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GS 2 : Polity, Governance, International Relations

1. Sherpa for G20 Summit appointed by India

The government has appointed a union minister as Sherpa for the G20 summit.

About Sherpa

- A sherpa is the personal representative of a head of state or government who prepares an international summit, particularly the annual G7 and G20 summits.
- Between the G7 summits there are multiple sherpa conferences where possible agreements are laid out.
- This reduces the amount of time and resources required at the negotiations of the heads of state at the final summit.
- The name sherpa—without further context—refers to sherpas for the G7 summit, but the designation can be extended to different regular conferences where the participation of the head of state is required.
- The sherpa is generally quite influential, although they do not have the authority to make a final decision about any given agreement.
- The name is derived from the Sherpa people, a Nepalese ethnic group, who serve as guides and porters in the Himalayas, a reference to the fact that the sherpa clears the way for a head of state at a major summit.

About G20

- 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.
- To tackle the problems or address issues that plague the world, the heads of governments of the G20 nations periodically participate in summits.
- In addition to it, the group also hosts separate meetings of the finance ministers and foreign ministers.
- The G20 has no permanent staff of its own and its chairmanship rotates annually between nations divided into regional groupings.

Aims and objectives

- The Group was formed with the aim of studying, reviewing, and promoting high-level discussion of policy issues pertaining to the promotion of international financial stability.
- The forum aims to pre-empt the balance of payments problems and turmoil on financial markets by improved coordination of monetary, fiscal, and financial policies.
- It seeks to address issues that go beyond the responsibilities of any one organization.

Members of G20

The members of the G20 consist of 19 individual countries plus the European Union (EU).

- 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.
- The European Union is represented by the European Commission and by the European Central Bank.

Its significance

- G20 is a major international grouping that brings together 19 of the world's major economies and the European Union.
- Its members account for more than 80% of global GDP, 75% of trade and 60% of population.

India and G20

- India has been a member of the G20 since its inception in 1999.

2. Nipah amidst a pandemic

In News

A Nipah virus outbreak has surfaced in Kerala with one confirmed death in Kozhikode.

Issue:

- India is still fighting the coronavirus pandemic and now, fears of a Nipah virus outbreak have surfaced in Kerala. The infection is associated with high fatality.
- Integrated Disease Surveillance Programme shows the diversity of viral or bacterial outbreaks flash by with barely a mention, unless they threaten India's metropolises as outbreaks of dengue, H1N1, chikungunya or malaria sometimes do.
- However, the SARS-CoV-2 pandemic draws attention to significant outbreaks that preceded it.

Details:

- Nipah in Kozhikode and Malappuram was the first outbreak that called for quality healthcare.
- Kerala's public health system, earlier commended only for quality primary health care, earned appreciation for its ability to establish links between the infected and their contacts and to isolate them to prevent further spread.

Controlling future viral or bacterial outbreaks:

- Now, there are established protocols at the national level for the three key aspects of a potential pandemic: infection control, treatment and vaccination.
- It is these lessons from the coronavirus pandemic that must inform future outbreaks.
- It had become routine for Uttar Pradesh and Bihar, at intervals, to report outbreaks of 'mystery fevers' while they were often easily diagnosable infections.
- India must be heartened that the potential of an outbreak evokes national concern and an anticipatory response, unlike the earlier and purely reactive approach.
- A standardised treatment for Nipah continues to be not available and a spike in cases could spell disaster given the high mortality rate.
- However, some studies suggest that vaccines developed for the coronavirus, if adequately tweaked, may prove effective against the Nipah virus too. Another potential candidate vaccine is in early human trials.
- Vaccination continues to be the best bet against the disease. The quick development of vaccines for tropical infections is a success of the coronavirus era.

GS 3 : Economy, Science and Technology,Environment

3. A tribunal for CAPF is needed

In News

There have been numerous cases of Central Reserve Police Force (CRPF) officers overstaying leave. The Ministry of Home Affairs (MHA) to issue orders to the CRPF headquarters to "include the provisions of **Security Force Court (SFC),** for initiating disciplinary action against the delinquent officers.

Departmental enquiries Vs SFC

- The SFC is **a purely judicial process** where the guilt must be proved beyond reasonable doubt and the charged official is at liberty to engage a legal practitioner to defend him.
- Departmental enquiry is **a quasi-judicial proceeding** where the mere element of the preponderance of probability is enough to determine guilt.
- Though the Central Reserve Police Force Act of 1949 provides for conducting judicial trial by a Commandant in his capacity as a Magistrate, seldom is it exercised as it gets into the realm of the judicial process.
- Hence, the **conduct of a departmental enquiry is the better option.**

What leads to delay in departmental enquiries against gazetted officers?

- CRPF rules lay down the procedure for the conduct of departmental enquiries against non-gazetted ranks, and in normal circumstances, **the departmental enquiries are completed within three to six months.**
- But when gazetted officers are charge-sheeted, the time taken to order the enquiries is longer.
- **Delay due to getting the views of other institutions:** In the case of a gazetted officer, the other institutions like the **Union Public Service Commission, the Central Vigilance Commission, the Department of Personnel and Training, and the MHA** are also roped in for their views and legal opinion.
- **Dealy due to postponement:** When the delinquent officers appear before the inquiring authority presence of the presenting officer and the defence assistant of the charged official is also required.
- Even if one of them fails to appear for the hearing, the conduct of **enquiry must be postponed.**
- **Procedural delay:** Often, the enquiry is conducted **ex parte** (without the presence of the charged official), so the recorded statements and other documents must be sent to the charged official.

- Quite often, delays occur in providing certain prosecution documents to the charged official who may demand them for preparing his own defence.
- **Postal delays** further aggravate the matter.
- **Since most officers are busy in operational matters,** which gain priority over everything else.

Way forward

- **Appoint retired officers as inquiring authorities:** The solution lies in appointing retired officers as inquiring authorities, who can afford to devote their time to the conduct of enquiries as is being done in most departments of the government.
- **Tribunal for CAPF:** With increasing cases being filed in the High Courts across the country in service matters, it is high time the government considered the setting up of tribunals for the CAPFs on the lines of the **Armed Forces Tribunal** for defence services.
- Retired officers of the rank of **Inspectors General and Additional Directors General** from the CAPFs could be part of these tribunals along with retired judges of High Courts.

Conclusion

Taking the steps suggested here would ensure the speedy delivery of justice and reduce the burden of the High Courts.

4. The economic reforms looking back to look ahead

Context

The economic reforms, so far, have been more focused on the technical nature of the economy than the system, process and people. The fundamentals need to be set right with a focus on human capital, technology readiness and productivity.

Benefits and limits of economic reforms of 1991

- Economic reforms of 1991 — and from time to time, subsequent interjections for liberalisation of economy and trade — have enabled some credible gains for the country.
- **Benefits:** Foreign exchange reserves (over $600 billion), sustained manufacturing contribution in GDP, increased share in global exports (from 0.6% in 1990s to 1.8%), robust software exports, and sustained economic growth in the range of 6%-8% are clear indicators of its success.

- **Limits:** Primary drivers of the economy — human capital, technology readiness, productivity, disposable income, capital expenditure, process innovation in setting up businesses, and institutional capacity — **have not got enough recognition.**

Issues affecting Indian economy

1) Lack of Human resource capital formation

- The **human resource capital (HRC)** formation, a good determinant of labour productivity, has been missing over the entire period of reforms.
- The **HRC rank for India stands at 103**; Sri Lanka is at 70, China at 34, and South Korea at 27, as brought out by the **Global Human Capital Report, 2017.**
- **Factors responsible for low HRC:** The lack of quality education, low skilled manpower and inadequacies in basic health care have resulted in low HRC.

2) Low disposable income

- The World Bank database on GDP for 2019 indicates the low per capita GDP in India, at **$2,104 (at $6,997 in PPP terms, ranked 125th globally)** against the world average of $11,429 (at $17,678 in PPP terms).
- Low per capita GDP has direct links to low **per capita family income.**
- **Low wages:** The report by Deloitte **(Global Manufacturing Competitiveness Index in 2016)** reflects that the **hourly wages in India have been $1.7**; they are $38, $24, $20.7 and $3.3 for the United States, Japan, South Korea, and China, respectively.
- Low wages have a **direct bearing on the disposable income** of families, **affecting demand**.

3) Low R&D expenditure

- India's research and development expenditure stand at **0.8% of GDP,** for other fast-emerging economies such as South Korea, it is (4.5%), China (2.1%) and Taiwan (3.3%).
- **Reduced technology readiness:** This low expenditure is resulting in lower capacity for innovation in technologies and **reduced 'technology readiness',** especially for manufacturing.

4) Low labour productivity: Result of low HRC and lack of technology readiness

- The lack of HRC and low technology readiness have impacted labour productivity adversely.

- World Bank publication of 2018 indicates that India's labour productivity in manufacturing is **less than 10% of the advanced economies** including Germany and South Korea, and is about 40% of China.
- Low productivity has unfavourable consequences for competitiveness, manufacturing growth, exports and economic growth.

5) Long time and more cost in setting up business

- There are difficulties in acquiring land for businesses, in efficient utilisation of economic infrastructure, and in providing business services.
- This results in a long time and more cost in setting up enterprises, resulting in a loss of creative energy of entrepreneurs.

Way forward

- **Investment in human capital and technology:** First, to attract large investment in manufacturing and advanced services, at a basic level, investment in human capital and technology is a prerequisite.
- **Technology readiness:** The reports by McKinsey and the World Economic Forum on advanced manufacturing suggest that Industry 4.0 will be defined by new technologies such as robotics, 3-D printing, artificial intelligence (AI), the Internet of things (IoT), etc.
- Consequently, efforts for **technology readiness** are very essential to stay competitive.
- It demands enhancing public research and development expenditure to 2% of GDP over the next three years.
- **Strategies to enhance per capita income:** There is a need to work on strategies to enhance per capita income by more wages for workers through **higher skills and enhancing minimum wages,** besides improving the social security net.
- **Promote business-centric approach**: Using insights from the work of Nobel laureate (1993) Douglass C. North, it is necessary to build the **capacity of public institutions to create a good environment for business and industry.**
- Policy reforms should lay an emphasis on process innovation and promote a business-centric approach to create a friendly ecosystem and for efficient internal supply **chain management to integrate with the global supply chain.**
- **Innovative nature in public policymaking:** The future of the economy should be particularly viewed in the backdrop of a significant and irreversible shift in terms of **a reliance on the global supply chain** as a result of the knowledge-intensive nature of businesses and exponential effects caused by advanced technologies under Industry 4.0, since the 2010s.

- Therefore, the strategies adopted since the 1990s till now may not ensure adequate returns, and call for **innovative approaches in public policymaking.**

Conclusion

In sum, it necessitates a systemic approach for policy reforms for setting the economic fundamentals right and to achieve higher growth.

5. Govt. mulls allowing local sales by SEZ units sans import tag

The government is considering a proposal to allow producers in Special Economic Zones (SEZs) to sell their output to the domestic market without treating them as imports.

SEZs

- A Special Economic Zone (SEZ) is an area in which the business and trade laws are different from the rest of the country.
- SEZs are located within a country's national borders, and their aims include increasing trade balance, employment, increased investment, job creation and effective administration.
- To encourage businesses to set up in the zone, financial policies are introduced.
- These policies typically encompass investing, taxation, trading, quotas, customs and labour regulations.
- Additionally, companies may be offered tax holidays, where upon establishing themselves in a zone, they are granted a period of lower taxation.

SEZs in India

- The SEZ policy in India first came into inception on April 1, 2000.
- The prime objective was to enhance foreign investment and provide an internationally competitive and hassle-free environment for exports.
- The idea was to promote exports from the country and realizing the need that level playing field must be made available to the domestic enterprises and manufacturers to be competitive globally.
- Subsequently, the SEZ Act 2005, was enacted to provides the umbrella legal framework, covering all important legal and regulatory aspects of SEZ development as well as for units operating in SEZs.

Who can set up SEZs? Can foreign companies set up SEZs?

- Any private/public/joint sector or state government or its agencies can set up an SEZ.
- Yes, a foreign agency can set up SEZs in India.

What is the role of state governments in establishing SEZs?

- State governments will have a very important role to play in the establishment of SEZs.
- A representative of the state government, who is a member of the inter-ministerial committee on private SEZ, is consulted while considering the proposal.
- Before recommending any proposals to the ministry of commerce and industry (department of commerce), the states must satisfy themselves that they are in a position to supply basic inputs like water, electricity, etc.

Are SEZ's controlled by the government?

- In all SEZs, the statutory functions are controlled by the government.
- The government also controls the operation and maintenance function in the central government-controlled SEZs. The rest of the operations and maintenance are privatized.

Are SEZs exempt from labour laws?

- Normal labour laws are applicable to SEZs, which are enforced by the respective state governments.
- The state governments have been requested to simplify the procedures/returns and for the introduction of a single-window clearance mechanism by delegating appropriate powers to development commissioners of SEZs.

Who monitors the functioning of the units in SEZ?

- The performance of the SEZ units are monitored by a unit approval committee consisting of a development commissioner, custom and representative of state government on an annual basis.

What are the special features for business units that come to the zone?

- Business units that set up establishments in an SEZ would be entitled for a package of incentives and a simplified operating environment.
- Besides, no license is required for imports, including second-hand machinery.

How do SEZs help a country's economy?

- SEZs play a key role in rapid economic development of a country.
- In the early 1990s, it helped China and there were hopes that the establishment in India of similar export-processing zones could offer similar benefits – provided, however, that the zones offered attractive enough concessions.
- Traditionally the biggest deterrents to foreign investment in India have been high tariffs and taxes, red tape and strict labour laws.
- To date, these restrictions have ensured that India has been unable to compete with China's massively successful light-industrial export machine.

6. Crypto is not currency, must regulate it as asset: Former RBI DG

Former RBI deputy governor R. Gandhi made a case for treating and regulating crypto as a separate asset class with a view to enabling governments around the world to effectively deal with illegal activities associated with virtual currencies.

In news

- After quite a lot of debate over the years, people have fully understood that crypto cannot be a currency because the fundamental element of a currency that it should be a legal tender is missing in this case.
- The general consensus among many policymakers is that it should be deemed as an asset, not as a currency, not as a payment instrument and not as a financial instrument as there is no clear identified issuer.

What are Cryptocurrencies?

- A cryptocurrency is a digital asset designed to work as a medium of exchange wherein individual coin ownership records are stored in a ledger existing in a form of a computerized database.
- It uses strong cryptography to secure transaction records, to control the creation of additional coins, and to verify the transfer of coin ownership.
- It typically does not exist in physical form (like paper money) and is typically not issued by a central authority.
- Cryptocurrencies typically use decentralized control as opposed to centralized digital currency and central banking systems.

How does it work?

- Cryptocurrencies work using a technology called blockchain.

- Blockchain is a decentralized technology spread across many computers that manage and record transactions.
- Part of the appeal of this technology is its security.

What is Blockchain Technology?

- Simply, blockchain is a decentralized, distributed, and public digital ledger.
- Blockchains are a new type of network infrastructure (a way to organize how information and value move around on the internet) that creates 'trust' in networks by introducing distributed verifiability, auditability, and consensus.
- Blockchains create trust by acting as a shared database, distributed across vast peer-to-peer networks that have no single point of failure and no single source of truth.
- No individual entity can own a blockchain network, and no single entity can modify the data stored on it unilaterally without the consensus of its peers.

THE INDIAN EXPRESS

GS 2 : Polity, Governance, International Relations

1. 13th BRICS Summit 2021

- Prime Minister Shri Narendra Modi will chair the 13th BRICS Summit on 9 September 2021 in virtual format.
- The theme for the Summit is '**BRICS@15: Intra-BRICS cooperation for continuity, consolidation and consensus**'.
- India had outlined four priority areas for its Chairship.
- These are
  - o Reform of the Multilateral System,
  - o Counter Terrorism,
  - o Using Digital and Technological Tools for achieving SDGs and
  - o Enhancing People to People exchanges.
- In addition to these areas, the leaders will also exchange views on the impact of the COVID-19 pandemic and other current global and regional issues.
- This is the second time Prime Minister Modi will be chairing the BRICS Summit. Earlier he had chaired the Goa Summit in 2016.
- The Indian Chairship of BRICS this year coincides with the fifteenth anniversary of BRICS, as reflected in the theme for the Summit.

- The priority under this pillar are:
    - BRICS Economic Partnership Strategy 2020-25 – Implementation of this strategy will be discussed.
    - BRICS Agriculture Research Platform – The platform's operations will be discussed.
    - Cooperation on Disaster Resilience
    - Innovation Cooperation
    - Digital Health and Traditional Medicine
- Cultural and People to People – The cultural and personal exchanges always enhance intra-group bonding and the BRICS 13th Summit is set to discuss the same.

2. Key initiatives to modernise education sector

The **Prime Minister of India** launched several academic initiatives which are expected to play an important role in shaping the country's future.

Major Initiatives under Shikshak Parv:

1. Indian Sign Language (ISL) Dictionary:

- The Dictionary is launched by **Indian Sign Language Research and Training Centre**, an Institute under the Department of Empowerment of Persons with Disabilities (Divyangjan).
- The 3rd edition of the ISL Dictionary contains a total of **10,000 terms** of everyday use, academic terms, legal & administrative terms, medical terms, and agricultural terms.
- The Dictionary contains **regional signs** used in different parts of the country.
    - **1st edition** of the ISL Dictionary was launched on 23rd March 2018 with 3000 terms.
    - **2nd edition** with 6000 terms (including earlier 3000 terms) was launched on 27th February 2019.

2. CBSE School Quality Assessment and Assurance (SQAA):

- School Quality Assessment and Assurance (SQAA) is launched by Central Board of Secondary Education to provide global parameters of attainment as standards in schools affiliated to it.

Aim:

- To enhancement of quality, recognition of excellence, promotion of accountability, across a range of descriptors or indicators of assessment.

Key Takeaways:

- It captures the **unique ethos** of an institution such as nurturing and promoting excellence in sports etc.

- This will provide a degree of choice to a student or parent looking for specific qualities.

- SQAA is easily implementable, objective, and carries with it a measure of credibility and acceptability.

3. Vidyanjali 2.0:

- Vidyanjali is an initiative taken by the Ministry of Education, Government of India.

Aim:

- To strengthen Schools through community and private sector involvement in schools across the country.

Major Highlights:

- The initiative will connect schools with varied volunteers; young professionals, school alumni, in service and retired teachers / Government officials.
- **Vidyanjali has two verticals**: "Participate in school Activity" and "Assets/Material/Equipment"

- Volunteer can support and strengthen the government and government aided schools.

4. National Digital Education Architecture (NDEAR):

- Union Budget 2021-22 has announced setting up of a National Digital Educational Architecture (NDEAR).

Aim:

- To provide a digital infrastructure for Education.

Key Points:

- Digital Architecture will support teaching and learning activities as well as educational planning, governance administrative activities.
- It will provide education eco-system architecture for development of digital infrastructure, that will ensure autonomy of all stakeholders, especially States and UTs.

5. NISHTHA Teachers Training Programme:

- National Initiative for School Heads and Teachers Holistic Advancement (NISHTHA) is a national mission to improve learning outcomes at the elementary level.

Objective:

- To motivate and equip teachers to encourage and foster critical thinking in students and teachers will get awareness and develop their skills on various aspects.

Expected outcomes:

- Improvement in learning outcomes of the students.
- Creation of an enabling and enriching inclusive classroom environment.
- Teachers are trained as first level counselors to be alert and responsive to the social, emotional, and psychological need of students.
- Teachers are trained to use Art as pedagogy leading to increased creativity and innovation among students.
- Teachers are trained to develop and strengthen personal-social qualities of students for their holistic development.

6. Shikshak Parv:

- The Ministry of Education is organizing **Shikshak Parv** from 8th of September to 25th of September, 2021.
- **Theme:** National Education Policy, for Principals, Teachers, students, schools.

3. Common Services Centres (CSC)

The Common Services Centres (CSC) have received a**pprovals to manage and operate Passport Seva Kendra (PSK)** kiosks in rural areas.

Common Services Centre (CSC) programme:

- Common Services Centre (CSC) programme is an initiative of the Ministry of Electronics & IT (MeitY), Government of India.
- CSCs are the **access points for delivery of various electronic services** to villages in India, thereby contributing to a digitally and financially inclusive society.
- They are positioned as **change agents, promoting rural entrepreneurship and building rural capacities and livelihoods**.
- They are **enablers of community participation** and collective action for engendering social change through a bottom-up approach with key focus on the rural citizen.
- **CSC e-Governance Services India Limited** monitors the implementation of the Common Services Centers Scheme.
- It is a Special Purpose Vehicle (CSC SPV) incorporated under the Companies Act, 1956.
    - o It provides a centralized collaborative framework for delivery of services to citizens through CSCs, besides ensuring systemic viability and sustainability of the scheme.

Significance

- The CSCs have an **extensive network of village-level entrepreneurs (VLEs)** who run and operate over 2.5 lakh centres across India.
- Most of these centres are **present either in rural or semi-urban areas**, where internet connectivity is not always the fastest.

- CSCs have **managed to create a niche for themselves** by offering services such as:
    - o Agriculture Services (Agriculture, Horticulture, Sericulture, Animal Husbandry, Fisheries, Veterinary)
    - o Education & Training Services (School, College, Vocational Education, Employment, etc.)
    - o Health Services (Telemedicine, Health Check-ups, Medicines)
    - o Rural Banking & Insurance Services (Micro-credit, Loans, Insurance)
    - o Entertainment Services (Movies, Television)
    - o Utility Services (Bill Payments, Online bookings)
    - o Commercial Services (DTP, Printing, Internet Browsing, Village level BPO).
- CSCs enable the three vision areas of the Digital India programme:
    - o Digital infrastructure as Utility to Every Citizen
    - o Governance and services on demand
    - o Digital empowerment of citizens

4. **Minister for Commerce designated as Sherpa in G20**

The government has appointed Union Minister for Commerce & Industry, as Sherpa for the G20 summit.

About G20 Summit:

- The G20 is an annual meeting of leaders from the countries with the largest and fastest-growing economies.
- Its members account for **85%** of the world's GDP, and two-thirds of its population.

Origin of G20:

- After the Asian Financial Crisis in 1997-1998. The G7 finance ministers established the G20 Finance Ministers and Central Bank Governors meeting in 1999.

Aim:

- To promote of International Financial stability.
- To solve Balance of Payments problems and financial markets by improved coordination of monetary, fiscal, and financial policies.

Member countries of G20:

- The G20 comprises **19 countries** and the **European Union**.
- The 19 countries are: Argentina, Australia, Brazil, Canada, China, Germany, France, **India,** Indonesia, Italy, Japan, Mexico, Russia, Saudi Arabia, South Africa, South Korea, Turkey, United Kingdom and United States.

Functioning of G20:

- The G20 **does not have a permanent secretariat** or Headquarters.
- G20 Presidency rotates annually according to a system that ensures a regional balance over time.
    - Every year the G20 selects a country from another group to be president.
- The president is responsible for **bringing together the G20 agenda** in consultation with other members and in response to developments in the global economy.

India's priority in G20 summits:

- Checking tax evasion to fight corruption, choking terror funds.
- Cutting the cost of remittances, market access for key drugs.
- Reforms in the World Trade Organisation to improve its functioning
- Full implementation of the Paris Agreement

Who is Sherpa?

- A Sherpa is a **personal representative** of the leader of a member country at an international Summit meeting such as G20.
- He engages in planning, negotiation, and implementation tasks through the Summit.
- They coordinate the agenda and participate in a series of pre-Summit consultations to help negotiate their leaders' positions.
- Sherpas are **career diplomats** or senior government officials appointed by the leaders of their countries.

Role of Sherpa in G20 summit:

- Sherpas meet before the start of the Summit to point out differences on various issues.
- At the G20 Summit, work progresses through two channels: the Finance Track and Sherpas' Track.
- Track representatives, prepare the Leaders' "Declaration" or "Communique", which is the outcome of the G20 Summit.
- The Sherpas' Track involves **technical and policy analyses** by working groups comprising officials from each member country and international organizations.
- It focuses on development-oriented issues such as agriculture, fighting corruption, employment, etc.

GS 3 : Economy, Science and Technology,Environment

5. What is Pollen Calendar?

Chandigarh now has its first pollen calendar, which can identify potential allergy triggers and provide a clear understanding for clinicians as well as allergy sufferers about their causes to help limit their exposure during high pollen loads.

What is a Pollen Calendar?

- Pollen calendars represent the time dynamics of airborne pollen present in a particular geographical area.
- They yield readily accessible visual details about various airborne pollen present throughout the year in a single picture.

Is this a new concept in India? Where else in the west has this calendar been used?

- Though the concept is not essentially new, this is one of the major environmental concerns that had not been addressed for the Indian cities.
- Such calendars are location-specific, as pollen concentrations are closely related to locally distributed flora.
- Europe, UK and the US are using regional pollen calendars in a big way to prevent and diagnose allergic rhinitis/hay fever and predict the timing and severity of the pollen season.

Why is it important to study pollen?

- Pollen grains are male biological structures with the primary role of fertilization, but when inhaled by humans, they may strain the respiratory system and cause allergies.
- Pollen found suspended in air can cause widespread upper respiratory tract and nasobronchial allergy with manifestations like asthma, seasonal rhinitis, and bronchial irritation.
- About 20-30 percent of the population suffers from allergic rhinitis/hay fever in India, and approximately 15 percent develop asthma.
- Pollen is considered a major outdoor airborne allergen responsible for allergic rhinitis, asthma, and atopic dermatitis in humans.

What were the key findings?

- The study highlights the variability of crucial pollen types in different seasons.
- Spring and autumn are two seasons when airborne pollen dominate.
- The findings will enhance the understanding of pollen seasons, which will in turn help minimize pollen allergies.

How will a pollen calendar benefit people, especially those who have respiratory issues?

- A pollen calendar provides a clear understanding for clinicians, as well as people with allergies to identify the potential allergy triggers and help to limit their exposure during high pollen load season.
- The early advisories can be prepared and disseminated through media channels to the citizens so that they can use protective gear during the period when the concentration of allergic pollen will be high.

Does the study infer that gardens and parks in the city contribute to the pollen and thus there must be proper scientific tree plantation?

- It is important to involve experts while designing parks.
- We should try to plant trees/shrubs that release no or little pollen.
- Trees such as palms, nettle, safeda, white mulberry (shahtoot), congress grass, pine, have a high incidence of pollen.

What kind of trees must be grown alongside our roads or in parks?

- Plant monoecious plants (male and female flowers on the same plant).
- Hibiscus, lilies, and holly that are grown widely in Chandigarh are examples of such plants.
- Cucumbers and squashes are also monoecious. Select plants with low to moderate pollen production.
- Non-allergic or entomophilous plant species should be chosen to provide an allergen-free atmosphere.
- Examples of such plants include rose, jasmine, salvia, Bougainvillea, Raat Rani, and sunflower.

6. Places in news: Gulf of Mexico

An oil spill spanning at least 10 miles has been captured by satellite imagery in waters off the Louisiana coast near the Gulf of Mexico.

Gulf of Mexico

- The Gulf of Mexico is an ocean basin and a marginal sea of the Atlantic Ocean, largely surrounded by the North American continent.
- It is bounded on the northeast, north and northwest by the Gulf Coast of the United States; on the southwest and south by the Mexican states of

Tamaulipas, Veracruz, Tabasco, Campeche, Yucatan, and Quintana Roo; and on the southeast by Cuba.

- The US states of Texas, Louisiana, Mississippi, Alabama, and Florida, which border the Gulf on the north, are often referred to as the "Third Coast" of the United States (in addition to its Atlantic and Pacific coasts).
- It is covered with a tangle of pipes, wells and other energy infrastructure, much of it no longer used, as a result of generations of oil extraction there.

Its formation

- The Gulf of Mexico took shape approximately 300 million years ago as a result of plate tectonics.
- Its floor consists of sedimentary rocks and recent sediments.
- It is connected to part of the Atlantic Ocean through the Florida Straits between the US and Cuba, and with the Caribbean Sea via the Yucatán Channel between Mexico and Cuba.
- Because of its narrow connection to the Atlantic Ocean, the Gulf experiences very small tidal ranges.

7. New Heat wave Hotspots and Trends in India

- **North-Western, Central, and further to south-central region of India are the new hotspot of intense Heatwave events** over the past half-century, said a study which found an increase in deadly Indian heat waves in recent years.
- The study also highlights the **need for developing effective heat action plans** in the three heatwave hotspot regions **with a focus on different vulnerabilities among the inhabitants**.
- Heatwaves emerged as a deadly health hazard, claiming thousands of lives across the globe in recent decades, with episodes strengthening in frequency, intensity, and duration in the past half-century in India as well.
- This has caused severe impacts on health, agriculture, economy, and infrastructure.
- In such a scenario, it is extremely important to identify the most heatwave vulnerable regions of the country to prioritize immediate policy intervention and stringent mitigation and adaptation strategies.
- A team of researchers **studied the change in spatial and temporal trends in Heatwaves (HW) and Severe heatwaves (SHW) over the past seven decades** in different meteorological subdivisions of India.
- This work has been supported under the Climate Change Program of the Department of Science & Technology. The study published in the journal

"International Journal of Climatology" links the association of HW and SHW with mortality over India.

- The study showed a **shift in the Spatio-temporal trend of HW events from the eastern region of Gangetic West Bengal and Bihar to North-Western, Central and further to south-central region of India**.
- The research also observed an **alarming southward expansion and a spatial surge in SHW events** in the last few decades that may put a greater population at additional risk of heat stress in a region already characterized by low Diurnal temperature range (DTR), or the difference between the maximum and minimum temperatures within one day and high humidity.
- Importantly, the **HW/SHW events were found to be positively correlated with mortality in Odisha and Andhra Pradesh**, highlighting that human health is highly susceptible to severe heatwave disasters.

Way Forward

- With an ever-increasing extreme-temperature threshold, **a heat resilient future is the need of the hour**.
- Dense population with an intensive outdoor work culture calls for an equitable heat resilient mitigation and adaptation strategies covering each section of the society depending on their vulnerability.
- The study highlights the need for **developing effective heat action plans in the three heatwave hotspot regions**.

1. NAMASYA App was launched recently to empower which of the following?

- a. AYUSH
- b. Railways
- c. Panchayati Raj
- d. Micro and Small enterprise

Answer : d

NAMASYA App

- National Aluminium Company Ltd (NALCO) has recently launched the NALCO Micro and Small enterprise Yogayog (NAMASYA) Application.
- NAMASYA is a modern & innovative bi-lingual platform developed exclusively for the benefit of the Company's Micro and Small Enterprise (MSE) Vendors.
- The app empowers MSEs with required information about vendor registration process, items which can be supplied by them with technical specification, vendor development and training programmes of NALCO.

National Aluminium Company Ltd (NALCO)

- It is a Navratna CPSE under the Ministry of Mines.
- As a responsible Corporate and India's leading producer and exporter of alumina and aluminium, the Company has taken several initiatives towards easing the process of doing business, especially for the MSE sector involved in mining and metal business, and furthering inclusive growth and sustainable development in its ecosystem.

2. With reference to Manda buffalo, which of the following statements is/are correct?

1. They are found in the Western Ghats.
2. The Manda are resistant to parasitic infections and are less prone to diseases.

Options:

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

Answer: b

Explanation:

- The National Bureau of Animal Genetic Resources (NBAGR), an Indian Council of Agricultural Research (ICAR) institute, has recognised the Manda buffalo, as one of the unique breeds of buffaloes found in India.
- It is found in the Eastern Ghats and plateau of the Koraput region of Odisha.

3. With reference to Financial Emergency in India, consider the following statements:

1. It can be proclaimed by the President of India under Article 360 of the Constitution.
2. Under this, all money bills of the state legislature can be reserved for the consideration of the President.

Which of the above statements is/are correct?

A 1 only
B 2 only
C 1 and 2only
D None

Answer : C

Explanation

- **Article 360** empowers the **president to proclaim a Financial Emergency** if he is satisfied that a situation has arisen **due to which the financial stability or credit of India** or any part of its territory is threatened. **Hence, statement 1 is correct.**
- A proclamation declaring financial emergency must be approved by both the Houses of Parliament within **two months** from the date of its issue.
- Effects of Financial Emergency:
  - Extension of the executive authority of the Union over the financial matters of the States.

- o Reduction of salaries and allowances of all or any class of persons serving in the State.
- o Reservation of all **money bills or other financial bills** for the consideration of the President after they are passed by the legislature of the State. **Hence, statement 2 is correct.**

4. Which among the following is directly responsible for the monitoring of Asset Monetisation programme?

- a. Department of Economic Affairs, Ministry of Finance
- b. Department of Investment and Public Asset Management, Ministry of Finance
- c. Department for Promotion of Industry and Internal Trade, Ministry of Commerce and Industry
- d. None of the above

Answer : d

Asset Monetisation programme

- The Union government has announced its plans to "monetize" about Rs 6 trillion worth of assets held by it, and public sector units (PSUs), under the National Monetisation Pipeline (NMP).
- The Prime Minister's Office is directly monitoring the progress of the asset monetisation programme.

5. Consider the following statements:

1. It is a landlocked country.
2. It is bordered by Russia to the east and northeast, and by Ukraine to the south.
3. It is not a member of the European Union.

The above statements describe:

- a. Poland
- b. Slovenia
- c. Belarus
- d. Lithuania

Answer: c
Explanation:

6. With reference to V. O. Chidambaram Pillai, consider the following statements:

1. He was popularly known as Kappalottiya Tamilan.
2. He participated in the Swadeshi Movement after the partition of Bengal.
3. He was involved in the Tuticorin Coral Mills strike, 1908.

Which of the statements given above is/are correct?

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

Answer : D

Explanation

- Recently, the Prime Minister paid tribute to **V. O. Chidambaram Pillai**, the legendary freedom fighter on his **150th birth anniversary.**
  - He was popularly **known as Kappalottiya Tamilan** (The Tamil Helmsman) and Sekkizuththa Semmal (scholarly gentry who suffered at the oil press). **Hence, statement 1 is correct.**
- **V. O. Chidambaram Pillai** entered politics **in 1905 following the partition of Bengal.**
  - Towards the end of 1905, he visited Madras and was drawn closer to the **Swadeshi Movemen**t initiated by **Bal Gangadhar Tilak** and **Lala Lajpat Rai. Hence, statement 2 is correct.**
  - He was drawn towards Ramakrishna Mission and came into contact with Subramania Bharati and the Mandayam family.
  - It was not until the arrival of **V. O. Chidambaram Pillai** at Tuticorin (Present day Thoothukudi) that the Swadeshi movement in Tirunelveli district began to gather force and momentum.
- By 1906, **V. O. Chidambaram Pillai** won the support of merchants and industrialists in Tuticorin and Tirunelveli for the idea of establishing a Swadeshi merchant shipping outfit by the name of the Swadeshi Steam Navigation Company (SSNCo).
  - He established many institutions like Swadeshi Prachar Sabha, Dharmasanga Nesavu Salai, National Godown, Madras Agro-Industrial Society Ltd and Desabimana Sangam.

- o **V. O. Chidambaram Pillai** and Siva were aided in their efforts by a number of Tirunelveli-based lawyers, who formed an organisation called the Swadeshi Sangam, or 'National Volunteers'.
- o The nationalist movement acquired a secondary character with the **beginning of the Tuticorin Coral Mills strike (1908). Hence, statement 3 is correct.**

Mains Practice Questions

1Q. Discuss the similarities and differences between the basic tenets of Buddhism and Jainism.

Approach

- Start the answer by briefly mentioning the origin of both religions.
- Discuss the similarities and differences between Buddhism and Jainism.
- Conclude Suitably.

2Q. What are the reasons that led to the rise of Bhakti movement in India and what was its impact? (250 words)

Approach

- Write in brief about the Bhakti Movement in the introduction.
- Give the reasons that led to the rise of Bhakti movement.
- Elaborate on its Impact on the society.