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GS 2 : Polity, Governance, International Relations

1. China-Myanmar New Passage has started

The shipments on a newly-launched railway line under the China-Myanmar New Passage from the Myanmar border to the key commercial hub of Chengdu in western China has started.

China-Myanmar New Passage

- The passage provides China a new road-rail transportation channel to the Indian Ocean, were delivered last week, state media reported on Tuesday.
- The transport corridor involves a sea-road-rail link.
- It connects the logistics lines of Singapore, Myanmar and China, and is currently the most convenient land and sea channel linking the Indian Ocean with southwest China.
- Goods from Singapore reached Yangon Port, arriving by ship through the Andaman Sea of the northeastern Indian Ocean, and were then transported by road to Lincang on the Chinese side of the Myanmar-China border in Yunnan province.
- The new railway line that runs from the border town of Lincang to Chengdu, a key trade hub in western China, completes the corridor.

India need to be watchful :

Fragility at India-Myanmar Border

- From the perspective of security, India's border with Myanmar has historically presented serious security challenges.
- Chinese troops had used the Myanmar route to threaten India's the North-eastern States prior to the 1962 war.
- In the run-up to the India-China war of 1962, Chinese troops had commissioned local muleteers in Northern Myanmar to facilitate the movement of troops and war logistics to challenge India's Northeast.

Way forward

- The work on infrastructure projects in India's the Northeastern States needs to be expedited to ensure speedy mobilization of India's own troops to face different contingencies.
- Monitoring of developments including deployment of space assets to ensure that India is not caught unaware would be desirable.
- Most importantly, India on its part needs to substantially step up its own game in Myanmar and proactively engage Myanmar in the realm of the infrastructure upgrade.

2. India's key concerns on Afghanistan addressed in UNSC resolution

In News: India-led United Nations Security Council (UNSC) Resolution 2593 addressed India's "key concerns" on Afghanistan.

- Russia and China Who are among the Permanent members of UNSC abstained from The resolution.

Resolution 2593

- The resolution called on the Taliban to keep their commitments on preventing terror groups in Afghanistan.
- It urged them to assist the safe evacuations of all Afghan nationals wishing to lead the country.
- It mentions individuals designated by Resolution 1267 also, which includes the Lashkar E Taiba and Jaish-e- Muhammad.

UNSC

- The UNSC is one of the six principal organs of the United Nations
- It is charged with the maintenance of international peace and security.
- **Powers:** Establishment of peacekeeping operations, establishment of international sanctions, and the authorization of military action through Security Council resolutions.
- It is the only UN body with the authority to issue binding resolutions to member states.
- The Security Council consists of fifteen members.
- **Permanent members (P5):** Russia, UK, France, China, and USA
- These permanent members can veto any substantive Security Council resolution, including those on the admission of new member states or candidates for Secretary-General.

- The Security Council also has 10 non-permanent members, elected on a regional basis to serve two-year terms.
- The body's presidency rotates monthly among its 15 members.

Resolution 1267

- Resolution 1267 was adopted unanimously on 15 October 1999.
- The UNSC designated Osama bin Laden and associates as terrorists and established a sanctions regime to cover individuals and entities associated with Al-Qaida, Osama bin Laden and/or the Taliban wherever located.
- Since the US invasion of Afghanistan in 2001 which ended recently, the sanctions have been applied to individuals and organizations in all parts of the world.
- There was no right of appeal against listing until December 2006.

3. BRICS succeeded up to a point but it now confronts multiple challenges

In News

The 13th BRICS summit is set to be held on September 9 in digital format under India's chairmanship

Challenges and opportunities for BRICS

- The importance of BRICS is self-evident: **it represents 42% of the world's population**, 30% of the land area, 24% of global GDP and 16% of international trade.
- **Weathering geopolitical challenges:** Member states have been carrying BRICS forward in an era of complex geopolitics.
- They have bravely continued holding dozens of meetings and summits, even as India-China relations were strained after Galwan valley incident.
- **Internal challenges:** There is also the reality of the strained relations of China and Russia with the West, and of serious internal challenges preoccupying both Brazil and South Africa.
- On the other hand, a potential bond emerged due to the battle against COVID-19.
- **Challenges to trade ties:** BRICS has been busy deepening trade and investment ties among its member states.
- The difficulty stems from **China's centrality and dominance of intra-BRICS trade flows**.
- How to create a better internal balance remains a challenge, reinforced by the urgent **need for diversification and strengthening of regional value chains**.

- **China's aggression:** Beijing's aggressive policy, especially against India, puts BRICS solidarity under exceptional strain.
- **Lack of support:** BRICS countries have not done enough to assist the Global South to win their optimal support for their agenda.

Does BRICS truly matter?

- The grouping has gone through a reasonably productive journey.
- **Acts as a bridge:** It strove to serve as a bridge between the Global North and Global South.
- It developed a **common perspective** on a wide range of global and regional issues.
- It established the **New Development Bank**; created a financial stability net in the form of Contingency Reserve Arrangement; and is on the verge of setting up a **Vaccine Research and Development Virtual Center**.

Immediate goals: 4 priorities

- As the current chair, India has outlined four priorities.
- **Reforms of multilateral institutions:** The first is to pursue **reform of multilateral institutions** ranging from the United Nations, World Bank and the International Monetary Fund to the World Trade Organization and now even the World Health Organization.
- Reform needs global consensus which is hardly feasible in the current climate of strategic contestation between the U.S. and China and the devastation caused by COVID-19.
- Nevertheless, Indian officials rightly remind us that BRICS emerged from the desire to challenge dominance (by the U.S.) in the early years of the century, and it remains committed to the goal of **counter-dominance (by China) now**.
- **Combating terrorism:** Tragic developments concerning Afghanistan have helped to focus attention sharply on this overarching theme, stressing the need to bridge the gap between rhetoric and action.
- China, for example, feels little hesitation in supporting clear-cut denunciations of terrorist groups and supports Pakistan, which is host to several international terrorist groups.
- BRICS is attempting to pragmatically shape its counter-terrorism strategy by crafting the **BRICS Counter Terrorism Action Plan**.
- **Counter Terrorism Action Plan** contains specific measures to fight radicalisation, **terrorist financing and misuse of the Internet** by terrorist groups.
- **Technology and digital solution:** Promoting technological and digital solutions for the Sustainable Development Goals and expanding people-to-people cooperation are the other two BRICS priorities.

Conclusion

It is necessary for leaders, officials and academics of this grouping to undertake serious soul-searching and find a way out of the present predicament.

4. Freedom of Movement and Residence

In News : The rights to free movement and residence across India cannot be curtailed on flimsy grounds, a Bench of Justices Indira Banerjee and V. Ramasubramanian held in a judgment.

Freedom of Movement and Residence

- Article 19(1)(d) and (e) of the Indian Constitution guarantees to every citizen of India right to move freely throughout the territory of India and to reside and settle in any Part of the of the Territory of India.
- This right is subject to reasonable restrictions imposed by law in the interest of the general public or for the protection of the interests of any Scheduled Tribes.

(A) Freedom of Movement under Article 19(1)(d)

- All Citizens of India have the right “to move freely throughout the territory of India.
- This Right is, however subject to reasonable restrictions mentioned under Article 19(5).

Restrictions:

- This clause (5) empowers the State to impose reasonable restrictions in the interest of the general public or for the protection of the interest of any Scheduled Tribe.
- **Kharak Singh V. State of UP (1963) Case:** The Supreme Court held that the right to move freely throughout the territory of India means the right of locomotion which connotes the right to move wherever one likes, and however one likes.
- **State of UP V. Kaushalya Case (1964):** In this case, the Supreme court held that the right of movement of prostitutes may be restricted on grounds of Public Health and in the interest of Public Morals.

(B) Freedom of Resident under Article 19(1)(e)

- Article 19(1)(e) of the Indian Constitution guarantees to every citizen of India, the right “to reside and settle in any part of the territory of India”.
- This right is subjected to reasonable restrictions which may be imposed by the State in the interest of the general public or for the protection of the interest of any Scheduled Tribe.

Some facts

- The Freedom of Movement and Residence apply only to citizens of India and not the Foreigners.
- A foreigner cannot claim the right to reside and settle in the country as guaranteed by Article Article 19(1)(e).
- The Government of India has the power to expel foreigners from India.

Why in news, now?

- The Supreme Court has held that the power of the State to pass an externment order or a direction barring certain people entry to specified areas should be exercised only in “exceptional cases”.
- The court said externment orders have their use in maintaining law and order.
- However, they cannot be employed as a vindictive or retaliatory measure.
- The drastic action of externment should only be taken in exceptional cases, to maintain law and order in a locality and/or prevent breach of public tranquility and peace, the court noted.

GS 3 : Economy, Science and Technology, Environment

5. Economy grows 20.1% in Q1

In News : India’s Gross Domestic Product (GDP) grew by 20.1% in the first quarter of 2021-22.

- In the corresponding quarter a year ago, the 24.4% contraction was recorded.
- However, economic activity still remained well below the pre-pandemic levels, due to the second wave of COVID-19.

- Gross Value Added (GVA) in the economy (April to June) rose 18.8%, as per the National Statistical Office (NSO), from a 22.2% dip in the first quarter of 2020-21.
- Electricity, gas, water supply and other utility services was the only sector along with agriculture, forestry and fishing, to recover beyond the pre-pandemic levels of 2019-20.

Difference between GDP and GVA?

- Gross value added (GVA) is defined as the value of output less (minus) the value of intermediate consumption.
- It is used to measure the output or contribution of a particular sector.
- When such GVAs from all sectors (\sum GVA) are added together along with adding taxes and reducing subsidies, we can get the GDP (at market price).
- GVA thus shows the production contribution of a **particular sector** and **GDP** shows the production contribution of **the economy**.

6. Sweat Equity Rules by SEBI

Context: Recently, the Securities and Exchange Board of India (SEBI) has brought into effect the SEBI (Share Based Employee Benefits and Sweat Equity) Regulations, 2021. The regulations have widened the scope of employees who can be offered stock (equity) options.

- SEBI has merged the SEBI (Share Based Employee Benefits) Regulations, 2014 (SBEB Regulations) and the SEBI (Issue of Sweat Equity) Regulations, 2002 (Sweat Equity Regulations).
- SEBI is a statutory body established in accordance with the provisions of the SEBI Act, 1992. Its basic function is to protect the interests of investors in securities and to regulate the securities market.

Sweat Equity

- Sweat equity is a non-monetary contribution that the individuals or founders of a company make towards the company.
- Cash-strapped startups and business owners typically use sweat equity to fund their companies.
- It will be **issued for providing** the know-how or making available rights in the form of intellectual property rights or value additions.
- The maximum yearly limit that can be issued by a listed company has been prescribed at 15% of the existing paid-up equity share capital

- It will be applicable for 10 years from the date of the company's incorporation.

7. Mumbai Climate Action Plan

In News : The Brihanmumbai Municipal Corporation (BMC) is drafting a Mumbai Climate Action Plan (MCAP) in a bid to tackle climate challenges. It recently launched a website for the same.

- Mumbai joined C40 Cities group in December 2020.
- There are 97 cities across the world connected in C40 Cities, who are pushed to develop and implement climate action plans to address climate change by reducing greenhouse gas emission significantly.

Mumbai Climate Action Plan

- Amid warnings of climate change leading to extreme weather events in the city, the civic body has started preparing the Mumbai Climate Action Plan (MCAP).
- It will look at climate resilience with mitigation and adaptation strategies by focusing on six areas –
 - - Sustainable waste management
 - Urban greening and biodiversity
 - Urban flooding and water resource management
 - Building energy efficiency
 - Air quality
 - Sustainable mobility
- The plan is expected to be ready by November ahead of the United Nations Climate Change (COP26) conference.

Why does Mumbai need a climate action plan?

- As per a study conducted by the World Resource Institute (WRI) India on Mumbai's vulnerability assessment, the city will face **two major climate challenges** –
 - - Rise in temperature
 - Extreme rain events which will lead to flooding.

- IPCC has warned that at least 12 Indian coastal cities including Mumbai will face **sea rise of 0.1 metres to 0.3 metres** in next three decades due to climate change.
- In February 2020, a report from McKinsey India stated that by 2050, Mumbai will see a **25% increase in the intensity of flash floods** and a 0.5 metre rise in sea level, which will affect two to three million people living within 1-km from the coastline.
- Since 2007, the city has seen a **constant rise in temperature mainly due to concretization, lack of green cover** and housing density. The average rise in temperature is up to 1 degree Celsius in these 14 years.
- City has witnessed increase in the number of **extremely heavy rainfall events**. Mumbai has seen, on an average, six heavy (64.5 – 115.5 mm), five very heavy (115.6 – 204.4 mm) and four extremely heavy (> 204.5 mm) rain events per year.
- Mumbai's climate action plan will help set a vision and implement strategies to fight these climate challenges with mitigation and adaptation steps

Greenhouse gas emission of the city

- The data show that Mumbai's greenhouse gas emission was **34.3 million tonnes in 2019**.
 - - 71% came from the energy sector which is mainly based on coal.
 - 24% is from transport,
 - Remaining 5% from solid waste management.
- As per the data, 95 per cent of Mumbai's electricity is coal-based and needs to be shifted to renewable energy to bring down emissions.

How does BMC plan to tackle the climate challenges?

- To minimise the impact of climate change, the MCAP will focus on reduction of greenhouse gas emission by sectors, and consumption patterns, for the near term (2030), medium term (2040) and long-term (2050).
- To better adapt to increasing climate risks so as to make "climate resilient Mumbai", following steps will be taken
 - Vulnerability assessment
 - Increasing community resilience capacities in vulnerable neighborhoods
 - Building climate resilient infrastructure
 - Nurturing robust natural systems

THE INDIAN EXPRESS

GS 2 : Polity, Governance, International Relations

1. India must rethink 'wait and watch' Afghan policy

In News

After the collapse of the government in Kabul, India has adopted a wait and watch approach in its dealing with the Taliban.

Taliban's position in Afghanistan

- The Taliban grip over Afghanistan will only strengthen unless there is a popular revolt against it in the cities.
- The Panjshiri defiance is unlikely to go anywhere without considerable and abiding **support from the US and a firm commitment from Tajikistan.**
- After a talk between leaders of the extinguished Afghan Republic and the Taliban on central government formation, there has been no news of the process for more than a week.
- There is continuous pressure on Taliban leaders and Pakistan from the Western donor community for the formation of a government acceptable to it.
- Some Taliban leaders would want financial flows to continue to prevent a collapse of the Afghan economy.

The approach of the international community toward Taliban

- Assurances would be sought from the Taliban not only by the West but also by Russia and China that there will be no attempt to put in place the **1990s practices of the Islamic Emirate** on gender issues and the more medieval manifestations of the Sharia.
- **Commitment on anti-terrorism:** US will keep close scrutiny on the Taliban to honour its commitment on al Qaeda and will demand that it continues to cooperate on ISIS-K extermination, an objective shared by Russia.
- **Diplomatic recognition** of a Taliban government, including allowing it to occupy the United Nations seat in the forthcoming future will **depend on its acceptability.**
- However, the US and EU will not be reluctant to maintain open and direct contact with a Taliban government.

Issues with India's wait and watch policy

- India continues to “wait and watch” Afghan developments.
- What is being overlooked is that “strategic patience” **cannot be an alibi for inaction.**
- The invocation of the British Raj policy of “**masterly inactivity**” by some scholars defies logic for it applied in a completely different context.
- **Recognition v. legitimacy:** Besides, while diplomatic recognition or its denial is a specific act of a country in inter-state relations, “**legitimacy**” is **more applicable in the internal jurisdiction of countries.**
- India “waited and watched” Afghan developments from the sidelines, at least since the US-Taliban deal.
- How long will India continue to “wait and watch”?

Way forward

- **Establish open contact:** To explore the Taliban's approaches towards India there is an obvious need to establish open and direct contacts with it.
- That will also allow India to convey its red lines.
- This should not be confused with **diplomatic recognition.**
- **Welcome Afghans:** The establishment of open contacts with the Taliban will not be contradictory to actively welcoming those Afghans, irrespective of their faith, who are closely connected with India.

Conclusion

It would damage India's reputation greatly and into the future, if perceptions grow, as they are growing, that India has abandoned its friends in Afghanistan at the time of their need.

2. Operation Devi Shakti

India has termed the evacuation operation from Afghanistan in the backdrop of the Taliban's takeover of the country last week as “Operation Devi Shakti”.

Operation Devi Shakti

- Operation Devi Shakti is an ongoing operation of the Indian Armed Forces to evacuate Indian citizens and foreign nationals after the fall of the Islamic Republic of Afghanistan to the Taliban.

Major evacuations undertaken

- Up till now, around 400 individuals from Kabul have been evacuated that covered Indian citizens as well as Afghan nationals including Sikhs and Hindus of Afghanistan.
- Hundreds of Indian nationals have to be taken out of Kabul which is now under the Taliban's control.
- India is airlifting its citizens through Dushanbe in Tajikistan and Qatar.
- The Indian Air Force has already evacuated around many passengers including its Ambassador to Afghanistan and all other diplomats.

3. INS Tabar Exercises with Moroccan Navy

In News:

- INS Tabar, as part of her overseas deployment, made a port call at Casablanca in Morocco on 25 and 26 Aug 21.
- The ship participated in a Maritime Partnership Exercise with Royal Moroccan Navy ship 'Lieutenant Colonel Arrahman' off Casablanca port.
- Evolutions like communication drills, replenishment at sea procedures and naval manoeuvres were undertaken during the exercise.
- The exercise concluded with the traditional 'Steam Past' between the two ships to bid farewell to each other.

About INS Tabar:

- INS Tabar (translates as "battle axe") is the third of the Talwar-class frigate of the Indian Navy. The frigate was commissioned on 19 April 2004 in Kaliningrad, Russia.
- INS Tabar is a well-equipped warship that has the ability to handle air/surface/sub-surface missions or defending herself operating either independently on maritime missions or supporting a larger naval task force.

4. Afghanistan and India's Evacuation Efforts

In News : External affairs minister S Jaishankar called its operation to evacuate its citizens from war-torn Afghanistan as 'Operation Devi Shakti' and saluted the efforts of Indian Air Force and Air India.

The latest developments in Afghanistan:

- Amid a massive evacuation effort by western troops, a suspected suicide bomb exploded outside Kabul airport in Afghanistan on Thursday, killing at least 13 people including children, civilians and US service members.
- Thousands of people have been gathering outside the Kabul airport in recent days with western troops racing to evacuate foreigners and Afghans to get out of the war-torn country by an Aug 31 deadline after the Taliban takeover of Afghanistan.

About India's evacuation effort:

- India has so far evacuated nearly 620 people, including 500 of its nationals, on flights from Kabul, Dushanbe and Doha.
- Nearly 200 people - including diplomats, officials and security personnel posted at the Indian embassy and some Indian nationals - were flown out of Kabul within two days of the Taliban marching into the Afghan capital on August 15.
- The evacuation flights have involved the C-130 and C-17 aircraft of the IAF and Air India's aircraft. However, flights by military aircraft from the Afghan capital to India have had to take longer routes through Iranian airspace in order to avoid flying over Pakistan.
- India is carrying out the evacuation missions in coordination with the US and several other countries.

India's priorities in the circumstances:

- India's priorities in the Afghan crisis and evacuation effort have been as follow:
- Evacuation of Indian nationals, safety of our diplomatic personnel.
- Assistance to Afghan nationals in distress.
- Providing leadership - Neighbourhood First.
- International coordination and humanitarian efforts.
- UNSC Special Session chaired by India on Afghanistan.
- Upcoming UNHRC Session in Geneva.
- UN 1988 Sanctions Committee chaired by India.

5. China-Pakistan Economic Corridor (CPEC)

- **CPEC is connecting China's Xinjiang with Pakistan's Gwadar port** is regarded as the flagship project of the multi-billion dollar Belt and Road Initiative (BRI) which is aimed at furthering China's global influence with infrastructure projects funded by Chinese investments all over the world.

- The CPEC is bilateral project between Pakistan and China, intended to promote connectivity across Pakistan with a **network of highways, railways, and pipelines accompanied by energy, industrial, and other infrastructure development projects** linking the Western part of China to the Gwadar Port in Balochistan, Pakistan running some 3000 km from Xinjiang to Balochistan **via Khunjerab Pass** in the Northern Parts of Pakistan. **CPEC is a part of OBOR.**
- It will pave the way for China to access the Middle East and Africa from Gwadar Port, enabling China to access the Indian Ocean and in return China will support development projects in Pakistan to overcome the latter's energy crises and stabilizing its faltering economy.
- China has committed to invest over USD 60 billion in Pakistan as part of the CPEC under which it planned to build a number of special economic zones.
- CPEC's potential impact on Pakistan has been compared to that of the Marshall Plan undertaken by the United States in post-war Europe. Pakistani officials predict that CPEC will result in the creation of upwards of 2.3 million jobs between 2015–2030, and add 2 to 2.5 percentage points to the country's annual economic growth.

Objections of India to CPEC

- **Sovereignty claims:** India objects to the CPEC project as upgrade works to the Karakoram Highway are taking place in Gilgit Baltistan in Pakistan-occupied Kashmir; territory that India claims as its own.
- **Encirclement fears:** India has alleged that China and Pakistan intended to develop the corridor not just for its economic benefits, but also is motivated by the "strategic intent of besieging India."
- India has not supported OBOR. China's insistence on establishing the CPEC project through PoK is seen by India as infringing its sovereignty.
- China is building roads and infrastructure in the disputed territory of Gilgit-Balistan, which is under Pakistan's control but which India claims as a part of Jammu and Kashmir.
- If CPEC project gets implemented successfully, this would hamper India's strategic interests in the South Asian region. It will serve Beijing's strategic ambition to encircle India.
- CPEC can aid Pakistan's legitimacy in the Kashmir dispute.
- China's increasing footprints in the South Asian region is detrimental to India's strategic hold e.g. construction of the Hambantota Port in Sri Lanka provided China critical strategic location in Indian Ocean.

GS 3 : Economy, Science and Technology, Environment

6. PM Gati Shakti Master Plan

- On India's 75th Independence Day, the Prime Minister announced that the Centre will launch 'PM Gati Shakti Master Plan'.
- It is a 100 lakh crore Infrastructure plan for developing 'holistic infrastructure'.
- The plan is aimed at **easier interconnectivity between road, rail, air and waterways** to reduce travel time and improve industrial productivity.
- The push for infrastructure is in line with the government's efforts to step up capital expenditure in infrastructure to promote economic growth.

Significance of the project

- The project will be a source of employment opportunities for the youth in future.
- Infrastructure development has the ability to create a **multiplier effect** with every rupee invested, yielding much higher returns.
- It will help **raise the global profile of local manufacturers** and help them compete with their counterparts worldwide.
- It also raises possibilities of new future economic zones.
- It is also help to **increase both manufacturing and exports**.

7. West Nile Virus outbreak in Russia

Russia warned of a possible increase in West Nile virus infections this autumn as mild temperatures and heavy precipitation create favorable conditions for the mosquitos that carry it.

West Nile virus (WNV)

- WNV is mainly transmitted through mosquito bites and can lead to fatal neurological disease in humans, although most people infected never develop any symptoms.
- Cases of WNV occur during mosquito season, which starts in the summer and continues through fall.

Its origin

- Originally from Africa, the WNV has spread to Europe, Asia, and North America.
- It was first isolated in a woman in the West Nile district of Uganda in 1937.
- It was identified in birds in the Nile delta region in 1953.
- Before 1997, WNV was not considered pathogenic for birds.
- Human infections attributable to WNV have been reported in many countries for over 50 years.

Symptoms

- Infected persons usually have no symptoms or mild symptoms.
- Some of the symptoms include fever, headache, body aches, skin rash, and swollen lymph glands.
- They can last a few days to several weeks and usually, go away on their own.
- Prolonged illness may cause inflammation of the brain, called encephalitis, or inflammation of the tissue that surrounds the brain and spinal cord, called meningitis.

Treatment

- There is no vaccine against the virus in humans although one exists for horses, the WHO says.

Prelims Practice Questions

1. Consider the following statements regarding the West Nile Virus (WNV):

1. It is not considered pathogenic for birds.
2. The disease caused by WNV is spread by infected mosquitoes.
3. The WNV can lead to a fatal neurological disease in humans.

Which of the statements given above is/are correct?

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

Answer : C

Explanation

- The West Nile Virus (WNV) is a member of the flavivirus genus and belongs to the Japanese encephalitis antigenic complex of the family Flaviviridae.
 - It is commonly found in Africa, Europe, the Middle East, North America and West Asia.
- WNV was first isolated in a woman in the West Nile district of Uganda in 1937.
 - It was identified in birds in the Nile delta region in 1953. **Before 1997, WNV was not considered pathogenic for birds. Hence, statement 1 is not correct.**
- **WNV causes an infectious disease spread by infected mosquitoes. Hence, statement 2 is correct.**
 - It spreads from birds to humans with the bite of an infected Culex mosquito.
 - It can lead to a **fatal neurological disease in humans. Hence, statement 3 is correct.**
 - The virus causes West Nile fever in around 20% of cases, according to the World Health Organization (WHO). It is related to the Zika, Dengue and Yellow Fever Viruses.

2. Brominated flame retardants are used in many household products like mattresses and upholstery. Why is there some concern about their use?

1. They are highly resistant to degradation in the environment.
2. They are able to accumulate in humans and animals.

Select the correct answer using the code given below.

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

Answer: c

Explanation:

- Brominated flame retardants (BFRs) are organobromine compounds that have an inhibitory effect on combustion chemistry and tend to reduce the flammability of products containing them. (Flame-retardant)
- Some brominated flame retardants have been identified as persistent, bioaccumulative, and toxic to both humans and the environment and were suspected of causing neurobehavioral effects and endocrine disruption.
- Given the high resistance they offer to environmental degradation they persist in the environment for long periods.

3. Which of the following is not an initiative of Ministry of Micro, Small & Medium Enterprises (MSME)?

1. Champions Portal
2. Udyam Registration
3. National SC-ST Hub
4. Niryat Bandhu Scheme

Select the correct answer using the codes given below:

- a. 1 only
- b. 4 only
- c. 3 and 4 only
- d. 1, 2 and 3 only

Answer : b

- Ministry of MSME has undertaken interventions to enhance MSME ecosystem in India.

Some of the key reforms introduced by Ministry of MSME are:

- **Revision of MSME definition:** In line with Government of India's top focus on energizing MSMEs in the country, Government of India approved the upward revision of MSME definition in 2020 under the Aatmanirbhar Bharat Package.
- The Government revised the MSME classification by inserting composite criteria of both investment and annual turnover.
- **Udyam Registration:** Udyam is an online and simplified procedure of filing of registration which enables MSMEs to obtain registration without any documentation and fees.
- It is a globally benchmarked process and a revolutionary step towards Ease of Doing Business.

- Ministry of MSME has also commenced API integration of Udyam Registration portal with GeM so that MSMEs can participate in Government procurement easily.
- **Champions Portal:** It is an online platform to help and handhold the MSMEs especially in this difficult time.
- It is an ICT based technology system aimed at making the smaller units big by solving their grievances, encouraging, supporting, helping and handholding throughout the business lifecycle.
- The platform facilitates a single window solution for all needs of MSMEs.
- **National SC-ST Hub (NSSH):** It has been launched to promote entrepreneurship culture in the SC-ST community and fulfill the 4% procurement target mentioned in the Public Procurement Policy order, 2018.
- To boost entrepreneurship among SC/ST population and for maximum on-ground penetration, several interventions have been undertaken to cater to the challenge of market linkages, finance facilitations, capacity building etc.
- **Procurement Policy:** For providing marketing support to MSMEs, all Central Ministries/Government Departments and CPSEs are required to procure 25% of their annual requirements of goods and services from MSEs including 4% from MSEs owned by SC/ST and 3% from MSEs owned by women entrepreneurs under the Public Procurement Policy.
- **Establishment of Enterprise Development Centers (EDCs):** With a view to provide Information related to MSMEs at one place, Enterprise Development Centres (EDCs) have been conceptualized.
- Till date Ministry of MSME has set up 102 EDCs across India.
- The aim of these centers is to build a network of entrepreneurial leaders by providing professional mentoring and handholding support services to existing as well as aspiring MSMEs with special focus on rural enterprises on continuous basis.

4. Which of the following are the applications of Hydrogels?

1. Soft robotics
2. Tissue engineering
3. Wastewater treatment
4. Regenerative medicine

Select the correct answer using the codes given below:

- a. 1 and 2 only
- b. 3 and 4 only
- c. 2, 3 and 4 only

- d. 1, 2, 3 and 4

Answer : d

- A group of researchers from Indian Institute of Technology (IIT), Guwahati have developed hydrogel-based electrodes that could enhance the performance of an energy storage device.
- They have developed the hydrogel electrodes by simple room temperature process in which graphene and MXene spontaneously assemble themselves over metal plates within a water medium.
- Graphene, a single atom thin carbon sheet, stores charge on its surface via physical adsorption, known as electrical double layer mechanism (ELDC).
- Whereas, MXene, nanosheets of titanium carbide, stores charge via both ELDC and chemical reaction on its surface, known as pseudo-capacitance.

Hydrogels

- They are three-dimensional (3D) cross-linked polymer networks, which can absorb and retain large amount of water.
- A hydrogel is a porous framework of interconnected materials, in which water remains stably locked within the pores.
- They have been applied in a wide range of biomedical and engineering applications, ranging from tissue engineering and regenerative medicine to wastewater treatment and soft robotics.

5. Consider the following statements with respect to Geological Survey of India (GSI)

1. It was set up in 1851 primarily to find coal deposits for the Railways.
2. Presently, GSI is an attached office to the Ministry of Mines.

Which of the statement(s) given above is/are correct?

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

Answer : c

Geological Survey of India (GSI)

- It was founded in 1851 primarily to find coal deposits for the Railways.
- One of the oldest Surveys of the world, the history of Geological Survey of India is synonymous with history of development of the infrastructure and industries in India.
- The main functions of GSI relate to creation and updation of national geo-scientific information and mineral resource assessment.
- These objectives are achieved through ground surveys, air-borne and marine surveys, mineral exploration, multidisciplinary geoscientific, geo-technical, geo-environmental and natural hazards studies, glaciology, seismotectonics, and carrying out fundamental research.
- GSI, headquartered at Kolkata, has six Regional offices located at Lucknow, Jaipur, Nagpur, Hyderabad, Shillong and Kolkata and State Unit offices in almost all States of the country.
- Geological Survey of India is an attached office of the Ministry of Mines.

6. Consider the following statements about Leaded Petrol

1. According to UNEP, World has completely eradicated the use of Leaded Petrol.
2. Leaded Petrol mainly affects the emission control system such as catalytic converters.
3. India's phase down of leaded petrol got completed way back in 2000.

Which of the statements given above is/are correct?

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

Answer : d

Leaded Petrol

- According to UNEP, globally, automotive fuel is completely lead-free now. Not a single fuel outlet sells leaded petrol anymore anywhere.
- Algeria was the last country to use the fuel.
- This feat is achieved after UNEP-led global Partnership for Clean Fuels and Vehicles (PCFV) began its campaign in 2002 to eliminate lead in petrol.

- Fumes from petrol vehicles using leaded petrol have been a significant source of lead exposures which affects multiple body systems and is particularly harmful to young children.
- It affects the brain, liver, kidneys and bones. Lead is measured in blood to understand exposure.
- Lead in bone is released into blood during pregnancy and becomes a source of exposure to the developing foetus.
- It affects emissions control systems of vehicles particularly catalytic converters.
- India started its phase down in 1994 and completed in 2000.

Mains Practice Questions

1. 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.

2. Model Code of conduct has been a remarkable step in ensuring free and fair elections in India. However, the present digital era has posed challenges to it. Comment.

Approach

- Start the answer by briefly discussing about the Model Code of Conduct.
- Discuss the limitations faced by the model code of conduct in the digital age.
- Conclude Suitably.