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GS 2 : Polity, Governance, International Relations

1. Needed: full disclosure on electoral bonds

Background:

PIL against Electoral bonds:

- A Public Interest Litigation (PIL) was filed in the Supreme Court by the Association of Democratic Reforms (ADR), to stay the sale of a new set of electoral bonds before the recently held Assembly elections. The ADR PIL had challenged electoral bonds as being unconstitutional.
- The Supreme Court while **downplaying the concerns of the corrupting influence of anonymous corporate and foreign money** had refused to stay the sale of electoral bonds.
- Instead, the Supreme Court expressing doubts over the absolute anonymity of the electoral bonds had reasoned that the available information in the public domain could be used to ascertain political donations.

Concerns with the SC's observations:

- The article argues against the above Supreme Court's suggestion based on the following facts.
 - Notably, the annual reports of all the potential donor companies and firms are **not readily accessible on the website of the Ministry of Corporate Affairs**.
 - Also private firms, unlike companies, have **no regulatory mandate to submit their annual reports** except for filing their annual tax returns, since their functioning is regulated by Acts other than the Companies Act of 2013.
 - Many registered companies while filing their annual financial statements, **do not disclose political donations**.
 - The company statements might have a total aggregate amount of all donations, including philanthropic ones. **Nowhere are donations to specific political parties required to be mentioned**.
 - The Finance Bill of 2017 amended Section 182 of the Companies Act of 2013 to remove the requirement for declaring disaggregated donations to political parties.

- That political **parties do not need to disclose their electoral bond donors** makes it extremely difficult to track political donations.
- The political parties are only required to **submit annual audit reports with a total of all donations received via electoral bonds**. This makes it very difficult to match a donation of a company to that received by a political party as only aggregate amounts are available.
- Even these annual audit reports are **submitted with great delays**.
- No ordinary person has the resources/time to navigate through documents available on government websites or analyze the income tax returns of companies to ascertain the political donations as suggested by the Supreme Court.
- Hence, the “match the following” suggestion of the Supreme Court to ascertain political donations is both impractical and incorrect.

Recommendations:

- Keeping in the **spirit of the Right to Information (RTI) Act of 2005** which mandates easier access to information held by public authorities, companies and political parties should **voluntarily disclose the identity of recipients and donors**.
- Alternatively, the **Supreme Court or the legislature could push for full and real-time disclosure**, to truly realize the benefit of transparency and accountability as envisaged through the electoral bond scheme.

Concerns over Electoral Bonds:

A new form of anonymity:

- The introduction of electoral bonds has resulted in the anonymity of thousands of crores of political donations and thus has greatly **reduced public and legislative oversight over such donations**.

Skewed framework:

- The current electoral bond framework makes it **possible for the ruling party via the State Bank of India (SBI) to have a full account of all donations** being made via electoral bonds, to itself and to Opposition parties.
- However the parliament, the Election Commission and the Opposition parties do not have this information, nor do the public. This will invariably lead to a situation where the potential donors will be pushed to donate towards the ruling party.

Against the spirit of electoral process:

- The electoral bonds give **political power to companies, wealthy individual donors, and foreign entities**, thus diluting the principle of one voter – one vote – one value.
- Every vote is not equally valuable if companies **can influence policies** through hidden donations.

Other concerns associated with political funding:

Foreign funding:

- In 2016 and 2018, amendments were made to the Foreign Contribution (Regulation) Act (FCRA) through the annual Finance Bills, with retrospective effect. These amendments **enabled Indian subsidiaries of foreign companies to make donations to political parties**.
- These amendments in conjunction with electoral bonds allow anonymous financing by foreign entities **opening Indian elections to the influence of foreign corporate and political donors**.

Changes in corporate funding framework:

- Earlier, only profit-making domestic companies could contribute to political parties. However, post some amendments now **even loss-making companies can contribute to political parties**.
- This could lead to an eventuality where Indian political parties could be fully funded by foreign entity/ domestic pressure groups through a **shell company**.

2. Delhi riots: 3 student activists get bail

Context:

The **Delhi High Court granted bail to three students** of Jawaharlal Nehru University and Jamia Millia Islamia **arrested under the Unlawful Activities (Prevention) Act (UAPA)** in connection with the northeast Delhi riots in 2020.

Details:

- The court criticised the **Delhi Police for casually invoking provisions of UAPA** against the three accused noting that the **line between the constitutionally guaranteed “right to protest” and “terrorist activity” had been blurred**.

- The three accused students were protesting against the enactment of the **Citizenship Amendment Act (CAA)**.
- The court remarked that, in spite of the fact that the **definition of ‘terrorist act’ in UAPA is wide and somewhat vague**, the phrase **‘terrorist act’ cannot be permitted to be casually applied to criminal acts** that fall squarely within the definition of conventional offences.
- The court cautioned that imposing extremely grave and serious penal provisions engrafted in **sections 15, 17 and 18 of the UAPA upon people would undermine the intent and purpose of the law**.

UAPA’s origin:

- The **‘terrorist act’**, including conspiracy and act preparatory to the commission of a terrorist act, were **brought within the purview of UAPA by an amendment made in 2004** when the Prevention of Terrorism Act (POTA) was repealed.
- POTA’s precursor, the **Terrorist & Disruptive Activities (Prevention) Act (TADA)** was repealed in 1995.

Defining ‘terrorism’:

- To understand the **concept and construction of ‘terrorism’**, the High Court referred to various Supreme Court (SC) judgments where the issue has already been dealt with.
- In Hitendra Vishnu Thakur versus State of Maharashtra case, SC said:
 - **“A ‘terrorist’ activity does not merely arise by causing disturbance of law and order or of public order.** The fallout of the intended activity must be such that it travels beyond the capacity of the ordinary law enforcement agencies to tackle it under the ordinary penal law.
 - **“Every terrorist may be a criminal but every criminal cannot be given the label of a ‘terrorist’ only to set in motion the more stringent provisions of TADA.”**

3. Research must follow protocol, says Ministry

Context:

To a question on a probe into a **filovirus study of bats in Nagaland** undertaken by the Bengaluru-based NCBS and TIFR, the Health Ministry said that **all research work has to follow a process and action will be taken if protocols are not followed**.

Background:

- It was a probe into a filovirus study of bats in Nagaland by the Bengaluru-based National Centre for Biological Sciences (NCBS) and the Tata Institute of Fundamental Research (TIFR).

Issue:

- Earlier, an enquiry was initiated into **whether adequate permissions had been sought for the study that had listed two scientists at the Wuhan Institute of Virology as co-authors, and was partially funded by the U.S. Department of Defense** through its Defence Threat Reduction Agency (DTRA).
- Besides, there is an **inter-department disagreement over where the bat samples should be stored.**
- Both the **foreign funding of the study**, which cost an estimated ₹1.9 crore, as well as **concerns over the storage of the bat samples** collected have come up for scrutiny.
- According to the Health Ministry report, the **study didn't have the requisite approval of ICMR. And the facility at NCBS was not equipped in terms of biosafety and biosecurity to undertake such testing.**
- The Health Ministry wants the samples of nucleic acid extract stored at the Bio Safety Level-4 (BSL-4) standard facility at the National Institute of Virology laboratory in Pune, rather than NCBS's Bengaluru facilities, which are rated BSL-3 at present.

The findings of the report are significant in the backdrop of the debate over the origins of COVID-19 worldwide, and the handling of bat samples at the Wuhan Institute laboratory.

4. SC closes trial against Italian marines

Context:

The Supreme Court ordered the **closure of court proceedings in India against the two Italian marines** who in 2012 allegedly killed two fishermen off the Kerala coast after mistaking them for pirates.

Background:

- Earlier, **the government approached the court for closure of the pending trial** against the marines, following a **United Nations tribunal decision that the duo would be tried in Italy.**

- Following that, the court said it would consider passing an order to quash the criminal proceedings only after Italy deposited ₹10 crore as compensation for the bereaved families of the fishermen.

5. IICT inks pact with pharma firm for 2-DG

What's in News?

CSIR-Indian Institute of Chemical Technology Hyderabad (IICT) and a Bengaluru-based integrated biopharmaceutical company, signed an agreement for technology transfer and manufacture of the anti-COVID drug **2-DG or 2-Deoxy-D-Glucose**.

- Studies have shown that the oral drug **2-DG has demonstrated quick recovery and reduction in oxygen dependence among moderately and severely affected patients.**

2-Deoxy-D-Glucose:

- The 2 DG drug, like glucose, **spreads through the body, reaches the virus-infected cells and prevents virus growth** by stopping viral synthesis and destroys the protein's energy production.
- The drug also **works on virus infection spread into lungs** which help us to decrease patients' dependability on oxygen.
- The drug is known for **selective accumulation in virally infected cells.**

6. Taiwan reports 'largest' incursion by Chinese forces

What's in News?

According to the Government of Taiwan, as many as 28 Chinese air force aircraft, including fighters and nuclear-capable bombers, entered Taiwan's air defence identification zone (ADIZ).

- It is the **largest reported incursion** to date.
- Taiwan has complained of repeated missions by China's air force concentrated in the southwestern part of its air defence zone **near the Taiwan-controlled Pratas Islands.**
- The news comes after the **Group of Seven leaders issued a joint statement scolding China and underscored the importance of peace and stability across the Taiwan Strait.**

One China Policy:

- The One China policy recognizes the long-held position in Beijing that **there is only one China, and that Taiwan is a part of that.**
- According to the One-China policy: **Any country wishing to establish diplomatic relations with Beijing** must acknowledge there is only “One China” and **sever all formal ties with Taiwan.**

GS 3 : Economy, Science and Technology, Environment

7. FCI rice to be used for ethanol production

Context:

The Central government has allocated 78,000 tonnes of rice procured for food security purposes to be diverted to ethanol production at a subsidised rate of ₹20 a kg.

- However, the share of rice in ethanol production is minuscule and **maize would form the primary feedstock for grain-based ethanol production.**

Details:

- This is part of the government’s plan to **double distilling capacities by 2025**, partly by **encouraging an increase in the share of grain-based ethanol production** from the current focus on molasses-based production.
- Earlier, a road map advancing the target date for achieving 20% blending of ethanol in petrol by five years to 2025 was presented.
 - **The last two years have seen blending levels of around 5%.**
- The centre is **targeting an ethanol production of 1,500 crore litres by 2025**, out of which, **740 crore litres, would be from grain-based distilleries**, with the **remainder coming from sugar-based distilleries.**
 - Currently, about a third of the 710-crore litre ethanol production capacity comes from grains.
 - Only 38 crore litres of grain-based ethanol is used for fuel.

Issue:

- It is believed that it is unethical as **millions of migrant, daily wage, unorganised sector and self-employed workers face a dire shortage of food required even for minimum sustenance**, apart from other deprivations of

adequate shelter, monetary support for basic needs, and protection from COVID-19 disease.

- Critics assert that converting rice stocks into ethanol under the nose of hungry people is unacceptable.

Ethanol:

- Ethanol is a **biofuel and a common by-product of biomass left by agricultural feedstock** such as **corn, sugarcane, hemp, potato, etc.**
- **It is produced mainly from molasses**, a byproduct of sugar manufacture.
- **Ethanol is basically alcohol of 99%-plus purity**, which can be used for blending with petrol.
- Ethanol being a less polluting fuel will **cut down carbon emissions**.

8. Embracing cryptocurrency

Context:

- Recently, **El Salvador became the first country in the world to adopt bitcoin as legal tender.**
- In this context, the **article argues for a more favourable approach towards cryptocurrency in India.**

Background:

India's stand on Cryptocurrency:

- Post-2010, the cryptocurrency market in India developed in a largely laissez-faire regulatory space and this has established a **substantial trading market for cryptocurrencies in India.**
- The **RBI had banned cryptocurrency trading in 2018**, based on concerns over the potential impact the cryptocurrencies could have on the financial stability in the economy.
 - These fears were based on cryptocurrencies' volatility, their susceptibility to hacking, and the fear that they could potentially facilitate criminal activities such as money laundering, terrorist financing and tax evasion.
- **The Supreme Court had asked the Centre in 2019 to frame policies for cryptocurrencies, and in 2020, struck down the curbs imposed by the RBI while stopping short of commenting on the legal nature of cryptocurrencies.**

- The court reasoned that there were alternative regulatory measures short of an outright ban through which the RBI could have achieved its objective of curbing the risks associated with cryptocurrency trading.
- A **high-level inter-ministerial committee (IMC)** was constituted under the chairmanship of the economic affairs secretary on digital currencies. The government had expressed its openness to evaluate and explore new technologies, including cryptocurrencies, for improving governance.
- **The draft Cryptocurrency and Regulation of Official Digital Currency Bill, 2021** proposes to **criminalize all private cryptocurrencies** while also laying down the **regulatory framework for an RBI-backed digital currency**.
 - The purported reason for the prohibition of private cryptocurrencies is the **imprecise legal nature of cryptocurrencies in India** and the **lack of legal framework** for the regulatory bodies to directly regulate private cryptocurrencies.

Way forward:

Need for legal definition of cryptocurrency and a regulatory framework:

- The fact that cryptocurrency has no legal classification should not be the impetus to prohibit its use in India rather the RBI should come up with an appropriate regulatory framework for cryptocurrencies.
- The methodology adopted in countries like the U.K., Singapore and the U.S could offer valuable lessons for India in this regard.
 - **The U.K. has classified cryptocurrency as property** and this has helped pave the way for cryptocurrencies to be covered within a regulated legal framework of the economy.
 - **The amenability of cryptocurrency transactions to the contract law framework in Singapore** has helped establish a legal framework for cryptocurrency trading.
 - **The trade in cryptocurrency is taxed in the U.S.** which has helped in the oversight and regulation of cryptocurrency trading.

Balanced regulation:

- There is a need for a balanced regulation of the cryptocurrency which could allow private individuals the freedom to harness a powerful new technology like blockchain technology-based digital currency with appropriate regulatory standards.
- Such permissive regulation **recognises the freedom of choice given to people** for using a medium of exchange other than a central bank-backed fiat currency.

- Such an approach would be in line with the rising global trend of embracing cryptocurrencies that **permit the growth of the cryptocurrency market subject to certain safeguards.**

THE INDIAN EXPRESS

GS 2 : Polity, Governance, International Relations

1. 42nd Session of FAO Conference

Why in News

Recently, the **Union Minister of Agriculture and Farmers' Welfare** addressed the **42nd session of Food and Agriculture Organization's (FAO) Conference.**

- The Conference takes place **every two years** and is FAO's **supreme governing body.**
- It determines the **policies of the Organization, approves the budget,** and makes recommendations to Members on food and agriculture issues.

Key Points

- **India's Efforts for Food Security during the Covid-19 Pandemic:**
 - **High Production of Foodgrains:** India registered an **all-time high production of foodgrains at 305 million tonnes as well as in exports** during 2020-21, contributing to **global food security.**
 - **KISAN RAIL:** It was introduced to transport the essential commodities including perishable horticulture produce, milk and dairy produce from the production centres to the large urban markets.
 - **Pradhan Mantri Garib Kalyan Package:** Under this scheme, free food grains were provided to 810 million beneficiaries and it has been further extended in which workers will be benefited till November, 2021.
 - **PM Kisan Scheme:** More than **Rs.1,37,000 Crore** have been sent to the bank accounts of over **100 million farmers** under this to **provide income support to the farmers.**
- **Climate Change and Agricultural Schemes:**

- **Pradhan Mantri Krishi Sinchayee Yojana (PMKSY):** It was launched in 2015 to address the issues of water resources and provide a permanent solution that envisages Per Drop More Crop.
- **Green India Mission:** It was launched in 2014 under the umbrella of National Action Plan on Climate Change (NAPCC) with the primary objective of protecting, restoring and enhancing India's diminishing forest cover.
- **Soil Health Card (SHC):** It was launched with the main objective of analysing cluster soil samples and advocating farmers regarding their land fertility status.
- **Paramparagat Krishi Vikas Yojana (PKVY):** It was executed to extensively leverage adaptation of climate-smart practices and technologies in conjunction with the Indian Council of Agricultural Research and state governments of India.
- **Rainfed Area Development (RAD):** It focuses on Integrated Farming System (IFS) for enhancing productivity and minimizing risks associated with climatic variabilities.
- **Sub-mission on Agro Forestry (SMAF):** It aims to encourage farmers to plant multi-purpose trees together with the agriculture crops for climate resilience and an additional source of income to the farmers, as well as enhanced feedstock to inter alia wood-based and herbal industry.
- **National Mission on Sustainable Agriculture (NMSA),** to develop, demonstrate and disseminate the techniques to make agriculture resilient to adverse impacts of climate change.
- **Mission Organic Value Chain Development for North Eastern Region (MOVCDNER):** It is a Central Sector Scheme, a sub-mission under NMSA, aims to develop certified organic production in a value chain mode.
- **Other Steps Highlighted:**
 - **Green Revolution, White Revolution, blue revolution, Public Distribution System** and price support system.

Food and Agriculture Organization

- **FAO is a specialized agency of the United Nations** that leads international efforts to defeat hunger.
- **World Food Day** is celebrated every year on **16th October** to mark the anniversary of the founding of the FAO in 1945.
- It is one of the UN food aid organisations **based in Rome (Italy)**. Its sister bodies are the **World Food Programme** and the **International Fund for Agricultural Development (IFAD)**.
- **Initiatives Taken:**

- **Globally Important Agricultural Heritage Systems (GIAHS).**
- Monitors the **Desert Locust** situation throughout the world.
- The **Codex Alimentarius Commission or CAC** is the body responsible for all matters regarding the implementation of the Joint FAO/WHO Food Standards Programme.
- **The International Treaty on Plant Genetic Resources for Food and Agriculture.**
- **Flagship Publications:**
 - The State of World Fisheries and Aquaculture (SOFIA).
 - The State of the World's Forests (SOFO).
 - **The State of Food Security and Nutrition in the World (SOFI).**
 - The State of Food and Agriculture (SOFA).
 - The State of Agricultural Commodity Markets (SOCO).
 - **World Food Price Index.**
- **India and FAO:**
 - **Support of FAO** in endorsing the Indian proposal for an **International Year of Pulses** which was celebrated in **2016** and for **declaring 2023** as the **International Year of Millets.**
 - **India released a commemorative coin of Rs. 75 denomination** to mark the 75th Anniversary of the FAO (16th October 2020).

2. Redefining Boundaries of UAPA: Delhi High Court

Why in News

Recently, the Delhi High Court granted bail to student activists in a **Unlawful Activities Prevention Act (UAPA), 1967** case.

- While delivering the judgement, the court **redefined the boundaries** of the otherwise "**vague**" **Section 15** of the UAPA.

Key Points

- **High Court's Ruling:**
 - **Extent of Terrorist Activity:**
 - Terrorist activity **cannot be broadly defined to include ordinary penal offences.**
 - By doing so, it **raised the bar for the State to book an individual for terrorism under the UAPA.**
 - The extent and reach of terrorist activity must travel beyond the effect of an ordinary crime and **must not arise merely by causing disturbance of law and order or even public order.**

- It must be such that **it travels beyond the capacity of the ordinary law enforcement agencies to deal with it** under the ordinary penal law.
- **Careful while Defining Unlawful Activities:**
 - The courts must be **careful in employing the definitional words and phrases used in Section 15 of UAPA in their absolute literal sense**, they should differentiate clearly how terrorism is different even from conventional, heinous crime.
 - **Section 15** of the UAPA defines “**terrorist act**” and is punishable with imprisonment for a term of at least five years to life. In case the terrorist act results in death, the punishment is death or imprisonment for life.
 - The court referred to how the **Supreme Court** itself, in case of *Kartar Singh v State of Punjab 1994*, flagged similar concerns against the misuse of another anti-terror law, the **Terrorists and Disruptive Activities (Prevention) Act, 1987 (lapsed in 1995)**.
- **Intent of Enacting UAPA:**
 - To **bring terrorist activity within its scope**, was, and could only have had been, to deal with matters of profound impact on the 'Defence of India', nothing more and nothing less.
 - It was **neither the intent nor purport of enacting UAPA that other offences of the usual and ordinary kind**, however grave, egregious or heinous in their nature and extent, **should also be covered by UAPA**.
- **Right to Protest:**
 - Observed that **protests against Governmental and Parliamentary actions are legitimate**; and though such protests are expected to be peaceful and non-violent, it is not uncommon for protesters to push the limits permissible in law.
 - The line between the **constitutionally guaranteed right to protest (Article 19) and terrorist activity seems to be getting somewhat blurred**.
- **Significance of the Ruling:**
 - This is the **first instance of a court calling out alleged misuse of the UAPA against individuals** in cases that do not necessarily fall in the category of “terrorism” cases.
 - According to data provided by the Ministry of Home Affairs in Parliament in March, a total of **1126 cases were registered under UAPA in 2019, a sharp rise from 897 in 2015**.

Unlawful Activities Prevention Act, 1967

- UAPA was passed in 1967. It aims at **effective prevention of unlawful activities associations in India.**
 - **Unlawful activity** refers to any action taken by an individual or association intended to disrupt the territorial integrity and sovereignty of India.
- The Act **assigns absolute power to the central government**, by way of which if the Centre deems an activity as unlawful then it may, **by way of an Official Gazette**, declare it so.
 - It has **death penalty and life imprisonment as highest punishments.**
- Under UAPA, **both Indian and foreign nationals can be charged.** It will be applicable to the offenders in the same manner, even if crime is committed on a foreign land, outside India.
- Under the UAPA, **the investigating agency can file a charge sheet in maximum 180 days after the arrests and the duration can be extended further** after intimating the court.
- The **2004 amendment added "terrorist act" to the list of offences to ban organisations for terrorist activities**, under which 34 outfits were banned.
 - Till 2004, "unlawful" activities referred to actions related to secession and cession of territory.
- In August, Parliament cleared the **Unlawful Activities (Prevention) Amendment Bill, 2019** to designate individuals as terrorists on certain grounds provided in the Act.
 - The Act empowers the Director General of **National Investigation Agency (NIA)** to grant approval of seizure or attachment of property when the case is investigated by the said agency.
 - The Act empowers the **officers of the NIA, of the rank of Inspector or above, to investigate cases of terrorism** in addition to those conducted by the DSP or ACP or above rank officer in a state.

GS 3 : Economy, Science and Technology, Environment

3. Embracing cryptocurrency

Rising global trend of embracing cryptocurrencies

- El Salvador became the **first country in the world** to adopt bitcoin as legal tender.
- The U.K. has classified **cryptocurrency as property.**

- The U.K. has sought to regulate the functioning of crypto-businesses while still **imposing some restrictions to protect the interests of investors.**
- On the other hand, while there is no exact legal classification of cryptocurrency in Singapore, there is now **a legal framework for cryptocurrency trading.**
- In the U.S., the open approach taken by the authorities has resulted in the trade in cryptocurrency being **both taxed and appropriately regulated.**

India's approach

- Between 2013 and 2018, the government's response to the rise of virtual currencies was **cautionary, alerting users to the potential risks posed by cryptocurrency transactions.**
- Instead of developing a regulatory framework to address these issues, the Reserve Bank of India (RBI), in April 2018, effectively imposed a ban on cryptocurrency trading.
- This ban was **overturned by the Supreme Court in 2020.**
- The court reasoned that there were **alternative regulatory measures** short of an outright ban through which the RBI could have achieved its objective of curbing the risks associated with cryptocurrency trading.
- India's next move lies in the draft **Cryptocurrency and Regulation of Official Digital Currency Bill, 2021.**
- The draft Bill proposes **to criminalise all private cryptocurrencies** while also laying down the regulatory framework for **an RBI-backed digital currency.**

What should be India's approach?

- The **global regulatory attitude towards cryptocurrencies** offers valuable insights into the alternative ways to achieve balanced regulation.
- In India, the **absence of an existing legal classification of cryptocurrency** should not be the impetus to prohibit its use.
- The government should use this as an opportunity to allow private individuals the **freedom to harness a powerful new technology with appropriate regulatory standards.**

Conclusion

Regulations to avoid the pitfall and not the outright ban is the right way towards the cryptocurrencies.

4. FSSAI recognizes new precision Iodine Value Analyser

The Council of Scientific and Industrial Research-Central Scientific Instruments Organization (CSIR-CSIO) has developed and transferred the technology of Precision Iodine Value Analyzer (PIVA).

What is Precision Iodine Value Analyzer?

- It is an instrument for the measurement of the degree of unsaturation (iodine value) in vegetable oils.
- This indigenous food testing equipment was recognized by the Food Safety and Standards Authority of India (FSSAI) on World Food Safety Day on June 7, 2021.
- It has applications in oil extraction units, quality control and assurance labs, food regulatory authorities, soaps and cosmetics, bakeries, meat industry, paint industry, biodiesel analysis, and charcoal industry.
- It is also useful in determining adulteration in edible oils and fats.

Measuring iodine value

- Iodine value is conventionally determined using manual titration and a few analytical instruments based on automated titration.
- However, these methods take a longer time to analyze, are costly, and use toxic chemicals.
- Researchers at CSIR-CSIO developed a rapid analysis technique that takes just three minutes to carry out the same analysis.
- Currently, PIVA has been calibrated and tested for coconut, sunflower, mustard, palm, rice bran, soybean, groundnut, olive oil, and ghee.
- This new development is a part of the ongoing effort to strengthen the food testing capabilities by introducing quick and advanced food testing kits.

5. Early Southwest Monsoon

Why in News

After arriving at the Kerala Coast two days behind the schedule, the Southwest Monsoon has hit early across some areas of south peninsular and central India.

Key Points

- **Cause of Early Monsoon:**

- **Cyclone Yaas**, formed in the Bay of Bengal in May, helped in bringing the crucial southwest monsoon winds over the Andaman Sea..
 - As a rule-of-thumb, the monsoon makes its onset over Kerala roughly ten days after it makes its advent over the south Andaman sea.
- After delaying in Kerala, **fast progress was mainly due to strong westerly winds from the Arabian Sea**, and also the **formation of a low-pressure system over the North Bay of Bengal**, that currently lies over **eastern Uttar Pradesh and Bihar**.
- An **off-shore trough**, prevailing **between Maharashtra and Kerala**, has helped the monsoon arrive early over Karnataka, Goa, Andhra Pradesh, Telangana, Maharashtra and southern Gujarat.
- **Further Progress:**
 - Over **Northwest India**, the monsoon becomes **active only when the monsoon currents** - either from the Arabian Sea or the Bay of Bengal - reach the region. As it is not expected to happen soon, the monsoon progress will remain slow.
 - Also, a stream of **mid-latitude westerly winds** is approaching Northwest India, which will **hinder the monsoon advancement** in the immediate coming days.
- **Early Monsoon and Rainfall Quantum:**
 - The **time of monsoon onset over a region has no direct impact on the rainfall quantum** received during the season, or in the monsoon's progress.
 - For instance, **the monsoon took 42 days in 2014 and 22 days in 2015** to cover the entire country. Even with such distinct ranges, **India recorded deficient rainfall during both years**.
- **Impact on Summer-Sown Crops:**
 - The early arrival of monsoon rains in central and northern India will help farmers accelerate sowing of **summer-sown crops** such as paddy rice, cotton, soybean and pulses, and may boost crop yields too.
- **Indications of Climate Change:**
 - The onset of the monsoon over various parts of the country each year can be ahead of time, in time or late. These variations are generally considered normal, given the complexity of the monsoon.
 - However, climate experts have linked **extreme weather events like intense rainfall over a region within a short time span or prolonged dry spell** during the four months (June-September) as indications of climate change.

Monsoon in India

- **About:**

- The **climate of India** is described as the '**monsoon**' type. In Asia, this type of climate is found mainly in the south and the southeast.
- Out of a total of **4 seasonal divisions** of India, **monsoon** occupies 2 divisions, namely:
 - **The southwest monsoon season** - Rainfall received from the southwest monsoons is seasonal in character, which occurs between June and September.
 - **The retreating monsoon season** - The months of October and November are known for retreating monsoons.
- **Factors Influencing South-West Monsoon Formation:**
 - **The differential heating and cooling of land and water** creates a low pressure on the landmass of India while the seas around experience comparatively high pressure.
 - **The shift of the position of Inter Tropical Convergence Zone (ITCZ)** in summer, over the Ganga plain (this is the equatorial trough normally positioned about 5°N of the equator. It is also known as the monsoon-trough during the monsoon season).
 - **The presence of the high-pressure area**, east of Madagascar, approximately at **20°S over the Indian Ocean**. The intensity and position of this high-pressure area affect the Indian Monsoon.
 - **The Tibetan plateau gets intensely heated** during summer, which results in strong vertical air currents and the formation of low pressure over the plateau at about 9 km above sea level.
 - **The movement of the westerly jet stream** to the north of the Himalayas and the presence of the **tropical easterly jet stream** over the Indian peninsula during summer.
 - **Tropical Easterly Jet** (African Easterly Jet).
 - **El Nino/Southern Oscillation (SO)**: Normally when the tropical eastern south Pacific Ocean experiences high pressure, the tropical eastern Indian Ocean experiences low pressure. But in certain years, there is a reversal in the pressure conditions and the eastern Pacific has lower pressure in comparison to the eastern Indian Ocean. This periodic change in pressure conditions is known as the SO.

6. Jal Shakti Abhiyan - II

Why in News

The Minister of Jal Shakti has urged all MPs to support the ongoing “**Jal Shakti Abhiyan: Catch The Rain**” campaign in their respective constituencies and states.

- Such interventions would ensure water source sustainability in rural areas and would strengthen the ongoing **Jal Jeevan Mission** being implemented by the Ministry.

Key Points

- **About:**
 - The Abhiyan with the **theme- “Catch the Rain where it falls, when it falls’** was launched on the occasion of **world water day** (22nd March 2021).
 - It covers **all rural and urban areas** of all districts of the country.
 - **Jal Shakti Abhiyan-I of 2019**, covered **only 1592 water stressed blocks** out of 2836 blocks in **256 districts** of the country.
 - **National Water Mission**, under the **Ministry of Jal Shakti**, is the nodal agency for its implementation.
 - A total of almost **Rs. 14,000 Cr worth of water conservation related work** is completed/ongoing **under the MGNREGS** (Mahatma Gandhi National Rural Employment Guarantee Scheme) of Dept of Rural Development.
- **Aim:**
 - The campaign aims **at tapping rainwater** by constructing artificial recharge structures, revitalizing existing ponds and water bodies, creating new water bodies, provisioning check dams, rejuvenating wetlands and rivers before the onset of monsoon.
 - It is also planned to create **a data-base of all water bodies** in the country by **geo tagging** them and using this data to create scientific and data-based district level water conservation plans.
- **Other Initiatives to Conserve Water:**
 - **Jal Jeevan Mission:**
 - An initiative under the **Ministry of Jal Shakti**, aims to ensure **access to piped water for every household in rural India**.
 - Government of India has restructured and subsumed the **National Rural Drinking Water Programme (NRDWP)** into Jal Jeevan Mission (JJM) to provide **Functional Household Tap Connection (FHTC)** to every rural household i.e., Har Ghar Nal Se Jal (HGNSJ).

- **Jal Jeevan Mission (Urban):**
 - In the **Budget 2021-22**, Jal Jeevan Mission (Urban) was announced under the **Housing and Urban Affairs Ministry** to provide universal coverage of water supply to all households through functional taps in all statutory towns in accordance with **Sustainable Development Goal- 6** (clean water and sanitation).
- **National Water Mission:**
 - It was launched with the objective of conservation of water, minimising wastage and ensuring more equitable distribution both across and within states through integrated water resources development and management.
- **NITI Aayog's Composite Water Management Index:**
 - With the objective of achieving effective utilization of water, NITI Aayog has developed the Composite Water Management Index.
- **Atal Bhujal Yojana:**
 - It is a central sector scheme worth Rs. 6,000 crore for sustainable management of groundwater with community participation.
 - It envisages people's participation through the formation of 'Water User Associations', water budgeting, preparation and implementation of Gram-panchayat-wise water security plans, etc.

7. Indo-Thai CORPAT

Why in News

Recently, the 31st edition of **India-Thailand Coordinated Patrol** (Indo-Thai CORPAT) between the Indian Navy and the Royal Thai Navy was conducted **in the Andaman sea** close to the **Strait of Malacca**.

Key Points

- **Naval Exercise:**
 - India and Thailand have been carrying out CORPAT along their **International Maritime Boundary Line** twice a year since 2005.
 - **Indian Naval Ship (INS) Saryu**, an indigenously built Naval Offshore Patrol Vessel and Thailand's Ship **HTMS-Krabi**, an **Offshore Patrol Vessel**, along with **Dornier Maritime Patrol Aircraft** from both navies participated in the CORPAT 31st edition.

- **Aims:**
 - To keep part of the Indian Ocean **safe and secure for commercial shipping and international trade.**
 - To ensure effective implementation of the **United Nations Conventions on Laws of the Sea (UNCLOS).**
 - UNCLOS specify **regulations regarding protection and conservation of natural resources**, conservation of marine environment, prevention and suppression of illegal, unregulated fishing activity, drug trafficking, piracy, exchange of information in prevention of smuggling, illegal immigration and conduct of search and rescue operations at sea.
- **In line with India's SAGAR Vision:**
 - As part of Indian Government's vision of **Security And Growth for All in the Region (SAGAR)**, the Indian Navy has been involved in assisting countries in the Indian Ocean Region with **Exclusive Economic Zone (EEZ) Surveillance, Humanitarian Assistance and Disaster Relief (HADR)**, and other capacity building and capability-enhancement activities, on their request.
- **Other Military Exercises between India and Thailand:**
 - **Exercise MAITREE** (Army).
 - **Exercise SIAM BHARAT** (Air Force).

Prelims Practice Questions

1. Tilak Swaraj Fund was started to fund which of the following movements?

- a. Civil Disobedience Movement
- b. Swadeshi Movement
- c. Non-Cooperation Movement
- d. Quit India Movement

Answer: c

Explanation:

- Tilak Swarajya Fund was started to fund the non-cooperation movement.
- It gathered over 1 crore rupees and was a part of the constructive agenda of the non-cooperation movement.

2. 'New Shephard' was recently in the news, it is?

- A New techniques that will help increase productivity of sheeps.
- B A rocket system that has been designed to take astronauts in space.
- C American solar powered fighter plane.
- D Newly discovered exo-planet by NASA.

Answer : B

Explanation

- New Shephard is a rocket system that has been **designed to take astronauts and research payloads past the Karman line. Hence, option B is correct.**
 - The Karman line is the internationally recognized boundary of space
- New Shephard has been named after astronaut Alan Shephard – the first American to go to space – and offers flights to space over 100 km above the Earth and accommodation for payloads.
- The idea is to provide easier and more cost-effective access to space meant for purposes such as academic research, corporate technology development and entrepreneurial ventures among others.
- It will also allow space tourists to experience microgravity by taking them 100 km above the Earth.

- Microgravity is the condition in which people or objects appear to be weightless. The effects of microgravity can be seen when astronauts and objects float in space

3. Consider the following statements:

1. Tulu is a Dravidian language included in the Eighth Schedule of the Indian Constitution.
2. Article 344 of the Indian Constitution deals with the Eighth Schedule languages.

Which of the statements given above is/are correct?

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

Answer : B

Explanation

- Tulu is a Dravidian language spoken mainly in two coastal districts Dakshina Kannada and Udupi of Karnataka and Kasaragod district of Kerala.
 - The Tulu speakers, mainly in Karnataka and Kerala, have been requesting the governments to give it official language status and include it in the eighth schedule to the Constitution. **Hence, statement 1 is not correct.**
- **Eighth Schedule of the Constitution:** The Constitutional provisions relating to the Eighth Schedule occur in **Article 344 (1) and 351** of the Constitution. **Hence, statement 2 is correct.**

4. What is the best description of the 'Karman Line'?

- a. Marks the boundary between EEZ and international waters.
- b. Defines a boundary between Earth's atmosphere and outer space.
- c. It is a reference line along the equator for navigation.
- d. None of the above

Answer: b

Explanation:

- The Karman Line is an attempt to define a boundary between Earth's atmosphere and outer space.
- It is an internationally recognised boundary of space.
- According to the Federation Aeronautique Internationale (FAI), it is at an altitude of 100 kilometres, or 62 miles, above sea level.
- The definition is based on a calculation by physicist Theodore von Karman that shows that around this point the atmosphere becomes too thin to support flight.

5. Consider the following statements:

1. The Kosi river has its source in Tibet.
2. The Kosi river joins the Ganga river in Katihar district of Bihar.
3. Kosi is also known as the Sorrow of Bihar.

Which of the statements given above is/are correct?

- A 1 and 2 only
B 2 only
C 3 only
D 1, 2 and 3

Answer : D

Explanation

- The **Kosi is a trans-boundary river** which flows through Tibet, Nepal and India.
 - **It has its source in Tibet** that includes the world's highest upland; it then drains a large part of Nepal before emerging onto the Gangetic plains. **Hence, statement 1 is correct.**

- The river crosses into northern Bihar, India where it branches into distributaries **before joining the Ganges near Kursela in Katihar district.** Hence, statement 2 is correct.
 - Its unstable nature has been attributed to course changes and the heavy silt it carries during the monsoon season, and flooding in India has extreme effects.
 - The Kosi carries the maximum amount of silt and sand after the Brahmaputra in India.
- It is **also known as the “Sorrow of Bihar”** as the annual floods affect about 21,000 km² of fertile agricultural lands thereby disturbing the rural economy. Hence, statement 3 is correct.

6. Consider the following statements about a Blank-Cheque-Company:

1. It is a firm that is specifically set up with the objective of acquiring a firm in a particular sector.
2. It is also known as a shell company.

Which of the statements given above is/are correct?

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

Answer : A

Explanation

- A blank-cheque company is an entity specifically set up with the objective of **acquiring a firm in a particular sector.** Hence, statement 1 is correct.
 - It is also known as **Special Purpose Acquisition Company (SPAC).** Hence, statement 2 is not correct.
- The aim of this SPAC is to raise money in an Initial Public Offering (IPO), and at this point in time, it does not have any operations or revenues.
 - Once the money is raised from the public, it is kept in an escrow account, which can be accessed while making the acquisition.
 - If the acquisition is not made within two years of the IPO, the SPAC is delisted and the money is returned to the investors.
- **A shell company** is a firm that **does not conduct any operations in the economy**, but it is **formally registered**, incorporated, or legally organized in the economy.

Mains Practice Questions

1. What are the salient features of the Jal Shakti Abhiyan launched by the Government of India for water conservation and water security?

Approach

- Start the answer by briefly discussing the Jal Shakti Abhiyan
- Discuss the salient features of the Jal Shakti Abhiyan.
- Conclude suitably.

2. The strength sustenance of local institutions in India has shifted from their formative phase of 'Functions, Functionaries and Funds' to the contemporary stage of 'Functionality'. Highlight the critical challenges faced by local institutions in terms of their functionality in recent times.

Approach

- Start the answer by briefly mentioning the establishment of local bodies in India.
- Discuss the various challenges faced by local institutions with respect to its functionality.
- Discuss some remedial measures.
- Conclude suitably.

