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DECEMBER

02.12.2021

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THE HINDU

GS 2 : Polity, Governance, International Relations

1. SC pushes for National Judicial Infrastructure Corporation (NJIC)

The Supreme Court orally said that courts cannot wait on the whims and fancies of the Government, but need a proper mechanism for funding the development of judicial infrastructure.

National Judicial Infrastructure Corporation (NJIC)

- The idea for such NJIC was first proposed by CJI Ramana in March this year, even before he took office.
- It mooted the idea of an “umbrella national organization” that would take care of the need for judicial infrastructure.
- Such a corporation would bring the uniformity and standardization required to revolutionize judicial infrastructure, said CJI.
- Soon after he was sworn in, the CJI commenced work on the NJIC and a survey of 6,000 trial courts in various states was undertaken as part of this exercise.

CJI recommends the composition of NJIC

- The CJI has said that the Judiciary is least interested in retaining control of the council.
- The composition can be of the Union Minister for Law and Justice, the Secretary, Finance, etc.
- The States can also be represented.
- The benefit of having a senior judge or Chief Justice on it would be that they are in the know of things.

Why need NJIC?

- **No central agency:** Presently, there is no agency to ensure use of funds allocated to augment judicial infrastructure
- **Infrastructure gap:** There is a substantial gap in infrastructure and availability of basic amenities in the lower judiciary.
- **Lack of basic amenities:** There is a lack of court halls, residential accommodation, and waiting room for litigants in trial courts, especially in smaller towns and rural areas.

- **Budgetary lapses:** Experience shows that budgetary allocation for state judiciary often lapses since there is no independent body to supervise and execute works.

NJIC is expected to fill this vacuum and overcome problems related to infrastructure.

Significance of NJIC

- The modernization of judicial infrastructure did not mean building more courts or filling up vacancies or ploughing through vacancies.
- An efficient “judicial infrastructure” means providing equal and free access to justice.
- This could be realized through a barrier-free and citizen-friendly environment.

2. Assisted Reproductive Technology (Regulation) Bill, 2020

The Lok Sabha has passed the Assisted Reproductive Technology- ART (Regulation) Bill,, 2020 that proposes the establishment of a national registry and registration authority for all clinics and medical professionals serving in the field.

Definition of ART

- The Bill defines ART to include all techniques that seek to obtain a pregnancy by handling the sperm or the oocyte (immature egg cell) outside the human body and transferring the gamete or the embryo into the reproductive system of a woman.
- Examples of ART services include gamete (sperm or oocyte) donation, in-vitro-fertilisation (fertilising an egg in the lab), and gestational surrogacy (the child is not biologically related to surrogate mother).
- ART services will be provided through: (i) ART clinics, which offer ART related treatments and procedures, and (ii) ART banks, which store and supply gametes.

Regulation of ART clinics and banks

- The bill provides that every ART clinic and bank must be registered under the **National Registry of Banks and Clinics of India**.
- It will act as a **central database with details** of all ART clinics and banks in the country.
- **State governments will appoint registration authorities** for facilitating the registration process.

- Clinics and banks will be registered only if they adhere to **certain standards** (specialised manpower, physical infrastructure, and diagnostic facilities).
- The registration will be **valid for five years** and can be renewed for a further five years.

Conditions for gamete donation and supply

- **Screening of gamete donors**, collection and storage of semen, and provision of oocyte donor can only be done by a registered ART bank.
- A bank can obtain semen from **males between 21 and 55 years of age**, and oocytes from **females between 23 and 35 years of age**.
- An oocyte donor should be an **ever-married woman having at least one alive child** of her own (minimum three years of age).
- The **woman can donate oocyte only once in her life** and not more than seven oocytes can be retrieved from her.
- A bank cannot supply gamete of a single donor to more than one commissioning couple (couple seeking services).

Conditions for offering ART services:

- ART procedures can only be carried out with the **written informed consent of both the party** seeking ART services as well as the donor.
- The party seeking ART services will be required to provide **insurance coverage in the favour of the oocyte donor (for any loss, damage, or death of the donor)**.
- The Bill also requires **checking for genetic diseases** before the embryo implantation.

Rights of a child born through ART

- A child born through ART will be deemed to be a biological child of the commissioning couple and will be entitled to the rights and privileges available to a natural child of the commissioning couple.
- A donor will not have any parental rights over the child.

National and State Boards:

- The Bill provides that the **National and State Boards for Surrogacy** constituted and will for the regulation of ART services.
- Key powers and functions of the National Board include:
 1. Advising the central government on ART related policy matters
 2. Reviewing and monitoring the implementation of the Bill
 3. Formulating code of conduct and standards for ART clinics and banks

4. Overseeing various bodies to be constituted under the Bill
5. State Boards will coordinate enforcement of the policies and guidelines for ART as per the recommendations, policies, and regulations of the National Board

Offences and penalties

Offences under the Bill include:

1. Abandoning, or exploiting children born through ART,
 2. Selling, purchasing, trading, or importing human embryos or gametes,
 3. Using intermediates to obtain donors,
 4. Exploiting commissioning couple, woman, or the gamete donor in any form, and
 5. Transferring the human embryo into a male or an animal
- These offences will be punishable with a fine between 5 and 10 lakh rupees for the first contravention.
 - For subsequent contraventions, these offences will be punishable with imprisonment for a term between eight and 12 years, and a fine between 10 and 20 lakh rupees.
 - Any clinic or bank advertising or offering sex-selective ART will be punishable with imprisonment between five and ten years, or fine between Rs 10 lakh and Rs 25 lakh, or both.
 - No court will take cognisance of offences under the Bill, except on a complaint made by the National or State Board or any officer authorised by the Boards.

3. Dam Safety Bill, 2021 introduced in RS

The Dam Safety Bill 2021 was moved in the Rajya Sabha but the debate could not be held because of disruptions from the Opposition parties.

Dam Safety Bill, 2021

- The Bill provides for surveillance, inspection, operation and maintenance of dams to prevent disasters, and institutional mechanisms to ensure safety.
- It applies to over 5,000 dams across the country, many of which are currently in poor conditions.
- It has been met with significant opposition, particularly from several states that claim the bill oversteps the Centre's mandate.

Which dams are covered?

- All dams in India with a height above 15 metres come under the purview of the bill.
- Dams between 10 to 15 metres of height are also covered but only if they meet certain other specifications in terms of design and structural conditions.

National Committee on Dam Safety

- The Bill provides for the constitution of a National Committee on Dam Safety (NCDS) which is to be chaired by the Central Water Commissioner (CWC).
- The other members of the NCDS will be nominated by the Centre and will include up to 10 representatives of the Centre, 7 state government representatives, and 3 experts on dam safety.
- The NCDS is to formulate policies for dam safety and to prevent dam failures.
- In the event of a dam failure, the NCDS will analyse why the failure occurred, and suggest changes in dam safety practices to ensure there aren't any repetitions.

National Dam Safety Authority (NDSA)

- The bill provides for the formation of a NDSA which will be responsible for implementing the policies of the NCDS, and will resolve issues between State Dam Safety Organisations (or SDSOs) and dam owners.
- The NDSA will also specify regulations for the inspection of dams and will provide accreditation to the various agencies working on the structure of dams and their alteration.

State Dam Safety Organisations (SDSOs)

- The bill will also result in the establishment of SDSOs, and State Committees on Dam Safety (SCDSs).
- The jurisdiction of the SDSOs will extend to all dams in that specific state.

Cross jurisdictions

- The NDSA will, in some cases, possess this jurisdiction, for example, if a dam owned by one state is situated in another or crosses multiple states, or if a dam is owned by a central public sector undertaking.
- SDSOs will be in charge of scrutinizing dams under their jurisdiction and maintaining a database of the same.
- The SCDS will review the work of the SDSO, and will also have to assess the impact of dam-related projects on upstream and downstream states.

- The bill gives the Central government the power to amend the functions of any of the above bodies through a notification, whenever it is deemed necessary to do so.

How does Bill change the functioning of dams?

- If the bill is made into a law, then dam owners will have to provide a dam safety unit in each dam.
- The dam safety unit will be required to inspect the dam before and after the monsoon session, and also during and after natural disasters such as earthquakes and floods.
- The bill requires dam owners to prepare emergency action plans. Risk-assessment studies will also have to be undertaken by owners, regularly.
- At specified, regular intervals, and in the event of either a modification to the dam's structure or a natural event that may impact the structure, dam owners will have to produce a comprehensive safety evaluation by experts.

Issues with bill

- The primary objection to the bill is that is unconstitutional, as water is one of the items on the State List.
- Tamil Nadu, which currently possesses four dams situated in Kerala, is opposed to the Bill as it would result in the four dams falling under the NDSA.
- This will be doing away with Tamil Nadu's rights over the maintenance of the dam.
- The Bill states that the NCDS will be chaired by the Central Water Commissioner.
- However the Supreme Court has ruled in the past that such a scenario is prohibited, as it involves the CWC, an advisor, functioning both as a regulator and the head of the NCDS.

4. India joins G20's Troika

India has joined the G20 'Troika' with Indonesia and Italy.

G20 Troika

- Troika refers to the top grouping within the G20 that consists of the current, previous and incoming presidencies – Indonesia, Italy and India.

- With this move, India has started the procedure for taking over the G20 presidency.

Significance of the move

- India will assume the G20 presidency on December 1, 2022 from Indonesia, and will convene the G20 Leaders' Summit for the first time in India in 2023.
 - Indonesia took over the G20 presidency this year.
 - Formed in 1999, the G20 is an international forum of the governments and central bank governors from 20 major economies.
 - Collectively, the G20 economies account for around 85 percent of the Gross World Product (GWP), 80 percent of world trade.
 - The members of the G20 consist of 19 individual countries plus the European Union (EU).
1. The 19 member countries of the forum are Argentina, Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, Mexico, Russia, Saudi Arabia, South Africa, South Korea, Turkey, United Kingdom and the United States.
 2. The European Union is represented by the European Commission and by the European Central Bank.
- India has been a member of the G20 since its inception in 1999.

5. Examining the federal nature of the Central Bureau of Investigation

- Eight States – West Bengal, Maharashtra, Kerala, Punjab, Rajasthan, Jharkhand, Chhattisgarh and Mizoram – have withdrawn '**general consent to the Central Bureau of Investigation (CBI)**' for launching investigations in their territory.
- The widespread withdrawal of consent has left the CBI handicapped with regard to the investigation of corruption charges against Central employees and undertakings working within the territorial jurisdiction of various States.
 - Though the withdrawal of general consent does not affect pending investigations or the cases registered in another State in relation to which investigation leads into the territory of the State which has withdrawn general consent; nor does the withdrawal circumscribe the power of the jurisdictional High Court to order a CBI investigation, however, it **disrobes the CBI office's general status as Police Stations**. It reduces the freedom of action available to CBI while investigating cases.

- The CBI had filed an affidavit in the Supreme Court. A Supreme Court bench has referred this case for the consideration of the Chief Justice of India.

Understanding the legal status:

- The CBI is a force constituted for Union Territories as recognised under the **Delhi Special Police Establishment Act of 1946**.
- **Entry 80 of the Union List** which provides for the extension of powers of the police force belonging to one State to any area in another State provides the legal foundation for the functioning of CBI in other states.
- Notably **“Police” comes under State List of the Seventh Schedule of the Constitution**. Hence the provision of general consent has been provided to safeguard the domain of the states while providing the necessary avenue for investigation by CBI in corruption cases.
- According to Section 6 of the Delhi Special Police Establishment Act of 1946, the State’s consent is required to extend CBI investigation beyond Union Territories. Hence the CBI can conduct an investigation into the territories of the States only with their consent.

Additional information:

- The appointment of the CBI chief is done by a committee consisting of the Prime Minister, the Leader of the Opposition and the Chief Justice of India by consensus.
- India is a signatory to the **United Nations Convention against Corruption**. This requires India to take firm impartial steps to combat corruption at all levels.

6. ‘Ensure code of ethics is followed on social media’

- **Report on ‘Ethical Standards in Media Coverage’** prepared by the Parliamentary Standing Committee on Communications and Information Technology has been presented in the Parliament recently.

Details:

- The Parliamentary panel notes that the **growth of social media platforms** such as Facebook, WhatsApp, Instagram and Twitter have allowed normal citizens to function as Journalists as they provide avenues for the citizens to use their personal recording devices including cellphones to capture events and post them on the Internet.
- The report also points out the issue of content made available through **online and OTT (over the top) platforms** without having undergone any sort of

regulation. The committee cautions that the information and content portrayed on such platforms can impact viewers, including minor children.

- The panel asks the Government to **ensure a code of ethics is followed in the digital media space while preserving the right to freedom of expression.** The report said that any regulation must have checks and balances to ensure that it is neither misused nor violative of Articles 14, 19 and 21 of the Constitution.
- The panel calls for the robust implementation of ‘**The Information Technology (Guidelines for Intermediaries and Digital Media Ethics Code) Rules, 2021**’ which it feels can ensure transparency and accountability for social media platforms with a robust oversight mechanism by the government.

GS 3 : Economy, Science and Technology, Environment

7. A launch window for India as a space start-up hub

After the launch of Sputnik in 1957, space race is on again, but this time, private players are on the power field. This has huge implications for original equipment manufacturers (OEMs) in the space sector in India and is a promising venture for global investors.

Insignificant share of India in space economy

- **2% India’s share:** The space economy is a \$440 billion global sector, with India having less than 2% share in the sector.
- While total early-stage investments in **space technologies** in FY21 were \$68 billion, India was on the fourth place with investments in about 110 firms, totalling not more than \$2 billion.

Reasons for India’s insignificant private participation

- **Absence of a framework:** The reason for the lack of independent private participation in space includes the absence of a framework to provide transparency and clarity in laws.
- **Brain drain:** Another aspect to throw light on is **the extensive brain drain in India**, which has increased by 85% since 2005.

- **Policy bottlenecks:** Brain drain can be linked to the **bottlenecks in policies** which create hindrances for private space ventures and founders to attract investors, making it virtually non-feasible to operate in India.

Suggestions

- The laws need to be broken down into multiple sections, each to address specific parts of the value chain and in accordance with the **Outer Space Treaty**.
- **Dividing into upstream and downstream:** Dividing activities further into upstream and downstream space blocks will allow legislators to provide a solid foundation to products/services developed by the non-governmental and private sectors within the value chain.
- **Timeline on licensing:** With the technicalities involved in the space business, timelines on licensing, **issuance of authorisation and continuous supervision mechanism** need to be defined into phases.
- **Insurance and indemnification clarity:** Another crucial aspect of space law is insurance and indemnification clarity, particularly about who or which entity undertakes the liability in case of a mishap.
- In several western countries with an evolved private space industry, there is a cap on liability and the financial damages that need to be paid.
- **Need to generate own IP:** Currently, many of the private entities are involved in equipment and frame manufacturing, with either outsourced specifications or leased licences.
- However, to create value, Indian space private companies need to **generate their intellectual property** for an independent product or service with ISRO neither being their sole or largest customer nor providing them IP and ensuring buy-backs.

Possibilities for India and the government's effort

- India currently stands on the cusp of **building a space ecosystem** and with ISRO being the guiding body, India can now evolve as a space start-up hub for the world.
- Already **350 plus start-ups** such as AgniKul Cosmos, Skyroot Technologies, Dhruva Space and Pixxel have established firm grounds for home-grown technologies with a practical unit of economics.
- Last year the Government of India created a new organisation known as **IN-SPACE** (Indian National Space Promotion and Authorisation Centre) which is a "single window nodal agency" established to boost the commercialisation of Indian space activities.

- A supplement to the Indian Space Research Organisation (ISRO), the agency promotes the entry of the Non-Government Private Entities (NGPEs) in the Indian space sector.

Conclusion

To continue the growth engine, investors need to look up to the sector as the next “new-age” boom and ISRO needs to turn into an enabler from being a supporter. To ensure that the sky is not the limit, investor confidence needs to be pumped up and for the same, clear laws need to be defined.

THE INDIAN EXPRESS

GS 2 : Polity, Governance, International Relations

1. EU unveils Global Gateway Project

The European Union has unveiled a project called “Global Gateway” that is worth 300 billion euros (\$340 billion). The project is being seen as a response to China’s Belt and Road strategy.

Global Gateway Project

- It is the initiative Build Back Better World and the European Global Gateway that are reinforcing each other.
- The bloc will mobilize the financial aid in public and private infrastructure investment around the world.
- It is an offshoot of a plan by G7 countries to offer developing countries an alternative to Belt and Road.
- The project will probably extend the remit of the European Fund for Strategic Investment, or create a similar institution, which can act as a guarantor for riskier investments in the ‘Global South’.
- The EU has indicated it especially wants to compete for infrastructure development projects in Africa.

About Belt and Road Initiative

- The Belt and Road is a flagship project of Chinese President Xi Jinping that was launched in 2013.

- Beijing has invested \$139.8 billion in the project which is the centerpiece of Chinese foreign policy.
- BRI aims to develop land and sea infrastructure to better connect China to Asia, Europe and Africa for trade and development, and it has found many partners around the world.

2. WHO Framework Convention on Tobacco Control (FCTC)

The World Health Assembly (WHA) took the historic decision to form a global treaty to “strengthen pandemic prevention, preparedness and response”.

Significance of the launch

- The launch of putting together this accord is the second such initiative taken under Article 19.
- The first initiative was the WHO Framework Convention on Tobacco Control (FCTC), which came into effect in 2005.

About FCTC

- The Framework Convention on Tobacco Control (FCTC) is the world’s first modern-day global public health treaty.
- It is also the first treaty negotiated under the auspices of the World Health Organization (WHO).
- The treaty entered into force in February 2005.
- It was signed by 168 of the 192 WHO member states and more than 180 WHO member states have become parties to the convention.

Highlights of the FCTC

The FCTC provides an internationally coordinated response to combating the tobacco epidemic and sets out specific steps for governments addressing tobacco use, including:

- Adopting tax and price measures to reduce tobacco consumption
- Banning tobacco advertising, promotion and sponsorship
- Creating smoke-free work and public spaces
- Putting prominent health warnings on tobacco packages
- Combating illicit trade in tobacco products

3 . A capital functioning from different regions

- Passage of Andhra Pradesh Decentralisation and Inclusive Development of All Regions Repeal Bill, 2021.

Details:

- Recently, the Andhra Pradesh assembly repealed the Andhra Pradesh Decentralisation and Inclusive Development of All Regions Act, 2020.
- The said Act stipulated three capitals for the state with Vishakapatnam, Amaravati, and Kurnool envisaged as executive, legislative and judicial capitals respectively as recommended by the Sivaramakrishnan Expert Committee.
- This was done to ensure decentralization of development as opposed to the concentration of wealth in a few megacities.
- Geographically, Andhra has three major distinct regions –
 - North-eastern region consisting of culturally rich Vizianagaram and Visakhapatnam.
 - Rayalaseema region in the southwest.
 - Nine coastal districts.
- The coastal region is better developed as compared to the North-eastern and South-west. The regional imbalance is reinforced with a similar spatial imbalance of urban settlements.
- Earlier, the then government ignored the advice of the committee and selected the area of Vijayawada which was specifically declared unsuitable by the said committee. Later the government proposed Amaravati as capital but not without losing out on the opportunity to correct spatial imbalances in the state.
- In 2019, the Government of Andhra Pradesh revisited its decision and decided to decentralize capital function in accordance with the view of the committee appointed by it.
- There is a fine-drawn difference between decentralized capitals and decentralizing capital functions. While the former refers to a plurality of capitals, the latter assumes one seat of capital with functions being performed at different locations.
- The Sivaramakrishnan Expert Committee and one appointed by the state government have recommended the latter.
- Such recommendation was founded on two principles – development interventions should be driven by natural endowments of the region and the environment should be considered as a positive constraint in order to protect the natural resource base.

Arguments in favour of decentralization of capital functions:

- The pandemic has only amplified the need for inclusive and equitable urbanization. This calls for the development of smaller self-sufficient cities rather than one big city.
- The disasters like floods serve as a warning against urbanizing flood plains. Thus smaller and environmentally sustainable cities are the need of the hour.
- Moreover, there have been many examples of effective decentralization of capital functions like Maharashtra, Uttar Pradesh, and Jammu and Kashmir, etc.

Arguments against decentralization of capital functions:

- Developing infrastructure for three capitals especially after investment done in the Amaravati Mangalagiri complex will only put pressure on already overstretched state funds.
- Such decentralization can create problems for coordination among organs of government especially legislature and executive.

Current status

- In 2015, the foundation stone of Amaravati was laid. But after the plans of Amaravati were drawn by a Singapore-based consultancy and funds sorted from various sources the incumbent government lost power. The new government stalled work at the site.
- The new three capital plan was announced. This led to massive protests among farmers who gave their land to the government on promised compensation.
- The division bench of the High Court has declared a status-quo on three capitals based on a petition by the farmers of Amaravati challenging laws establishing three capitals.
- As of now, the Chief Minister has promised a more comprehensive bill on the same in the future.

4. National Export Insurance Account (NEIA):

Government has approved financial aid for the period **by the Ministry of Commerce** and administered by from 2021-22 to 2025-26 to NEIA Trust.

What is NEIA?

- **National Export Insurance Account (NEIA)** is a trust set
- **NEIA Trust** was **established in 2006** to promote project exports from India that are of strategic and national importance.
- **NEIA provides additional support to the insurance cover provided by ECGC** for project exports making Indian project exporters more competitive and gain a stronger foothold in various jurisdictions, highlighting India's capabilities to execute large projects abroad. **Export Credit & Guarantee Corporation of India (ECGC).**

Objectives:

The National Export Insurance Account (NEIA) Trust **aims to ensure the availability of credit risk cover for projects and other high-value exports**, which are desirable from the point of view of national interest, **but which ECGC is unable to underwrite** due to capacity constraints or at terms, which are different from its regular policies.

What does it do?

- The NEIA Trust **promotes Medium and Long Term (MLT) /project exports** by extending (partial/full) support to covers issued by ECGC to MLT/project export.
- It also supports to Exim Bank for Buyer's Credit (BC-NEIA) tied to project exports from India.

Step taken by GOI recently:

Government approves continuation of the National Export Insurance Account (NEIA) scheme and infusion of Rs. 1,650 crore Grant-in-Aid over 5 years.

Significance of recent move of Government:

The capital infusion in NEIA Trust will **help the Indian Project Exporters (IPE)** to tap the huge potential of project exports in focus market.

- **Support to project exports with Indian content sourced from across the country** will enhance the manufacturing in India.
- **Corpus contribution of ₹1,650 Crore** will enhance the underwriting capacity of the Trust.
- It will **enable NEIA to support project exports worth ₹33,000 Crore** at full capacity utilization.
- In turn this support will translate into an estimated output of domestically manufactured goods to the tune of ₹25,000 Crore approximately.

NEIA- Performance highlights:

- The NEIA Trust was set up in 2006 to promote **Medium and Long-Term (MLT)/ project exports** by enabling credit and political insurance.
- NEIA supports projects which are **commercially viable and are strategically important**.
- The corpus commitment of GOI is Rs.4000 crore and **Maximum Liability Permissible is 20 times of the actual corpus**.
- The **contribution received from the Government of India** over the years, as of March 31,2021 was Rs.3,091 crore.
- **Since inception, NEIA has extended 213 covers**, with a consolidated project value of Rs. 53,000 crores, to 52 countries as of 31st August 2021.
- **Its impact** in enabling project exports has been most significant in Africa and South Asia.

GS 3 : Economy, Science and Technology, Environment

5. Mission Indradhanush (IMI) 3.0

Two rounds of Intensified **Mission Indradhanush (IMI) 3.0** of 15 days' duration were conducted recently, to reach out to the pregnant women and children who missed vaccination under routine immunisation programmes in 250 districts across 29 states/UTs.

- During **Intensified Mission Indradhanush (IMI) 3.0** around 9.5 lakh children and 2.2 lakh pregnant women were vaccinated.
- Various States and UTs have started implementation of the Intensified Mission Indradhanush 3.0.

About IMI 3.0:

It is a campaign aimed **to reach those children and pregnant women** who have been missed out or been left out of the Routine Immunisation Programme.

- **This is aimed** to accelerate the full immunisation of children and pregnant women through a mission mode intervention.
- The first phase has been rolled out from 22nd Feb. for 15 days,
- It is being **conducted in pre-identified 250 districts/urban areas across 29 States/UTs** in the country.
- **Beneficiaries from migration areas and hard to reach areas will be targeted** as they may have missed their vaccine doses during the pandemic.

Classification of districts:

As per the guidelines released for IMI 3.0, the districts have been classified to reflect 313 low risk; 152 medium risk; and 250 high risk districts.

What is the Mission Indradhanush?

'Mission Indradhanush' was launched by the Government of India in December 2014.

- It was aimed to strengthen and re-energize the programme and achieve full immunization coverage for all children and pregnant women.
- The ultimate goal of Mission Indradhanush is to ensure full immunization with all available vaccines for children up to two years of age and pregnant women.

Intensified Mission Indradhanush (IMI) 2.0:

'Intensified Mission Indradhanush 2.0' was launched on October 31, 2019 **to ensure that not a single child in the country misses out on vaccination.**

- It had a special focus on improving coverage in areas with "low" immunisation.
- **Through 'IMI 2.0', the health ministry aims to reach** each and every child below the age of two years and all pregnant women still **uncovered/partially covered in 271 districts** of the country.

6. What are International Financial Services Centres(IFSC)?

Prime Minister Narendra Modi is set to inaugurate **InFinity Forum**, a thought leadership Forum on FinTech, on 3rd December.

- The event is being hosted by **International Financial Services Centres Authority (IFSCA)**, under the aegis of Government of India in collaboration with GIFT City and Bloomberg.
- Indonesia, South Africa and the U.K. are partner countries in the first edition of the Forum.

The InFinity Forum:

- It will bring together the leading minds of the world in policy, business, and technology to discuss and come up with actionable insight into how technology and innovation can be leveraged by the FinTech industry for inclusive growth and serving humanity at large.
- The agenda of the Forum will focus on the theme of 'Beyond'; with various sub themes including FinTech beyond boundaries, FinTech beyond Finance and FinTech Beyond Next.

The forum will witness participation from over 70 countries.

About IFSCA:

- The International Financial Services Centres Authority (IFSCA), headquartered at GIFT City, Gandhinagar Gujarat, has been established under **the International Financial Services Centres Authority Act, 2019**.
- It works as a unified authority for the development and regulation of financial products, financial services and financial institutions in the International Financial Services Centre (IFSC) in India.

What is an IFSC?

An IFSC caters to **customers outside the jurisdiction of the domestic economy**.

- Such centres deal with flows of finance, financial products and services across borders.
- London, New York and Singapore can be counted as global financial centres.

Services an IFSC can provide:

- Fund-raising services for individuals, corporations and governments.
- Asset management and global portfolio diversification undertaken by pension funds, insurance companies and mutual funds.
- Wealth management.
- Global tax management and cross-border tax liability optimization, which provides a business opportunity for financial intermediaries, accountants and law firms.
- Global and regional corporate treasury management operations that involve fund-raising, liquidity investment and management and asset-liability matching.
- Risk management operations such as insurance and reinsurance.

- Merger and acquisition activities among trans-national corporations.

Can an IFSC be set up in a special economic zone (SEZ)?

The **SEZ Act 2005** allows setting up an **IFSC in an SEZ** or as an **SEZ** after approval from the central government.

IFSCs in India:

The first IFSC in India has been set up at **the Gujarat International Finance Tec-City (GIFT City)** in Gandhinagar.

7. 5G technology

According to the recently released 'Ericsson Mobility Report':

- Fifth generation telecom services are likely to account for 39% of mobile subscriptions or about 500 million subscriptions in India at the end of 2027.
- The total number of smartphone subscriptions is expected to be 810 million at the end of 2021 and is projected to grow at a compounded annual growth rate of 7%, exceeding 1.2 billion by 2027.
- 4G subscriptions are expected to reduce from 68% of mobile subscriptions in 2021 to 55% in 2027 as subscribers migrate to 5G.

What is 5G?

- 5G is the next generation of mobile broadband that will eventually replace, or at least augment 4G LTE connection.

Features and benefits of the 5G technology:

1. Operate in **the millimeter wave spectrum (30-300 GHz)** which have the advantage of sending large amounts of data at very high speeds.
2. Operate in **3 bands**, namely low, mid and high frequency spectrum.

3. **Reduced latency** will support new applications that leverage the power of 5G, the Internet of Things (IoT), and artificial intelligence.
4. **Increased capacity** on 5G networks can minimize the impact of load spikes, like those that take place during sporting events and news events.

Significance of the technology:

India's **National Digital Communications Policy 2018** highlights the importance of 5G when it states that the convergence of a cluster of revolutionary technologies including 5G, the cloud, Internet of Things (IoT) and data analytics, along with a growing start-up community, promise to accelerate and deepen its digital engagement, opening up a new horizon of opportunities.

What are the potential health risks from 5G?

To date, and after much research performed, **no adverse health effect has been causally linked with exposure to wireless technologies.**

- **Tissue heating** is the main mechanism of interaction between radiofrequency fields and the human body. Radiofrequency exposure levels from current technologies result in **negligible temperature rise in the human body.**
- **As the frequency increases, there is less penetration into the body tissues** and absorption of the energy becomes more confined to the surface of the body (skin and eye).

Provided that the overall exposure remains below international guidelines, **no consequences for public health are anticipated.**

What are the international exposure guidelines?

Two international bodies produce exposure guidelines on electromagnetic fields. Many countries currently adhere to the guidelines recommended by:

1. The International Commission on Non-Ionizing Radiation Protection.
2. The Institute of Electrical and Electronics Engineers, through the International Committee on Electromagnetic Safety.

These guidelines are not technology-specific. They cover radiofrequencies up to 300 GHz, including the frequencies under discussion for 5G.

International efforts- International Electromagnetic Fields (EMF) Project:

WHO established the International Electromagnetic Fields (EMF) Project in 1996. The project investigates the health impact of exposure to electric and magnetic fields in the frequency range 0-300 GHz and advises national authorities on EMF radiation protection.

8. Parker Solar Probe

The NASA probe recently made an extremely close encounter with the Sun. The probe was just 5.3 million miles away from the surface of our star and passed by at a ridiculous speed of 363,660 mph, making it **the fastest artificial object ever created**.

- Additionally, the Parker Solar Probe also broke the record for **the closest satellite to survive a near pass of the Sun**.

What next?

The probe will continue to orbit and increasingly get closer to the Sun, eventually coming within 4.3 million miles from the surface at speeds above 430,000 mph. With each pass, the probe collects valuable data about our star and relays the information back to Earth for scientists to interpret. Information regarding solar wind, and the amount of dust particles in the area are two main sets of data the probe collects.

About the mission:

- NASA's historic **Parker Solar Probe** mission will revolutionize our understanding of the sun, where changing conditions can propagate out into the solar system, affecting Earth and other worlds.
- Parker Solar Probe will travel through the sun's atmosphere, closer to the surface than any spacecraft before it, facing brutal heat and radiation conditions – and ultimately providing humanity with the closest-ever observations of a star.

Journey:

- In order to unlock the mysteries of the sun's atmosphere, Parker Solar Probe will use Venus' gravity during seven flybys over nearly seven years to gradually bring its orbit closer to the sun.
- The spacecraft will fly through the sun's atmosphere as close as 3.9 million miles to our star's surface, well within the orbit of Mercury and more than seven times closer than any spacecraft has come before.

Parker Solar Probe has three detailed science objectives:

1. Trace the flow of energy that heats and accelerates the solar corona and solar wind.
2. Determine the structure and dynamics of the plasma and magnetic fields at the sources of the solar wind.
3. Explore mechanisms that accelerate and transport energetic particles.

Prelims Practice Questions

1. With reference to cotton, which of the following statements is/are correct?

1. It is a drought resistant crop and is suitable for arid climates.
2. The soil of the Deccan plateau is suitable for growing cotton crops.
3. Gujarat is the leading cotton producing state of India.

Select the correct answer using the code given below:

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

Answer : D

Explanation

About Cotton

- Kharif Crop which requires 6 to 8 months to mature.
- **Drought - resistant crop ideal for arid climates. Hence, statement 1 is correct.**
- Occupies 2.1% of the world's arable land, meets 27% of the world's textiles needs.
- Temperature: Between 21-30°C.
- Rainfall: Around 50-100cm.
- **Soil Type:** Well-drained black cotton soil (Regur Soil) (E.g. Soil of Deccan Plateau). **Hence, statement 2 is correct.**
- Products: fibre, oil and animal feed.
- Top Cotton Producing Countries: China > India > USA
- **Top Cotton Producing States in India: Gujarat > Maharashtra > Telangana > Andhra Pradesh > Rajasthan. Hence, statement 3 is correct.**

2. Why is there a great concern about the 'microbeads' that are released into the environment?

- a. They are considered harmful to marine ecosystems.
- b. They are considered to cause skin cancer in children.
- c. They are small enough to be absorbed by crop plants in irrigated fields.
- d. They are often found to be used as food adulterants.

Answer: a

Explanation:

- Microbeads are solid plastic particles with a greatest diameter of less than one millimetre.
- Polyethylene is the most common material, however other petrochemical plastics such as polypropylene and polystyrene can also be used.
- Exfoliating personal care items, toothpastes, and biomedical and health-science studies all employ them.
- Microbeads in freshwater and ocean water can produce plastic particle contamination and constitute an environmental concern to aquatic species.
- **Hence Option A is Correct.**

3. Consider the following statements regarding the Commonwealth of Nations?

1. It was established by the London Declaration in 1949.
2. Queen Elizabeth II is the head of the Commonwealth.
3. The membership is based on free and equal voluntary cooperation.

Which of the statements given above is/are correct?

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

Answer : D

Explanation

Commonwealth of Nations

- It is an international intergovernmental organization of countries that were **mostly former territories of the British Empire and dependencies**.
- It was established by the **London Declaration** in 1949. **Hence, statement 1 is correct.**
- **Queen Elizabeth II** is the head of the Commonwealth. **Hence, statement 2 is correct.**
- The current membership includes 54 Countries. The membership is based on **free and equal voluntary co-operation**. **Hence, statement 3 is correct.**
 - It is home to 2.5 billion people, and includes both advanced economies and developing countries.
- The last country to join the Commonwealth was **Rwanda** in 2009.
- The **Commonwealth Heads of Government Meeting** is a **biennial summit** meeting of the heads of government from all Commonwealth nations.

4. Amongst the eight core sectors in the Index of Industrial Production, which sector has the lowest weightage?

- a. Cement
- b. Coal
- c. Fertilizers
- d. Steel

Answer: c

Explanation:

- Coal, crude oil, natural gas, refinery products, fertiliser, steel, cement, and power are among the eight key sector industries.
- The eight core industries account for 40.27 percent of the weight of the items in the Industrial Production Index (IIP).
- In decreasing order of weightage, below are the eight Core Industries:
 - Refinery Products
 - Electricity
 - Steel
 - Coal
 - Crude Oil
 - Natural Gas
 - Cement
 - Fertilizers

Hence Option C is Correct.

5. Which of the following countries forms the “Lithium triangle” ?

- A Chile, Argentina, and Bolivia
- B Pakistan, Afghanistan, and Iran
- C Myanmar, Thailand, and Vietnam
- D Canada, U.S, and Mexico

Answer : A

Explanation

Chile, Argentina, and Bolivia make up South America's “lithium triangle” and together hold more than 75% of the world's lithium reserves beneath their salt flats. Hence, option A is correct.

6. Located in the Idukki district of Kerala, the Mullaperiyar dam is under the control of which of the following states or UTs?

- a. Karnataka
- b. Tamil Nadu

- c. Kerala
- d. Puducherry

Answer: b

Explanation:

- The dam is at the centre of a decades-long conflict between Tamil Nadu and Kerala, two southern Indian states.
- The dam, which is located in Kerala, poses a threat to thousands of people who live downstream.
- The water provided by the dam, which is **controlled by Tamil Nadu**, is a lifeline for residents in five districts.
- Hence Option B is Correct.

Mains Practice Questions

1Q. Account for the present location of iron and steel industries away from the source of raw material, by giving examples. (UPSC GS-1 Mains 2020)

Approach

- Start the answer by briefly discussing major location factors for the iron and steel industries.
- Discuss the present location factors of iron and steel industries away from the source of raw material
- Conclude suitably.

2Q. "A governor should be discharging his/her duty in accordance with the spirit of the Constitution, not just be an agent of the centre". Discuss the statement in the light of the role of governor in the Indian polity. (250 words)

Approach

- Introduce by defining the constitutional position of governor.

- Briefly mention the role and responsibility of the governor.
- Discuss various issues related to the governor's role as merely an agent of the centre.
- Suggest what should be the way ahead.
- Conclude suitably.

