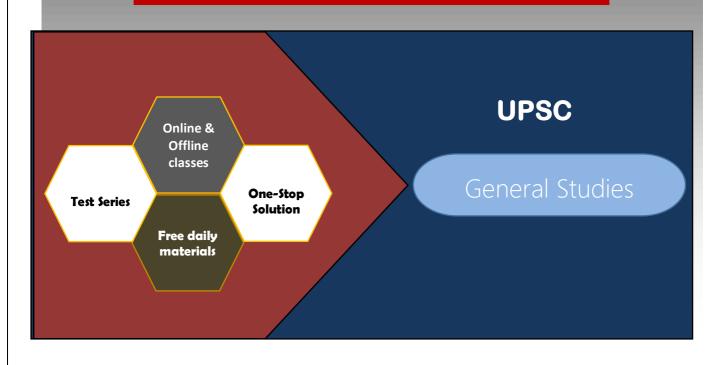**VISHNU I A S**

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GS 2 : Polity, Governance, International Relations

1. Central Bureau of Investigation (CBI)

The Centre has told the Supreme Court that the CBI was an "autonomous body" and it had no "control" over the investigative agency.

Background

- The submission in the top court comes two days after the promulgation of an ordinance extending the tenures of the CBI Director and the Enforcement Directorate chief.
- Attorney-General K was objecting to a suit filed by the West Bengal Government over the use of CBI.

West Bengal vs. CBI

- West Bengal has challenged the CBI's jurisdiction to register FIRs and conduct investigations in the State in some cases.
- The State had withdrawn its "general consent" to the CBI way back in 2018.

About CBI

- The Bureau of Investigation traces its origins to the **Delhi Special Police Establishment**, a Central Government Police force, which was **set up in 1941** by the Government of India.
- It then aimed to **investigate bribery and corruption** in transactions with the War and Supply Department of India.
- It then had its headquarters in Lahore.
- After the end of the war, there was a continued need for a central governmental agency to investigate bribery and corruption by central-government employees.
- The DSPE acquired its popular current name, Central Bureau of Investigation (CBI), through a Home Ministry resolution dated in 1963.

Mandate of the CBI

- The CBI is the **main investigating agency** of the GoI.
- It is **not a statutory body**; it derives its powers from the Delhi Special Police Establishment Act, 1946.

- Its important role is to prevent corruption and maintain integrity in administration.
- It works under the **supervision of the CVC** (Central Vigilance Commission) in matters pertaining to the Prevention of Corruption Act, 1988.
- The CBI is also India's **official representative with the INTERPOL**.

Cases to investigate

- Cases connected to infringement of **economic and fiscal laws**
- Crimes of a serious nature that have **national and international ramifications**
- **Coordination with** the activities of the various state police forces and anti-corruption agencies.
- It can also take up any **case of public importance** and investigate it
- **Maintaining crime statistics** and disseminating criminal information.

Issues with CBI

- **Caged parrot:** The Supreme Court has criticised the CBI by calling it a "caged parrot speaking in its master's voice".
- **Political interference:** It has often been used by the government of the day to cover up wrongdoing, keep coalition allies in line and political opponents at bay.
- **Investigation delay:** It has been accused of enormous delays in concluding investigations due to political inertia.
- **Loss of Credibility:** CBI has been criticised for its mismanagement of several cases involving prominent politicians and mishandling of several sensitive cases like Bofors scandal, Bhopal gas tragedy.
- **Lack of Accountability:** CBI is exempted from the provisions of the Right to Information Act, thus, lacking public accountability.
- **Acute shortage of personnel:** A major cause of the shortfall is the government's sheer mismanagement of CBI's workforce.
- **Limited Powers:** The powers and jurisdiction of members of the CBI for investigation are subject to the consent of the State Govt., thus limiting the extent of investigation by CBI.
- **Restricted Access:** Prior approval of Central Government to conduct inquiry or investigation on the employees of the Central Government is a big obstacle in combating corruption at higher levels of bureaucracy.

Way Forward

- **Need for autonomy:**   As long as the government of the day has the power to transfer and post officials of its choice in the CBI, the investigating agency will not enjoy autonomy and will be unable to investigate cases freely.

- A new CBI Act should be promulgated that ensures the autonomy of CBI while at the same time improving the quality of supervision.
- **Selection of director/ Officers:** To ensure that the CBI is a robust, independent and credible investigation agency, there is an urgent need to work out a much more transparent mechanism for selection and induction of officers on deputation.
- **Lokpal scrutiny:** The Lokpal Act already calls for a three-member committee made up of the PM, the leader of the opposition and the CJI to select the director.
- **Bifurcation of Cadre:** CBI should be bifurcated into an Anti-Corruption Body and a National Crime Bureau.
- **Develop own cadre**: One of the demands that have been before Supreme Court, and in line with international best practices, is for the CBI to develop its own dedicated cadre of officers.
- **Annual social audit** should be carried out by ten reputed, knowledgeable persons with background of law, justice, public affairs and administration and the audit report should be placed before the parliament.

2. Duare Ration Scheme in West Bengal

West Bengal CM has launched an ambitious "Duare Ration" Scheme.

Duare Ration Scheme

- The Scheme aims for providing food grains under the public distribution system (PDS) at the doorstep for the entire population of the State.
- It aims to unload the person carrying huge chunk of food grains manually.
- Vehicles will carry ration in a particular street or lane and employees of ration dealers will make the food grains available to the people near their residence.

Key arrangements

- The state govt would provide around 21,000 ration dealers with the financial assistance of ₹1 lakh each to purchase vehicles for delivering ration to people in this manner.
- It also announced financial assistance to ration dealers to hire additional staff to make the scheme a success.

3. SC, HCs can't interfere in daily temple rituals:

A writ petition was filed in the Supreme Court alleging that rituals were not being performed as per traditions at the famous Tirumala Tirupati temple.

Supreme Court's observations:

- Constitutional courts could not interfere with day-to-day **rituals and sevas** performed in temples on the basis of "public interest" petitions.
- Religious scholars and priests were best equipped to go into the question whether rituals in a temple were being conducted in accordance with customs and traditions.
- In such matters, the writ jurisdiction of a constitutional court under **Articles 226 and 32** was limited.

What is Article 32?

Article 32 deals with **the 'Right to Constitutional Remedies',** or affirms the right to **move the Supreme Court** by appropriate proceedings **for the enforcement of the rights conferred in Part III of the Constitution.**

- It states that **the Supreme Court "shall have power to issue directions or orders or writs,** including writs in the nature of habeas corpus, mandamus, prohibition, quo warranto and certiorari, whichever may be appropriate, **for the enforcement of any of the rights conferred by this Part".**

Key Points:

- The right guaranteed by this Article **"shall not be suspended except as otherwise provided for by this Constitution".**
- Only if any of these fundamental rights is violated can a person can approach the Supreme Court directly under Article 32.

Can High Courts be approached in cases of violation of fundamental rights?

In civil or criminal matters, the first remedy available to an aggrieved person is that of trial courts, followed by an appeal in the High Court and then the Supreme Court.

When it comes to **violation of fundamental rights,** an individual can approach **the High Court under Article 226 or the Supreme Court directly under Article 32.**

- Article 226, however, is not a fundamental right like Article 32.

What have been the Supreme Court's recent observations on Article 32?

In **Romesh Thappar vs State of Madras (1950),** the Supreme Court observed that Article 32 provides a "guaranteed" remedy for the enforcement of fundamental rights.

- This Court is thus constituted the protector and guarantor of fundamental rights, and it cannot, consistently with the responsibility so laid upon it, refuse to entertain applications seeking protection against infringements of such rights," the court observed.

During **the Emergency, in Additional District Magistrate, Jabalpur vs S S Shukla (1976), the** Supreme Court had said that the citizen loses his right to approach the court under Article 32.

Finally, Constitutional experts say that **it is eventually at the discretion of the Supreme Court and each individual judge to decide whether an intervention is warranted in a case,** which could also be heard by the High Court first.

4. Pochampally makes it to list of best tourism villages in the world

Pochampally village in Telangana is set to be named as one of the best Tourism Villages by the United Nations World Tourism Organisation.

Best Tourism Villages Initiative

- The Best Tourism Villages by UNWTO Pilot initiative aims to award those villages which are outstanding examples of rural destinations and showcase good practices in line with its specified nine evaluation areas.

- It also aims to support villages to enhance their rural tourism potential through training and access to opportunities for improvement.

Key objectives

- Reduce regional inequalities in income and development
- Fight rural depopulation
- Progress gender equality and women's and youth empowerment
- Enhance education and skills development

About Pochampally

- Pochampally, 50 Kms from Hyderabad, is a town in Nalgonda district of Telangana.
- It is often referred to as the Silk City of India for the exquisite sarees that are woven through a unique style called Ikat.
- It is also known as Bhoodan Pochampally to commemorate the Bhoodan Movement that was launched by Acharya Vinobha Bhave from this village on April 18th, 1951.
- Currently, a two-room Vinobha Bhave Mandir exists within the village which was earlier the place where Vinobha Bhave resided during his visit to the village.

What is Pochampally Ikat?

- Ikat is a Malaysian, Indonesian word that means "Tie and Dye".
- For this style, Pochampally Ikat, received a Geographical Indicator (GI Status) in 2004.
- Ikat involves the process of wrapping (or tying) and dyeing sections of bundled yarn to a predetermined colour pattern before they are woven.
- The dye penetrates into exposed sections while the wrapped section remains undyed.
- This pattern formed by the yarn in this process is woven into fabric.

5. National Register of Citizens (NRC):

Only little over a thousand doubtful cases in the final draft of **the National Register of Citizens (NRC),** Assam have been referred to the concerned district commissioners for necessary action.

Background:

More than 19 lakh of the 3.29 crore applicants in Assam were excluded from the final draft register published on August 31, 2019, which cost 1,220 crore.

- The government had rejected the NRC in its current form and demanded re-verification of at least 30% names in areas bordering Bangladesh and 10% in the rest of the State.

Background:

The Supreme Court had monitored the exercise of updating the NRC of 1951 in Assam. About 19.06 lakh out of 3.3 crore applicants were excluded from the updated draft.

About NRC:

- At its core, **the NRC is an official record of those who are legal Indian citizens.** It includes demographic information about all those individuals who qualify as citizens of India as per **the Citizenship Act, 1955.**
- The register was first prepared after the 1951 Census of India and since then it has not been updated until recently.

NRC in Assam:

So far, **such a database has only been maintained for the state of Assam.**

- The exercise was a culmination of **Assam Accord of 1985** signed between the Centre and the All Assam Students' Union (AASU) and All Assam Gana Sangram Parishad (AAGSP) for detection, disenfranchisement and deportation of foreigners.

Why was NRC updated for Assam?

In 2013, the SC ordered the updation of the NRC, in accordance with Citizenship Act, 1955 and Citizenship Rules, 2003 in all parts of Assam. The process officially started in 2015.

Issues present:

- **Lakhs of people** were left out of the complete draft of Assam's **National Register of Citizens (NRC) published in 2018.**
- **As per the Supreme Court** mandated rules, those left out of the draft NRC list had to **mandatorily submit their biometrics during the hearings of 'claims' (to include themselves in the NRC) and 'objections'** (to object to someone else's inclusion) process.
- **27 lakh people** who were left out from the list published in **2018** submitted their **biometric details** and amongst these **only 8 lakh people** made it into the draft list published in 2019. However, these 8 lakh people are struggling to get Aadhaar, and concerned about benefits linked to it
- **Lack of clarity and inability to enjoy the full benefits** emanating from Aadhar has caused significant mental pressure on individuals.
- This situation has arisen primarily due to the lack of clarity over the NRC exercise since the government is withholding assigning Aadhar to these newly added individuals since the **complete and final NRC list is yet to be published.**

GS 3 : Economy, Science and Technology,Environment

6. Taproot upgrade in Bitcoins

Bitcoin went through a major upgrade that enables its blockchain to execute more complex transactions, potentially widening the virtual currency's use cases and making it a little more competitive with Ethereum for processing smart contracts.

What is the new upgrade?

- The enhancement, called Taproot, is the most significant change to the bitcoin protocol since the SegWit (Segregated Witness) block capacity change in 2017.
- SegWit effectively increased the number of transactions that could fit into a block by pulling data on signatures from bitcoin transactions.
- Smart contracts are self-executing transactions whose results depend on pre-programmed inputs.

What is Taproot?

- The Taproot upgrade consists of three separate upgrade proposals.
- However, at its core, the upgrade introduces a new digital signature scheme called "Schnorr" that will help bitcoin transactions become more efficient and more private.
- Schnorr can also be leveraged to let bitcoin users execute more complex smart contracts.

When was Taproot officially activated?

- Taproot was officially activated on block 709,632.
- Blockchains settle transactions in batches or blocks.
- Each block can contain only a certain number of transactions.

What is its impact on Bitcoin?

- The biggest impact would be the bitcoin network's ability to process more smart contracts, similar to what Ethereum does.
- Bitcoin has historically been much more limited in processing smart contracts compared with Ethereum.
- Taproot increases privacy by obscuring what type of transaction is being executed.

What are the other enhancements?

- The Schnorr signatures can make more complex transactions on the bitcoin protocol, such as those from wallets that require multiple signatures, look like just any other transaction.
- This makes transactions more private and more secure.
- Bitcoin transactions will also become more data-efficient, optimizing block capacity and leading to lower transaction fees.

What does Taproot mean for investors?

- Large-scale upgrades have paved the way for the next phase of innovation in the bitcoin network.
- The last major upgrade in 2017 helped launch the Lightning Network, which facilitated much faster and cheaper bitcoin payments than before.
- Taproot to lead to a similar wave of innovation in bitcoin centered around smart contracts.

7. 'Navy's plan for a 170-ship force on course'

- Revision of the **Maritime Capability Perspective Plan (MCPP).**

Background:

Changing dynamics in OIR:

- Global and regional balances of power are shifting rapidly and the **Indian Ocean Region (IOR) is emerging as a geo-strategically important area**.
- There has been an increasing number of players in the Indian Ocean Region and the complexity of the maritime environment has only increased as a result.
- China has been rapidly expanding its Navy, rolling out more ships than any other country amid its expanding global footprint, especially in the Indian Ocean Region. This development poses serious **security as well as strategic challenges to India.**

Details:

- India has been focussing on expanding its capacity in the naval segment to **enhance the capability of the Indian Navy in meeting the emerging challenges in the IOR and beyond.**
- Indian Navy has planned for a **170 ship force** in its Maritime Capability Perspective Plan (MCPP). The Navy has also budgeted for a second indigenous aircraft carrier.
  - o The Navy currently has 130 ships and had earlier planned to achieve securing 200, which was revised to 170 ships by 2027.
- The Navy plans to have **diverse platforms like an aircraft carrier, submarine and maritime patrol aircraft** each of which plays its own definite role and is required to make a balanced naval force.
- India has also undertaken focussed efforts at **indigenization of the defence production**. The soon to be commissioned **first Project-15B class stealth-guided missile destroyer Visakhapatnam** and the **fourth Scorpene-class submarine Vela** showcase indigenous capacity to build complex combat platforms.
- The MCPP of the Navy is being reworked to bring it in line with the **10-year Integrated Capability Development Plan (ICDP)** being formulated by the Department of Military Affairs to bring in service integration. The MCPP will have to also factor in the budgetary allocations and constraints.

GS 2 : Polity, Governance, International Relations

1. Digital India Land Record Modernization Program

Union Minister for Rural Development and Panchayati Raj has recently held a workshop on Digital India Land Record Modernization Programme (DILRMP).

About DILRMP

- The DILRMP was previously known as the National Land Record Modernization Programme (NLRMP).
- It was launched in 2008 with the purpose to digitize and modernizing land records and developing a centralized land record management system.
- The DILRMP is the amalgamation of two projects:

1. Computerization of Land Records (CLR)
2. Strengthening of Revenue Administration and Updating of Land Records (SRA & ULR)

- The district will be taken as the unit of implementation, where all activities under the programme will converge.

Components of DILRMP

The DILRMP has 3 major components

1. Computerization of land record
2. Survey/re-survey
3. Computerization of Registration

Key features: Unique Land Parcel Identification Numbers

- It is just like the Aadhar Number of land parcels.
- A unique ID based on Geo-coordinates of the parcels is generated and assigned to the plots.
- This has been introduced to share the computerized digital land record data among different States/Sectors and a uniform system of assigning a unique ID to the land parcel across the country.

Benefits offered

The citizen is expected to benefit from DILRMP in one or more of the following ways;

- Real-time land ownership records will be available to the citizen
- Property owners will have free access to their records without any compromise in regard to the confidentiality of the information
- Abolition of stamp papers and payment of stamp duty and registration fees through banks, etc. will also reduce interface with the Registration machinery
- These records will be tamper-proof
- This method will permit e-linkages to credit facilities

2. World Bank's STARS project:

Performance of World Bank aided project STARS was reviewed recently.

What is it?

STARS stands for **Strengthening Teaching-Learning and Results for States Program (STARS).**

STARS project would be implemented as a new **Centrally Sponsored Scheme** under the Department of School Education and Literacy, Ministry of Education.

It is a project **to improve the quality and governance of school education in six Indian states.**

- **Six states are-** Himachal Pradesh, Kerala, Madhya Pradesh, Maharashtra, Odisha, and Rajasthan.
- Some 250 million students (between the age of 6 and 17) in 1.5 million schools, and over 10 million teachers will benefit from the program.

Reform initiatives under the project include:

1. Focusing more directly on the delivery of education services at the state, district and sub district levelsby providing customized local-level solutions towards school improvement.

2. Addressing demands from stakeholders, especially parents, for greater accountability and inclusion by producing better data to assess the quality of learning; giving special attention to students from vulnerable section.

3. Equipping teachers to manage this transformation by recognizing that teachers are central to achieving better learning outcomes.

4. Investing more in developing India's human capital needs by strengthening foundational learning for children in classes 1 to 3 and preparing them with the cognitive, socio-behavioural and language skills to meet future labour market needs.

Unique components of the project:

Contingency Emergency Response Component (CERC):

The project includes a Contingency Emergency Response Component (CERC) under the National Component which would enable it to be more responsive to any natural, man-made and health disasters.

- It will help the government respond to situations leading to loss of learning such as school closures/infrastructure damage, inadequate facilities and use technology for facilitating remote learning etc.
- The CERC component would facilitate the rapid re-categorization of financing and the utilization of streamlined financing request procedures.

3. Unique Land Parcel Identification Number (ULPIN) scheme:

'Bhumi Samvaad' – a National Workshop on Digital India Land Record Modernisation Programme (DILRMP) was held recently at India Habitat Centre here in the national capital.

- Talking about the importance of **Unique Land Parcel Identification Numbers (ULPIN),** Shri Singh said it is just like the Aadhar Number of land parcels.
- He said that in this unique system wherein a unique ID based on **Geo-coordinates** of the parcels is generated and assigned to the plots.

About the Scheme:

- Under the scheme, a 14-digit identification number will be issued to every plot of land in the country.
- It is being described as "the Aadhaar for land" — a number that would uniquely identify every surveyed parcel of land and prevent land fraud, especially in rural India, where land records are outdated and disputed.
- The identification will be based on the longitude and latitude of the land parcel, and is dependent on detailed surveys and geo-referenced cadastral maps.

Benefits:

The benefits of ULPIN are multitudinous. The single source of information can authenticate the ownership and in turn it can end the dubious ownership. It will help identify the government lands easily and protect land from shabby land transaction.

4. Vanniyar quota

The Tamil Nadu Government has filed an appeal in the Supreme Court, challenging the Madras High Court's November 1 order.

- The order had declared ultra vires (beyond one's legal power or authority) a law of TN government which provided 10.5% internal reservation for Vanniyars within the overall 20% quota for the Most Backward Classes (MBCs) in government jobs and higher education.
- The recommendation for 10.5% reservation to the Vanniyakula Kshatriya was made in commensurate with their population as enumerated in a survey held in 1983 by the Tamil Nadu Second Backward Classes Commission.

What is Vanniyar Movement?

- Vanniyars are one of the largest and most consolidated backward communities in Tamil Nadu.
- They had raised massive protests in the mid-1980s demanding 20% reservation in the state, and 2% in central services.
- During agitation from September 17 to 23, 1987, many protesters were killed.
- **Split of OBC quota**: In 1989, the OBC quota was split into two: Backward Castes and Most Backward Castes.
  o Vanniyars were categorised among the MBCs with 107 other communities, with 20% reservation.

- Three decades later, the state government passed a Bill, and the current government has implemented it with a Government Order ensuring 10.5% reservation for Vanniyars within the 20% MBC quota.

GS 3 : Economy, Science and Technology,Environment

5. India needs a coordinated approach for decarbonisation of economy

The announcement of enhanced targets for climate action by India, particularly for achieving net-zero emissions by 2070, has highlighted the importance of long-term planning for decarbonising the economy.

Why do we need a decarbonising strategy

- The Government of India has responded to rapid reductions in the cost of renewable energy (RE) based power, with dramatic enhancements in the **targets for RE**.
- With this approach, India has done well and is on a path to fulfilling its **Paris Agreement commitments for 2030.**
- However, the road ahead will be challenging, and therefore, a coordinated strategy for decarbonising the economy efficiently and effectively will be required.

Strategy for decarbonising the economy

- **Factoring in the changes:** By 2070, there will be many changes in technology, environmental conditions, and the economy.
- The planning horizon of about 50 years will need to be broken up into shorter periods so that new knowledge about emerging technologies can be incorporated into plans.
- **Monitoring of the progress:** Plans will need to be monitored so that the course can be corrected to respond to any unforeseen problems.
- Five years, as the UK has used, seems like a reasonable "Goldilocks ideal."
- An **autonomous and technically credible agency,** like the Climate Change Committee (CCC) in the UK, should be set up.

Decarbonising the power sector

- **Biggest source of GHG:** The **power sector** is the biggest source of GHG emissions and also the **easiest one to decarbonise.**

- **Reducing emission intensity** is a good overarching objective; increased use of RE or non-fossil-fuel generation is a means to that end.
- **The four 2030 targets:** Non-fossil fuel generating capacity to be 500 GW, RE capacity to be 50 per cent of all generation capacity, reduction in emission intensity by 45 per cent, and avoidance of GHG emissions by 1 billion tonnes — **are inter-related.**

Suggestions to decarbonise the power sector

- **Set emission intensity targets:** Setting **permissible emission intensity** in terms of grammes of carbon dioxide equivalent per kWh of electricity sold, would be a good option for targets in the power sector.
- **Single emission-related objective:** In order to decarbonise the power sector, it would be best to have **a single emissions-related objective** so that an optimal strategy can be developed to achieve the objective at the lowest cost.
- **Avoid separate targets:** Currently there is a profusion of **separate targets** for almost every resource used to generate electricity.
- For example, there are separate **renewable purchase obligations (RPOs)** for solar, non-solar RE, and hydropower.
- Such an approach reduces the flexibility of distribution companies to select resources to meet their loads, resulting in a non-optimal resource mix, and a higher cost of electricity.
- **Reconsider RPO:** RPOs are usually imposed to support nascent technologies, and because RE is now competitive on costs with conventional generation, the need for RPOs should be reconsidered.
- The use of **emission intensity targets** is a better approach.

Conclusion

The use of five-year interim targets for permissible emission intensity and the establishment of an autonomous and credible agency to advise the government on targets and policies and to monitor progress will greatly facilitate an effective, economic, and smooth transition to decarbonisation of the power sector first, and the Indian economy later by 2070.

6. Navy's plan for a 170-ship force

 The Navy's plan for a 170 ship force is under way, and some changes in timelines are also being finalised.

Key takeaways

- The Navy shall include a second indigenous aircraft carrier in its Maritime Capability Perspective Plan (MCPP).
- The Navy will commission the first **Project-15B class stealth-guided missile destroyer** Visakhapatnam on November 21, and the **fourth Scorpene class submarine Vela** on November 25.
- **Current status:** The Navy currently has 130 ships and had earlier planned to achieve securing 200, which was revised to 170 ships by 2027.
- **Revised timeline:** The timeline is now being revised as the Navy is revising its MCPP for the next 15 years, which is expected to be ready by 2022.
  - It will be in line with the 10-year Integrated Capability Development Plan (ICDP) being formulated by the Department of Military Affairs to bring in service integration

Navy's Maritime Capability Perspective Plan (MCPP)

- The Navy's Maritime Capability Perspective Plan (MCPP)' emphasises on capability building rather than numbers.
- The MCPP lays down the plans for force development and modernisation over three plan periods from 2005-22.
- **Aim:** To build a three-dimensional force that is able to meet all future challenges

7. Mission 500 GW by 2030

In News: India takes one more step to reduce carbon emission and reduce the cost of power to consumers.

Ministry of Power and New & Renewable Energy have issued revised guidelines providing for thermal generation companies to set up renewable energy generation capacity either by themselves through developers by open bids and supplying it to the consumers under the existing PPAs. This will enable the replacement of fossil fuel based energy by renewable energy under the existing PPAs.

- As the cost of renewable energy is less than the cost of Thermal energy, the gains from the bundling of renewable energy with thermal will be shared between the generator and Distribution companies/other procurers on a 50:50 basis.
- As the renewable energy will be balanced with thermal energy, therefore, the DISCOMs will now not need to acquire any separate capacity for balancing of renewable energy. This is a very significant step towards achieving the goal of 500 GW of non-fossil fuel capacity by 2030.

- The distribution companies will be able to count the renewable energy supplied under the scheme towards their renewable purchase obligation and this will be without the financial burden of separate PPA. This step by the Central Government will lead to a faster energy transition and will be beneficial for both the Generators and the Distribution Companies.

Prelims Practice Questions

1. **Consider the following statements:**

   1. Education is part of the state list.
   2. Provisions related to education can be found in Part III of the constitution.

Which of the above statements are correct?

A 1 only
B 2 only
C Both 1 and 2
D Neither 1 nor 2

Answer : D

Explanation

- The **42nd Amendment to the Constitution in 1976 moved education from the State to the Concurrent List. Hence, statement 1 is not correct.**
- The **86th Amendment in 2002 made education an enforceable right** under **Article 21-A.**
- **However, Part IV of the Indian Constitution, Article 45 and Article 39 (f) of Directive Principles of State Policy (DPSP),** has a provision for state-funded as well as equitable and accessible education.
- The fundamental duties were increased to eleven by the **86th Amendment in 2002**, which added a duty on every parent or guardian to ensure that their child or ward was provided opportunities for education between the ages of six and fourteen years.
- **Hence, statement 2 is not correct.**

2. Kamo'oalewa recently seen in news is

a. A new variant of coronavirus found in samples taken from the Xinjiang region of China
b. A fossil of a new megaraptor in Patagonia
c. A Near-Earth asteroid which could be a fragment of our moon
d. A Most Advanced Humanoid Robot

Answer: c

Explanation:

- Kamoʻoalewa is a very small asteroid, fast rotator and near-Earth object. Currently, it is the smallest, closest, and most stable (known) quasi-satellite of Earth.
- Recent studies point to the possibility of Kamo'oalewa being a part of the Earth's Moon. It could have broken away from the Moon due to a possible impact, and gone on to orbit the Sun rather than the Earth-like its parent does.

3. Among the following countries, which one does not share a border with the Baltic Sea?

A Denmark
B Germany
C Russia
D Belarus

Answer : D

Explanation

- Baltic sea is an arm of the North Atlantic Ocean, extending northward from the latitude of southern Denmark almost to the Arctic Circle and separating the Scandinavian Peninsula from the rest of continental Europe.
- Proceeding clockwise from the west, the **countries bounding the Baltic** are **Denmark**, Sweden, Finland, **Russia**, Estonia, Latvia, Lithuania, Poland, and **Germany. Hence option D is correct.**

4. In India, it is legally mandatory for which of the following to report on cyber security incidents?

1. Service providers
2. Data centres
3. Body corporate

Select the correct answer using the code given below:

a. 1 only
b. 1 and 2 only
c. 3 only
d. 1, 2 and 3

Answer: d

Explanation:

- Cybersecurity incidents mean any real and suspected adverse event in relation to cybersecurity that violates an explicitly or implicitly applicable security policy resulting in unauthorized access, denial of services, unauthorised use of computer resources for processing or storage of data or change in data without authorization.
- Section 70-B of the Information Technology Act, 2000 gives the Central government the power to appoint an agency of the government, Indian Computer Emergency Response Team to report incidents of cybersecurity.
- Rule 12 of the CERT rules gives every person, company or organization the option to report cybersecurity incidents to the CERT-In.

5. Quasi Satellites has been recently in the news. Which of the following statements most appropriately describes it?

A It is a satellite-based on quantum computing.
B Satellite to be launched on the far side of the moon
C Satellites of Mars
D Space rocks near the earth's orbit that moves around the Sun.

Answer : D

Explanation

- **Kamo'oalewa was discovered in 2016** (through the **PanSTARRS telescope in Hawaii**),
  - It is a word that is part of a Hawaiian chant, and alludes to an offspring that travels on its own.
  - It is **one of Earth's quasi-satellites, a space rock that orbits the Sun, but remains relatively close to the planet –** in this case about 9 million miles away.
  - The asteroid is roughly the size of a Ferris wheel – between 150 and 190 feet in diameter.
  - Because of its small size (about 50 metres wide), this quasi-satellite has been difficult for scientists to study, and little was known about it so far.
- **Hence, option D is correct.**

6. Consider the following statements with respect to Earthquakes:

1. The magnitude of earthquakes is measured on the Mercalli Scale.
2. The magnitude is expressed in absolute numbers, 0-10.

Which of the above statements is/are correct?

a. 1 only
b. 2 only
c. Both
d. None

Answer: b

Explanation:

- Mercalli scale measures the intensity of an earthquake.
- Intensity scales, like the Modified Mercalli Scale and the Rossi-Forel scale, measure the amount of shaking at a particular location. An earthquake causes many different intensities of shaking in the area of the epicenter where it occurs. So the intensity of an earthquake will vary depending on where you

are. Sometimes earthquakes are referred to by the maximum intensity they produce.

- Magnitude scales, like the moment magnitude and Richter scale measure the size of the earthquake at its source.
- The magnitude in richter scale is expressed in absolute numbers, 0-10.
- The Richter scale is a base-10 logarithmic scale, meaning that each order of magnitude is 10 times more intensive than the last one. In other words, a two is 10 times more intense than a one and a three is 100 times greater. In the case of the Richter scale, the increase is in wave amplitude.

Mains Practice Questions

1Q. Examine the objectives and significance of national supercomputing mission in India alongwith the challenges involved. (250 words)

Approach

- Give a brief idea on supercomputing mission
- Mention its objectives
- Enumerate the advantages and challenges

2Q. The present-day food system is one of the main drivers of deforestation and biodiversity loss. Examine. (250 words)

Approach

- Introduce the problem of Deforestation and Biodiversity Loss by giving some facts.
- Examine how food system is related with the above problem.
- Give Conclusion.