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**GS 2 : Polity, Governance, International Relations**

**1. As cases surge, panel approves Russia's Sputnik V vaccine**

**Context:**

Russia's COVID-19 vaccine – Sputnik V has been recommended for emergency use authorisation in India following a meeting of the Subject Expert Committee (SEC).

**Details:**

- If approved by the Drug Controller General of India (DCGI), Sputnik V would be the third vaccine to be made available in India after the Serum Institute of India's Covishield and Bharat Biotech's Covaxin.
- It adds that the vaccine supplies for the global market will be produced by the Russian Direct Investment Fund (RDIF) international partners in India, Brazil, China, South Korea and other countries.
- The freeze-dried form of the Sputnik V vaccine can be stored at a temperature of +2 to +8 degrees Celsius, which allows for easy distribution worldwide, including hard-to-reach regions.

**What is Emergency Use Authorisation?**

- Vaccines and medicines, and even diagnostic tests and medical devices, require the approval of a regulatory authority before they can be administered.
- In India, the regulatory authority is the Central Drugs Standard Control Organisation (CDSCO).
  - Drugs Controller General of India is the head of department of the Central Drugs Standard Control Organization.
- For vaccines and medicines, approval is granted after an assessment of their safety and effectiveness, based on data from trials. Approval from the regulator is required at every stage of these trials which is a long process, designed to ensure that a medicine or vaccine is absolutely safe and effective.
- The fastest approval for any vaccine until now was for the mumps vaccine in the 1960s which took about four-and-a-half years after it was developed.
- In emergency situations, like the current one (COVID-19 pandemic), regulatory authorities around the world have developed mechanisms to grant

interim approvals if there is sufficient evidence to suggest a medical product is safe and effective.

- Final approval is granted only after completion of the trials and analysis of full data; until then, emergency use authorisation (EUA) allows the medicine or the vaccine to be used on the public.

**The circumstances that allow health regulators to issue accelerated approvals under EUA are:**

- Rare Diseases
- Massive disease outbreak
- No proven vaccine or drug available
- Evidence of a drug or vaccine that is tested in a country and has yielded desired results
- A country neither has the financial resources nor the personnel to conduct solid clinical trials to a drug/vaccine that has undergone thorough clinical trials in another country

**Note:**

- There is no explicit mention of EUA in India, however, there is a provision under the New Drugs and Clinical Trials, 2019.
- New Drugs and Clinical Trials, 2019 mentions an 'accelerated approval process', depending on the severity, urgency and lack of alternatives.
- In the event of the above-mentioned grounds, the regulator can overrule the need to have local clinical trials if the drug has been approved elsewhere.

**2. China extends \$500 mn loan to Lanka**

**Context:**

China signed a \$500 million loan agreement with Sri Lanka.

**Details:**

- Chinese President has assured Sri Lanka of as much assistance as China's capacity allows.
- This is the second instalment of the \$1 billion loan sought by Sri Lanka in 2020.
  - The first was released in March 2020, just as the pandemic hit Sri Lanka.
- The approval comes a month after Sri Lanka obtained a currency swap facility from China for \$1.5 billion.

- Beijing-based Asian Infrastructure Investment Bank (AIIB) also sanctioned Sri Lanka's request for a \$180 million loan.
- Sri Lanka already owes more than \$ 5 billion to China from past loans.

### **Sri Lanka's Economic Crisis:**

- Like many pandemic-hit countries, Sri Lanka is facing an acute economic crisis for over a year now.
- Its rupee plummeted to nearly 203 against the U.S. dollar.
- The country's foreign reserves dropped to \$ 4.05 billion in March 2021 after its exports and tourism sector earnings, and foreign remittances dropped considerably in the last 12 months.
- Sri Lanka is due to repay some \$ 4.5 billion of its outstanding debt this year.
- Colombo hopes that the loan would boost its foreign reserves that are under severe strain since the pandemic struck.

### **Assistance by India:**

- India extended a \$400 million swap facility through the Reserve Bank of India, and provided a three-month rollover, but the facility was not further extended.
- The Central Bank of Sri Lanka settled the swap in February 2021.
- Meanwhile, Colombo is awaiting New Delhi's response to two requests made in 2020 by the government.
  - While PM Mahinda Rajapaksa sought a debt moratorium on the debt Sri Lanka owes to India, President Gotabaya Rajapaksa requested Prime Minister Modi for a \$ 1 billion currency swap last year. Neither request has been cleared as yet.

## **3. 'Northeast citizens faced bias amid pandemic'**

### **Context:**

A study was commissioned by the Indian Council of Social Science Research (ICSSR) on racial discrimination and hate crimes against people from the northeastern States.

### **Details:**

- The study found that 78% of the people from the region who were interviewed believed that physical appearance was the most important reason for prejudice.

- Amid the COVID-19 outbreak, people from the region faced an increased number of acts of hate and prejudices against them.
- A series of attacks were reported in various parts of the country, where people from the region were harassed, abused, traumatised and were disparagingly called coronavirus, the study said.
- The study quoted a 2020 report from the Right and Risks Analysis Group (RRAG) that found a significant upsurge in acts of racial discrimination against people from the northeastern region.
- The risk of being victimised in racial hatred remains subtle yet deeply entrenched.

### Safeguarding the vulnerable migrants:

- In 2014, the Government of India set up the Bezbaruah Committee to look into concerns of the persons hailing from the North-Eastern states who are living in different parts of the country, especially the metropolitan areas, and to suggest suitable remedial measures which could be taken by the Government.
- The M.P. Bezbaruah Committee recommended amendments to the IPC by creating new offences under Section 153C and 509A to deal with comments, gestures and acts intended to insult a member of a particular racial group.
- It also suggested making such offences 'gender-neutral', 'cognizable' and 'non-bailable' with imprisonment extendable up to three years or five years with fine, respectively.

### **4. Iran blames Israel for nuclear plant outage, pledges revenge**

- **Context:**
- Iran blamed Israel for a sabotage attack on its underground Natanz nuclear facility that damaged its centrifuges and vowed it would take revenge.

### Details:

- Iran described the blackout as an act of nuclear terrorism, raising regional tensions.
- Multiple Israeli media outlets reported that an Israeli cyberattack caused the blackout.
  - Israeli media maintains a close relationship with the country's intelligence agencies.
- Public broadcaster Kan said the Mossad (the national intelligence agency of Israel) was behind the attack.

- The head of the Atomic Energy Organization of Iran emphasised the need for a confrontation by the international bodies and the International Atomic Energy Agency against the act.

### Concerns:

- If Israel caused the blackout, it further heightens tensions between the two nations, already engaged in a shadow conflict across the wider West Asia.
- The latest incident comes amid negotiations over the crumbling atomic accord with world powers.
- The developments also complicate the efforts by the U.S., Israel's main security partner, to re-enter the atomic accord aimed at limiting Tehran's nuclear programme.

### Note:

- Natanz was built largely underground to withstand enemy airstrikes.
- It became a flashpoint for Western fears about Iran's nuclear plan in 2002 when satellite photos showed Iran building its underground centrifuges facility at the site.

## 5. Save the deal

### Context:

- **Vienna talks** as part of the efforts to revive the **Joint Comprehensive Plan of Action (JCPOA)**.

### Details:

- The Vienna talks between China, Russia, the U.K., France, Germany and Iran, have raised hopes for the revival of the agreement.
- The participation of an American delegation is a significant development in this regard.

### U.S.'s outreach:

- The Biden administration has displayed flexibility in its approach towards Iran. The President appointed a special envoy, ended the U.S.'s support for Saudi Arabia's war against the Houthis, Iran-backed militants, in Yemen and promised to lift sanctions if Tehran returns to the JCPOA terms.

- The U.S. administration has also reportedly made an offer to Iran to release \$1 billion of Iranian money frozen in South Korea as part of the sanctions in exchange for ending its 20% uranium enrichment.

### Challenges:

- Though all parties agree that bringing the deal back on track is ideal, there are several challenges that need to be addressed first.

### **Iran's enhanced nuclear programme:**

- Iran has lately unveiled some **latest developments in domestic centrifuge technology** which could enable it to enrich larger quantities of uranium at much higher speeds. This development could disrupt the ongoing negotiations.

### **American sanctions:**

- Notably, though the new U.S. administration under President Joe Biden has signalled its willingness to return to a nuclear deal with Iran, it **has continued to enforce the sanctions imposed by the previous U.S. President Donald Trump**.
- This has not been taken well by the Iranians.

### **Deadlock in negotiations:**

- The U.S. wants Iran to end its uranium enrichment and centrifuge development programmes and return to the 2015 agreement, while Tehran has demanded the U.S. to first lift all sanctions imposed on it.

### **Domestic pressures:**

- Iran holds its **presidential polls in June 2021**.
- The best possibility of reviving the JCPOA is before the presidential election in Iran given the possibility of the election of a more conservative candidate for the Iranian Presidentship. The current President Mr. Rouhani who is considered a moderate is more likely to agree to a negotiated revival of the nuclear agreement.

### **External dangers:**

- Iran-backed Shia militias in Iraq continue to target U.S. forces and bases in Iraq.

- The Israel-Iran shadow conflict is now being fought inside Syria and on the seas.
- If **security tensions** rise in the region involving Iran and its proxies, it could derail the diplomatic efforts.

### Conclusion:

- **The U.S.'s best chance to address Iran's nuclear programme is through the revival of the JCPOA.**
- The U.S. and Iran should exercise restraint, stay focused on talks and rebuild the lost trust, and take measures to get the deal back on track to resolve the nuclear crisis before time runs out.

## **6. India's South Asian opportunity**

### Context:

- **The thaw in the relationship between India and Pakistan.**

### Details:

- The recent thaw in the bilateral relationship between the two neighbours India and Pakistan seems to indicate a growing, but unstated, realisation that **an atmosphere of peace and tranquillity is of mutual interest to both countries.**
- The Kashmir issue seems to have taken a back seat between the two countries.

### Implications of India - Pakistan rivalry:

- **India-Pakistan animosity hurts regionalism and South Asian growth.**
- **SAARC has remained a victim of India-Pakistan rivalry.** Pakistan has been blocking trade and connectivity and people-to-people ties. The repeated boycotting of the SAARC summits is an indication of the impairment of the organization.
- South Asia with a population of slightly over 1.9 billion and a GDP (PPP) of \$12 trillion, **performs badly when compared with the Association of South East Asian Nations (ASEAN) member countries** which have registered impressive economic growth and development.

### Potential of a vibrant bilateral relationship:

#### **Regional integration:**



- A fair peace between India and Pakistan is not just good for the two states but for all the nations constituting the **South Asian Association for Regional Cooperation (SAARC)**.

#### **Economic potential:**

- Reports from World Bank, Asian Development Bank and the European Union have noted the immense potential hidden in the South Asian economic integration.
- **An economically transformed and integrated South Asian region** could advantageously link up with China's Belt and Road Initiative and even join the Regional Comprehensive Economic Partnership, unleashing great economic potential

#### **Way forward:**

##### **India's role:**

- India should seize the moment and **become more South Asia-concerned and much less Pakistan-obsessed**.
- Given its size and heft, **India should take the lead in transforming the South Asian region**.
- India enjoys an overwhelming 'size imbalance' in South Asia. The shares of India in the total land area, population, and real GDP of South Asia in 2016 are 62%, 75%, and 83%, respectively. The two other big countries in South Asia are Pakistan and Bangladesh with shares in regional GDP of only 7.6% and 5.6%, respectively.
- India needs to view peace with Pakistan not as a bilateral matter, to be arrived at leisurely, but as essential and urgent, viewing it as a chance to dramatically transform South Asia for the better.

##### **Larger agenda for the region:**

- There should be a more focussed approach on **issues plaguing the entire subcontinent like poverty and malnutrition**. Co-operation and collaboration in these aspects would benefit both India and Pakistan.

### **GS 3 : Economy, Science and Technology, Environment**

## 7. Scaling up vaccine production

### Context:

- The **second wave of COVID-19 infections in India** and the **reports of the scarcity of COVID-19 vaccines and drugs in India.**

### Details:

- According to the Observer Research Foundation, till the end of March, India had produced 316 million doses of Covishield and Covaxin – the two COVID-19 vaccines in use in India.
- The issue of vaccine shortage may not be due to low vaccine production potential. Perhaps, the **problem has more to do with centralised procurement, distribution, and coordination with different state governments and local authorities.**
- As India aims to inoculate more and more people, it is **imperative to ramp up vaccine production.** Serum Institute of India (SII), which manufactures Covishield, has said that it can produce 100 million doses a month, up from the 50 million doses, provided it can scale up its manufacturing capacity.

### Means to ramp up vaccine production:

- There are **several legal means** that the government should employ to scale up the production of COVID-19 vaccines.
- These legal means can be divided into the **non-intellectual property-(IP)-based and IP-based options.**

### Non-IP-based solutions:

- The government can direct pharmaceutical companies to loan their manufacturing capacity to the existing COVID-19 manufacturers like the SII and Bharat Biotech to boost their manufacturing capability so that more COVID-19 vaccine vials can be produced.

### Supporting legal provisions:

- Section 2 of the **Epidemic Diseases Act of 1897** empowers the government to take measures that it may deem necessary to prevent the outbreak or its spread.
- Section 26B of the **Drugs and Cosmetics Act, 1940**, empowers the Central government to regulate the sale, manufacture, and distribution of a drug that is essential to meet the requirements of an emergency arising due to an epidemic.

### IP-based solutions:

- The Central government can **licence specific companies to manufacture the COVID-19 vaccines**.
- Another option available to the government is to ensure that all COVID-19 vaccine projects that are funded by the taxpayer's money should not claim IP rights in the first place or if patents are granted, they should not be enforced.

### Supporting legal provisions:

- Under Section 100 of the **Patents Act, 1970**, the Central government has the power to authorise anyone to use any patents or patent applications for the "purposes of government".
- Section 92 of the Patents Act allows the Central government to issue a **compulsory licence (a licence issued to manufacture the patented product without the consent of the patent holder)** in circumstances of national emergency or extreme urgency or in case of public non-commercial use.

### Using public sector companies:

- The government needs to explore the production capabilities of the pharmaceutical companies in the public sector to build India's manufacturing competence.

## 8. Military exercise in Bangladesh ends

### What's in News?

Multinational military exercise Shantir Ogrosena, underway in Bangladesh, concluded.

- The exercise saw participation by four countries, along with observers from the U.S., the U.K., Russia, Turkey, Saudi Arabia, Kuwait and Singapore.
- The aim of the exercise was to strengthen defence ties and enhance interoperability among neighbourhood countries to ensure effective peacekeeping operations.

## THE INDIAN EXPRESS

### GS 2 : Polity, Governance, International Relations

#### 1. India and the great power triangle of Russia, China and US

##### India's changing relations with great powers

- The recent visit of Russian foreign minister Sergei Lavrov to Delhi and Islamabad is among multiple signs of India's changing relations with the great powers.
- At the same time, Delhi's growing **strategic partnerships with the US and Europe** have begun to end India's prolonged alienation from the West.
- Also, New Delhi's own **relative weight in the international system** continues to increase and give **greater breadth and depth to India's foreign policy**.

##### Shifts in triangular relations between Russia, China and America

###### 1) Russia-China relations

- The leaders of Russia and China — Joseph Stalin and Mao Zedong — signed a formal treaty of alliance in 1950.
- Russia invested massively in the economic modernisation of China, and also gave it the technology to become a nuclear weapon power.
- However, by the 1960s, their relations soured and two were arguing about ideology and a lot else.
- The Sino-Soviet split had consequences way beyond their bilateral relations.
- None of them more important than **the efforts by both Moscow and Beijing to woo Washington**.
- The break-up between Russia and China also **opened space for Delhi** against Beijing after the 1962 war in the Himalayas.
- Under intense American pressure on Russia in the 1980s, Moscow sought to **normalise ties with Beijing**.
- Stepping back to the 1960s and 1970s, China strongly objected to Delhi's partnership with Moscow.

###### 2) Russia-US relations

- Russia, which today resents India's growing strategic warmth with the US, has its **own long history of collaboration with Washington**.
- Moscow and Washington laid the foundations for **nuclear arms control** and sought to develop a new framework for shared global leadership.
- But Delhi was especially concerned about the **Nuclear Nonproliferation Treaty** system, with all its constraints on India's atomic options, that Moscow and Washington constructed in the late 1960s.

### 3) US-China relations

- Despite fighting Korean War with the US in the early 1950s, China normalised relations with the U.S. in 1971 **to counter the perceived threat from Russia**.
- Deng Xiaoping, refused to extend the 1950 security treaty with Russia that expired in 1980.
- China turned instead, towards building a solid economic partnership with the US and the West that **helped accelerate China's rise as a great power**.

### Lessons for India

- The twists and turns in the **triangular dynamic** between America, Russia and China noted above should remind us that Moscow and Beijing are not going to be "best friends forever".
- India has no reason to rule out important changes in the way the US, Russia and China **relate to each other in the near and medium-term**.
- In the last few years, India has finally overcome its **historic hesitations in partnering with the US**.
- India has also intensified its efforts to engage **European powers, especially France**.
- Prime Minister Boris Johnson's visit to India later this month promises a fresh start in India's difficult postcolonial ties with Britain.
- India is also expanding its **ties with Asian middle powers like Japan, Korea and Australia**.
- Despite the current differences over Afghanistan and the Indo-Pacific, India and Russia have no reason to throw away their mutually beneficial bilateral partnership.
- The current troubles with China seem to be an unfortunate exception to the upswing in India's bilateral ties with global actors.

### Conclusion

India has successfully managed the past flux in the great power politics; it is even better positioned today to deal with potential changes among the great powers.

## 2. Visit of Defence Minister of Kazakhstan

### Why in News

Recently, the **Defence Minister of India** held bilateral talks with the Defence Minister of the Republic of **Kazakhstan** in **New Delhi**.

- The two Ministers had last met in Moscow (Russia) in September 2020 on the sidelines of **Shanghai Cooperation Organisation (SCO)** Defence Ministers' meeting.

### Key Points

- **Highlights of the Talks:**
  - Agreed that both sides must look at the possibility of **defence industrial collaboration** of mutual interest.
  - Exchanged views **to further strengthen bilateral defence cooperation**, including through training, defence exercises and capacity building.
  - Kazakhstan thanked India for the opportunity given to the Kazakh troops for deployment as part of the Indian battalion in the **United Nations Interim Force in Lebanon (UNIFIL)**.
    - **UNIFIL** was established by the UN Security Council in 1978 to confirm Israeli withdrawal from Lebanon, restore international peace and security and assist the Lebanese Government in restoring its effective authority in the area.
  - Assessed the **annual joint military exercise KAZIND**.
- **Indo-Kazakh Defence Cooperation:**
  - It is carried out under the framework of an agreement on '**Defence and Military Technical Cooperation**' signed in July 2015 during the visit of Indian Prime Minister to Kazakhstan.
  - The agreement includes conduct of joint training, **exercises, military-technical cooperation, UN peacekeeping and exchange of intelligence**.
    - Kazakh Armed Forces Unit underwent training on peacekeeping operations in India in April-May 2018 for deployment under the **command of an Indian Battalion at UNIFIL, Lebanon**.
- **Significance of Kazakhstan to India:**
  - There are **three factors** which make Kazakhstan important for India. First, its **geo-strategic location**; second, its **economic potential**, especially in terms of energy resources; and third, its **multi-ethnic and secular structure**.

- **Kazakhstan's geo-political existence between Russia and Asia**, along with long borders with China, makes it a country of great strategic importance.
  - Kazakhstan lies to the northeast of the Caspian Sea, bordered by the Russian Federation to the north, China to the east, and Kyrgyzstan, Turkmenistan and Uzbekistan to the south.
- Kazakhstan **can also help India achieve a geostrategic rebalancing with China**. India's foremost objective is countering the rapid economic inroads China is making in the region through the **One Belt One Road (OBOR)** initiative.
  - India seeks to achieve this with the competing **North-South Transport Corridor (NSTC)**.
  - NSTC is a **multi-modal transportation** established on **12<sup>th</sup> September 2000** in **St. Petersburg, by Iran, Russia and India** for the purpose of promoting transportation cooperation among the Member States. It has been expanded to include eleven new members.
- Kazakhstan has become **one of the key activists in the field of global nuclear security**, and has achieved a number of results in peacekeeping policies and the resolution of conflicts around **Nagorno-Karabakh, Iran, Ukraine and Syria**.

## India - Kazakhstan Relations

- **Historical:**
  - Relations between India and Kazakhstan are ancient and historical going back to more than 2000 years.
  - There has been a constant and regular flow of trade in goods and, more importantly, exchange of ideas and cultural influences.
    - The **flow of Buddhism from India to Central Asia and Sufi ideas from Central Asia to India** are two such examples.
- **Political Relations:**
  - India was **one of the first countries to recognize the independence of Kazakhstan**. **Diplomatic relations** were established in **February 1992**.
  - India and Kazakhstan have been **strategic partners since 2009**.
- **Cooperation at Multilateral Fora:**
  - India and Kazakhstan actively cooperate under the aegis of Multilateral Fora including **CICA, SCO and the UN organizations**.
  - India has been a consistent supporter of Kazakhstan's initiative on **Conference on Interaction and Confidence-Building Measures in Asia (CICA)** and is actively participating in the process.

- Kazakhstan supports India's permanent membership in an expanded **United Nations Security Council (UNSC)** and has extended its support for India's non-permanent membership in 2021-22.
- **Trade and Economy:**
  - The **India-Kazakhstan Inter-Governmental Commission (IGC)** established in 1993 is the **apex bilateral institutional mechanism** for developing trade, economic, scientific, technological, industrial and cultural cooperation between the two countries.
    - The Ministry of Petroleum and Natural Gas on the Indian side and Ministry of Energy on the Kazakh side are the nodal ministries with respective Ministers as the Co-Chair of the Commission.
  - Several **Joint Working Groups (JWGs)** have been established in the areas of Counter Terrorism, Trade & Economic Cooperation, Defence & Military Technical Cooperation, Information Technology, Hydrocarbons, Textiles, Tea Debt and Space Cooperation, Health and Transport, Connectivity & Logistics to take forward bilateral relations in the respective spheres.
  - Kazakhstan is **India's largest trade and investment partner in Central Asia.**
- **Space Cooperation:**
  - **Indian Space Research Organization (ISRO)** launched "**Al-Farabi-1**", a 1.7 kg Technology Demonstrator Nano Satellite built by Al-Farabi Kazakh National University, Almaty along with 103 other satellites in 2017.
  - A delegation from ISRO attended **Kazakh Defence Expo 'KADEX'** in May 2018.
- **Civil Nuclear Cooperation:**
  - Kazakhstan **supported India in obtaining India-specific exemption** to allow civil nuclear cooperation with **Nuclear Suppliers Group (NSG)** countries in 2008.
- **Indian Technical and Economic Cooperation (ITEC):**
  - India provides capacity building assistance to Kazakhstan in various specialized fields under **ITEC program** sponsored by the Ministry of External Affairs.
- **Consular:**
  - India and Kazakhstan have **an agreement on visa free entry for Diplomatic and Official Passport holders.**
  - Since February 2018, **Indian has extended e-visa facility** to Kazakh citizens.
  - Kazakhstan has also introduced **electronic visa facilities for travelers from India** with effect from 1<sup>st</sup> January 2019.



## Way Forward

- Being part of central Asia, Kazakhstan is strategically important for India. India needs to use its instrument of economic leverages more efficiently to build closer ties with Central Asia.
- At its core, the heightened India-Kazakhstan relationship allows New Delhi to bypass Pakistan and the highly unstable Afghanistan to reach a resource-rich Nur-Sultan, complementing India's developing economy.

## 3. Violence in Northern Ireland (UK)

### Why in News

Recently, **Northern Ireland, the United Kingdom (UK)** saw the worst violence in years. Parts of Northern Ireland are split along sectarian lines, **23 years after a peace deal largely ended Northern Ireland's troubles.**

### Key Points

- **Historical Conflict:**
  - **Geographically**, Northern Ireland is part of Ireland. **Politically**, it's part of the UK.
  - Ireland, long dominated by the UK, broke free about 100 years ago after centuries of **colonisation** and an uneasy union. 26 of its 32 counties became an independent, Roman Catholic-majority country. **6 counties in the north, which have a Protestant majority, stayed British.**
  - Northern Ireland's **Catholic minority experienced discrimination in the Protestant-run state.**
  - In the **1960s, a Catholic civil rights movement demanded change**, but faced a harsh response from the government and police.
  - The **British Army was deployed in 1969**, initially to keep the peace.
    - The situation deteriorated into a conflict between Irish republican militants who wanted to unite with the south, loyalist paramilitaries who sought to keep Northern Ireland British, and UK troops.
  - During three decades of conflict, **more than 3,600 people, a majority of them civilians, were killed** in bombings and shootings. Most were in Northern Ireland, though the Irish Republican Army also set off bombs in London and other British cities.
- **Ending the Conflict:**

- By the **1990s**, after secret talks and with the help of diplomatic efforts by Ireland, Britain and the United States, the combatants reached a **peace deal**.
- The **1998 Good Friday accord** saw the paramilitaries lay down their arms and established a **Catholic-Protestant power-sharing government** for Northern Ireland.
- The question of Northern Ireland's ultimate status was deferred: **it would remain British as long as that was the majority's wish**, but a future referendum on reunification was not ruled out.
- While the peace has largely endured, small **Irish Republican Army splinter groups have mounted occasional attacks on security forces**, and there have been outbreaks of sectarian street violence.
- The power-sharing arrangement has had periods of success and failure and still the government is not trusted by both the sides.
- **Problem Child of Brexit:**
  - Northern Ireland has been called the **"problem child" of Brexit, the UK's divorce from the European Union (EU)**.
  - As the **only part of the UK that has a border with an EU nation**, Ireland, it was the trickiest issue to resolve after Britain voted narrowly in 2016 to leave the 27-nation bloc.
  - An open Irish border, over which people and goods flow freely, underpins the peace process, allowing people in Northern Ireland to feel at home in both Ireland and the UK.
  - The **insistence of Britain's government on a "hard Brexit"** that took the country out of the EU's economic order meant the creation of new barriers and checks on trade.
  - Both Britain and the EU agreed that the **border could not be in Ireland** because of the risk that would pose to the peace process. The alternative was to put it, metaphorically, in **the Irish Sea** between Northern Ireland and the rest of the UK.
  - That arrangement has alarmed **British unionists, who say it weakens Northern Ireland's place in the UK** and could bolster calls for Irish reunification.
- **Reason for Current Violence:**
  - **Brexit and Corona:**
    - Britain left the EU on **31st December** and the new trade arrangements quickly became an irritant to Northern Ireland unionists who want to stay in the UK.
    - Early trade glitches, exacerbated by the **coronavirus pandemic**, led to some empty supermarket shelves, fueling alarm.
    - There was anger that British Prime Minister long insisted there would be no new checks on trade as a result of Brexit, had downplayed the scale of the changes wrought by leaving the EU.

- **Identity Crisis:**
  - Some in Northern Ireland's British **loyalist community** feel as if **their identity is under threat**. And many other loyalists believe that, de facto, **Northern Ireland has ceased to be as much a part of the UK** as it was.

## **GS 3 :Economy, Science and Technology,Environment**

### **4. Shaphari Scheme**

Commerce Ministry wants to build confidence in quality, antibiotic-free shrimp products from India for the global market.

#### **Shaphari Scheme**

- The Marine Products Exports Development Authority (MPEDA) has developed a certification scheme for aquaculture products called 'Shaphari', a Sanskrit word that means the superior quality of fishery products suitable for human consumption.
- The Shaphari scheme is based on the United Nations' Food and Agriculture Organization's technical guidelines on aquaculture certification.
- It will have two components – certifying hatcheries for the quality of their seeds and, separately, approving shrimp farms that adopt the requisite good practices.
- The certification of hatcheries will help farmers easily identify good quality seed producers.
- Those who successfully clear multiple audits of their operations shall be granted a certificate for a period of two years.
- The entire certification process will be online to minimize human errors and ensure higher credibility and transparency.

#### **Bolstering confidence in India's Shrimp production**

- To bolster confidence in India's frozen shrimp produce, the country's biggest seafood export item, the Centre has kicked off a new scheme called 'Shaphari' to certify hatcheries and farms that adopt good aquaculture practices.
- Frozen shrimp is India's largest exported seafood item.
- But a combination of factors had hurt export volumes in recent months, including container shortages and incidents of seafood consignments being rejected because of food safety concerns.

- Some recent consignments sourced from Indian shrimp farms being rejected due to the presence of antibiotic residue and this is a matter of concern for exporters.
- The National Residue Control Programme for food safety issues in farm produce and pre-harvest testing system is already in place.
- But this certification was proposed as a market-based tool for hatcheries to adopt good aquaculture practices and help produce quality antibiotic-free shrimp products to assure global consumers.

### Frozen shrimp export potential

- Frozen shrimp is India's largest exported seafood item. It constituted 50.58% in quantity and 73.2% in terms of total U.S. dollar earnings from the sector during 2019-20.
- India exported frozen shrimp worth almost \$5 billion in 2019-20, with the U.S. and China its the biggest buyers.
- Andhra Pradesh, West Bengal, Odisha, Gujarat and Tamil Nadu are India's major shrimp producing States, and around 95% of the cultured shrimp produce is exported.

## 5. National Supercomputing Mission

### Why in News

The **second phase of the National Supercomputing Mission (NSM) will be completed by September 2021**, taking India's total computational capacity to **16 Petaflops**.

### Key Points

- **About the National Supercomputing Mission (NSM):**
  - **Launch:** NSM was **announced in 2015**, with an **aim** to connect national academic and R&D institutions with a grid of more than 70 high-performance computing facilities at an estimated cost of Rs. 4,500 crores **over the period of seven years by 2022**.
    - It supports the government's vision of 'Digital India' and 'Make in India'.
  - **Implementation:** NSM is **jointly steered by the Ministry of Electronics and IT (MeitY) and Department of Science and Technology (DST - Ministry of Science and Technology)** and implemented by the **Centre for Development of Advanced**

**Computing (C-DAC)**, Pune and the Indian Institute of Science (IISc), Bengaluru.

- **Features:**
  - It is also an effort to **improve the number of supercomputers** owned by India.
  - These supercomputers will also be networked on the National Supercomputing grid over the **National Knowledge Network (NKN)**. The NKN connects academic institutions and R&D labs over a high-speed network.
  - Under NSM, the long-term plan is to build a strong base of 20,000 skilled persons over the next five years who will be equipped to handle the complexities of supercomputers.
- **Progress of NSM:**
  - In the first phase, **PARAM Shivay, PARAM Shakti, PARAM Brahma, PARAM Yukti and PARAM Sanganak** were deployed at IIT (BHU), IIT Kharagpur, Indian Institute of Science Education and Research, Pune, and Jawaharlal Nehru Centre for Advanced Research.
  - Recently, **PARAM-Siddhi AI**, has been ranked **63<sup>rd</sup> in the Top 500 list of most powerful supercomputers** in the world. It was developed under the NSM.
- **Recent Development:**
  - In October 2020, **C-DAC had inked MoUs with IITs** along with **IISc, National Agri-Food Biotechnology Institute and NIT, Tiruchirapalli** – where a High Power Computing (HPC) system in each institute is currently being installed.
  - So far, **over 4,500 people have been trained in HPC** and further training in **Artificial Intelligence** will be held at special **NSM nodal centres** established at four IITs – **Kharagpur, Madras, Goa and Palakkad**.
- **Challenges:**
  - The NSM envisages setting up a network of 70 high-performance computing facilities in the country but **skewed funding for the mission** during the initial years slowed down the overall pace of building supercomputers.
  - **Only 16.67% of the total budget of Rs. 4,500 crore**, was utilised during the first four-and-a-half years for execution of the mission.
- **Global Scenario:**
  - Globally, **China** has the maximum number of supercomputers and maintains the **top position** in the world, followed by the **US, Japan, France, Germany, Netherlands, Ireland and the United Kingdom**.

## 6. Antarctica's Doomsday Glacier

## Why in News

Researchers from **Sweden's University of Gothenburg** have been able to obtain data from underneath Thwaites Glacier, also known as the '**Doomsday Glacier**'.

- They find that the **supply of warm water to the glacier is larger than previously thought**, triggering concerns of faster melting and accelerating ice flow.

## Key Points

- **Doomsday Glacier:**
  - Called the **Thwaites Glacier**, it is **120 km wide at its broadest**, fast-moving, and melting fast over the years.
  - Because of its **size (1.9 lakh square km)**, it contains **enough water to raise the world sea level** by more than half a metre.
    - Studies have found the **amount of ice flowing** out of it has **nearly doubled over the past 30 years**.
  - Today, Thwaites's melting **already contributes 4% to global sea level rise** each year.
  - It is estimated that it would collapse into the sea **in 200-900 years**.
  - Thwaites is **important for Antarctica as it slows the ice behind it** from freely flowing **into the ocean**.
  - Because of the risk it faces, and poses, Thwaites is often called the **Doomsday Glacier** (Doomsday meaning warning or threat, something that can cause destruction).
- **Previous Studies:**
  - **Hole in the Glacier:** A **2019 study** had discovered a **fast-growing cavity in the glacier**, sized roughly **two-thirds the area of Manhattan**.
    - The **size of a cavity** under a glacier **plays an important role in melting**. As more heat and water get under the glacier, it melts faster.
  - **Detection of Warm Water at Grounding Line:**
    - **About:** In 2020, researchers from **New York University (NYU)** **detected warm water** at a vital point below the glacier. In the NYU study, scientists dug a 600-m-deep and 35-cm-wide access hole, and deployed **an ocean-sensing device called Icefin** to measure the waters moving below the glacier's surface.
    - **Findings:**
      - The **NYU study** reported water at just two degrees above freezing point at Thwaites's **"grounding zone" or "grounding line"**.

- **The grounding line** is the place below a glacier at which the ice transitions between resting fully on bedrock and floating on the ocean as an ice shelf. The location of the line is a **pointer to the rate of retreat of a glacier**.
- When **glaciers melt** and lose weight, **they float off the land** where they used to be situated. When this happens, **the grounding line retreats**. That **exposes more of a glacier's underside to seawater**, increasing the likelihood it will melt faster.
- This results in the glacier speeding up, stretching out, and thinning, causing the grounding line to retreat ever further.
- **Findings from Sweden's Gothenburg Study (New Study):**
  - **About:** Sweden's Gothenburg study used an **uncrewed submarine** to go under the Thwaites glacier front to make observations.
    - The submersible called "**Ran**" measured among other things the **strength, temperature, salinity and oxygen content of the ocean currents** that go under the glacier.
    - Using the results, the researchers **have been able to map the ocean currents** that flow below Thwaites's floating part.
  - **Findings:** The researchers have been able to identify **three inflows of warm water**, among whom **the damaging effects of one had been underestimated in the past**.
    - The researchers discovered that **there is a deep connection to the east through which deep water flows from Pine Island Bay**, a connection that was previously thought to be blocked by an underwater ridge.
      - **Pine Island Bay is a drainage system of West Antarctica**.
    - The study also **looked at heat transport in one of the three channels** which brings warm water towards the glacier from the north.
    - They found that **there were distinct paths that water takes in and out of the ice shelf cavity**, influenced by the geometry of the ocean floor.

### Way Forward

- The study shows that warm water is approaching the pinning points of the glacier from all sides, impacting these locations where the ice is connected to the seabed and where the ice sheet finds stability. This has the potential to make things worse for Thwaites, whose ice shelf is already retreating.

- For the first time, data is being collected that is necessary to model the dynamics of Thwaites glacier. This data will help better calculate ice melting in the future.
- With the help of new technology, models can be improved and the great uncertainty that now prevails around global sea level variations can be reduced.

## 7. Exercise Shantir Ogroshena

### Why in News

**Multinational military exercise Shantir Ogroshena**, which went for 10 days in **Bangladesh**, concluded on 12<sup>th</sup> April 2021.

- The year 2021 marks the 50<sup>th</sup> anniversary of diplomatic relations between India and Bangladesh.

### Key Points

- **About the Exercise:**
  - The exercise was organised to commemorate the birth centenary of **Bangabandhu Sheikh Mujibur Rahman**, Bangladesh's Father of the Nation and celebrate the **golden jubilee of the liberation of Bangladesh**.
  - It was held at **Bangabandhu Senanibas (BBS), Bangladesh**.
  - '**Shantir Ogroshena**' 2021 means "**Front Runner of the Peace**".
- **Theme:**
  - The theme of this exercise was to **strengthen defence ties and enhance interoperability amongst neighbourhood countries** to ensure effective **peacekeeping operations**.
  - It was a **UN (United Nations)- mandated counterterrorism exercise**.
- **Countries that Participated:**
  - Troops from **India, Bangladesh, Bhutan and Sri Lanka** participated in the exercise with **observers from the USA, UK, Russia, Turkey, Saudi Arabia, Kuwait and Singapore**.
- **Other Exercises involving Bangladesh:**
  - **SAMPRITI (Army)**.
  - **TABLE TOP (Air)**.
  - **IN-BN CORPAT (Navy)**.
  - **SAMVEDNA (Multinational Air Exercise with Bangladesh, Nepal, Sri Lanka and UAE)**.



### Prelims Practice Questions

1. With reference to the Minimum Alternate Tax (MAT), consider the following statements:

1. The MAT was introduced due to an increase in the number of zero tax paying companies.
2. Only domestic companies in India are covered under the provision of MAT.

Which of the statements given above is/are correct?

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

**Answer : A**

**Explanation**

- At times it may happen that a taxpayer, being a company, may have generated income during the year, but by taking the advantage of various provisions of Income-tax Law (like exemptions, deductions, depreciation, etc.), it may have reduced its tax liability or may not have paid any tax at all.
- **Due to an increase in the number of zero tax paying companies**, Minimum Alternate Tax (MAT) was introduced by the Finance Act, 1987 with effect from assessment year 1988-89. Later on, it was withdrawn by the Finance Act, 1990 and then reintroduced by Finance Act, 1996. **Hence, statement 1 is correct.**
- MAT is calculated at 15% on the book profit (the profit shown in the profit and loss account) or at the usual corporate rates, and whichever is higher is payable as tax.
- **All companies in India, whether domestic or foreign**, fall under this provision. MAT was later extended to cover non-corporate entities as well. **Hence, statement 2 is not correct.**
- MAT is an important tool with which tax avoidance can be prevented.

**2. Which of the following cities are associated with the nuclear weapons programme of Iran?**

1. Natanz
2. Arak
3. Fordow

**Choose the correct option:**

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

**Answer: d**

**Explanation:**

- Natanz, Fordow and Arak house Iran's major nuclear facilities.

**3. The Umngot river is associated with which of the following Indian states?**

- a. Nagaland
- b. Mizoram
- c. Meghalaya
- d. Sikkim

**Answer: c**

**Explanation:**

- Umngot, considered India's clearest river is associated with the state of Meghalaya.

**4. Which of the following is wrongly matched?**

- a. Marib region: South Sudan
- b. Nagorno-Karabakh region: Azerbaijan
- c. Aleppo: Syria
- d. Kirkuk: Iraq

**Answer: a**

**Explanation:**

- Marib is in Yemen. Fighting for the key Yemeni region of Marib has intensified between the pro-government and Houthi rebel fighters. The Houthis have been trying to seize oil-rich Marib, the government's last significant pocket of territory in the north.
- Nagorno-Karabakh region is recognised as part of Azerbaijan, but it is controlled by ethnic Armenians.

**5. The 'muon g-2' experiment is being carried out in which of the following countries?**

- a. China
- b. U.S.
- c. Japan
- d. France

**Answer: b**

**Explanation:**

- Fermilab, housing the American particle accelerator, has released the first results from its 'muon g-2' experiment.
- These results spotlight the anomalous behaviour of the elementary particle called the muon.
  - The muon is considered as a heavier cousin of the electron.
- Muon g-2 is a particle physics experiment at Fermilab to measure the anomalous magnetic dipole moment of a muon to a precision of 0.14 ppm, which will be a sensitive test of the Standard Model. It might also provide evidence of the existence of entirely new particles.

**6. Which of the following statement's is/are correct with respect to brucellosis?**

1. It is a zoonotic infection.
2. The disease is caused by a group of bacteria.
3. People are infected by eating raw or unpasteurized dairy products.

**Options:**

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

Answer: d

Explanation:

- Brucellosis is a disease caused by a group of bacteria from the genus Brucella. These bacteria can infect both humans and animals.
- Brucellosis is a zoonotic infection. It is a bacterial infection that spreads from animals to people. It affects thousands of people worldwide.
- Most commonly, people are infected by eating raw or unpasteurized dairy products. Sometimes, the bacteria that cause brucellosis can spread through the air or through direct contact with infected animals.

### Mains Practice Questions

**1. "When there is citizen participation in budgeting and closer engagement of citizens in the monitoring of civic works, there are better outcomes and fewer leakages." In the light of the given statement discuss the utility of the Participatory Budgeting.**

Approach

- Introduce by writing what is meant by the Participatory Budgeting.
- Write the benefits of the Participatory Budgeting in the governance.
- Mention some of the issues with the participatory budgeting.
- Conclude suitably.

**2. The decision to go without "Question Hour" during the Monsoon Session of Parliament has evoked serious concerns about the democratic functioning of the institution and erodes constitutional mandate of parliamentary oversight over executive action. Discuss. (250 words)**

Approach

- Introduce by briefly writing about the 'Question Hour' and 'Zero Hour' and mention the significance of the same for democracy.
- Write in brief the reason for cancelling the Question Hour.

- Discuss in detail the concerns about the democratic functioning of parliament in light of evoking the 'Question Hour'.
- Conclude by suggesting a way forward.

