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GS 2 : Polity, Governance, International Relations

1. Health first, fiscal prudence later

Context:

- **Subsidised LPG prices have increased** by a massive 50% in the given financial year.

Background:

Pradhan Mantri Ujjwala Yojana (PMUY):

- Pradhan Mantri Ujjwala Yojana (PMUY) was launched in 2016 to **distribute LPG connections to women of Below Poverty Line (BPL) families**. It provided an upfront connection subsidy of ₹1,600 for eligible beneficiaries.
- Since 2016, PMUY has provided LPG connections to 8 million poor households to reduce women's drudgery and indoor air pollution.
- PMUY has helped **expand LPG coverage to more than 85% of households**, in comparison to less than a third of Indian households in 2011 who used LPG as their main cooking fuel.
- The government is offering 1 crore new connections under Ujjwala 2.0 in Financial Year 22.

Rising prices of LPG:

- India determines domestic LPG prices based on imported LPG price as **India imports more than 50% of the total LPG consumption in India**.
- As the pandemic set in, the LPG subsidised price began to rise, even when global LPG prices plummeted, due to **higher tax rates** which were contributing to the government finances.
- Currently, the **LPG prices are rising globally** and the government move to go in for a **50% reduction in the LPG subsidy budget** for FY22 (versus FY21) will only further push LPG prices upwards.

Concerns:

- The rising LPG prices could have a detrimental impact on the substantial gains made under the Pradhan Mantri Ujjwala Yojana.

Further reduce affordability:

- Multiple studies assessing PMUY have concluded that while access has increased, many **new beneficiaries are not consuming LPG in a sustained manner**.
 - Large-scale primary surveys by the Council on Energy, Environment and Water (CEEW) suggest that, on average, recent PMUY beneficiaries consumed only about half the LPG compared to long-standing regular consumers.
- **Limited uptake of LPG among poor households** is due to the inability of the poor households to afford LPG, despite the subsidy.

Impact on public health:

- Limited uptake of LPG among poor households is also attributable to the **easy availability of biomass in rural areas**, making it difficult for LPG to displace it.
- The rising LPG prices may push more users towards biomass usage which does not augur well for the health of the users. **Biomass is a major cause of indoor air pollution**. Biomass use for cooking contributes up to 30% to the ambient PM2.5 at the national level.

Recommendations:

- The Central government will have to work towards balancing LPG subsidies and ensuring sustained clean fuel consumption in poorer households.

Better targeting of LPG subsidy:

- The government should work towards better targeting of LPG subsidy.
- Currently, the government provides a uniform subsidy per cylinder to all LPG consumers (PMUY or otherwise). The **economically poor households need a greater subsidy** to make it affordable for them to use LPG as their main cooking fuel.

Eliminating subsidy leakage:

- The **de-duplication efforts to weed out households with multiple LPG connections** must be accelerated to avoid subsidy leakages.

Conclusion:

- The continued support to the economically poor for sustaining LPG use is not merely a fiscal subsidy but also a **social investment to free-up women's productive time and reduce India's public health burden.**
- This social investment will yield rich dividends in the years ahead through a **healthier and productive population.**

2. China gives green light for first downstream dams on Brahmaputra

Context:

A draft of China's new Five-Year Plan (FYP) 2021-2025 has given the green light for the first dams to be built on the lower reaches of the Yarlung Zangbo river, as the Brahmaputra is known in Tibet before it flows into India.

Details:

- The draft outline of the FYP for 2025 and long-range objectives through the year 2035, specifically mentions the building of hydropower bases on the lower reaches of the river as among the priority energy projects to be undertaken in the next 5 years.
 - The lower reaches refer to the sections of the river in Tibet before it flows into India.
- The inclusion of the projects in the draft plan suggests the authorities have given the go-ahead to begin tapping the lower reaches for the first time.
 - This marks a new chapter in the hydropower exploitation of the river.
- Other major projects include the construction of coastal nuclear power plants and power transmission channels.
- The draft is all set to be formally approved.

Concerns for India:

- The FYP's backing for the projects also suggests that a number of long-pending proposals from Chinese hydropower companies to build dams on the lower reaches, including near the border with India, may be given approval.
- India has expressed concerns to China over the four planned dams on the upper and middle reaches.
- However, Indian officials have said the dams are not likely to greatly impact the quantity of the Brahmaputra's flows in India because:
 - They are only storing water for power generation.
 - The Brahmaputra is not entirely dependent on upstream flows with an estimated 35% of its basin in India.

- Dams on the lower reaches and at the Great Bend would, however, raise fresh concerns because of the location across the border from Arunachal Pradesh and the potential impact downstream.

Note:

- In 2015, China operationalised its first hydropower project at Zangmu in Tibet.
- Three other dams at Dagu, Jiexu and Jiacha are being developed, all on the upper and middle reaches of the river.

3. Jaishankar, Zalmay Khalilzad discuss Afghan peace talks

Context:

External Affairs Minister S. Jaishankar and the United States special envoy for Afghanistan Zalmay Khalilzad discussed the latest developments pertaining to the Afghan peace talks.

Details:

- India has been keenly following the evolving political situation after the U.S. signed a peace deal with the Taliban.
- The deal provided for the withdrawal of American troops from Afghanistan, effectively drawing curtains on Washington's 18-year war with the Taliban.
- India has also been maintaining that care should be taken to ensure that any such process does not lead to any ungoverned spaces where terrorists and their proxies can relocate.

Note:

India has been a major stakeholder in Afghanistan and it has extended \$3-billion developmental assistance in the last few years to the country.

4. Janaushadhi is helping the poor, says Modi

What's in News?

The Prime Minister inaugurated the 7,500th Janaushadhi Kendra at NEIGRIHMS, Shillong.

- He urged the people to buy affordable medicines from Janaushadhi Kendras.
- Jan Aushadhi Diwas is celebrated on 7th March every year.
- The Jan Aushadhi Divas aims to provide further impetus and create awareness about the use of generic medicines.

GS 3 : Economy, Science and Technology, Environment

5. Railways and a question of transparency

Context:

- The article analyzes the concerns associated with the functioning of the Indian railways and suggests measures to improve its performance.

Concerns:

- The railways are in the midst of **financial distress** and are faced with **fundamental organisational issues**.

Depressed freight earnings:

- The freight earnings in 2020-21 though more than in 2019-20, would be lower than what was achieved in 2018-19. In fact, the passenger and freight earnings in 2019-20 were less than in 2018-19, indicating that a downslide had started even before the outbreak of COVID-19, probably due to the **economic slowdown**.

Operating Ratio:

- The Operating Ratio (OR), which is broadly the **ratio of working expenses to revenues**, has been artificially kept below 100% by making less-than-required provision for pension payments during 2019-20 and 2020-21. While the official figures of OR are 98.36% for 2019-20 and 96.96% for 2020-21, the actual OR works out to 114.19% and 131.49%, respectively, if the required provision is made for pension payments.
 - The Operating Ratio is an important financial performance index to measure the financial viability and sustainability of the Railways.
- The railway finances are in the red and the COVID-19 pandemic has nothing to do with it.

Increasing burden of staff costs and pension payments:

- A major challenge facing the Railways is the **burgeoning staff costs including pension**.
- Over the years, traffic revenues have been unable to keep pace with the increase in staff costs and pension payments. While the passenger and freight revenues increased by 84.8 % from 2010-11 to 2019-20, the staff and pension costs raced ahead at almost double that rate, by 157%, in the same period.
- While in 2010-11, the staff plus pension costs formed 55.7% of the traffic earnings, by 2019-20, they had shot up to 77.5% of the traffic earnings. This, despite the fact that there has been a reduction of about one lakh staff on the roll during this period.
- The spike in the staff and pension costs is largely attributable to the implementation of the **Central Pay Commission recommendations**. The Indian Railway's finances are bound to be subjected to another fatal body blow by the next Pay Commission around 2025-26.

Skewed product mix of freight:

- A detailed analysis of the product mix of freight carried by the railways brings to light a major concern associated with railways.
- A disturbing feature of freight traffic is the **overwhelming dependence on one commodity: coal**. Despite all the marketing efforts over the years, almost 50% of freight earnings are contributed by the transport of coal.
- With the availability of alternative sources of renewable energy such as solar at competitive prices, the dependence on coal-based thermal power plants is bound to reduce to meet the incremental energy needs. Also, India's commitment under the 2015 Paris Agreement would result in India reducing its dependency on coal-based power plants. This does not augur well for the Railways and it will have to therefore think seriously of life after coal.

Recommendations:

- The serious problems of viability facing the **country's largest and most crucial transport organisation** should be addressed at the earliest. The following measures could act as a guiding post.
 - The railways should work towards achieving a quantum jump in revenues, particularly on the freight front, and a drastic reduction in the number of employees. The full commissioning of the two **Dedicated Freight Corridors (DFCs)**, slated to be operational by 2022, assumes great urgency and importance as it would help boost revenues for the railways.
 - The railways should promote the **adoption of the roll-on roll-off model** of transporting loaded trucks on rail on the DFCs, which apart

from boosting revenues has the added advantage of reducing the overall carbon footprint.

- A suggestion to corporatize the Railways' Production Units and to outsource the non-critical sectors like medical services needs to be looked into with discussions with all stakeholders.
- An **annual report called 'Indian Railways Report'** on the lines of the annual Economic Survey should be placed in Parliament every year detailing the physical and financial performance of the Railways, identifying the challenges and plans for the future to meet the country's rail transport needs. This would ensure detailed public scrutiny of the affairs of the railways.

6. Government earnings from the spectrum auction

The end of India's first auction of telecommunications spectrum in five years was held with the government generating revenue of ₹77,815 crores from the exercise.

What is Spectrum?

- Devices such as cellphones and wireline telephones require signals to connect from one end to another.
- These signals are carried on airwaves, which must be sent at designated frequencies to avoid any kind of interference.
- The Union government owns all the publicly available assets within the geographical boundaries of the country, which also include airwaves.
- With the expansion in the number of cellphones, wireline telephone and internet users, the need to provide more space for the signals arise from time to time.

Spectrum allocations

- Spectrum refers to the invisible radio frequencies that wireless signals travel over. The frequencies we use for wireless are only a portion of what is called the electromagnetic spectrum.
- To sell these assets to companies willing to set up the required infrastructure to transport these waves from one end to another, the central government through the DoT auctions these airwaves from time to time.
- These airwaves called spectrum is subdivided into bands that have varying frequencies.
- All these airwaves are sold for a certain period of time, after which their validity lapses, which is generally set at 20 years.

How has the industry been since the last auction?

A lot has changed in the industry since 2016 when the previous auction took place.

- In the last few years, there has been a consolidation in the industry, as a result of which there are only a few major players now.
- While the user base has grown, the industry itself has witnessed unforeseen financial stress in the form of an important court case against it.
- The reference is to the Supreme Court verdict last September that ordered telecom players to share revenues coming from even non-telecom services with the government.
- It gave telecom companies 10 years to pay their Adjusted Gross Revenue (AGR) dues to the government, with 10% of the dues to be paid by March 31, 2021.

What about the 5G rollout?

- The auction for 5G is likely to happen later.
- In the auction that was held last week the government offered spectrum for 4G in the following bands: 700 MHz, 800 MHz, 900 MHz, 1,800 MHz, 2,100 MHz, 2,300 MHz and 2,500 MHz.
- The “king” in 5G, the C-band, which is the band between 3,300 MHz and 4,200 MHz, was not on offer in this round of auctions.

How did this auction compare to the last round?

- In 2016, about 40% of the 2,355 MHz of spectrum (at a reserve price of ₹5.6 lakh crore) was sold, giving the government ₹65,789 crores in revenue.
- This time, the Centre has managed to get more.
- The government said the revenue generated by the auction has exceeded its expectations, which was about 45,000 crore.

THE INDIAN EXPRESS

GS 2 : Polity, Governance, International Relations

1. Rights of Overseas Citizens of India

Why in News

Recently, the government has notified a consolidated list of rights of the **Overseas Citizens of India (OCI)**.

- The rights and restrictions are not new, they have been **notified previously in 2005, 2007, and 2009**. They were also mentioned in an OCI brochure published by the Ministry of Home Affairs in November 2019.

Key Points

- **Multiple Entry Lifelong Visa:**
 - OCI cardholders will be entitled to get multiple entry lifelong visas for visiting India for any purpose.
- **Prior Permission:**
 - OCI cards would need prior permission for a set of activities that include **research, journalism, mountaineering, missionary or Tablighi work, and visits to restricted areas**.
- **Parity with Non Resident Indians (NRIs):**
 - OCI cardholders will enjoy parity with NRIs in **adoption of children, appearing in competitive exams, purchase or sale of immovable property** barring agricultural land and farmhouses, and **pursuing professions** such as doctors, lawyers, architects, and chartered accountants.
- **Parity with Indian Nationals:**
 - They have parity with Indian nationals in the matter of domestic air fares, entry fees to monuments and public places.
- **Entrance Exams and Admissions:**
 - OCIs **can appear** for all-India entrance tests such as **National Eligibility cum Entrance Test (NEET)**, Joint Entrance Examination (Mains), Joint Entrance Examination (Advanced) or such other tests **to make them eligible for admission only against any NRI seat or any supernumerary seat**.

- The OCI cardholder **shall not be eligible for admission against any seat reserved exclusively for Indian citizens.**
- **Other Economic, Financial and Educational fields:**
 - In respect of all other economic, financial and educational fields not specified in the latest notification or the rights and privileges not covered by the notifications made by the **Reserve Bank of India** under the **Foreign Exchange Management Act, 1999**, the OCI cardholder **shall have the same rights and privileges as a foreigner.**
- **Exemption:**
 - They are exempted from registration with the **Foreigners' Regional Registration Officer (FRRO)** for any length of stay in India.
 - Foreigners visiting India who **hold long-term visas (more than 180 days) are required to register their presence** in India with the Foreigners' Regional Registration Office (FRRO).
- **Restrictions:**
 - There will be **no restriction in visiting religious places** and attending normal religious activities like attending religious discourses.
 - However, preaching religious ideologies, making speeches in religious places, distribution of audio or visual display/pamphlets pertaining to religious ideologies, spreading conversion etc. **will not be allowed.**

Overseas Citizen of India

- The **Ministry of Home Affairs** defines an OCI as a person who:
 - Was a citizen of India on or after **26th January 1950**; or
 - Was eligible to become a citizen of India on **26th January 1950**; or
 - Is a **child or grandchild of such a person**, among other eligibility criteria.
- According to **Section 7A of the OCI card rules**, an applicant is not eligible for the OCI card if he, his parents or grandparents have ever been a citizen of Pakistan or Bangladesh. The category was introduced by the government in 2005.
- The Government of India via **Citizenship (Amendment) Act, 2015** merged the **Person of Indian Origin (PIO) category with OCI category** in 2015.

Non Resident Indian

- A Non-Resident Indian (NRI) means a person resident outside India who is a **citizen of India** or is a person of Indian origin.
 - An Indian citizen residing outside India for a combined total of at least **183 days in a financial year** is considered to be an NRI.
- NRIs **enjoy voting rights** and are required to **pay and file the income tax return** on their Indian income like resident Indians.

- NRI is more of a technical classification for taxation purposes and investment purposes.
- However, in case an **NRI wishes to take up foreign citizenship, he/she will have to give up Indian citizenship** as the Indian constitution does not allow dual citizenship.
 - A person cannot hold Indian as well as foreign citizenship simultaneously.

Foreigner

- As per the the **Foreigners Act, 1946**, foreigner means a person who is not a citizen of India.
- The Fundamental Rights guaranteed by **Articles 14, 20, 21, 21A, 22, 23, 24, 25, 26, 27 and 28** are available to all persons whether citizens or foreigners. The Fundamental Rights guaranteed by **Articles 15, 16, 19, 29, and 30** are available only to citizens of India.

2. What changes after COVID-19 vaccination?

As the vaccination drive gains momentum, questions have emerged about appropriate behaviour after being vaccinated.

What does being vaccinated mean?

- Being fully vaccinated means a period of two weeks or more following the receipt of the second dose in a two-dose series, or two weeks or more following the receipt of a single-dose vaccine.
- In India, currently, both vaccines being used – Covishield and Covaxin – follow a two-dose regimen.
- Typically, the immune response takes a while to build up after a vaccine shot.
- After the first jab of a two-dose vaccine, a good immune response kicks in within about two weeks. It is the second dose that boosts the immune response.

Is the COVID threat averted?

- It is still unclear how long immunity lasts from the vaccines at hand now.
- Whether or not the immune response is durable, how it performs with the passage of time, and how long it lasts can be found out only by monitoring people who have already been vaccinated over a period.

- If the vaccinated individual is still carrying the virus, the vaccine may provide immunity from severe disease for him or her, but the individual could still transmit the virus.

What changes after you get a vaccine shot?

- After vaccination, one risk of severe disease from COVID-19 goes down dramatically.
- There is not enough evidence yet of vaccine response for some age groups, and vaccines are in short supply in the community.

3. Maitri Setu between India and Bangladesh

M will inaugurate 'Maitri Setu' between India and Bangladesh tomorrow.

Maitri Setu

- The bridge 'Maitri Setu' has been built over the Feni River which flows between the Indian boundary in Tripura State and Bangladesh.
- The 1.9 Km long bridge joins Sabroom in India with Ramgarh in Bangladesh.
- The construction was taken up by the National Highways and Infrastructure Development Corporation Ltd.

Significance of the bridge

- With this inauguration, Tripura is set to become the 'Gateway of North East' with access to Chittagong Port of Bangladesh, which is just 80 kms from Sabroom.
- The name 'Maitri Setu' symbolizes growing bilateral relations and friendly ties between India and Bangladesh.

About Feni River

- Feni is a river in southeastern Bangladesh and Tripura.
- It is a trans-boundary river with an ongoing dispute about water rights.
- It originates in the South Tripura district and flows through Sabroom town and then enters Bangladesh.
- The question of sharing the waters of the river between India and Pakistan was first discussed in 1958.

Other associated projects

Sabroom Check Post

- PM will lay the foundation stone for setting up an Integrated Check Post at Sabroom.
- It will help ease the movement of goods and passengers between the two countries provide new market opportunities for products of North-East states and assist the seamless movement of passengers to and from India and Bangladesh.
- The project is being taken up by the Land Ports Authority of India.

4. Assam's Sattras and their political significance

In poll-bound Assam, the campaigns are sought to be held in the Bartadrava Than/Sattra (monastery) in Nagaon, which is the birthplace of renowned Vaishnavite saint-reformer Srimanta Sankardeva.

What are Sattras?

- Sattras are monastic institutions created as part of the 16th-century Neo-Vaishnavite reformist movement started by Vaishnavite saint-reformer Srimanta Sankardeva (1449-1596).
- As the saint travelled across Assam, spreading his teachings and propagating an egalitarian society, these Sattras/Thans were established as centres of religious, social and cultural reforms in the 16th century.
- These institutions are of paramount importance and lie at the heart of Assamese culture.
- Today, Sattras are spread across the state, promulgating Sankardeva's unique "worship through art" approach with music (borgeet), dance (sattriya) and theatre (bhauna).

Composition of Sattra

- Each Sattra has a naamghar (worship hall) as its nucleus and is headed by an influential "Sattradhikar".
- Monks, known as bhakats, are inducted into Sattras at a young age.
- They may or may not be celibate, depending on the kind of Sattra they are inducted into.

What is Sankardeva's philosophy?

- Sankardeva propagated a form of Bhakti called eka-sharana-naam-dhrama.
- He espoused a society based on equality and fraternity, free from caste differences, orthodox Brahmanical rituals and sacrifices.

- His teaching focused on prayer and chanting (naam) instead of idol worship. His dharma was based on the four components of deva (god), naam (prayers), bhakats (devotees), and guru (teacher).

What is the relationship between the Sattras and the State?

- During the Ahom reign, the Sattras received a lot of donations in the form of land or money from the kings.
- Unlike temples, Sattras did not require patronage because they were self-sufficient, grew their own food and could sustain themselves.
- However, today, it is different. Annual grants from the state and central government are doled out to Sattras, in the hope of political support.

Do Sattras matter in elections?

- While Sattras votes may not decide the outcome of an election, it is undeniable that the Sattras and Sattradhikars have a lot of influence.
- There are especially Sattras-based constituencies like Nagaon, Kaliabor, Majuli, Barpeta, Bartadadrva etc.
- Assamese families usually have ties with one Sattras, or the other.
- That is why politicians – regardless of party are often seen visiting Sattras.

GS 3 :Economy, Science and Technology,Environment

5. Sub-Mission on Agroforestry Scheme

Why in News

The **Ministry of Agriculture and Farmers Welfare** signed a **Memorandum of Understanding (MoU)** with the **Central Silk Board** on a **convergence model** for the implementation of **Agroforestry in the silk sector**. It is a part of the ongoing **Sub-Mission on Agroforestry (SMAF) Scheme**.

- Earlier, the Government of India allocated Rs. 2161.68 crores for three years i.e. 2017-2020 to its **Central Sector Scheme 'Silk Samagra'** for the development of **sericulture** in the country.

Key Points

- **Convergence Model:**
 - **Aim:**
 - To **incentivize the farmers to take up sericulture based Agroforestry** models thereby contributing to the Make in India and Make for the World vision of the Prime Minister.
 - **About:**
 - This linkage will add another dimension to agroforestry for **faster returns** to the growers as well as **support the production** of the range of silks that India is famous for.
 - The **Central Silk Board (CSB - under the Ministry of Textiles)** will act as a catalyst to promote Agroforestry in the silk sector.
 - **CSB** is a statutory body established in the year **1948 by an Act of Parliament.**
 - The initiative of formalizing the collaboration in the sericulture sector is especially targeted for augmentation of sericulture host plants e.g. **Mulberry, Asan, Arjuna, Som, Soalu, Kesseru, BadaKesseru, Phanat, etc.** to be cultivated both as block plantations and border or peripheral plantations on farmlands.
 - **Significance:**
 - Planting sericulture based tree species on the farm bunds and rearing silkworms will help in **creating additional income opportunities for farmers besides their regular source of income** from agriculture activities.
 - It will contribute to the Prime Minister's vision of **doubling farmers' income by 2022.**
- **Sub-Mission on Agroforestry (SMAF) Scheme:**
 - **About:**
 - The **Department of Agriculture, Cooperation and Farmers Welfare (DAC & FW)** has been implementing the SMAF since **2016-17** as part of the recommendation of the **National Agroforestry Policy 2014.**
 - India was the **first country to have such a comprehensive policy** which was launched at the World Agroforestry Congress held in Delhi in February 2014.
 - The scheme is implemented **only in the states having liberalized transit regulations for the transport of timber** and will be extended to other states as and when such relaxations are notified by them.
 - At present, the scheme is being implemented in **20 States and 2 UTs.**
 - The scheme **promotes endemic species or tree species that come with medicinal value.**
 - Exotic species are not promoted by the scheme.

- **Aim:**
 - 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.
- **Funding:**
 - It is operational under the funding pattern **60:40 (Central government: State government)** basis for all states except for 8 states of North East Region, the hilly states of Himachal Pradesh and Uttarakhand where it would be **90:10** fund sharing. For Union Territories (UTs), the assistance will be 100% from the Central government.
- **Beneficiaries:**
 - Farmers would be supported financially to the extent of **50% of the actual cost of the interventions** (limited to 50% of the estimated cost as indicated in the Cost norms) for the respective interventions.
 - **Farmers groups/Cooperatives** and **Farmer Producers Organization (FPO)** can also avail the benefit of the programme but the assistance can be accessed as per norms and provisions applicable to the individual farmers.
 - At least **50% of the allocation is to be utilized for small, marginal farmers** of which at least **30% should be women beneficiaries/farmers**. Further **16% & 8%** of the total allocation or in proportion of SC/ST population in the district will be utilized for **Special Component Plan (SCP) and Tribal Sub Plan (TSP)** respectively.
 - Farmers **must have a soil health card** to get the benefit under the programme.
- **Other Initiatives for Farmers:**
 - **National Mission for Sustainable Agriculture.**
 - **National Food Security Mission.**
 - **Rashtriya Krishi Vikas Yojana (RKVY).**
 - **Mission for Integrated Development of Horticulture.**
 - **Pradhan Mantri Krishi Sichayee Yojana (PMKSY).**
 - **Nutrient Based Subsidy (NBS) Programme.**
 - **Rashtriya Gokul Mission.**
 - **Pradhan Mantri Fasal Bima Yojana.**
 - **Paramparagat Krishi Vikas Yojana.**

Agroforestry

- Agroforestry is defined as a **land use system which integrates trees and shrubs on farmlands and rural landscapes to enhance productivity, profitability, diversity and ecosystem sustainability.**
- It is a dynamic, ecologically based, natural resource management system that, through **integration of woody perennials on farms and in the agricultural landscape, diversifies and sustains production and builds social institutions.**

Sericulture

- **About:**
 - It is an **agro-based industry.**
 - It involves **rearing of silkworms** for the production of raw silk, which is the yarn obtained out of cocoons spun by certain species of insects.
 - The **major activities** of sericulture consist of **food-plant cultivation** to feed the silkworms which spin silk cocoons and **reeling the cocoons for unwinding the silk filament** for value-added benefits such as processing and weaving.
 - Domesticated silkworms (*Bombyx mori*) are raised for the purpose of sericulture.
- **Silk Production in India:**
 - There are **five major types of silk** of commercial importance, obtained from different species of silkworms.
 - These are **Mulberry, Oak Tasar & Tropical Tasar, Muga and Eri.**
 - Except for mulberry, other **non-mulberry varieties of silks are wild silks, known as vanya silks.**
 - India has the unique distinction of producing all these commercial varieties of silk.
 - **South India is the leading silk producing area of the country** and is also known for its famous silk weaving enclaves like Kancheepuram, Dharmavaram, Arni, etc.

6. Miyawaki Technique of Urban Afforestation

Miyawaki Method

- Miyawaki method is a method of urban afforestation by turning backyards into mini-forests.
- It includes planting trees as close as possible in the same area which not only saves space, but the planted saplings also support each other in growth and block sunlight from reaching the ground, thereby preventing the growth of weed.

- Thus the saplings become maintenance-free (self-sustainable) after the first three years.
- It helps to create a forest in just 20 to 30 years while through conventional methods it takes anywhere between 200 to 300 years.
- The native trees of the region are identified and divided into **four layers** – shrub, sub-tree, tree, and canopy.
- The quality of soil is analysed and biomass which would help enhance the perforation capacity, water retention capacity, and nutrients in it, is mixed with it.
- A mound is built with the soil and the seeds are planted at a very high density – three to five sapling per square meter.
- The ground is covered with a thick layer of mulch.

7. India Science Research Fellowship 2021

Why in News

Forty scholars from six countries have been recommended for award of Indian Science Research Fellowship (ISRF) 2021.

- This fellowship is a **platform to establish research cooperation with neighbouring countries** of India, which is **one of the mandates of DST's (Department of Science and Technology) International Science and Technology Cooperation.**

Key Points

- **About India Science Research Fellowship (ISRF):**
 - As part of India's initiatives to **engage with neighbouring countries to develop S&T partnerships**, the **Department of Science and Technology (DST) has launched ISRF Programme.**
 - This fellowship is for scholars from the neighbouring countries - **Afghanistan, Bangladesh, Bhutan, Maldives, Myanmar, Nepal, Sri Lanka, and Thailand.**
 - ISRF programme has provided an opportunity to the young researchers from neighbouring countries to get **access to the state of art facilities** available in the Indian institutes/universities.
 - ISRF has been implemented **since 2015.**
- **Significance of the Fellowship:**
 - **Science Diplomacy:** Enlarging India's pursuit of influence in global arena/platforms and mainstreaming Science, Technology and Innovation (STI) into international diplomacy and foreign relation.
 - **Technological Advancement** in the **South Asia region.**

International Science and Technology Cooperation

- **About:** The International S&T Cooperation (IC) Division of DST has the mandated responsibility of
 - negotiating, concluding and implementing **Science, Technology and Innovation (STI) Agreements** between India and other countries, and
 - providing interventions on STI aspects in international forums.
- **Significance:**
 - In showcasing and projecting India's scientific excellence in the global research landscape,
 - Leveraging foreign alliances and partnerships to accelerate key priorities and programs devoted to strengthening India's national science and technology (S&T)/ Research and Development (R&D) competencies-capabilities-access to technologies in synergies with national flagship programs.
- IC Division is partnering in the following International programs-
 - **International Solar Alliance,**
 - **Mission Innovation,**
 - **International AIDS Vaccine Initiative,**
 - **The Laser Interferometer Gravitational-Wave Observatory (LIGO),** etc.

8. Equine Herpes Virus Outbreak in Europe

Why in News

Recently, there has been an outbreak of **Equine Herpes Virus (EHV-1) among horses in Europe.**

- So far seven countries have confirmed EHV-1 cases: Spain, Belgium, France, Germany, Italy, Sweden and Qatar.

Key Points

- **About Equine Herpes Virus (EHV):**
 - Equine Herpes Virus is a common **DNA virus** that occurs in horse populations worldwide.
 - EHV is a family of viruses which are named by numbers such as **EHV 1, 2, 3, 4 and 5.**
 - There are more viruses in this family, but **EHV 1, 3, and 4 pose the most serious health risks for domestic horses.**
 - **Health Risks:**
 - **EHV1** can cause manifestations of disease in horses, including **respiratory disease, abortion and neonatal death.**

- This strain can also cause **neurological problems**, leading to **paralysis** and in some cases, **death**. Horses that contract this virus can develop a **lack of coordination, weakness, loss of appetite and are unable to stand**.
- **Spread of EHV-1 Virus:**
 - It is **contagious** and spread by **direct horse-to-horse contact** via the respiratory tract through nasal secretions.
 - This virus can **also be spread indirectly** through **contact with physical objects** that are contaminated with the virus.
- **Equine Herpesvirus Myeloencephalopathy (EHM)** is another name for the neurologic disease associated with Equine Herpes Virus (EHV) infections.
- **Precautions and Treatment:**
 - As the infection has a high transmission rate, **keeping a diseased horse in isolation** is required.
 - Treatments may include **anti-inflammatory drugs**.

Prelims practice Questions

1. Consider the following statements regarding Contempt of court in India:

1. Criminal contempt is the wilful disobedience to any judgment, decree, direction, order, writ or other process of a court.
2. On finding guilty of Contempt of Court, the court can only impose the fines.

Which of the statements given above is/are not correct?

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

Answer : C

Explanation

- According to the **Contempt of Court Act of 1971**, contempt of court is of two types:

- **Civil contempt:** It is the wilful disobedience to any judgment, decree, direction, order, writ or other process of a court or wilful breach of an undertaking given to a court.
- **Criminal contempt:** It is the publication of any matter or the doing of any other act which scandalises or lowers the authority of any court, or interferes with the due course of any judicial proceeding, or obstructs the administration of justice in any other manner. **Hence, statement 1 is not correct.**
- The Contempt of Court Act of 1971 **punishes the guilty with imprisonment** that may extend to six months or fine of ₹ 2,000 or both. **Hence, statement 2 is not correct.**
- The act was amended in 2006 to include “truth and good faith” as a defence.
 - It was added that the court may impose punishments only if the act of the other person substantially interferes, or tends to interfere with the due course of justice.

2. Which of the following statement/s is/are incorrect with respect to Gulf Stream Ocean current system?

1. It is a warm Atlantic Ocean current.
2. It conveys warm surface water from equator to the north and the deeper cold, low-salinity water down south.

Options:

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

Answer: d

Explanation:

- The Gulf Stream, together with its northern extension the North Atlantic Drift, is a warm and swift Atlantic ocean current that originates in the Gulf of Mexico and stretches to the tip of Florida, and follows the eastern coastlines of the United States and Newfoundland before crossing the Atlantic Ocean as the North Atlantic Current.

- The Gulf Stream system conveys warm surface water from equator to the north and the deeper cold, low-salinity water down south. It works like a giant conveyor belt.

3. Which of the following countries are not the members of the EastMed Gas Forum?

1. Israel
2. Italy
3. Hungary
4. Turkey

Select the correct answer using the code given below:

- A 1 and 2 only
- B 2 and 4 only
- C 3 and 4 only
- D 1, 2 and 3

Answer : C

Explanation

- In 2019, Egypt, Cyprus, Greece, Israel, Italy, Jordan and Palestinian Authority signed the East Med Gas Forum (EMGF) foundation charter, creating a platform for East Mediterranean natural gas cooperation. Cairo will be the headquarters of the forum. **Turkey and Hungary** are not members of EMGF. **Hence, option C is correct.**

4. The term arribada is associated with which of the following?

- a. Shifting cultivation practice in North-east India
- b. Mass nesting exhibited by Olive Ridley Turtles
- c. Aboriginal tribe of Australia
- d. Seasonal migration exhibited by the Siberian crane

Answer: b

Explanation:

- The olive ridley turtles turn up in millions for mass nesting along the Odisha coast every year. This phenomenon is referred to as 'arribada'.
- Gahirmatha beach in Kendrapara district is acclaimed as the world's largest-known nesting ground of these endangered marine species. Apart from Gahirmatha, these aquatic animals turn up at Rushikulya river mouth and Devi river mouth for mass nesting.

5. Which of the following organisation has released Nationally Determined Contribution Synthesis Report?

- a. Ministry of Coal
- b. Green Peace International
- c. Ministry of Environment, Forest and Climate Change
- d. UN- Framework Convention on Climate Change

Answer : d

NDC Synthesis Report

- NDCs are at the heart of the Paris Agreement and embody efforts by each country to reduce national emissions and adapt to the impacts of climate change.
- Each NDC reflects the country's ambition, taking into account its domestic circumstances and capabilities.
- The NDC Synthesis Report covers submissions up to 31st December 2020 and includes new or updated NDCs by 75 Parties, which represent approximately 30% of global greenhouse gas emissions.
- It has called for more ambitious climate action plans by the countries in order to achieve the Paris Agreement target of containing global temperature rise to 2°C (ideally 1.5°C) by the end of the century.

UNFCCC

- The UNFCCC secretariat (UN Climate Change) is the United Nations entity tasked with supporting the global response to the threat of climate change.

- The Convention has near universal membership (197 Parties) and is the parent treaty of the 2015 Paris Agreement.
- The UNFCCC is also the parent treaty of the 1997 Kyoto Protocol.

6. Arktika-M, sometimes seen in the news recently, refers to?

- a. Intercontinental Nuclear ballistic missile developed by Iran
- b. World's first mission launched by NASA to study black holes
- c. Russia's space satellite to monitor climate and environment in the Arctic Region
- d. India's surveillance satellite deployed in space to monitor Indian Ocean Region

Answer : c

Arktika-M

- Russia has recently launched its space satellite Arktika-M on a mission to monitor the climate and environment in the Arctic.
- The Arctic has warmed more than twice as fast as the global average over the last three decades and Moscow is seeking to develop the energy-rich region, investing in the Northern Sea Route for shipping across its long northern flank as ice melts.
- The satellite successfully reached its intended orbit after being launched from Kazakhstan's Baikonur cosmodrome by a Soyuz rocket.
- Russia plans to send up a second satellite in 2023 and combined the two will offer round-the-clock, all-weather monitoring of the Arctic Ocean and the surface of the Earth.

'Sindhu Netra'

- DRDO's 'Sindhu Netra' surveillance satellite deployed in space, will help to monitor Indian Ocean Region.

Mains Practice Questions

1. People should not be considered as a mere headcount but as citizens having certain basic rights. Discuss the significance and challenges associated with the census in India. (250 Words)

Approach:

- Highlight the significance and challenges associated with the census in India.
- Highlight some measures to overcome them.

2. The moral compass of the society that is essential to enhance common good and well being of all has been losing relevance. Critically examine. (250 words)

Approach:

- Briefly state what constitute the moral values of society.
- Highlight the common good and well-being that can be accrued from such values.
- Highlight degeneration of common good by not following social moral values.
- Conclude by suggesting some measures to correct it.