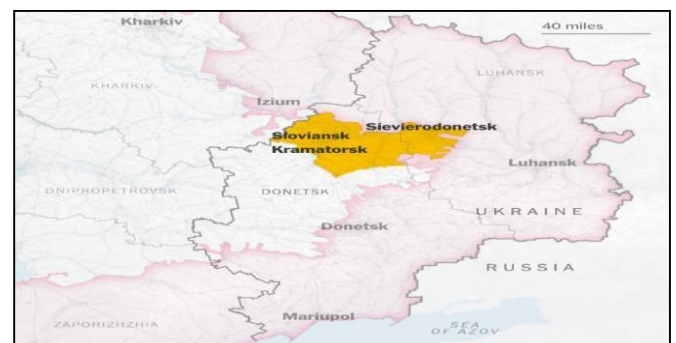
News: More than a 100 days after Russia began its invasion of Ukraine, it is the strategic eastern city of Sievierodonetsk that remains the focus of intense fighting in the battle's current phase.

About:

- Located nearly 140 km south of the Russian border, Sievierodonetsk is one of the largest cities of the Donbas region.
- It is located near the left bank of the Siverskyi Donets river, and has a population of over a lakh.
- Administratively, Sievierodonetsk falls under Ukraine's Luhansk oblast (province).
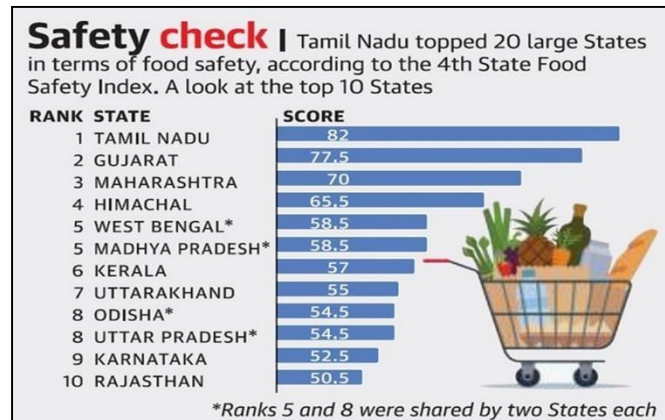- It is a big industrial hub known for chemical works and machine-building factories.
- If the city of Sievierodonetsk falls, then it will allow Russia to control the entire Luhansk region.

4th State Food Safety Index

News: On the occasion of World Food Safety Day Union Minister for Health and Family Welfare Dr Mansukh Mandaviya released the 4th State Food Safety Index (SFSI) for the year 2021-22.

Safety check | Tamil Nadu topped 20 large States in terms of food safety, according to the 4th State Food Safety Index. A look at the top 10 States

RANK	STATE	SCORE
1	TAMIL NADU	82
2	GUJARAT	77.5
3	MAHARASHTRA	70
4	HIMACHAL	65.5
5	WEST BENGAL*	58.5
5	MADHYA PRADESH*	58.5
6	KERALA	57
7	UTTARAKHAND	55
8	ODISHA*	54.5
8	UTTAR PRADESH*	54.5
9	KARNATAKA	52.5
10	RAJASTHAN	50.5

Ranks 5 and 8 were shared by two States each

About:

- SFSI was started from 2018-19 with the aim of creating a competitive and positive change in the food safety ecosystem in the country.
- The SFSI measures the performance of States on the basis of five parameters of food safety set by the Health Ministry.
- The rating is done by the Food Safety and Standards Authority of India (FSSAI).

Who were the winners?

- This year, among the larger states, Tamil Nadu was the top ranking state, followed by Gujarat and Maharashtra.
- Among the smaller states, Goa stood first followed by Manipur and Sikkim.

- Among UTs, Jammu & Kashmir, Delhi and Chandigarh secured first, second and third ranks.

Tiangong Space Station

News: Three Chinese astronauts docked at the country's space station on Sunday.

About:

- The space station will operate in low-Earth orbit at an altitude of 340-450 km above Earth's surface.
- Tiangong, which means 'heavenly palace', is expected to become fully operational by the end of the year and is set to be operational for at least 10-15 years

Significance:

- The low orbit space station would be the country's eye from the sky, providing round the clock bird's-eye view for its astronauts on the rest of the world.
- It shall aid China's aim to become a major space power by 2030.
- It replicates the International Space Station (ISS), from which China was excluded.

What are the other planned space stations?

- **Lunar Gateway** – It is joint project of NASA, Japan Aerospace Exploration Agency (JAXA), and Canadian Space Agency (CSA). It envisages to be first space station beyond low Earth orbit and the first space station to orbit the moon.
- **The Russian Orbital Service Station**
- **Starlab** – Is the name given to the planned LEO space station designed by Nanoracks for commercial space activities use.
- **Indian Human Spaceflight Programme** - India plans to deploy a 20-tonne space station as a follow-up programme of the Gaganyaan mission, it will be deployed in 5–7 years after the completion of the Gaganyaan project.

Commission for Air Quality Management (CAQM)

News: Recently, the Commission for Air Quality Management (CAQM) has issued directions to ban the use of coal in industrial, domestic and other miscellaneous applications in the entire Delhi-NCR region from 1st January 2023.

About:

- The Commission was first formed by an ordinance in October 2020.
- The erstwhile Environment Pollution (Prevention and Control) Authority, or EPCA had been dissolved to make way for the Commission.
- The Commission will be a statutory authority.
- The Commission will supersede bodies such as the central and state pollution control boards of Delhi, Punjab, Haryana, UP and Rajasthan.

Composition:
- The Chairperson of the commission will be a government official of the rank of Secretary or Chief Secretary.
- The chairperson will hold the post for three years or until s/he attains the age of 70 years.
- It will have members from several Ministries as well as representatives from the stakeholder States.
- It will have experts from the Central Pollution Control Board (CPCB), Indian Space Research Organisation (ISRO) and Civil Society.

Powers and Functions:
- It will have the powers to issue directions to these state governments on issues pertaining to air pollution.
- It will entertain complaints as it deems necessary for the purpose of protecting and improving the quality of the air in the NCR and adjoining areas.
- It will also lay down parameters for control of air pollution.
- It will also be in charge of identifying violators, monitoring factories and industries and any other polluting unit in the region, and will have the powers to shut down such units.
- It will also have the powers to overrule directives issued by the state governments in the region, that may be in violation of pollution norms.

Fast Radio Burst (FRB)

News: In a paper published in Nature, astronomers have reported a fast radio burst (FRB) whose characteristics are different from almost all other FRBs previously detected, except one. The scientists used the National Science Foundation's Karl G Jansky Very Large Array (VLA) and other telescopes to study the object.

About:
- FRBs are bright flashes of light that appear for a few milliseconds and then vanish.
- Since the first FRB was discovered in 2007, 140 more were discovered until June 2021, according to a post on the MIT website.
- Their origins are unknown, and their appearance is unpredictable.
- The new study in Nature describes FRB 20190520B, first discovered in 2019. What makes it different is that unlike many other FRBs, it emits frequent, repeating bursts of radio waves. And between bursts, it constantly emits weaker radio waves.
- Only one FRB has been previously observed to behave this way. Called FRB 121102, that was discovered in 2012.

QS World University Rankings

News: The Indian Institute of Science, Bengaluru (IISc) is the new national leader in the QS World University Rankings, 2023 released, which also shows that all Indian Institutes of Technology (IITs) improved their standing.

About:
- The latest edition of QS World University Rankings features 41 Indian universities, of which 12 improved their positions, 12 remained stable, 10 declined and seven are new entries.

INDIA'S BEST
Top Indian institutes in QS World University Rankings 2023

2023	Institute	2022
155	IISc Bangalore	186
172	IIT Bombay	177
174	IIT Delhi	185
250	IIT Madras	255
264	IIT Kanpur	277
270	IIT Kharagpur	280
369	IIT Roorkee	400
384	IIT Guwahati	395

Source: QS (https://www.TopUniversities.com/)

- The IISc ranks 155th globally, and is the global leader in the citations per faculty (CpF) indicator, which QS uses to evaluate the impact of the research produced by universities.
- The IISc is the fastest rising South Asian university among the top-200 universities in the QS rankings, having climbed 31 places year on year.
- The IISc is the world's top research university, achieving a perfect score of 100/100 for CpF.
- The IIT Bombay, which was the top Indian university in QS World University Rankings of the previous edition, is the second best Indian institution this time and climbed five places

globally to reach the 172 rank. The third best Indian university is the Indian Institute of Technology, Delhi, followed by IIT Madras and IIT Kanpur.

- O.P. Jindal Global University is the top-ranked private institute in India, and moved up from the 701-750 ranking band to 651-700, followed by the Manipal Academy of Higher Education and Amity University.

Türkiye

News: The United Nations has agreed to a formal request for the name change from Turkey. Turkey will now be known as Türkiye. Domestically, citizens refer to the land as Turkiye, but its anglicised version 'Turkey' was adopted internationally.

Why have they proposed to change the name?

- Turkey government was not pleased with the Google search results that came up for the word 'Turkey'.
- Some of these results included the large bird that is served for Thanksgiving and Christmas meals in North America.
- According to Cambridge Dictionary's definition, the term 'turkey' means 'something that fails badly' or 'a stupid or silly person'.

Ribbon Weed

News: It is world's largest plant which has been recently discovered off the West Coast of Australia in Shark Bay.
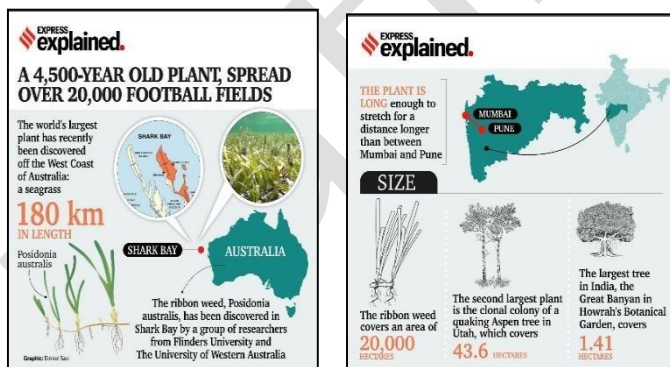
About:

- Scientific Name: Posidonia australis.
- It has recently been discovered off the West Coast of Australia in Shark Bay.
- The plant is 4,500 years old and has double the number of chromosomes than other similar plants.

- It can usually grow to around 35cm per year.
- It covers an area of 20,000 hectares.

Shreshta Scheme

News: Ministry of social Justice and empowerment has launched the Scheme "SHRESHTA"-Scheme for residential education for students in High school in Targeted Areas.

Who are beneficiary?

- The Scheme will be beneficial for SC students who could not reach for higher quality education.
- It provides for high quality education for meritorious but poor SC students in CBSE-affiliated reputed residential schools across the country.

Eligibility:

- The students belonging to Scheduled Castes, studying in class 8th and 10th in the current academic year and students belonging to marginalized income group within the SC community, whose parental annual income is upto Rs.2.5 Lakh are eligible.

What is the selection process?

- They are selected through a transparent mechanism through a National Entrance Test for SHRESHTA (NETS), which is conducted by the National Testing Agency (NTA) for admission in class 9th and 11th.

Aegean Sea

News: Recently, Turkish President warned Greece to demilitarize islands in the Aegean Sea.

What is the issue?

- Turkey says Greece has been building a military presence in violation of treaties that

guarantee the unarmed status of the Aegean islands. It argues the islands were ceded to Greece on the condition they remained demilitarised.

- Greece maintains Turkey has deliberately misinterpreted the treaties and says it has legal grounds to defend itself including a long-standing threat of war if Greece extended its territorial waters.

About Aegean Sea:

- Aegean Sea an arm of the Mediterranean Sea, located between the Greek peninsula on the west and Asia Minor on the east.
- The Aegean is connected through the straits of the Dardanelles, the Sea of Marmara, and the Bosporus to the Black Sea, while the island of Crete can be taken as marking its boundary on the south.

Hypogonadism

The Benefits of Optimal Testosterone
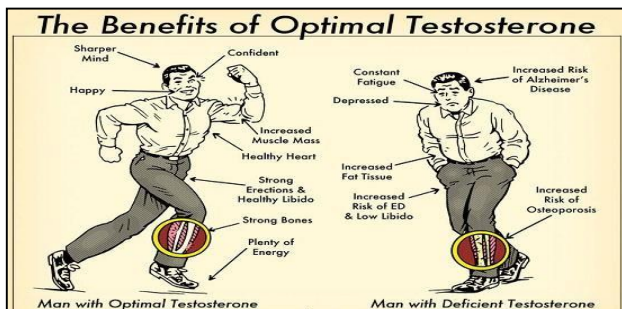
About:

- It is a condition caused by the deficiency of the male sex hormone, testosterone.
- It can cause sexual dysfunction, weakening of bones and muscles, and reduced quality of life.
- Risk factors include ageing (as testosterone levels decline with age), obesity and diabetes.
- Testosterone replacement therapy is the standard treatment for hypogonadism.

Biotechnology Industry Research Assistance Council (BIRAC)

News: To mark the completion of ten years of setting up of Biotechnology Industry Research Assistance Council (BIRAC), Biotech Startup Expo – 2022 was launched with the theme 'Biotech Startup Innovations: Towards AtmaNirbhar Bharat.'

About:

- BIRAC is a not-for-profit Public Sector Enterprise, set up by the Department of Biotechnology (DBT).
- Its main objective is to strengthen and empower the emerging Biotech enterprise to undertake strategic research and innovation, addressing nationally relevant product development needs.

Functions:

- Providing access to risk capital through targeted funding.
- Technology transfer.
- IP management and handholding schemes that help bring innovation excellence to the biotech firms and make them globally competitive.

Decriminalization of Cannabis

News: Thailand has become the first country in Asia to decriminalize Marijuana which is also known as Cannabis.

About:

- It has decriminalized Marijuana with the aim of boosting its agriculture and tourism sectors.
- Under decriminalization, it is no longer a crime in Thailand to grow and trade marijuana and hemp products, or use parts of the plant to treat illnesses.
- In 2018, Canada became the first G20 country to legalize the recreational use of cannabis. Uruguay legalized the recreational use of marijuana for all adults above the age of 18 in 2013.

What is Marijuana?

- Marijuana is a psychoactive drug from the Cannabis plant used for medical, recreational & religious purposes.
- Cannabis can be used for smoking, vaporization, within food, or as an extract.
- It creates mental and physical effects, such as a 'high' or 'stoned' feeling, a general change in perception, and an increase in appetite.
- Short term side effects may include a decrease in short-term memory, dry mouth, impaired motor skills, red eyes, and feelings of paranoia or anxiety.
- Long term side effects may include addiction, decreased mental ability and behavioural problems in children whose mothers' used cannabis during pregnancy.

What is the status of regulation in India?

- Cannabis was regulated by the state excise departments and legally sold till 1985.
- In 1985 The Narcotic Drugs and Psychoactive Substances (NDPS) Act has been enacted central level commercial cultivation of cannabis by production, possession, sale/purchase, transportation, interstate import/export or any other forms is punishable. The Act has been amended three times – in 1988, 2001, and most recently in 2014.
- While CBD oil manufacturing is licensed under the Drugs and Cosmetics Act, 1940 can be legally used and sold. Some Indian websites do sell. But to purchase it one needs a prescription and many even facilitate it.
- Similarly, Bhang, ganja and charas are enlisted in the Drugs and Cosmetics Rules, 1945 for use in Ayurveda, Siddha and Unani.

New Space India Limited (NSIL)

News: The Union Cabinet has approved the transfer of 10 in-orbit communication satellites from Government of India (GoI) to New Space India Ltd. (NSIL), a wholly owned Public Sector Enterprise of GOI under the administrative control of the Department of Space.

About:

- The Union Cabinet has also approved increasing the authorized share capital of NSIL from Rs.1000 crore to Rs.7500 crore.
- Transfer of these assets to NSIL will further provide the desired financial autonomy to the company to realize capital intensive programmes/projects and thereby offering huge employment potential and technology spin-off to other sectors of the economy.
- This approval is expected to trigger domestic economic activity in space sector and increase India's share in the global space market.
- The Space Sector reforms mandated NSIL to undertake end-to-end commercial space activities and function as a full-fledged satellite operator. NSIL functioning as a single-window operator will also facilitate the ease of doing business in space sector.
- NSIL Board will now be empowered to price the transponders as per the market dynamics and global trends in the Satellite Communication sector. NSIL is also authorized to offer and allocate capacity as per its internal policies and guidelines.

Paralitherizinosaurus Japonicus

News: Dinosaur 'reaper' with massive claws found in Japan. The herbivore used its vicious-looking claws to forage for food.

About:

- It is a bipedal dinosaur.
- A new study has revealed that it roamed around the shores of Asia between 66 million and 145 million years ago (Cretaceous period).
- It was identified from the fossilised remains unearthed on Hokkaido, the northern island of Japan. The fossil is the first to be found in Asia in marine sediments.
- The dinosaur belonged to a group known as Therizinosaurs - bipedal and primarily herbivorous three-toed dinosaurs.
- The most remarkable aspect of this species is that it had sword-like claws.

To read more about the Dinosaur 'reaper' do read the following link: https://www.livescience.com/reaper-reptile-by-the-sea-dinosaur-japan

CiSS application

News: The National Commission for the Protection of Child Rights (NCPCR) has launched a 'CiSS application' under the Baal Swaraj portal to help in the rehabilitation process of Children in Street Situations (CiSS).

About:

- The CiSS application is used for receiving data of children in street situations from all the states and union territories, tracking their rescue and rehabilitation process. The initiative is taken under the direction of the Supreme Court of India.
- Baal Swaraj is a portal launched by NCPCR for online tracking and digital real-time monitoring mechanism of children in need of care and protection.

Ramsay Hunt Syndrome

News: Ramsay Hunt Syndrome – a viral disease has temporarily paralysed one side of pop sensation Justin Bieber's face.

About:

- Ramsay Hunt Syndrome is neurological disease in which a virus – Varicella Zoster – causes inflammation of the nerves involved in facial movements.
- The Varicella Zoster Virus (VZV) is the same virus that causes chickenpox and shingles.
- When the nerves get inflamed, they lose their ability to function, leading to temporary facial palsy or paralysis.
- The symptoms include painful, red rash and blisters in and around the ear, and facial paralysis on the same side.
- It is treated using anti-viral drugs, steroids and physiotherapy.

Indian National Space Promotion and Authorisation Centre (IN-SPACe)

News: Headquarters of the Indian National Space Promotion and Authorisation Centre (IN-SPACe) was inaugurated at Bopal, Ahmedabad.

About:

- The establishment of IN-SPACe was announced in June 2020.
- It is an autonomous and single window nodal agency in the Department of Space.
- It was established for the promotion, encouragement and regulation of space activities of both government and private entities.
- It also facilitates the usage of ISRO facilities by private entities.

Nixtamalisation

News: A study has thrown light on how Maya people fortified their maize with the chemical process known as 'nixtamalisation' and also built indoor toilets in pits they dug into the limestone bedrock of the Yucatan peninsula in Mesoamerica.

About:

- Nixtamalisation is a method by which the ancient people of Mesoamerica like the Maya used to soak and cook their maize in an alkaline solution and make it more palatable, nutritious and non-toxic. Nixtamal is derived from the Nahuatl word nextamalli, meaning 'nixtamalised maize dough'.
- Maize is the primary crop of the Americas and has been cultivated in the region for millennia. Maize, beans and squash are called the 'Three Sisters' and formed the basis of diets throughout pre-Columbian North and Mesoamerica.
- The researchers noted that the key reason for the spread of maize in the Americas was nixtamalisation.
- The process ensures that the maize contains amino acids, calcium and Vitamin B2, which can be utilised by the human body. It also eliminates certain mycotoxins (toxins produced by certain moulds (fungi) and can be found in food) present in maize.
- Without this treatment, maize-dependent populations were at elevated risk of pellagra (Vitamin B2 deficiency), calcium deficiency and mycotoxin poisoning.
- Nejayote, wastewater from nixtamalisation, may have been used to lime the chultunes while they were used as latrines. This was done to control odours and inhibit insect and microorganism growth like it is done today.

Mithali Raj

News: Veteran Indian women's cricketer Mithali Raj announced her retirement from all forms of international cricket, bringing an end to a glorious 23-year career. She

finishes her career having set and broken plenty of records, both as batter and captain.

About:

- In July 2021, Mithali Raj became the leading run-getter in women's internationals, going past England's Charlotte Edwards (10,273 runs).
- At 7805 runs in 232 matches, Raj is the highest run-scorer in women's ODIs.
- She is the only player in the top seven with an average of over 50.
- Her tally of 2364 runs in women's T20Is is the highest for India.
- She is one of only two players to have played more than 200 ODIs.
- She has 71 fifty-plus scores in ODIs and 17 fifty-plus scores in T20Is. Her combined tally of 88 fifty plus scores is the most by any player in women's international cricket.
- She is the only Indian woman to score a double century in Tests.
- Having debuted at the age of 16 in 1999, she has also had the longest international career in women's cricket. It spanned for over 23 years.
- Mithali Raj has 89 wins out of 155 as captain which is the most by any player in women's ODIs.

Pradhan Mantri National Apprenticeship Mela

News: Pradhan Mantri National Apprenticeship Mela was organised across 200 locations across India on June 13th, 2022.

Who will organize it, when and what is its objective?

- The Ministry of Skill Development and Entrepreneurship will be organising the Pradhan Mantri National Apprenticeship Mela every month now on.
- Its objective is to connect the youth with more opportunities of on-ground training within corporates and further a chance to get employment.

Who is eligible and what options do the candidates have?

- Individuals having a 5th–12th grade pass certificate, a skill training certificate, an ITI Diploma, or a graduate degree can apply for

an interview across these trades/opportunities.
- The candidates will be given a choice of 500+ trades, including welders, electricians, housekeepers, beauticians, mechanics, and others.
- Candidates will also receive Apprenticeship certificates recognised by the National Council for Vocational Education and Training (NCVET) at the end of their training period, which will give them industry recognition.
- A credit bank concept will also be introduced soon, with a depositary of various credits accumulated by learners that can be used for future academic pathways.

Note – You can quote such initiatives taken by the government in your mains answers whenever question regarding Demography Dividend, Skilling or Unemployment pops up in your question paper.

Type Certificate (TC) Under Drone Rules, 2021

News: Union Minister of Civil Aviation awarded the first Type Certificate (TC) under Drone Rules, 2021 to IoTechWorld Avigation Pvt Ltd. The Gurugram based company was established in April 2017 and is one of India's leading manufacturers of kisan drones.

About:

- IoTech has received the Type Certificate in barely 34 days after submission of its online application on the DGCA's DigitalSky Platform on 11 May 2022.
- This is despite the fact that the Drone Rules, 2021, allow 60 days to Quality Council of India (QCI) or the Certification Bodies (CB) and 15 days to DGCA for issuing the Type Certificate (i.e 75 days in total).
- The Drone Rules, 2021 were notified on 25 Aug 2021 and the 'Certification Scheme for Unmanned Aircraft Systems (CSUAS)' for obtaining Type Certificate (TC) for drones was notified on 26 Jan 2022. The drone certification scheme of January 2022 was developed by the Quality Council of India (QCI).

Indian Railway Innovation Policy

News: Minister of Railways launched Indian Railway Innovation Policy – 'StartUps for Railways'. Through such platform start-ups will get a good opportunity to connect with Railways.

Key Features:

- Grant up to Rs. 1.5 Crore to innovator on equal sharing basis with provision of milestone-wise payment.
- Complete process from floating of problem statement to development of prototype is online with defined time line to make it transparent and objective.
- Trials of prototypes will be done in Railways. Enhanced funding will be provided to scale up deployment on successful performance of prototypes.
- Developed Intellectual property rights (IPR) will remain with innovator only.
- Assured developmental order to innovator.
- De-centralization of complete product development process at divisional level to avoid delays.

Migration in India 2020-21 Report

News: As per the Migration in India Report 2020-21 (released by the Ministry of Statistics and Programme Implementation (MoSPI), 0.7 per cent of the country's population was a 'temporary visitor' in households during July 2020-June 2021.

Definition of Migration:

- As per International Organization for Migration (The UN Migration Agency) defines a migrant as any person who is moving or has moved across an international border or within a state away from his/her habitual place of residence.
- It can be either voluntary or forced movements as a consequence of the increased magnitude or frequency of disasters, economic challenges and extreme poverty or conflict situations.
- International Migrants Day is celebrated annually by the UN on 18th December to raise awareness about the challenges and difficulties of international migration.
- 11 out of the 17 SDGs contain targets and indicators relevant to migration or mobility.

Who are Temporary Visitors?

- 'Temporary visitors' are categorized as those who arrived after March 2020 and stayed in the household continuously for a period of 15 days or more but less than 6 months. 84% of these visitors moved places for reasons linked to the pandemic.

Ancovax

News: The Agriculture Ministry unveiled India's first Covid-19 vaccine for animals. Developed by Hisar-based National Research Center on Equines, the vaccine called Ancovax, can protect animals against the Delta and Omicron variants of SARS-CoV-2.

How does it work?

- It can be used in dogs, lions, leopards, mice and rabbits. It is an inactivated vaccine developed using an infectious part of the Delta variant.
- In addition, it uses Alhydrogel as an adjuvant to boost the immune system.

What was the need for it?

- There have been reports of Covid-19 infection in several animals, including dogs and cats.
- The aim of the vaccine is to protect endangered animals such as lions and tigers.
- India reported at least nine covid infections in Asiatic lions in Chennai zoo last year, with one of the lioness likely to have died of it. This prompted the closure of tiger reserves for tourism.

Why type matters?

- A killed vaccine for animals is always better than a live-attenuated vaccine (where a weakened live virus is used)
- A live vaccine in wild animals is avoided as it might have been attenuated for one particular species, but it can still cause disease in another.
- Around 15 years ago, a rabies vaccine developed for dogs was given to wolves in Africa and unfortunately the entire pack died. A killed virus vaccine will not harm the animals.

Bharat Gaurav Scheme

News: India's first private train, under the Bharat Gaurav scheme has been flagged off from Coimbatore. The train will cover several historical destinations on

the route while giving the passengers an insight into the cultural heritage of the country.

About:

- Launched in November 2021, under the scheme, trains now have a third segment for tourism. Until now, the Railways had passenger segments and goods segments. These trains are not regular trains that will run as per a timetable but will be more on the lines of the Ramayana Express being run by the IRCTC.
- It was announced under the theme-based tourist circuit trains. These trains will be run by both private players and IRCTC, in theme-based circuits. By theme-based tourism (circuits), the railways mean trains like Guru Kripa that go to all places related to Guru Nanak or a Ramayan-themed train to touch upon places related to Lord Ram.
- Anyone, from societies, trusts, consortia and even state governments can apply to take these trains and run them on special tourism circuits based on a theme. Service Provider will offer all-inclusive packages to tourists including rail travel, hotel accommodation, sightseeing arrangement, visit to historical/heritage sites, tour guides etc.

Potential of the Scheme:

- These trains will help realise India's rich cultural heritage and magnificent historical places to the people of India and the world.
- They will also help in tapping the vast tourism potential of India.

Steel Slag

News: Union Steel Minister inaugurated a six-lane highway in Surat made of steel slag -- a first in India.

About:

- The road constructed using 100 per cent steel-processed slag is a real example of converting 'waste into wealth' and improving sustainability of steel plants.
- The road has been jointly made by Central Road Research Institute (CRRI) - a laboratory of Council of Scientific and Industrial Research (CSIR) and ArcelorMittal Nippon Steel (AMNS) India.
- Slag is a by-product which comes out during manufacturing of steel through three processes, namely basic oxygen furnace

(BOF) route, electric arc furnace (EAF) and induction furnace (IF).

- This is a breakthrough for the industry as far as utilisation of slag is concerned. Slag was being used only for only landfilling.
- Use of such material in road construction shall not only increase its durability but also help in reducing the cost of construction as slag-based materials have better properties than natural aggregates. The use of steel slag in road construction will also address the shortage of natural aggregates in the country.

South Asia Subregional Economic Cooperation (SASEC)

News: Volume of trade from three Border Crossing Points (BCPs) – Akhaura, Sonamasjid and Tamabil – between Bangladesh-India will rise by 50% by 2027, after the implementation of the trade facilitation loan of 143 million US dollars provided by the Asian Development Bank (ADB).

About:

- The South Asia Sub-Regional Economic Cooperation Integrated Trade Facilitation (SASEC) Sector Development Program (SDP) will reform trade policies and improve the cross-border trade facilities at Akhaura, Sonamasjid and Tamabil BCPs.
- It will also increase connectivity among SASEC countries by facilitating trade among the SASEC countries through Bangladesh as a sub-regional hub.
- ADB believes in advancing regionalism and hence has launched the Greater Mekong Subregion (GMS) Program, the Central Asia Regional Economic Cooperation (CAREC) Program, and the SASEC Program.
- The SASEC program brings together Bangladesh, Bhutan, India, Maldives, Myanmar, Nepal, and Sri Lanka in a project-based partnership that aims to promote regional prosperity and improve economic opportunities.

Mitticool Refrigerator

News: Bureau of Indian Standards (BIS), the National Standards Body of India, has developed an Indian Standard, IS 17693: 2022 for 'non-electric cooling cabinet made of clay'.

About:

- Named as 'Mitticool refrigerator', Shri Mansukh Bhai Prajapati from Gujarat is the innovator behind the refrigerator which projects an eco-friendly technology.
- BIS standard specifies the construction and performance requirements of a cooling cabinet made out of clay, which operates on the principle of evaporative cooling.
- It is a natural refrigerator made primarily from clay to store vegetables, fruits, milk, and also for cooling water.
- It provides natural coolness to foodstuffs stored in it without requiring any electricity. Fruits, vegetables, and milk can be stored reasonably fresh without deteriorating their quality.
- In this era, where the world is dominated by technology and advancement, there are people in our country who still bank on traditional cooling. Clay pots have been an integral part of Indian kitchens until factory-made products of variety of materials invaded the market.

I2U2 Initiative

News: As part of I2U2 initiatives, India, Israel, UAE, and the US will hold its first virtual summit in July 2022.

About:

- I2U2 initiative is a new grouping of India, Israel, USA and UAE.
- In the grouping's name, 'I2' stands for India and Israel, whereas 'U2' stands for USA and the UAE.
- This is a great achievement which tells the geopolitical changes that happen in the region.
- This will not only revitalize and re-energize the system of alliances and partnerships around the world, but also stitch together partnerships that did not exist previously or were not utilized to their full extent.

Background:

- I2U2 was initially formed in October, 2021 following the Abraham Accords between Israel and the UAE, to deal with issues concerning maritime security, infrastructure and transport in the region.

- Back then it was called 'International Forum for Economic Cooperation. More commonly referred to as the 'West Asian Quad'.

Potential benefits for India:

- India will get advantage of the Abraham Accords to deepen engagement with Israel without risking its ties with the UAE and the other Arab states.
- India is a massive consumer market. It's a massive producer of high-tech and highly sought-after goods as well. India will benefit from this grouping.

Juneteenth

News: Juneteenth completes a year as the first new federal holiday created in almost four decades.

About:

- The word is a blend of June and Nineteenth.
- It is the oldest nationally celebrated commemoration of the ending of slavery in the US representing freedom for African Americans, observed on June 19th every year.
- It is also known as Emancipation Day or Juneteenth Independence Day.

Surety Bond

News: The Government has asked IRDAI to come up with such a bond, which can replace expensive Bank Guarantees.

About:

- In finance, a surety bond or guaranty involves a promise by one party to assume responsibility for the debt obligation of a borrower if that borrower defaults.

- It is generally provided by the insurance company to allow the harmed party to make a claim on the bond to recover losses.
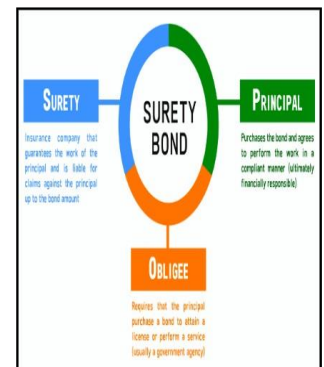
Purpose:

- Surety bonds are mainly aimed at infrastructure development, mainly to reduce indirect cost for suppliers and work-contractors thereby diversifying their options and acting as a substitute for bank guarantee.

Benefits:

- Surety bonds protect the beneficiary against acts or events that impair the underlying obligations of the principal.
- They guarantee the performance of a variety of obligations, from construction or service contracts to licensing and commercial undertakings.

Mukhyamantri Matrushakti Yojana

News: PM Modi on Saturday launched in Vadodara two flagship schemes of the Gujarat Government under its Integrated Child Development Services, Poshan Abhiyan, which will be focused on rolling out additional nutrition to pregnant women and lactating mothers.

About:

- The Mukhyamantri Matrushakti Yojana, which will cover 7 lakh women, is Gujarat government's first scheme aimed at dealing with dietary deficiency within first 1000 days of the conception of a child (from pregnancy to 2 years), considered the crucial first window to check malnutrition.
- The scheme will entail distribution of 2 kg chickpeas, 1 kg toor dal and 1 litre fortified ground nut oil.
- The entire scheme will be electronically monitored. Packets will have bar codes which will be scanned and the scheme is OTP based. This means the beneficiary will receive OTPs confirming that they have received these packages, so that it can be known that the intended beneficiary is actually receiving the ration.

Which other scheme was launched?

- The PM also relaunched the Poshan Sudha Yojana.

- Under the same, hot cooked meals will be provided to tribal women once a day at Anganwadi centres. The pilot has been carried out in 10 districts in the state and will now be extended to all 14 tribal-dominated districts.
- Under this scheme, pregnant women and lactating mothers registered at Anganwadi are provided a full nutritious meal. In addition, iron and calcium tablets as well as education on health and nutrition are also offered.

Bamboo Dwelling Bat

News: Recently, Scientists have discovered a new species of bamboo-dwelling bat near the Nongkhyllem Wildlife Sanctuary.

About:

- The new species of Bamboo dwelling bat has been named Glischropus Meghalayanus.
- Bamboo-dwelling bats are a particular kind of bat living in the internodes of bamboo with specialised morphological characters that help them to adapt to the life inside a bamboo plant.
- It is small in size and has a dark brown colour with sulphur yellow belly.

Nongkhyllem Wildlife Sanctuary

- Situated in the Ri-Bhoi district near Lailad village and spread over an area of 29 sq. kms, Nongkhyllem Wildlife Sanctuary is one of the famous attractions of Meghalaya.
- The Sanctuary falls in the Eastern Himalayan Global biodiversity hotspot.
- The sanctuary supports different species of fauna such as Royal Bengal Tiger, Clouded

- Leopard, Indian Bison, and Himalayan Black Bear etc.
- Among the birds, the rare species which can be spotted here are Manipur Bush Quail, Rufous Necked Hornbill and Brown Hornbill.

Other Wildlife Sanctuary in Meghalaya include Siju Wildlife Sanctuary, Narpuh Wildlife Sanctuary, Baghmara Wildlife Sanctuary and Nokrek Wildlife Sanctuary.

Global Gold Recycling

News: As per World Gold Council (WGC), India has emerged as the fourth largest recycler in the world and the country has recycled 75 tonnes in 2021.

About:

- India's gold refining capacity increased by 1,500 tonnes (500%) in 2021
- Number of formal recycling businesses has increased from less than five in 2013 to 33 in 2021.
- The scale of unorganised refining has fallen, largely due to the government's tightening of pollution regulations.
- India has the potential to emerge as a competitive refining hub if the next phase of bullion market reforms promotes responsible sourcing, exports of bars and consistent supply of scrap.

You may refer the following link to know more about World Gold Council - https://www.gold.org/who-we-are

NIPUN

News: Union Minister of Housing and Urban Affairs launched a project named National Initiative for Promoting Upskilling of Nirman workers (NIPUN) for the promotion of Upskilling of 1 lakh Nirman Workers.

About:

- It comes under MoHUA's DAY-NULM (National Urban Livelihood Mission)
- It will train construction workers to access self-employment and skilled wage employment opportunities
- Implementation will be done by National Skill Development Corporation (under MSDE)
- Construction is one of the largest employers and contributes about 9% to India's GDP.

Please note that this is different from NIPUN Bharat Initiative (National Initiative for Proficiency in Reading with Understanding and Numeracy) launched by Education ministry of India under NEP 2020.

Section 295A of IPC

News: The debate surrounding the comments by BJP spokespersons Nupur Sharma and Naveen Jindal have put the spotlight on the law that deals with criticism of or insult to religion.

About:

- India does not have a formal legal framework for dealing with hate speech. However, a cluster of provisions, loosely termed hate speech laws, are invoked. These are primarily laws to deal with offences against religions.
- Provisions in the Indian Penal Code (IPC), primarily Section 295A, define the contours of free speech and its limitations with respect to offences relating to religion.
- Section 295A defines and prescribes a punishment for deliberate and malicious acts, intended to outrage religious feelings of any class by insulting its religion or religious beliefs.
- Section 295A is one of the key provisions in the IPC chapter to penalise religious offences.
- The state often invokes Section 295A along with Section 153A of the Indian Penal Code, which penalises promoting enmity between different groups on grounds of religion, race, place of birth, residence, language, etc, and doing acts prejudicial to maintenance of harmony.

What is the Rangila Rasool case?

- Section 295A was brought in 1927. The amendment was a fallout of an acquittal under Section 153A of the IPC by the Lahore High Court in 1927 in Rajpaul v Emperor, popularly known as the Rangila Rasool case.
- Rangila Rasool was a tract brought out by a Hindu publisher that had made disparaging remarks about the Prophet's private life.

Dutch Disease

About:

- Dutch Disease in economics refers to a phenomenon wherein a country witnesses' uneven growth across sectors due to the

discovery of natural resources, especially large oil reserves.

- The term was first coined by 'The Economist' in 1977 to describe the decline of the manufacturing industry in the Netherlands.

How exactly did the term come up and what does it signify?

- When a country discovers natural resources and starts exporting them to the rest of the world, it causes the exchange rate of the currency to appreciate significantly and this, in turn, discourages the exports from other sectors while encouraging the import of cheaper alternatives.
- For example, when The Netherlands in 1960's discovered gas reserves in the North Sea it led to subsequent export of oil and the appreciation of the Dutch currency made Dutch exports of all non-oil products less competitive on the World market. Unemployment rose from 1.1% to 5.1% and capital investment in the country dropped.
- Following this over the years, the country witnessed a downfall in the industrial sector.

Negev Desert

News: Israel uncovers a rare early mosque in the Negev.

About:

- The remains of the mosque are believed to be more than 1,200 years old.

- The mosque located in the Negev desert contains 'a square room and a wall facing the direction of Mecca', with a half-circle niche in that wall pointing to the south.
- These unique architectural features show that the building was used as a mosque.

Azooxanthellate Corals

News: Four species of azooxanthellate corals were recorded for the first time from the waters of the Andaman and Nicobar Islands.

About:

- All four groups of corals are from the same family Flabellidae.
- Azooxanthellate corals are a group of corals that do not contain zooxanthellae and derive nourishment not from the sun but from capturing different forms of plankton.
- These groups of corals are deep-sea representatives, with the majority of species reporting from between 200 m to 1000 m. Their occurrences are also reported from shallow coastal waters.

Significance:

- The most studies of hard corals in India have been concentrated on reef-building corals while much is not known about non-reef-building corals. These new records enhance knowledge about non-reef-building, solitary corals.

UNSC Resolution 1267

News: India and US proposal to designate Abdul Rehman Makki (brother-in-law of Hafiz Saeed, founder of Lashkar-e-Toiba) under the UN Security Council Resolution 1267 were put on 'technical hold' by China.

What does Resolution 1267 mean?

- Resolution 1267 provides for sanctions against individuals and entities that support or finance the acts or activities of ISIL, Al-Qaida, associated individuals, groups, undertakings and entities.
- LeT, JuD, Hafiz Saeed, Jaish-e-Mohammed and its head Masood Azharare listed under 1267.

Snake Island

News: Ukraine has caused significant losses to the Russian military in airstrikes on Zmiinyi Island, also known as snake island, in the Black sea.

About:

- Zmiinyi Island, also known as Snake or Serpent Island, is a small piece of rock less than 700 metres from end to end, that has been described as being X-shaped.
- It is located 35 km from the coast in the Black Sea, to the east of the mouth of the Danube and roughly southwest of the port city of Odessa.

- The Danube is the second longest river in Europe after the Volga. It rises in the Black Forest mountains of western Germany and flows for some 2,850 km to its mouth on the Black Sea.

Niryat Portal

News: PM inaugurated Vanijya Bhawan and launched the National Import-Export for Yearly Analysis of Trade (NIRYAT) portal.

How does the Portal help?

- The portal will provide a public database on exports from states and will help break down silos and help the industry to take fast decisions.
- It will also ultimately connect the government's work on one district one export plan.
- From this portal, important information related to more than 30 commodity groups exported to more than 200 countries of the world will be available.

Ogiek

News: African court orders Kenya to pay $1.3 million as reparations to indigenous Ogiek people.

About:

- The Ogiek are among some of the most marginalised of all indigenous peoples and minorities in Kenya.
- Traditionally honey-gatherers, they survive mainly on wild fruits and roots, game hunting, and traditional beekeeping.
- Having inhabited the Mau Forest for many centuries, their unique way of life is closely tied to its rich biodiversity and natural resources: in fact, the term 'Ogiek' literally means 'caretaker of all plants and wild animals'.

Sao Joao Festival

About:

- Sao Joao' festival is the feast of St John the Baptist.
- Traditionally, people jump into the well but since the wells are fast disappearing, people prefer to celebrate it in swimming pools.

- It is celebrated to commemorate the day in the name of St John De Baptista who was believed to have baptised Jesus Christ.

VL-SRSAM

News: The indigenously developed shipborne weapon system, Vertical Launch Short Range Surface to Air Missile (VL-SRSAM), was successfully flight tested by DRDO and the Indian Navy.

About:

- VL-SRSAM is a canisterised system, which means it is stored and operated from specially designed compartments.
- In the canister, the inside environment is controlled, thus making its transport and storage easier and improving the shelf life of weapons.

It is designed to strike at the high-speed airborne targets at the range of 40km to 50km and at an altitude of around 15km.

Water Hyacinth

News: Recently, West Bengal has made an outstanding example by utilising Water Hyacinth, an obnoxious aquatic weed plant to develop small-scale cottage industry that is both financially rewarding as well as environmentally friendly in approach.

About:

- Water hyacinth, scientifically known as Eichhornia crassipes Mart. (Pontederiaceae), is an aquatic weed common in waterbodies across South Asia, including India.
- This is not an indigenous species but was introduced to India during the British colonial rule as an ornamental aquatic plant from South America.
- The plant produces beautiful purple flowers that have high aesthetic value.

Significance:

- The plant has been used as a bio-fertiliser in some organic agriculture practises.
- This plant is a good phytoremediation species, suggesting it has the ability to trap and remove toxic metabolites and harmful heavy metals from water.

What are concerns surrounding Water Hyacinth?

- It is an obnoxious weed that has been suffocating surface freshwater sources like rivers, rivulets, streams, ponds, dams, lakes and bogs, making the waterbodies unsuitable for commercial fishery, transportation and recreation.
- The plant is a prolific vegetable matter-producer and has the ability to choke out any closed waterbody at an astonishing rate. A plant that is prolific produces a large number of young plants, or fruit. This cuts off sunlight as well as reduces oxygen level in the water, making it unfit for commercial use.
- It is an expensive and labour-intensive process to remove this weed from time to time.

Global Livability Index

News: According to Global Liveability Index released by The Economist annually, the cities in India have fared poorly in the list of the world's most liveable cities.

About:

- New Delhi has been ranked 112th, while Mumbai is ranked at 117th position.
- Austrian capital Vienna has once again topped the list of most liveable cities in the world in the list of 140 cities.
- The Pakistani city of Karachi and Bangladesh's capital Dhaka are among the least liveable cities in the world.

Consumer Expenditure Survey

News: The government is set to launch a new household consumer expenditure survey (CES) in July.

About:

- The CES is a quinquennial (recurring every five years) survey conducted by the government's National Statistics Office (NSO) that is designed to collect information on the consumer spending patterns of households across the country, both urban and rural.

Counting the spending | The All-India Households' Consumer Expenditure Survey will be conducted between July 2022 and June 2023

What is it? Usually carried out every five years, the survey helps assess poverty levels and consumption patterns across the country, and rebase GDP calculations

What's the big deal? The last survey whose findings were made public was conducted in 2011-12

Why this long pause? A survey was conducted in 2017-18 too, but its results were not released owing to 'quality' concerns. It reportedly reflected the first drop in monthly per capita household spending since 1972-73, with a rise in poverty incidence

Living Lands Charter

News: All 54 Commonwealth members have agreed to voluntarily dedicate a 'living land' in their respective countries to future generations, in line with the strategy set for the United Nations Decade on Ecosystem Restoration.

About:

- The non-binding 'Living Lands Charter' mandates that member countries will safeguard global land resources and arrest land degradation while acting against climate change, biodiversity loss and sustainable management.
- The charter recognizes the 'critical guardianship' provided by indigenous peoples and local communities in protecting land and vital ecosystem services.

Cosmic Cannibalism

News: Astronomers have observed for the first time a phenomenon, called, 'cosmic cannibalism', a dead star (white dwarf) is sucking in debris from both the inner and outer reaches of its planetary system.

What is a White Dwarf?

- A white dwarf is formed when a low-mass star like our sun exhausts most of its nuclear fuel.
- It is usually very dense, dim and about the size of a planet.
- It is the last observable stage of evolution for low and medium mass stars.

PGII Scheme

News: President Biden and G7 Leaders Formally Launched the Partnership for Global Infrastructure and Investment.

What is the scheme about?

- The infrastructure plan was first unveiled at the 2021 G7 summit in Britain. Called the Build Back Better World at the time, the US-driven plan faltered from a lack of progress, and the project was renamed to PGII before being resuscitated at the 2022 summit.
- It is a plan to mobilise $600bn in funding for the developing world in a move seen as a counter to China's Belt and Road plan.
- The initiative will be geared towards tackling climate change, improving global health, achieving gender equity and building digital infrastructure.

Bird Village in Udaipur

News: Recognised as the 'bird village' following community-driven conservation efforts, Menar in the Udaipur district is set to be notified as Rajasthan's new wetland.
How does it help?

- It will pave the way for getting the Ramsar site status for this rural heartland of the Mewar region.

How many Ramsar sites does Rajasthan have?

- At present, Rajasthan has two wetlands recognised as Ramsar sites – Keoladeo Ghana in Bharatpur district and Sambhar Salt Lake in Jaipur district.

Sunspots

News: A huge sunspot that is directly facing earth has grown to be twice the size of Earth and its width has doubled in just 24 hours.

What are Sunspots?

- Sunspots are areas that appear dark on the surface of the Sun.
- They appear dark because they are cooler than other parts of the Sun's surface.
- Solar flares are a sudden explosion of energy caused by tangling, crossing or reorganizing of magnetic field lines near sunspots.

Hermit Spyware

News: Lookout, a cloud-based security company, has recently discovered a new spyware called "Hermit" that is capable of affecting both Android and iOS devices.

About:

- Hermit is a commercial spyware that is known to be used by governments with victims in Kazakhstan, Italy and northern Syria. The spyware was first detected in Kazakhstan in April 2022 after the government violently suppressed protests against government policies.
- Hermit is a modular spyware that hides its malicious capabilities in packages downloaded after it's deployed.
- These modules, along with the permissions the core apps have, enable Hermit to exploit a rooted device, record audio and make and redirect phone calls, as well as collect data such as call logs, contacts, photos, device location and SMS messages.
- Hermit tricks users by serving up the legitimate webpages of the brands it impersonates as it kicks starts malicious activities in the background.

Bharat NCAP

News: Recently, the Ministry of Road Transport and Highways has approved the draft GSR (General Statutory Rules) notification to introduce Bharat NCAP (New Car Assessment Programme).

- NCAP will be rolled out from 1st April 2023 and will mean auto manufacturers in India as well as importers will have the option of getting cars star rated within country.

About:

- It is a new car safety assessment program which proposes a mechanism of awarding 'Star Ratings' to automobiles based upon their performance in crash tests.
- Bharat NCAP standard is aligned with global benchmarks and it is beyond minimum regulatory requirements.
- The proposed Bharat NCAP assessment will allocate Star Ratings from 1 to 5 stars. The testing of vehicles for this programme will be carried out at testing agencies, with the necessary infrastructure.

Applicability:

- It will be applicable on type approved motor vehicles of category M1 with gross vehicle weight less than 3.5 tonnes, manufactured or imported in the country.
- M1 category motor vehicles are used for the carriage of passengers, comprising eight seats, in addition to driver's seat.

Dak Karmayogi

News: Recently, the Ministry of Communications has launched 'Dak Karmayogi', an e-learning portal of the Department of Posts.

About:

- This portal has been developed 'In-House' under vision of 'Mission Karmayogi', which was conceptualized by Prime Minister with a view to bring efficiency of bureaucracy with 'Minimum Government' and 'Maximum Governance'.
- The Portal will enable the trainees to access the uniform standardized training content online or in blended campus mode to enable them to effectively deliver a number of G2C (Government to Citizen) services for enhanced customer satisfaction.
- Its main objective is to provide better services by upgrading employees and Gramin Dak Sevaks.

Primary Agriculture Credit Societies

News: The Cabinet Committee on Economic Affairs has approved Computerization of Primary Agricultural Credit Societies (PACS) with the objective of increasing efficiency of PACS, bringing transparency and accountability in their operations; facilitating PACS to diversify their business and undertake multiple activities/ services.

About:

- This project proposes computerization of about 63,000 functional PACS over a period of 5 years.
- The PACS constitute the lowest tier of the three-tier Short-term cooperative credit (STCC) in the country comprising of approx.13 Cr. farmers as its members, which

is crucial for the development of the rural economy.

- PACS account for 41 % (3.01 Cr. farmers) of the KCC loans given by all entities in the Country and 95 % of these KCC loans (2.95 Cr. farmers) through PACS are to the Small and Marginal farmers.