March (Week 2)

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Prelims

NATIONAL

Naval exercise MILAN

(Source: The Hindu)

Context: *Indian Navy's largest multilateral exercise MILAN 2022, which saw the participation of over 40 countries, ended recently in Vishakhapatnam.*

Details:
- The sea phase of the 11th edition saw the participation of 26 ships, one submarine and 21 aircraft, the Navy said in a statement.
- The sea phase commenced with a series of exercises to enhance the interoperability amongst the participating Navies, the statement said.
- The first two days at sea included complex anti-air warfare drills with U.S. P-8A aircraft shepherding a strike of Indian fighter aircraft on a formation of warships of the participating Navies.
- The exercise, held amid tensions between the West and Russia and the crisis in Ukraine, saw the warships of the Quad countries; France, Myanmar, South Korea, Vietnam and others practise completing drills.
- Russia, Iran, Israel and Saudi Arabia and others are participating in the exercise without ships. Cross-deck landing operations were carried out during the helicopter operations, while ships from the participating countries undertook the exercise of replenishment at sea.
- Starting with the participation of four countries, Indonesia, Singapore, Sri Lanka and Thailand, in 1995, the exercise has since transitioned in terms of the number of participants and complexity of exercises.
- Earlier, the exercise was held at Port Blair but this edition was shifted to Visakhapatnam, as it offers more infrastructure as well as sea space for the exercise.

The Pal-Dadhvav massacre

(Source: Indian Express)

Context: *The Gujarat government marked 100 years of the Pal-Dadhvav killings, calling it a massacre "bigger than the Jallianwala Bagh". Before this, the incident had been featured on the state's Republic Day tableau.*

The incident
- The Pal-Dadhvav massacre took place on March 7, 1922, in the Pal-Chitariya and Dadhvaav villages of Sabarkantha district, then part of Idar state.
- The day was Amalki Ekadashi, which falls just before Holi, a major festival for tribals. Villagers from Pal, Dadhvav, and Chitariya had gathered on the banks of river Heir as part of the 'Eki movement', led by one Motilal Tejawat.
- The movement was to protest against the land revenue tax (lagaan) imposed on the peasants by the British and feudal lords.

- Tejawat, who belonged to Koliyari village in the Mewad region of Rajasthan, had also mobilised Bhils from Kotda Chhavni, Sirohi, and Danta to participate. The impact of the protest was felt in Vijaynagar, Dadhvaav, Poshina and Khedbrahma, which are now talukas of Sabarkantha; the Aravalli districts, Banaskantha and Danta of Banaskantha district; and Kotda Chhavni, Dungarpur, Chittor, Sirohi, Banswada and Udaipur of Rajasthan, all of which were then princely states.
- Tejawat had been outlawed by the Udaipur state, which had announced a Rs-500 reward on his head.
- The Mewad Bhil Corps (MBC), a paramilitary force raised by the British that was on the lookout for Tejawat, heard of this gathering and reached the spot.
- Nearly 1,000 tribals (Bhils) fell to bullets, writes Pandya. Pandya's account, collected from government gazettes and local historians, says others jumped into two wells. Tejawat was shot at twice, but was taken to safety by the villagers on a camel. He later "returned to the spot to christen it 'Veerbhumi'."
- While the British claimed some 22 people were killed, the Bhils believe 1,200-1,500 of them died. In the Jallianwala Bagh massacre of April 13, 1919, 500-1,000 people are said to have been killed after General Reginald Edward Dyer's forces opened fire on peaceful protesters.

Tribal population
- Gujarat has a near 14 per cent tribal population that resides along its northern-eastern stretch, called the 'poorvi patti', bordering the districts of Madhya Pradesh, Rajasthan and Maharashtra.
- Bhils are the dominant tribe in this stretch, which covers the districts of Aravalli, Sabarkantha, Banaskantha, Panchmahal, Chhota Udepur, Mahisagar, Narmada, Dahod, Tapi, Navsari and Dang.

SAMARTH Scheme

(Source: PIB)

Context: SAMARTH Scheme launched recently by Ministry of Micro Small and Medium Enterprises.

Details:
- A Special Entrepreneurship Promotion Drive for Women -"SAMARTH" is being implemented by the Ministry of MSME.
- It aims to provide women with an opportunity to be self-reliant and independent by undertaking self-employment opportunities.
- The Ministry of MSME envisions greater participation of women in the MSME sector and therefore will work hard to promote entrepreneurship.
- Under the Samarth initiative of the Ministry, the following benefits will be available to aspiring and existing women entrepreneurs:
  o 20% Seats in free Skill Development Programs organized under skill development schemes of the Ministry will be allocated for Women. More than 7500 women will be benefited.
  o 20% of MSME Business Delegations sent to domestic & international exhibitions under the schemes for Marketing Assistance implemented by the Ministry will be dedicated to women-owned MSMEs.
  o 20% Discount on annual processing fee on NSIC's Commercial Schemes.
  o Special Drive for registration of women-owned MSMEs under Udyam Registration.

India's diamond industry

(Source: The Hindu)

Context: *Sanctions imposed by the United States and European nations on Russia in the wake of its aggression on Ukraine is likely to have a direct impact on the Indian diamond industry at a time when it is on a recovery mode after the pandemic and is aiming at $24 billion revenue in FY'22.*

Details:
- Russia's biggest diamond miner Alrosa supplies about 30% of the rough diamonds globally and is a critical source for India. India imports, cuts and polishes 80-90% of the world's rough diamonds.
- There is no major impact as of now though there are problems in fund transfer with some banks.
- Orders for the next two months were placed before the war broke out and sanctions were imposed. "As of now we know Alrosa as a company is not under sanctions."
- The sanctions have severed Russia's central bank and two major banks from the SWIFT system. While they do not prohibit business with Alrosa, trade settlement has become difficult, which could lead to supply disruptions.
- The Indian diamond industry, which is **almost entirely export-oriented**, is likely to clock revenues of $24 billion this fiscal.

HANSA-NG

(Source: PIB)

Context: *Sea trials of HANSA-NG aircraft have been successfully completed.*

Details:
- **HANSA-NG is** India's first indigenous Flying Trainer.
- It is designed and developed by **CSIR-National Aerospace Laboratories** in Bangalore under the aegis of **Council of Scientific and Industrial Research (CSIR).**
- It is one of the most advanced flying trainer powered by Rotax Digital Control Engine with unique features like
  - Just-In-Time Prepreg (JIPREG) Composite lightweight Airframe
  - Glass Cockpit
  - Bubble Canopy with wide panoramic view
  - Electrically operated flaps
- It is designed to meet the Indian flying club's requirements and is an ideal choice for Commercial Pilot Licensing (CPL) due to its low cost and low fuel consumption.

The office of the Governor

(Source: The Hindu)

Context: *Article 131 of the draft Constitution had provided for an elected Governor or a Governor appointed by the President from a panel of four candidates elected by the Legislative Assembly. After elaborate deliberations, the Assembly voted for a nomination provision which rules out any role for the*

Legislative Assembly. The Sarkaria Commission recommended that the appointee should be someone from outside the respective State so that he would not have any personal interest to protect. They reiterated that it is better to have a detached figure as Governor. The Commission condemned the practice of Governors venturing further into active politics as well as ascending to other offices after the completion of their term. However, conflict still arises when Governors turn vocal in public against elected leaders, who respond with equal vehemence, taking the relation to a new low.

Constitutional Status

- The makers of the Constitution of India did not anticipate that the office of the Governor, meant to "preserve, protect and defend the Constitution and the law", would metamorphose into the most controversial constitutional office rendering the constitutional praxis rugged.
- Though the original Draft of the Constitution provided for either the direct election or the appointment of the Governor (Article 131 of the draft which was to become Article 155), the Constituent Assembly chose a third alternative for the appointment of the Governor by the President, so as to avoid confrontation with the elected executive.
- Article 131 of the draft Constitution had provided for an elected Governor or a Governor appointed by the President from a panel of four candidates elected by the Legislative Assembly.
- After elaborate deliberations, the Assembly voted for a nomination provision which rules out any role for the Legislative Assembly. Jawaharlal Nehru also strongly supported a nominated Governor as an elected Governor may lead "to conflict and waste of energy and money and also leading to certain disruptive tendency in this big context of an elective governor plus parliamentary system of democracy."
- Finally, a process by which the Governor is nominated by the President on the advice of the Council of Ministers was adopted and it became Article 155 of the enacted Constitution.
- When the elected Governor of the United States was juxtaposed with the nominated Governor in Canada and Australia, democratic propriety demanded nomination despite the suspicious reluctance towards the parent law, the Government of India Act, 1935, which conceived the nomination system.
- Dr. Ambedkar categorically stated on the floor that "The Governor under the Constitution has no functions which he can discharge by himself; no functions at all. While he has no functions, he has certain duties to perform…"
- Instead of a powerful Governor, what the Constitution conceived was a duty-bound Governor, a constitutional prophesy that failed to work after the fourth general election of 1967 as Congress had to bid farewell to their power in eight States while retaining power at the Union, gradually resulting in a tug of war between central assertion and constitutional autonomy.

Politics till the Bommai verdict

- A classic example of Raj Bhavan getting embroiled in partisan politics was sketched by a series of events in Tamil Nadu beginning from the declaration of national emergency on June 25, 1975. This was followed by the DMK regime offering political support and shelter to the national dissidents which led to realignments in State politics.
- A report was then sent by the then Governor K. K. Shah seeking the dismissal of the DMK government for pervasive corruption and therefore, President's Rule was imposed on February 3, 1976.
- The President's Rule was imposed in States over a 100 times prior to 1994. But after the Supreme Court's judgment in the S. R. Bommai case, such rampant practices came to an end as the Supreme Court declared that the imposition of President's Rule shall be confined only to the breakdown of constitutional machinery.

The Sarkaria Vision

- The S. R. Bommai judgment passed by the nine-judge bench of the Supreme Court extensively quoted from the commission on Centre-State Relations constituted by Central Government in 1983.

- The three-member commission headed by Justice R. S. Sarkaria remains till date the bedrock of any inquiry into the relations between the Centre and State. The Commission, which submitted its report in 1988, sought to reinfuse the spirit of co-operative federalism in Indian politics.
- The Sarkaria Commission sought to restore dignity to the Raj Bhavan by focusing more on the appointee who shall be an eminent person in some walk of life, someone outside the respective State so that he would not have any personal interest to protect.
- The Commission reiterated the views of Nehru as expressed on the floor of the Constituent Assembly that it is "better to have a detached figure" as Governor who has not been recently active in politics.
- While batting for a secure term for the Governor, the Commission condemned the practice of Governors venturing further into active politics as well as ascending to other offices after the completion of the term, all of which contaminate the purity of gubernatorial intent.
- Regarding the Governor's role as the Chancellor of State universities, the Sarkaria Commission was of the view that it is desirable to consult the Chief Minister or the concerned minister, though it shall be left to the Governor to act on the same or not.
- As a matter of fact, the first Administrative Reforms Commission (1966) in its report on "Centre-State Relationships" had recommended strongly that once the Governor completes his term of five years, he shall not be made eligible for further appointment as Governor.
- Unlike the Sarkaria Commission which was specifically on Centre State Relations, the mandate and canvas of the Administrative Reform Commission (ARC) was wider. Nevertheless, the limited views offered by the ARC testifies the formative concern of Indian polity on the politicisation of the office of the Governor.
- The National Commission (2000) also reiterated the view of the Sarkaria Commission regarding the appointment of Governor. It enriched the discourse by stipulating that there should be a time-limit, desirably six months to give assent or to reserve a Bill for consideration of the President.
- If the Bill is reserved for consideration of the President, there should be a time-limit, desirably of three months, within which the President should take a decision whether to accord his assent or to direct the Governor to return it to the State Legislature or to seek the advisory opinion of the Supreme Court.

The Punchhi Commission
- The Punchhi Commission on Centre-State relations (2007), headed by former Chief Justice of India Justice M. M. Punchhi, was constituted to enquire into Centre-State Relations taking into account the changes in the last years since Sarkaria Commission submitted its report in 1988.
- Though Punchhi Commission affirmed most of the recommendations of the Sarkaria Commission, its views also reflected the changing times and its needs.
- The Commision could not appreciate the practice of Governors being called back at the bell of regime change, something that does not befit the salutary position assigned to the Governor.
- It must be remembered that a constitution bench of the Supreme Court in the B. P. Singhal Case (2010) declared that a change in power at the Centre cannot be grounds to recall governor and hence such actions are judicially reviewable.
- While Sarkaria Commission recommended that Governor's tenure of five years shall only be sparingly cut short, Punchhi Commission went one step ahead and recommended that Governor shall have fixed tenure so that they wouldn't hold office under the intangible pleasure of the Central government.
- It proposed an amendment to Article 156 so that there would be a procedure to remove the Governor from office.
- It also went further in recommending that Governors shall not be overburdened with the task of running universities by virtue of them being made Chancellors under the State University Acts.
- Complying with the norms and conventions advocated by the Sarkaria commission coupled with the functional safeguards recommended by the Punchhi Commision will go a long way in rediscovering the constitutional equilibrium.

The core of discontent

- The Apex Court must be credited for having drawn the lakshman rekha on gubernatorial over-reach through a catena of clear decisions ranging from the landmark S. R. Bommai (1994) , Rameshwar Prasad (Bihar Assembly Dissolution Case of 2006) and Nabam Rebia (Arunachal Assembly Case of 2016) by which the possibility of gross high handedness is either eliminated or reduced to the time taken for judicial review.

- Arbitrary imposition of President's Rule and dissolution of Legislative Assembly on partisan grounds are becoming the fables of yore.

- However, conflict arises over issues which are non-critical but have the potential to upset harmonious administrative balance at the state level. Attitudinal issues form the core of such imbalance, as is recently seen in many States.

- When Governors turn vocal in public, the local leaders who carry electoral mandate on their sleeve respond with equal vehemence, taking the relation to a new low.

- Unless the practice of Governors making critical appraisals of their own council of ministers in public glare is brought to a halt, the situation in the states where an opposition party is in power would remain unhealthy.

- All these bring us to back to square one; the recommendation of the Sarkaria Commission that the governor appointee shall be a detached outsider and a person of eminence in some walks of life.

- To add to the Sarkaria commission, the paradox of an apolitical President and political Governor needs to be reconciled, sooner than later.

The rules around guardianship of minors

(Source: The Hindu)

Context: *In the recent past, there have been changes to the rules for passport and PAN card that allow an applicant to furnish their mother's name if she is a single parent. But this continues to be a niggling issue when it comes to school certificates and umpteen other documents that insist on the father's name as the guardian. Last year in September, a PIL in Madras High Court sought that all documents must also require the mother's name to be mentioned along with the father's.*

What are the rules for issuing of passport and PAN cards to those with single parents?

- In December, 2016, the Ministry of External Affairs liberalised its rules for the issuance of passports and took a number of steps.

- Certain changes were made following the recommendations of a three-member committee comprising of the Ministry of External Affairs and the Ministry of Women and Child Development that examined various concerns pertaining to passports for children after a divorce or in case of adoptions.

- Following the changes, applicants could provide the name of either parent instead of providing details of both the father and mother.

- The new passport application form also does not require the applicant to provide the name of her or his spouse when they are divorced and neither are they required to provide the divorce decree.

- Similarly, in November 2018, the Central Board of Direct Taxes amended Income Tax Rules, 1962, so that the father's name was not mandatory when a mother was a single parent.

- The new PAN application form also seeks the mother's name alongside the father's. Applicants can also choose whether they want their father's name on the PAN card or their mother's name.

What do the guardianship laws in the country say?

- Indian laws accord superiority to the father in case of guardianship of a minor.
- Under the religious law of Hindus, or the Hindu Minority and Guardianship Act, (HMGA) 1956, the natural guardian of a Hindu minor in respect of the minor's person or property "is the father, and after him, the mother: provided the custody of a minor who has not completed the age of five years shall ordinarily be with the mother."
- The Muslim Personal Law (Shariat) Application Act, 1937 says that the Shariat or the religious law will apply in case of guardianship according to which the father is the natural guardian, but custody vests with the mother until the son reaches the age of seven and the daughter reaches puberty though the father's right to general supervision and control exists.
- The concept of Hizanat in Muslim law states that the welfare of the child is above all else. This is the reason why Muslim law gives preference to the mother over father in the matter of custody of children in their tender years.
- Experts say that though courts may tend to grant custody of a child following marital dispute to the mother, guardianship rests primarily with the father in the law and this contradiction highlights that mothers are perceived as caregivers, but not as decision makers for children.
- The Supreme Court's landmark judgment in Githa Hariharan v. Reserve Bank of India in 1999 provides partial relief.
- In this case, the HMGA was challenged for violating the guarantee of equality of sexes under Article 14 of the Constitution of India and the court held that the term "after" should not be taken to mean "after the lifetime of the father ", but rather "in the absence of the father".
- But the judgment failed to recognise both parents as equal guardians, subordinating a mother's role to that of the father. Though the judgment sets a precedent for courts, it has not led to an amendment to the HMGA.
- The Law Commission of India in its 257th report on "Reforms in Guardianship and Custody Laws in India" in May 2015 recommended that the "superiority of one parent over the other should be removed and that both the mother and the father should be regarded, simultaneously, as the natural guardians of a minor."
- Before this, in its 133 report too the Commission had recommended that the HMGA be amended to "constitute both the father and the mother as being natural guardians 'jointly and severally,' having equal rights in respect of a minor and his property."

EXERCISE SLINEX

(Source: PIB)

Context: *The Ninth Edition of EXERCISE SLINEX is scheduled at Visakhapatnam.*

Details:
- Exercise Slinex is India – Sri Lanka Bilateral Maritime Exercise.
- SLINEX stands for Sri Lanka–India Naval Exercise.
- It aims to enhance interoperability, improve mutual understanding and exchange best practices and procedures for multi-faceted maritime operations between both navies.
- SLINEX is in consonance with India's policy of 'Neighbourhood First' and vision of 'Security and Growth for All in the Region (SAGAR)'.

UPI123Pay

(Source: Indian Express)

Context: *The unified payments interface (UPI) service, which was limited to smartphones to date, will be now available for feature phones without internet, courtesy the Reserve Bank of India's (RBI) UPI123Pay. The service is expected to benefit 40 crore feature phone users and is likely to increase digital financial inclusion, especially in the rural parts of the country. The initiative is "envisioned to accelerate the process of digital adoption in India, by creating a richer and inclusive ecosystem that can accommodate larger sections of population," the RBI said.*

How does one use UPI123Pay?
- UPI123Pay is a three-step method to initiate and execute services for users.
- It includes calling an IVR (interactive voice response) number, app functionality in feature phones, missed call-based approach and also proximity sound-based payments.
- The missed call feature would allow phones to access their bank accounts and perform routine transactions, such as receiving or transferring funds, regular purchases, bill payments, etc.
- A user just has to give a missed call on the number displayed at the merchant outlet.
- The customer will then receive an incoming call to authenticate the transaction by entering the UPI pin.
- The scan-and-pay function of UPI, available on smartphones, is not there on UPI123Pay.

PARAM Ganga

(Source: PIB)

Context: *A petascale supercomputer named 'PARAM Ganga' has been established at IIT Roorkee under the National Supercomputing Mission.*

Details:
- This indigenous petascale supercomputer has been a joint effort between the National Supercomputing Mission under the Ministry of Electronics and IT in association with the Department of Science and Technology.
- It is implemented by the Centre for Development of Advanced Computing (C-DAC) and the Indian Institute of Science, Bangalore.
- C-DAC is facilitating the establishment of the supercomputing ecosystem in a phased manner and has designed and developed the computer server "Rudra" along with high speed interconnect "Trinetra" which are major components required for supercomputers.
- C-DAC will shoulder the responsibility of design, development, deployment and commissioning of the supercomputing systems under the supervision of the National Supercomputer Mission.
- Infrastructure, Applications, R & D and Human Resource Development are the four pillars of the National Supercomputer Mission.
- The major objective of this initiative is to assist the research community to achieve milestones and introduce products for scientific and societal applications.
- The National Supercomputer Mission plans to build and deploy 24 facilities with cumulative compute power of more than 64 petaflops.

Foreigners Order

(Source: The Hindu)

Context: *The Ministry through a gazette notification amended the Foreigners Orders, 1948 by inserting a new provision, paragraph 3B, stating "requirement of holding a valid passport or other valid travel document while living in India."*

Details:
- The Union Home Ministry has notified that a foreigner living in India shall hold a valid passport or any "other valid travel document", which includes emergency certificate, certificate of identity and any other document issued by the government of a foreign country.
- The order assumes significance as many people from Afghanistan were not able to return or had decided to stay back in India after the Taliban takeover in Afghanistan in August 2021.
- India issued 200 e-Emergency X-Miscellaneous visas, out of 60,000 applications, to Afghan nationals. The passports of many Afghans seem to have either expired and are not valid anymore.
- The Passport Act states that a foreigner, unless exempted through a government order, needs to be in possession of a valid passport to continue to stay in India.
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- India had last year extended the visas of all Afghan nationals living in India on gratis until further orders. "They will not be granted exit or issued leave India notice by the Foreigners Regional Registration Office (FRRO) without prior approval of the Ministry of Home Affairs," the September 2, 2021 order had said.
- The Foreigners Order under Foreigners Act, 1946 regulates the entry and departure of foreigners in India. Other than this, the Passport (Entry in India) Act, 1920 prescribes the rules for foreigners authorising their stay here on the basis of visas affixed to passports or other travel documents. Foreigners not in possession of valid passports is a punishable offence.
- The amended order also enables online filing of "any report or application or information."
- "...the Registration Officer or the civil authority shall verify genuineness of the report or application or information and, he may, if considered necessary, call upon the applicant or the informant for personal appearance of the applicant or informant," the amended order says.

Manual scavenging

(Source: Indian Express)

Context: *Three labourers in Mumbai, allegedly hired for manual scavenging, died after inhaling toxic fumes in a septic tank.*

What is manual scavenging?
- Manual scavenging is the practice of removing human excreta by hand from sewers or septic tanks. India banned the practice under the Prohibition of Employment as Manual Scavengers and their Rehabilitation Act, 2013 (PEMSR).
- The Act bans the use of any individual for manually cleaning, carrying, disposing of or otherwise handling in any manner, human excreta till its disposal.
- In 2013, the definition of manual scavengers was also broadened to include people employed to clean septic tanks, ditches, or railway tracks. The Act recognizes manual scavenging as a "dehumanizing

practice," and cites a need to "correct the historical injustice and indignity suffered by the manual scavengers."

Why is manual scavenging still prevalent in India?

- The lack of enforcement of the Act and exploitation of unskilled labourers are the reasons why the practice is still prevalent in India.
- The Mumbai civic body charges anywhere between Rs 20,000 and Rs 30,000 to clean septic tanks. The unskilled labourers, meanwhile, are much cheaper to hire and contractors illegally employ them at a daily wage of Rs 300-500.
- Last year, activist Bezwada Wilson from the Safai Karmachari Andolan, said on Twitter that 472 deaths due to manual scavenging had been recorded from 2016 to 2020.

Compensation

- After a two-year-long wait, widows of the three workers who died while cleaning a septic tank in May 2019 were set to get compensation from the state government's social justice department issuing a Government Resolution (GR).
- As per the Prohibition of Employment of Manual Scavengers and their Rehabilitation (PEMSR) Act, 2013 and the Supreme Court's decision in the Safai Karamchari Andolan v/s Union of India case, a compensation of Rs 10 lakh each was awarded by the High Court to the three women.
- The GR is a huge win for safai karamcharis within the state because it acknowledges the role of the State even when deaths occur in private societies. Many deaths recorded are in private societies, where labourers are illegally hired.

INTERNATIONAL

Xenotransplantation

(Source: Indian Express)

Context: *A patient whose failing heart had been replaced with the heart of a genetically altered pig in a landmark surgery at the University of Maryland Medical Centre in Baltimore, United States, died recently two months after the operation. The successful transplantation surgery was announced on January 10, a few days after it was carried out on 57-year-old David Bennett, who was suffering from severe arrhythmia, a life-threatening disorder affecting the rhythm of his heartbeats.*

Cross-species transplant
- According to the FDA, xenotransplantation is "any procedure that involves the transplantation, implantation or infusion into a human recipient of either (a) live cells, tissues, or organs from a nonhuman animal source, or (b) human body fluids, cells, tissues or organs that have had ex vivo contact with live nonhuman animal cells, tissues or organs".
- Xenotransplantation is seen as an alternative to the clinical transplantation of human organs whose demand around the world exceeds supply by a long distance.
- Xenotransplantation involving the heart was first tried in humans in the 1980s. A well known case was that of an American baby, Stephanie Fae Beauclair, better known as Baby Fae, who was born with a congenital heart defect, and who received a baboon heart in 1984.
- The surgery was successful, but Baby Fae died within a month of the transplant after the baboon heart was rejected by her body's immune system. Even so, Baby Fae managed to survive the xenotransplantation for much longer than in earlier experiments.
- Xenotransplantation, if found compatible in the long run, could help provide an alternative supply of organs to those with life-threatening diseases. The pig's heart transplanted into Bennett did well initially, and he showed no signs of rejection for several weeks. Bennett spent time with his family, did physical therapy and watched the Super Bowl, The New York Times reported, quoting hospital officials.
- It was not immediately clear if his death ultimately occurred due to rejection of the xenotransplanted heart by his body.

Why the heart of a pig?
- Pig heart valves have been used for replacing damaged valves in humans for over 50 years now.
- There are several advantages to using the domesticated or farmed pig (Sus scrofa domestica) as the donor animal for xenotransplantation.
- The pig's anatomical and physiological parameters are similar to that of humans, and the breeding of pigs in farms is widespread and cost-effective.
- Also, many varieties of pig breeds are farmed, which provides an opportunity for the size of the harvested organs to be matched with the specific needs of the human recipient.

Genetically engineered pig
- The molecular incompatibility between pigs and humans can trigger several immune complications after the transplant, which might lead to rejection of the xenograft.
- To preempt that situation, genetic engineering is used to tweak the genome of the pig so as to 'disguise' it, so that the immune system of the human recipient fails to recognise it, and the reactions that lead to xenograft rejection are not triggered.
- In the case of Bennett, the donor pig had been put through 10 genetic modifications intended to 'deactivate' or knock out four pig genes, and add six human genes.

- A "GalSafe" pig was used, from which a gene that codes for Alpha-gal (a sugar molecule) was removed. Alpha-gal can elicit a devastating immune response in humans, and GalSafe pigs have been well studied, and are approved by the USFDA for use in pharmacology.
- The pig was provided by Revivicor, a regenerative medicine company. On the morning of the surgery, the team removed the pig's heart and placed it in a special machine to keep the heart preserved until surgery.

Newest crater on the moon

(Source: The Hindu)

Context: *A leftover piece of a spacecraft flying through space reportedly hit the surface of the moon, creating a new crater that may be around 65 feet wide. The piece of space junk was earlier believed to be a SpaceX rocket, but was later said to be the third-stage booster of Chang'e 5-T1 – a lunar mission launched by the China National Space Administration in 2014. China, however, denied responsibility, saying that the booster in question had "safely entered the earth's atmosphere and was completely incinerated", news agency AFP reported. According to orbital calculations, the collision took place on March 4 at 5.55 p.m. IST on the far side of the moon. The object reportedly weighs around four tonnes and was racing towards the moon at a speed of 9,300 km an hour. The speed, trajectory, and time of impact were calculated using earth-based telescope observations.*

How was the object spotted in space?
- American astronomer Bill Gray was the first to predict the collision. In January 2022, Gray had said that a booster from a SpaceX Falcon 9 rocket was likely to hit the moon after seven years of floating in space.
- Gray later corrected his prediction, saying that the space junk was part of a Chinese lunar mission and not from SpaceX.
- Gray runs Project Pluto, a blog that tracks near-earth objects. Project Pluto also supplies astronomical software to amateur and professional astronomers. Gray is the creator of popular astronomy software called Guide.
- He informed that the object was first spotted during an asteroid survey in 2015 and was believed to be a part of the Deep Space Climate Observatory (DSCOVR) satellite that was launched by SpaceX on Falcon 9 rocket on February 11, 2015.
- Gray continued to track the object, and after analysing data that came in from nine different observatories in January 2022, he was able to improve the accuracy of the object's trajectory and give a confident prediction of the date and time of the object's collision with the surface of the moon.
- The astronomer has also said that this is the first recorded unintentional case of space junk hitting the moon.

Is the crater permanent?
- Both the earth and the moon have been hit by multiple objects like asteroids throughout their existence, but craters on the moon are of a more permanent nature than those on earth.
- This is because of processes like erosion, tectonics, and volcanism.
- According to NASA, these three processes keep the surface of the earth crater-free and remove traces of collisions that have happened in the past. Currently, the earth has less than 200 known craters while the moon has thousands.
- An absence of atmosphere means there is no wind system and no weather on the moon, and hence no cause for erosion of existing craters.

- Absence of tectonics prevents the moon's surface from forming new rocks, or causing a shift in the existing surface patterns, unlike that on earth.
- Lastly, absence of volcanism makes it impossible for craters to be covered.

Raising the age of consent in the Philippines

(Source: Indian Express)

Context: *The Philippines raised its age of sexual consent from 12 years to 16 years, with President Rodrigo Roa Duterte signing off on the amendment to the Special Protection of Children against Abuse, Exploitation, and Discrimination Act.*

What does the new law state?
- Republic Act (RA) No. 11648 signed by Duterte on March 7 increased the age of determining statutory rape to 16 years.
- The law is gender-neutral and applies to both male and female children and offenders. It reads that rape is committed "by a person who shall have carnal knowledge of another person" that the "offended party is under sixteen (16) years of age or is demented."
- The law also holds the seduction of a minor over 16 but under 18 "committed by any person in public authority, priest, home-servant, domestic, guardian, teacher, or any person who, in any capacity, shall be entrusted with the education of custody of the minor seduced" punishable by a prison sentence.
- The Act directs the Department of Education in the Philippines to create awareness of child rights by teaching age-appropriate subjects regarding the provisions of this law and including it in the basic curriculum.

What is the age of consent in India and other countries?
- In India, The Protection of Children from Sexual Offences Act, 2012, defines a "child" as anyone below 18 years of age, and hence, engaging in sexual activity with a 'child' is considered sexual assault.
- With the Philippines' new law, the age of consent remains lowest in Angola at 12 years.
- While several reports state that the age of consent in Nigeria is 11, according to its Child Rights Act 2003, "No person shall have sexual intercourse with a child." The law goes on to state that a person will be charged with an offence of rape if they do and "it is immaterial that the offender believed the person to be of or above the age of eighteen years". Effectively, the age of consensual sex becomes 18.
- According to data provided by the World Population Review, Japan has the age of consent at 13, and countries like China, Germany, Italy and Brazil have it as 14. In the United States, the age of consent is decided by states individually and varies between 16 to 18. The United Kingdom, too, has 16 as its age of consent.
- The highest age of consent is seen in Bahrain at 21, while South Korea has specified it at 20.

The Temporary Protection Directive

(Source: Indian Express)

Context: *Over 1.5 million people fled Ukraine in the first 10 days of fighting, according to the United Nations High Commissioner for Refugees, which has described the displacement as the "fastest growing refugee crisis since the Second World War". Responding to the crisis, EU Member States on March 3 made*

the unprecedented decision to activate the European Union's Council Directive 2001/55/EC of 20 July 2001, known as the Temporary Protection Directive (TPD). At a meeting, European interior ministers unanimously agreed to establish a temporary protection mechanism for the waves of people displaced from Ukraine because of the war.

What is temporary protection?

- The European Commission describes "temporary protection" under the TPD as an "exceptional measure to provide immediate and temporary protection to displaced persons from non-EU countries and those unable to return to their country of origin".
- The directive applies when "there is a risk that the standard asylum system is struggling to cope with demand stemming from a mass influx risking a negative impact on the processing of claims".

Why establish standards?

- The Commission gives two reasons for doing so.
  - First, it reduces disparities between the policies of EU States on the reception and treatment of displaced persons in a situation of mass influx.
  - Second, it promotes solidarity and burden-sharing among EU States with respect to receiving large numbers of potential refugees at one time.
- Article 1 of Council Directive 2001/55/EC of 20 July 2001 underlines that the purpose of the Directive is to both "establish minimum standards for giving temporary protection" to displaced persons as well as to "promote a balance of effort between Member States in receiving and bearing the consequences of receiving such persons".

What obligations does the TPD place upon EU states?

- According to the European Commission, the TPD "foresees harmonised rights for the beneficiaries of temporary protection", which include:
  - a residence permit for the duration of the protection (which can last from 1-3 years),
  - appropriate information on temporary protection,
  - access to employment,
  - access to accommodation or housing
  - access to social welfare or means of subsistence,
  - access to medical treatment,
  - access to education for minors,
  - opportunities for families to reunite in certain circumstances, and
  - guarantees for access to the normal asylum procedure.
- The TPD also contains provisions for the return of displaced persons to their country of origin, unless they have committed serious crimes or they "pose a threat to security from the benefit of temporary protection".

How did the TPD come to be?

- As the USSR disintegrated, the 1990s saw multiple instances of armed conflict and ethnic strife in Europe.
- Yugoslavia disintegrated into its constituent republics amid fighting; Croats and Serbs fought bloody wars in Bosnia; Azerbaijan and Armenia fought over the territory of Nagorno-Karabakh; the North Caucasus Russian republics of North Ossetia-Alania and Ingushetia clashed over the eastern part of the former territory's Prigorodny district; and Transnistria, which made a bid for independence from Moldova as the Soviet Union collapsed, saw a short war.
- As large numbers of people were displaced by these conflicts, the EU felt the need to put in place special procedures to deal with mass influxes of displaced persons.
- The 2001 Temporary Protection Directive provided a tool for the EU to address such situations.

- The war in Ukraine is the first time that the EU has invoked the TPD. It is being seen as another sign of European unity against Russia.

Financial Action Task Force

(Source: The Hindu)

Context: *The global money laundering and terrorist financing watchdog FATF has retained Pakistan on its terrorism financing "grey list" and asked Islamabad to address at the earliest the remaining deficiencies in its financial system.*

Details:
- Pakistan has been on the grey list of the Paris-based Financial Action Task Force (FATF) since June 2018 for failing to check money laundering, leading to terror financing, and was given a plan of action to complete it by October 2019.
- Since then, the country continues to be on that list due to its failure to comply with the FATF mandates.
- The plenary on Friday decided against exiting Pakistan from the category despite the country meeting 32 out of 34 action points, the Dawn newspaper reported.

About FATF
- The Financial Action Task Force (FATF) is an inter-governmental body decision-making body.
- It was established in 1989 during the G7 Summit in Paris to develop policies against money laundering.
- It is a "policy-making body" which works to generate the political will to bring about national legislative and regulatory reforms in money laundering.
- It has also started dealing with virtual currencies. The FATF Secretariat is located in Paris.
- FATF sets standards and promotes effective implementation of:
    - o legal, regulatory and operational measures for combating money laundering.
    - o The FATF works to identify national-level vulnerabilities with the aim of protecting the international financial system from misuse.
- India became an Observer at FATF in 2006. Since then, it had been working towards full-fledged membership. On June 25, 2010 India was taken in as the 34th country member of FATF.

FATF on terror financing

- FATF's role in combating terror financing became prominent after the 9/11 terror attacks in the US. In 2001 its mandate expanded to include terrorism financing.
- Financing of terrorism involves providing money or financial support to terrorists.
- As of 2019, FATF has blacklisted North Korea and Iran over terror financing.
- Twelve countries are in the grey list, namely: Bahamas, Botswana, Cambodia, Ethiopia, Ghana, Pakistan, Panama, Sri Lanka, Syria, Trinidad and Tobago, Tunisia and Yemen.

What as FATF 'grey list' and 'blacklist'?
- FATF has 2 types of lists:
    - o **Black List:** Countries knowns as Non-Cooperative Countries or Territories (NCCTs) are put in the blacklist. These countries support terror funding and money laundering activities. The FATF revises the blacklist regularly, adding or deleting entries.

o **Grey List:** Countries that are considered safe haven for supporting terror funding and money laundering are put in the FATF grey list. This inclusion serves as a warning to the country that it may enter the blacklist.

Consequences of being in the FATF grey list:

- Economic sanctions from IMF, World Bank, ADB

- Problem in getting loans from IMF, World Bank, ADB and other countries

- Reduction in international trade

- International boycott

Democracy Report 2022

(Source: The Hindu)

Context: *According to the latest report from the V-Dem Institute at Sweden's University of Gothenburg, the level of democracy enjoyed by the average global citizen in 2021 is down to 1989 levels, with the democratic gains of the post-Cold War period eroding rapidly in the last few years. The study, titled 'Democracy Report 2022: Autocratisation Changing Nature?' states that more than twice as many countries (32) are undergoing autocratisation as are witnessing democratisation (15). Noting that India is one of the top ten 'autocratisers' in the world, the V-Dem (Varieties of Democracy) report classifies India as an autocracy ('electoral autocracy') rather than a democracy, ranking it 93rd on the liberal democracy index, out of 179 countries.*

What is the V-Dem report's methodology?
- Since key features of democracy, such as, judicial independence, are not directly measurable, and to rule out distortions due to subjective judgments, V-Dem uses aggregate expert judgments to produce estimates of critical concepts.
- It gathers data from a pool of over 3,700 country experts who provide judgments on different concepts and cases.
- Leveraging the diverse opinions, the V-Dem's measurement model algorithmically estimates both the degree to which an expert is reliable relative to other experts, and the degree to which their perception differs from other experts to come up with the most accurate values for every parameter.

What parameters were used to assess the status of a democracy?
- V-Dem's conceptual scheme takes into account not only the electoral dimension (free and fair elections) but also the liberal principle that a democracy must protect "individual and minority rights against both the tyranny of the state and the tyranny of the majority".
- The V-Dem report classifies countries into four regime types based on their score in the Liberal Democratic Index (LDI): Liberal Democracy, Electoral Democracy, Electoral Autocracy, and Closed Autocracy.
- The LDI captures both liberal and electoral aspects of a democracy based on 71 indicators that make up the Liberal Component Index (LCI) and the Electoral Democracy Index (EDI).

- The LCI measures aspects such as protection of individual liberties and legislative constraints on the executive, while the EDI considers indicators that guarantee free and fair elections such as freedom of expression and freedom of association.
- In addition, the LDI also uses an Egalitarian Component Index (to what extent different social groups are equal), Participatory Component Index (health of citizen groups, civil society organisations), and Deliberative Component Index (whether political decisions are taken through public reasoning focused on common good or through emotional appeals, solidarity attachments, coercion).

What are the main findings of the report?
- While Sweden topped the LDI index, other Scandinavian countries such as Denmark and Norway, along with Costa Rica and New Zealand make up the top five in liberal democracy rankings. Autocratisation is spreading rapidly, with a record of 33 countries autocratising.
- Signaling a sharp break from an average of 1.2 coups per year, 2021 saw a record 6 coups, resulting in 4 new autocracies: Chad, Guinea, Mali and Myanmar. While the number of liberal democracies stood at 42 in 2012, their number has shrunk to their lowest level in over 25 years, with just 34 countries and 13% of the world population living in liberal democracies.
- Closed autocracies, or dictatorships, rose from 25 to 30 between 2020 and 2021. While the world today has 89 democracies and 90 autocracies, electoral autocracy remains the most common regime type, accounting for 60 countries and 44% of the world population or 3.4 billion people. Electoral democracies were the second most common regime, accounting for 55 countries and 16% of the world population.

What does the report say about India?
- The report notes that India is part of a broader global trend of an anti-plural political party driving a country's autocratisation. Ranked 93rd in the LDI, India figures in the "bottom 50%" of countries.
- It has slipped further down in the Electoral Democracy Index, to 100, and even lower in the Deliberative Component Index, at 102.
- In South Asia, India is ranked below Sri Lanka (88), Nepal (71), and Bhutan (65) and above Pakistan (117) in the LDI.

What does the report say about the changing nature of autocratisation?
- One of the biggest drivers of autocratisation is "toxic polarisation" — defined as a phenomenon that erodes respect of counter-arguments and associated aspects of the deliberative component of democracy — a dominant trend in 40 countries, as opposed to 5 countries that showed rising polarisation in 2011.
- The report also points out that "toxic levels of polarisation contribute to electoral victories of anti-pluralist leaders and the empowerment of their autocratic agendas".
- Noting that "polarisation and autocratisation are mutually reinforcing", the report states that "measures of polarisation of society, political polarisation, and political parties' use of hate speech tend to systematically rise together to extreme levels."
- The report identified "misinformation" as a key tool deployed by autocratising governments to sharpen polarisation and shape domestic and international opinion. Repression of civil society and censorship of media were other favoured tools of autocratising regimes.
- While freedom of expression declined in a record 35 countries in 2021, with only 10 showing improvement, repression of civil society organisations (CSOs) worsened in 44 countries over the past ten years, "putting it at the very top of the indicators affected by autocratisation".
- Also, in 37 countries, direct government control over CSOs' existence moved in an authoritarian direction — "evidence of the far-ranging weakening of civil society around the world."
- Significantly, the report also found that decisive autonomy for the electoral management body (EMB) deteriorated in 25 countries.

North Korea's satellite launches

(Source: Indian Express)

Context: *North Korea appears preparing to launch a reconnaissance satellite, a move that may prove as controversial as the nuclear-armed country's weapons tests, because they use the same banned ballistic missile technology, experts say.*

History of launches
- Since 1998 North Korea has launched five satellites, of which two appeared to have been successfully placed in orbit, including its last in 2016.
- International observers said the satellite appeared to be under control, but there was lingering debate over whether it had sent any transmissions.
- Experts at the time of the 2016 launch said that North Korea had used a three-stage rocket booster like the Unha-3 of previous launches, but that a new launch pad was clearly built for a larger rocket.
- A senior official at North Korea's space agency said after the launch that it planned to put more advanced satellites into orbit by 2020 and eventually "plant the flag of (North Korea) on the moon". The country has not launched any more satellites since then, however.
- During a party congress in January 2021, leader Kim Jong Un revealed a wish list that included developing military reconnaissance satellites.

Dual-use technology
- The United States and its allies called North Korea's latest tests of satellite systems clear violations of United Nations Security Council resolutions, which prohibit any development of technology applicable to North Korea's ballistic missile programmes.
- North Korea has said its space programme and defence activities are its sovereign right.
- At the time of the 2016 space launch, North Korea had yet to fire an ICBM. The satellite launch was condemned by governments in the United States and South Korea as a disguised test of ballistic missile technology capable of striking the continental United States.
- The report said the Unha-3 system would be ungainly to use as a weapon because it required a fixed launching site and a long period for preparation, and predicted that North Korea would not develop an operational road-mobile ICBM until some time after 2020.
- North Korea launched its first road-mobile ICBM the next year, and later test fired several more.
- North Korea has not test fired an ICBM since 2017, but now officials in Washington and Seoul fear a new satellite launch could help the country further improve its ballistic missiles.

humanitarian corridors

(Source: Indian Express)

What are humanitarian corridors?
- The United Nations considers humanitarian corridors to be one of several possible forms of a temporary pause of armed conflict.
- They are demilitarized zones, in a specific area and for a specific time — and both sides of an armed conflict agree to them.

What are they for?
- Via these corridors, either food and medical aid can be brought to areas of conflict, or civilians can be evacuated.
- The corridors are necessary when cities are under siege and the population is cut off from basic food supplies, electricity and water.
- In cases where a humanitarian catastrophe unfolds because the international law of war is being violated — for example through large-scale bombing of civilian targets — humanitarian corridors can provide crucial relief.

Who sets them up?
- In most cases, humanitarian corridors are negotiated by the United Nations. Sometimes they're also set up by local groups. Since all sides need to agree to set up the corridors, there is a risk of military or political abuse. For example, the corridors can be used to smuggle weapons and fuel into besieged cities.
- On the other hand, they can also be used by UN observers, NGOs and journalists to gain access to contested areas where war crimes are being committed.

Who gets access?
- Access to humanitarian corridors is determined by the parties to the conflict. It's usually limited to neutral actors, the UN or aid organizations such as the Red Cross.
- They also determine the length of time, the area and which means of transport — trucks, buses or planes — are allowed to use the corridor.
- In rare cases, humanitarian corridors are only organized by one of the parties to the conflict. This happened with the American airlift after the Berlin blockade by the Soviet Union in 1948-1949.

Where else have they been used?
- Humanitarian corridors have been put in place since the mid-20th century. For example, during the so-called Kindertransport from 1938 to 1939, Jewish children were evacuated to the United Kingdom from areas under Nazi control.
- Humanitarian corridors were also created during the 1992-1995 siege of Sarajevo, Bosnia and the 2018 evacuation of Ghouta, Syria.
- However, there are many wars and conflicts where calls for civilian corridors or a pause in fighting have been made in vain. In the ongoing war in Yemen, for instance, the UN has so far failed in its negotiations.

Biological and Toxin Weapons Convention

(Source: The Hindu)

Context: *As Russia called for a Security Council meeting on the issue of biological laboratories in Ukraine, India said any matters relating to obligations under the Biological and Toxin Weapons Convention (BTWC) should be addressed through consultation and cooperation between the parties concerned.*

Biological weapons
- **Biological weapons disseminate disease-causing organisms or toxins to harm or kill humans, animals or plants.**

- They can be deadly and highly contagious. Diseases caused by such weapons would not confine themselves to national borders and could spread rapidly around the world.
- The consequences of the deliberate release of biological agents or toxins by state or non-state actors could be dramatic.
- In addition to the tragic loss of lives, such events could cause food shortages, environmental catastrophes, devastating economic loss, and widespread illness, fear and mistrust among the public.

The Biological Weapons Convention

- The Biological Weapons Convention (BWC) effectively prohibits the development, production, acquisition, transfer, stockpiling and use of biological and toxin weapons. It was the first multilateral disarmament treaty banning an entire category of weapons of mass destruction (WMD).
- The BWC is a key element in the international community's efforts to address WMD proliferation and it has established a strong norm against biological weapons. The Convention has reached almost universal membership with 183 States Parties and four Signatory States.
- Formally known as "The Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction", the Convention was negotiated by the Conference of the Committee on Disarmament in Geneva, Switzerland.
- It opened for signature on 10 April 1972 and entered into force on 26 March 1975. The BWC supplements the 1925 Geneva Protocol, which had prohibited only the use of biological weapons.
- States Parties to the Biological Weapons Convention undertook "never in any circumstances to develop, produce, stockpile or otherwise acquire or retain:
  o microbial or other biological agents, or toxins whatever their origin or method of production, of types and in quantities that have no justification for prophylactic, protective or other peaceful purposes;
  o weapons, equipment or means of delivery designed to use such agents or toxins for hostile purposes or in armed conflict."

Key Provisions of the Convention

Article	Provision
Article I	Undertaking never under any circumstances to develop, produce, stockpile, acquire or retain biological weapons.
Article II	Undertaking to destroy biological weapons or divert them to peaceful purposes.
Article III	Undertaking not to transfer, or in any way assist, encourage or induce anyone to manufacture or otherwise acquire biological weapons.
Article IV	Requirement to take any national measures necessary to prohibit and prevent the development, production, stockpiling, acquisition or retention of biological weapons within a State's territory, under its jurisdiction, or under its control.
Article V	Undertaking to consult bilaterally and multilaterally and cooperate in solving any problems which may arise in relation to the objective, or in the application, of the BWC.
Article VI	Right to request the United Nations Security Council to investigate alleged breaches of the BWC, and undertaking to cooperate in carrying out any investigation initiated by the Security Council.
Article VII	Undertaking to assist any State Party exposed to danger as a result of a violation of the BWC.
Article X	Undertaking to facilitate, and have the right to participate in, the fullest possible exchange of equipment, materials and information for peaceful purposes.

Revoking Russia's 'most favoured nation' status

(Source: Indian Express)

Context: *The United States, the European Union, Britain, Canada and Japan were due to move jointly on Friday to revoke Russia's "most favoured nation" (MFN) status over its invasion of Ukrain.*

What is 'most favoured nation' status?
- The World Trade Organization's 164 members commit to treating other members equally so they can all benefit from each other's lowest tariffs, highest import quotas and fewest trade barriers for goods and services.
- This principle of non-discrimination is known as most favoured nation (MFN) treatment. There are some exceptions, such as when members strike bilateral trade agreements or when members offer developing countries special access to their markets.
- For countries outside the WTO, such as Iran, North Korea, Syria or Russian ally Belarus, WTO members can impose whatever trade measures they wish without flouting global trading rules.

Removal of MFN status
- There is no formal procedure for suspending MFN treatment and it is not clear whether members are obliged to inform the WTO if they do so.
- India suspended Pakistan's MFN status in 2019 after a suicide attack by a Pakistan-based Islamist group killed 40 police. Pakistan never applied MFN status to India.

What does losing MFN status mean?
- Revoking Russia's MFN status sends a strong signal that the United States and its Western allies do not consider Russia a economic partner in any way, but it does not in itself change conditions for trade.
- It does formally allow the Western allies to increase import tariffs or impose quotas on Russian goods, or even ban them, and to restrict services out of the country. They could also overlook Russian intellectual property rights.
- Ahead of MFN status removal, the United States had already announced a ban on imports of Russian oil and gas.
- Canada said last week it was withdrawing MFN status for Russia and Belarus, which allowed Russian troops to move into Ukraine from its territory, setting a 35% general tariff on virtually all imports. "Russia and Belarus will join North Korea as the only countries whose imports are subject to the general tariff," Canada said.
- The European Union has already banned about 70% of all imports, such as tobacco, potash and products made of wood or steel, from non-WTO member Belarus. However, it is waiting for formal adoption of MFN suspension before taking similar action against Russia. Imports from Russia include mineral fuels, precious metals and stones, iron and steel, fertilizers and inorganic chemicals.
- The MFN move comes on top of unprecedented sanctions, export controls and banking restrictions aimed at pressuring Russian President Vladimir Putin to end the largest conflict in Europe since World War Two.

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Debunking an urban myth about Taj Mahal

(Source: The Hindu)

Context: *A monument of national importance, the Taj Mahal is a UNESCO World Heritage Site. UNESCO describes it as a "masterpiece of architectural style in conception, treatment and execution". This 17th century wonder is again at the centre of multiple narratives driven by ideologicy. In the process, history is being pushed into the shadows.*

Details:
- The latest attempt at building an ideologically-driven narrative came against the backdrop of Prime Minister Narendra Modi inaugurating the Kashi Vishwanath Dham in December 2021.
- In an appreciable gesture, Mr. Modi showered flower petals on sanitation workers who work at the Kashi Vishwanath Temple, to thank them for keeping the temple clean.
- But this heartwarming gesture soon became another reason to criticise the Mughals. Several news channels started comparing Mr. Modi with Mughal emperor Shah Jahan. The point hammered home was that unlike the Prime Minister who had showered flower petals on sanitation workers, Shah Jahan had chopped off the hands of those who had built the Taj Mahal.
- In their misplaced exuberance, some politicians from the ruling establishment picked up the thread. In no time, social media was flooded with posts suggesting that the hands of workers who had built the Taj Mahal were chopped off.
- The fact remains that this is a well-known urban myth. There is no historical evidence to prove that Shah Jahan did this. This urban myth goes back to the 1960s or at least resurfaced around that time. As this controversy has been raked up again, let us revisit written records to salvage the truth.

Builders of the Taj
- The Taj Mahal was conceived as a memorial by Shah Jahan for his wife Mumtaz Mahal. UNESCO states that several historical and Quranic inscriptions in the Arabic script have helped us understand how the Taj Mahal was built.
- Masons, stone-cutters, inlayers, carvers, painters, calligraphers, dome builders and other artisans were requisitioned from the whole empire and also from Central Asia and Iran to construct the monument. UNESCO says: "The Taj Mahal is considered to be the greatest architectural achievement in the whole range of Indo-Islamic architecture... The uniqueness of Taj Mahal lies in some truly remarkable innovations carried out by the horticulture planners and architects of Shah Jahan."
- While we cannot discount the skills and craftsmanship of the artisans and workers, it was indeed the expertise and creative capabilities of the architects and planners, including those from Central Asia and Iran, which gave us this marvel.
- The supervision of the process, starting from the ideation stage to the conception and execution stage, was entrusted to the Mughal nobles.
- Account books and Mughal records say, for example, that Ata Muhammad, a stonemason, was paid ₹500 a month. Shakir Muhammad from Bukhara received ₹400, while Muhammad Sajjad, a mason from Multan, and Chiranjilal, a façade worker from Lahore, were paid ₹590 and ₹800 a month, respectively.
- The normal wages of such workers were about ₹15 rupees a month, as reflected in period records for trained workers.

- Therefore, it can be safely assumed that the people quoted in the account books were team leaders who were responsible for certain work. They were perhaps tasked with engaging local and other workers. These huge sums were redistributed among several people.
- Also, apart from these masters, architects, calligraphers and organisers feature in historical records. Some of them were, or became part of, the Mughal nobility. The uniqueness of the monument has been attributed to the calligraphy.
- We know from historic records that this distinguishing feature in the monument was devised and supervised by a noble, Amanat Khan, who was originally a calligrapher from Shiraz in Iran and migrated to the Mughal court with his elder brother Afzal Khan in 1608 CE.
- He began working in the Imperial Library of emperor Shah Jahan, while Afzal Khan soon rose to become Prime Minister of the empire. Amanat Khan was appointed to design the calligraphy on the mausoleum in Agra, which came to be known as the Taj Mahal.
- Impressed with his work, Shah Jahan conferred on him the title of 'Amanat Khan' (like an heirloom) and a 'mansab', a land title that ranked with the nobility. Amanat Khan worked on the Taj Mahal for six years. The calligraphy inside the domed hall of the grand mausoleum was completed in 1638. However, just when he completed the most important project of his life, a personal tragedy struck him. Afzal Khan died in Lahore.
- W. E. Begley, an eminent scholar of Indian and Islamic Art, wrote that the old calligrapher spent his entire income in constructing a memorial for his brother. It is said that Amanat Khan did not return to Iran on the request of his closest friend Ustad Ahmad, who was the chief architect of the Taj Mahal.

Respected architects
- Ustad Ahmad was a respected architect who was equated with the nobility of the time. Shah Jahan's court historians emphasise his personal involvement in the construction.
- More than any other Mughal emperor, he showed great interest in building new magnificent buildings. He held daily meetings with his architects and supervisors.
- The court chronicler, Abdul Hamid Lahori, wrote that Shah Jahan would make "appropriate alterations" to whatever the skilful architects had designed after considerable thought and "would ask the architects competent questions". In writings by Lahori's son, Lutfullah Muhandis, two architects are mentioned by name: Ustad Ahmad Lahori and Mir Abd-ul Karim. Ustad Ahmad Lahori had laid the foundations of the Red Fort in Delhi.
- Mir Abd-ul Karim had been the favourite architect of the previous emperor, Jahangir. Several designers and architects, 37 in all, are mentioned by name in Mughal history. It is probable that they all worked together to shape the Taj Mahal.
- They include Ismail Afandi (aka Ismail Khan), who had worked for the Ottomans in Turkey as a designer and builder of domes; Qazim Khan, a goldsmith from Lahore, who cast the gold finial that crowns the dome; Chiranji Lal, a lapidary from Delhi, who was chosen as the chief mosaicist; Amanat Khan, the master calligrapher whose signature is inscribed on the Taj gateway; Mohammed Hanif, a master mason from Delhi; and Mukrimat Khan and Mir Abdul Karim from Shiraz, chief supervisors and administrators.
- While the efforts and hard work of artisans and workers played a key role in the construction of the monument, we know that projects of this nature and scale are created by the planners and architects.
- They were all felicitated and rewarded by Shah Jahan for giving shape to his passion and vision. The records conclusively show that the rumours about the chopping of hands were just that: hearsay.
- For leaders to repeat this myth every now and then only betrays their ignorance and lack of understanding of history.

A new vision for old age care

(Source: The Hindu)

Context: *As India becomes increasingly urbanised and families break up into smaller units, homes for the elderly have sprung up. The care of elderly people is managed by a set of professionals or voluntary organisations interested in geriatric services. The number of such care homes is rising rapidly in urban and semi-urban India. These homes are either paid for, or offer free or subsidised service. Typically, such homes are run by NGOs, religious or voluntary organisations with support from the government, or by local philanthropists. They provide accommodation, timely care, and a sense of security for their residents. However, the quality of service varies as these homes lack regulatory oversight. Many homes lack clearly established standard operating procedures, and their referral paths to health care are informal. There is an urgent need to understand the quality of life at such institutions, including the impact of these homes on the mental health of their residents.*

A rapidly growing section

- A formal approach to homes for the elderly is an important policy and planning issue for India. The UN World Population Ageing Report notes that India's ageing population (those aged 60 and above) is projected to increase to nearly 20% by 2050 from about 8% now.
- By 2050, the percentage of elderly people will increase by 326%, with those aged 80 years and above set to increase by 700%, making them the fastest-growing age group in India.
- With this future in mind, it is essential that our policy framework and social responses are geared to meet this reality.
- A recent set of research papers from Hyderabad focusing on the quality of health in homes for the elderly has some interesting insights.
- The papers highlight the fact that good intentions and a sense of charity are often inadequate when it comes to addressing the basic health needs of their elderly residents.
- These papers are outcomes of the Hyderabad Ocular Morbidity in Elderly Study (HOMES) by the L.V. Prasad Eye Institute that was primarily meant to understand the vision needs of elderly residents of such homes.
- About 30% of the residents who were part of the study (over 1,500 participants from 40 homes) had a vision impairment of some sort, but nearly 90% of this vision impairment could be addressed by simple, relatively low-cost health interventions: issuing better eye glasses or cataract surgery.
- The study also found some 'unseen' effects of vision impairment: many were prone to depression. In fact, those with both vision and hearing impairment had a rate of depression that was five times higher than those without. Our homes, buildings and social environment are not built keeping the elderly (or people with disabilities) in mind.
- As people age, and their motor skills weaken, they are at a greater risk of falling down and hurting themselves. Having an impairment increases this risk. Instead of planning for accessible and elderly-friendly structures that allow them to operate safely, we reduce their mobility.
- People with functional skills are asked to stay away from daily tasks like cooking, sewing, cleaning, or washing up. This reduces their sociability, their sense of independence and well-being — all leading up to mental health issues and depression.
- The state of homes for the elderly today offers us some low-hanging fruit we can address easily: build formal pathways for basic health screening between such homes and public health facilities. This can include screenings for blood sugar, blood pressure, periodic vision and hearing screening, and a simple questionnaire to assess mental health.
- Such interventions are inexpensive (think of all the motorcycle-operated screenings outside public grounds for morning-walkers) and could go a long way in identifying health issues and offering support. The next step would be to build formal pathways to address any health issues that such screenings identify. Many hospitals (public, NGO-run, and private care) can help.

Public policy support

- Crucial though will be the need for robust public policy to support homes for the elderly.
- Health institutions will also need to offer a comprehensive set of packages that are tailored for the elderly — not piecemeal solutions for diabetes, cardiology or cancer, for example.
- What happens once care is provided? Homes for the elderly must be guided, again by policy, to make their facilities, buildings and social environment elderly- and disabled-friendly.
- Design, architecture and civic facilities must be thought from the ground up — and these innovations must be available for all residents, not just those living in expensive ones.
- There are lessons here for society as a whole, but, as they say, let's take one step at a time.

GS II

China's takeaways from the war

(Source: The Hindu)

Context: *Like India, and on expected lines, China also abstained on the U.S.-sponsored United Nations Security Council (UNSC) Resolution condemning Russia for the invasion of Ukraine. However, China's reasons for abstaining from voting at the UNSC as well as its gains and expectations from the invasion are unique to its own situation. In 2014 too, China decided to abstain when the last vote against Russian aggression in Crimea came up for vote in the UNSC as did the legitimacy of the Crimean referendum. However, there are far bigger consequences this time since the full-scale invasion and Ukrainian resistance are leading to more uncertain outcomes. That is why it is important to look at China's current strategic calculations.*

The status question

- The first is the question of China's status as a responsible power. This is important for China because this year, the Communist Party of China is slated to hold the 20th National Party Congress. External stability, an enabling external environment and a positive perception and recognition of China's role in the world would help the party at home too.
- This is playing out at two levels. One important question that is being asked is whether China knew of Russia's plans to invade Ukraine and whether it did enough to discourage it. Many observers have noted that Russian President Vladimir Putin may have informed Chinese President Xi Jinping of his intentions when he visited Beijing for the opening of the Winter Olympics.
- Mr. Xi may have suggested that Mr. Putin wait for the Winter Olympics to conclude before recognising Donetsk and Luhansk and sending "defensive forces" there followed by the outright invasion. Chinese officials have denied such talks as being baseless. If Mr. Putin had informed Mr. Xi of the impending actions, China would have expected Russian action to be limited to the Donbas region, which includes Donetsk and Luhans
- Moreover, by trying to engage the peace process, China would also like to avoid renewed criticisms of it being a selfish power. In the last few days, the U.S. media has been trying to argue that the U.S. must make China pay for its silence on the war. China, for its part, has refused to call the Russian action as an invasion.
- Recently, an op-ed published in The New York Times had alleged that U.S. intelligence had sought China's help in dissuading Mr. Putin against the invasion, but China underplayed Russia's intentions and brushed those concerns under the carpet.

Strategic outcomes

- While China may be surprised by the way the invasion has progressed, the war is not an entirely negative outcome for China. As a consequence of this invasion, the West will possibly direct its attention away from China.
- Thus, China will not remain the principal villain in the eyes of the liberal world, which it has been since it has unilaterally been constructing islands in the South China Sea, and since reports of human rights violations in Xinjiang have increased.
- One might also see a reduction in China's 'wolf warrior diplomacy' as it senses an opportunity to mediate and create a stake in the settlement process.
- Second, that Russia is imposing costs on the West by stretching its military budgets is also a good thing for China. This will divert Europe's attention to its neighbourhood and away from the Indo-Pacific and possibly delay its engagements with the Quad.

- Beijing also sees a pattern in Ukraine's engagement with Europe and fears its repetition in Central Asia where Russian and Chinese interests converge in keeping democratic interventions away.
- For all the rhetoric of the Shanghai Cooperation Organisation's mandates of fighting "terrorism, extremism and splittism", the principal shared concern for China and Russia is that of externally instigated regime changes, which force democratisation in Central Asia and destabilise the region.
- That is why China, while continuing to appeal to Russia to resolve its issues with Ukraine, has been rather stern vis-à-vis the U.S. by calling the latter's sanctions on Russia and military promises to Ukraine as being akin to adding fuel to the fire.
- Militarily and tactically, there is a lot for China to learn from this conflict. For one, the shock and awe and escalation matrix used by Russia could well be a template if China were to consider a military solution in Taiwan or in circumstances where it sees its core interests being violated.
- China would also be studying Russian posturing and signalling, such as putting the nuclear deterrent forces on high alert, and the response from the U.S., the North Atlantic Treaty Organization, individual European countries and the UNSC.
- This is not to say that China would prioritise a military solution to reunite Taiwan, but every crisis is an opportunity to learn.

NATO expansionism

(Source: The Hindu)

Context: *When Russian President Vladimir Putin launched a military invasion of Ukraine on February 24, the purported reason behind this act of extraordinary territorial aggression was that the eastward expansion of the North Atlantic Treaty Organization (NATO) threatened at some undefined point in the future to allow Ukraine to join the grouping as a treaty ally and thus bring a formidable transatlantic security coalition within striking distance of Russia's western borders — yet again. This justification offered by Russia as the reason for undertaking a ground war, including the brutal targeting with ordnance of civilian infrastructure and the expected devastation in terms of human casualty and property damage, has come under increasing scrutiny. In this context, understanding the history of NATO's challenge to the security posture of Russia would help identify the roots of this conflict. It might also provide a clearer picture of what institutional arrangements and assurances the Kremlin could accept as sufficient to pull back its troops and weaponry and engage in dialogue with the administration of Ukrainian President Volodymyr Zelensky.*

What are the origins of NATO and why does it matter to Russia?
- The self-declared mission of NATO when it emerged on April 4, 1949, had three prongs: "deterring Soviet expansionism, forbidding the revival of nationalist militarism in Europe through a strong North American presence on the continent, and encouraging European political integration."
- Clearly the legacy of the Nazi scourge and World War II weighed heavily on the minds of the founding members of NATO. Although NATO claims that it is only "partially true" that its very creation was to counter the threat from the erstwhile Soviet Union, there was a strong emphasis on military cooperation and collective defence in its clauses.
- For example, Article 5 of the Treaty proclaims that "an armed attack against one or more of them… shall be considered an attack against them all" and that following such an attack, each ally would take "such action as it deems necessary, including the use of armed force" in response.
- The broader context at the time was that in 1955, a time when the Cold War was gaining momentum, the Soviet Union signed up socialist republics of Central and Eastern Europe to the Warsaw Pact, including Albania (which withdrew in 1968), Bulgaria, Czechoslovakia, East Germany, Hungary, Poland, and Romania.

- The Pact, essentially a political-military alliance, was viewed as a direct strategic counterweight to NATO, and its focus at the time was the fact that while East Germany was still part of the Soviet occupied-territory of Germany, the Federal Republic of Germany had joined NATO by May 1955, and Moscow began to worry about the consequences of a strengthened and rearmed West Germany at its border.
- As a unified, multilateral, political and military alliance, the Warsaw Pact was aimed at tying Eastern European capitals more closely to Moscow, which it effectively did for several decades through the worst hostilities of the Cold War.
- Indeed, the Pact even gave the Soviet Union the option to contain civil uprisings and dissent across the European satellite states, including in Hungary in 1956, Czechoslovakia in 1968, and Poland in 1980-1981.
- All that began to unravel by the late 1980s, when the sheer downward pressure of inevitable economic slowdown in most Eastern European Pact allies reduced the potential for military cooperation to make any real difference strategically across the region.
- Thus, it hardly came as a surprise in September 1990 that East Germany quit the Pact to be reunified with West Germany, and soon Czechoslovakia, Hungary, and Poland withdrew from all Warsaw Pact military exercises. The Pact was officially disbanded in early 1991 after the dissolution of the Soviet Union itself.

What were the rounds of expansions carried out by NATO?
- Even as the Soviet Union was dissolved into Russia and former Soviet republics, NATO, emboldened by circumstances and optimism that the global balance of power was tipping in its favour, embarked on a path of expansion.
- During the term in office of U.S. President Bill Clinton, NATO began, in successive rounds of negotiation and expansion, to pull former Warsaw Pact states into its membership.
- After reunification, while Germany retained membership of NATO, the Czech Republic, Hungary, and Poland joined the alliance in 1999. But it did not end there — in 2004, Bulgaria, Estonia, Latvia, Lithuania, Romania, Slovakia, Slovenia joined the treaty organisation. In 2009 Albania and Croatia signed on, in 2017 Montenegro entered the bloc and in 2020 it was North Macedonia's turn.

Why is Russia sensitive to NATO expansion?
- In 2008, in the week leading up to NATO's Bucharest Conference, "NATO Allies welcomed Ukraine's and Georgia's Euro-Atlantic aspirations for membership and agreed that these countries will become members of NATO."
- They went on to announce a period of intensive engagement with both countries at a high political level to address the questions still outstanding regarding their Membership Action Plan applications.
- This set off alarm bells in the Kremlin, because even the very concept of Ukraine, a nation considered to hold strong historic ties first to the Soviet Union and then Russia, was anathema. This development prompted Mr. Putin to warn erstwhile U.S. Undersecretary for Political Affairs William Burns that "no Russian leader could stand idly by in the face of steps toward NATO membership for Ukraine.
- That would be a hostile act toward Russia." This was only among the more recent of a long list of actions by NATO leaders that Russia considers a political betrayal.
- However, it is not necessarily the case that Russia is right to believe that — and to understand this, it is important to grapple with the history of NATO expansion and its consequences.

Did NATO violate a promise to avoid expansion?
- An oft-quoted line in this line of enquiry is the comment by U.S. Secretary of State James A. Baker to Soviet leader Mikhail Gorbachev in February 1990, that "there would be no extension of NATO's jurisdiction for forces of NATO one inch to the east."
- While Moscow seized upon this comment to fuel its ostensible outrage at NATO expansion into the Baltic states region, it is a fact that in early 1990, the locus of the diplomacy for the Two Plus Four –

including East and West Germany plus the United States, France, the Soviet Union, and the United Kingdom – agreement was whether a unified Germany would be part of NATO. Indeed, Mr. Baker's aim in making that comment was to reassure Moscow that NATO command structures and troops would not be transferred to the territory of the former German Democratic Republic.

- Yet it was a difficult time in Russian politics, domestically, because in the aftermath of the Soviet Union's dissolution, there was a failure to institutionalise democratic practices, a stable market economy, and a robust law and order system.
- Facing all manner of chaos at home, erstwhile Russian President Boris Yeltsin began to interpret – many argue deliberately falsely – the Two Plus Four Treaty as a ban on NATO expansion east of Germany. He wrote to Mr. Clinton in September 1993, that Russia ruled out "the option of expanding NATO territory eastward."
- Through the 2000s, Mr. Putin carried on in this vein, speaking with increasing alarm and anger at NATO's steady expansion into Eastern Europe, and saying in Munich in 2007 that "it is obvious that NATO expansion does not have any relation with the modernisation of the alliance itself or with ensuring security in Europe. On the contrary, it represents a serious provocation that reduces the level of mutual trust."
- In 2008, following NATO announcement of its intent to admit Georgia and Ukraine into its alliance, Russia invaded Georgia and took control of several of its territorial regions; and in 2014, with Ukraine drifting closer towards an economic alliance with the European Union, Russia marched into Ukraine and seized Crimea.

Why do Indians go abroad for medical studies?

(Source: The Hindu)

Context: *The war in Ukraine has turned the spotlight on something that has been the trend for about three decades now. When students from India studying in Ukraine cried out for help, it became clear that there were a large number of them trapped in a war zone. According to estimates from Ukraine, reported in the media, around 18,000 Indian students are in Ukraine. It may be safe to assume they are pursuing medicine, at least anecdotally, going by interviews with students who have returned. Hundreds of students are still stuck in several regions of Ukraine, while for those who have returned, an uncertain future threatens, unless the Government finds a solution soon.*

Which countries do Indian students prefer?
- For about three decades now, Indian students have been heading out to Russia, China, Ukraine, Kyrgyzstan, Kazakhstan, the Philippines to pursue a medical degree. The medium of education for these students is English, a language they are comfortable with, and the amount spent on living and the medical degree are far more affordable than paying for an MBBS seat in private medical colleges in the country.
- The desire to study medicine still holds a lot of value in the Indian community. While it retains the prestige of an honourable profession, there is a great deal of aspirational zeal in taking up medicine.
- The lack of equal opportunities exacerbated by the caste factor in the Indian context, has a great deal of impact on the prestige still associated with being a doctor, says G.R. Ravindranath, of the Doctors' Association for Social Equality.

Doesn't India have enough colleges?
- There are certainly far more MBBS aspirants than there are MBBS seats in India. In NEET 2021, as per a National Testing Agency press release, 16.1 lakh students registered for the exam, 15.4 lakh students appeared for the test, and 8.7 lakh students qualified. Bharati Pravin Pawar, Union Minister of State for

Health, told the Lok Sabha in December 2021, that as per data from the National Medical Commission (NMC), in 2021-22, there were 596 medical colleges in the country with a total of 88,120 MBBS seats.

- While the skew is in favour of Government colleges, it is not greatly so, with the number of private medical institutions nearly neck-to-neck with the state-run ones.
- That means over 50% of the total seats are available at affordable fees in Government colleges. Add the 50% seats in the private sector that the NMC has mandated must charge only the government college fees.
- Assuming each one of these seats is also available at this reduced fee structure, that could be another 20,000 odd seats. In effect, roughly 65,000 seats are available within the affordable fee segment.
- Additionally, these colleges are also not distributed evenly across the country, with States such as Maharashtra, Karnataka, Tamil Nadu and Kerala having many more colleges.

What about costs?
- The cost factor on both sides of an MBBS degree is significant. The costs of an MBBS degree in a Government college tot up to a few lakhs of rupees for the full course, but in a private medical college, it can go up to ₹1 crore for the five-year course. In case it is a management seat, capitation fees can inflate the cost by several lakhs again.
- Whereas, an MBBS course at any foreign medical university in the east and eastern Europe costs far less. Students from Tamil Nadu who returned from Ukraine said on an average they had to spend close to ₹30lakh-₹40 lakh, inclusive of lodging and boarding.
- A majority of the students had written NEET at least twice, and only decided to move after they could not get an MBBS seat. On return, the requirement is to clear the Foreign Medical Graduates Examination, a licensure examination held for students who have studied medicine abroad, and for most countries, also a house surgency stint.
- Dr. Ravindranath explains that in India the disparities in income of doctors, and others, like nurses and allied health professionals, is also a key factor in making an MBBS degree alluring. People are willing to leave their home to study far away in much colder places and with completely alien cultures and food habits.
- The ability to practise as a doctor, in Government and private sectors simultaneously, and the scope of earning a life-long income are also powerful incentives, in addition to the social status it confers.

Is the solution more private medical colleges?
- While Prime Minister Modi emphasised that more private medical colleges must be set up in the country to aid more people to take up MBBS, medical education experts have called for pause on the aspect.
- If the aim is to make medicine more accessible to students of the country, the path ahead is not in the private sector, but in the public sector, with the Central and State governments' involvement, they point out. From 2003, the Centre's Pradhan Mantri Swasthya Suraksha Yojana has been working to augment facilities for quality medical education in the country.
- "Starting private medical colleges by reducing the strict standards set for establishing institutes may not actually be the solution to this problem, if we think this is a concern," says Dr. Ravindranath. Going overseas to study does have advantages, it could broaden students' mind and thinking, expose them to a whole range of experiences, and their approach to issues and crises is likely to be far better.
- However, creating more medical colleges will be beneficial for the country, if access and availability can be ensured.
- This will not be possible by resorting to private enterprise only. He adds that State and Central governments can start more medical colleges, as recommended by NITI Aayog, by utilising district headquarters hospitals, and expanding the infrastructure.
- This way, students from the lower and middle socio-economic rung, who are otherwise not able to access medical seats, will also benefit.

Best Practices for evacuation of Indian Diaspora

(Source: The Hindu)

Context: *As Operation Ganga comes to a halt, the process by which the Union Government evacuated stranded students from the conflict ridden areas of Ukraine have come under scrutiny. This article by Constantino Xavier, dated February 8, 2017, outlines the procedures and guidelines the country has to follow while taking steps to evacuate citizens from war torn regions.*

Details:
- On January 26, 1986, as New Delhi celebrated its Republic Day, South Yemen was being engulfed in a civil war that threatened the lives of thousands of foreigners living there.
- While Britain, France and the Soviet Union coordinated to jointly evacuate their nationals, the 850 Indians in the country were forced to wait for several more days until New Delhi finally managed to convince a merchant ship to pick them up.
- Fast forward almost 30 years, to April 2015, when Yemen was on fire once again. This time, however, the Indian government successfully conducted Operation Raahat to evacuate almost 5,000 Indians and nearly 1,000 citizens from 41 other countries.
- Besides Air India aircraft, the Indian Navy deployed vessels, and the Indian Air Force C-17 Globemasters for strategic airlift. Such unprecedented efforts and resources reflect New Delhi's new drive to protect the lives and assets of its citizens abroad in times of crisis.
- The increasing size and complexity of the diaspora requires the government to expand capacity and improve procedures. More than 11 million Indians now reside abroad and 20 million travel internationally every year. As political instability rattles the West Asian region, which hosts more than seven million Indians, the government can no longer rely on heroic efforts by individual officials or quick-fix solutions.
    - **First**, the government will need to build on its rich experience in conducting more than 30 evacuation operations since the 1950s. Studying India's history, best practices and lessons learned will help institutionalise them and avoid the need to reinvent the wheel every time a crisis erupts. By supporting policy-oriented research at universities and think tanks to document the memory of senior officials, the government would also facilitate the transmission of their expertise to younger officials.
    - **Second**, the government must avoid the jugaad approach. Every evacuation case is unique, given the specific nature and location of the crisis, but this should not preclude an analytical attempt to formulate a blueprint that lists core tasks for all operations. An inter-ministerial committee should prepare a manual with guidelines that establish a clear chain of command and division of competencies; identify regional support bases, assembly points and routes for evacuation; develop country-specific warden systems to communicate with expatriates; and establish evacuation priority and embarkation criteria.
    - **Third**, India's diplomatic cadre must be given specific training to operate in hostile environments. As a senior government official told me, when it comes to operating in complex theatres, "practice and preparedness make perfection". To achieve this, the government could instruct the police or army to train Indian Foreign Service probationers to operate in war zones; conduct frequent evacuation simulations and emergency drills; and create rapid reaction teams of Indian security personnel to be deployed to protect diplomatic staff and installations abroad.
    - **Fourth**, the success of future operations will also rely on New Delhi's willingness to work together with friendly governments. India will have to invest in cooperative frameworks that facilitate coordination among countries that have large expatriate populations in West Asia, in particular Nepal, Bangladesh and Sri Lanka, and among leading powers with evacuation capacity in the Indian Ocean region.

- o **Fifth**, the government will have to assign a greater role to its armed forces, in particular by strengthening the Navy and Air Force's capacity to operate in tandem with civilian authorities. It should, for example, direct the military to develop a non-combatant evacuation (NEO) doctrine, designate the Integrated Defence Staff as the nodal organisation to improve inter-services and civil-military coordination, direct the services to conduct more multilateral NEO exercises, and adapt military modernisation plans to increase capacity for out-of-area deployment and evacuation.
- o **Sixth**, to minimise redundancies, the government must institutionalise a permanent inter-ministerial coordinating mechanism for emergency evacuations, incentivise inter-agency cross-posting of officials dealing with diaspora affairs, and encourage State governments to create regional contingency plans.
- o **Seventh**, to avoid cost inflation and delays, the government must establish a permanent civil reserve air fleet that pools aircraft from all Indian airlines based on pre-established requisition and reimbursement procedures.
- o **Eighth**, the government will have to invest in new technologies to better monitor the diaspora's profile and mobility. This can be achieved by encouraging more diplomatic missions to provide online consular registration forms, developing an online registration system for overseas travellers, utilising social media, and by making the Aadhaar card compulsory to facilitate biometric identity verification and reduce identity fraud during evacuation.
- o **Finally**, the government must expand efforts to manage public opinion and be able to conduct a quiet diplomacy that is crucial to safely extricate Overseas Indians from conflict zones. To reduce domestic pressures, it should embed media representatives more frequently in such missions, reassure the diaspora by ensuring that high-level political representatives are personally engaged, and avoid raising expectations by clearly distinguishing Indian citizens from people of Indian origin.
- India has extensive experience in conducting evacuation operations, but to secure the lives and assets of Indians abroad, the government must avoid an ad hoc approach and seek to institutionalise best practices, bolster diplomatic and military capabilities, and improve coordination.

GS III

The effects of the Russia-Ukraine conflict on maritime trade

(Source: The Hindu)

Context: *As Russia continues its military onslaught on Ukraine, the Western economies and its allies have taken retaliatory steps, in the form of heavy sanctions, to effectively paralyse the Russian economy. One industry which is going to be heavily affected is the shipping industry as delays and shipping costs are expected to rise due to disruptions in the global supply chain.*

What has been the impact on maritime trade so far in Ukraine?

- When the war started, some 15 sea ports in Ukraine were shut down. The loading and discharging of cargo ceased. Around 140 ships that were berthed in the Ukranian ports at that time have stayed in the ports since then. None of the ports or the ships berthed in these ports has been attacked so far. Two ships were attacked while in anchorage leading traders to avoid Black Sea routes for their ships.
- For seafarers, the safest place in case of any accident is always the ship which has power, food and means to make water. Bunkers in ports have been identified for safely housing seafarers but ship crew have not moved out of their ships, says Sanjay Prashar, managing director of VR Maritime Services.
- One of the company's ships is stranded at a Ukranian port. Some of the stranded ships in Ukrainian ports have Indian crew on board.
- Barring occasional attacks, ports and nuclear facilities, as strategic assets have not seen much fighting or attacks. So far, the war has involved the Russian Army and Air Force, not so much Naval attacks except a small operation in Kerch, says Pritam Banerjee, a logistics expert.
- Port cities such as Mariupol have been attacked from land but as Ukrainians hold out and resist the invasion, Ukrainian president has warned of an imminent attack on the Odessa port by Russian warships.
- This would be a major escalation of the war. All the merchant ships will be under threat. As a direct consequence of the war, insurance premiums will go up for ships serving Black Sea ports.

What has been the impact globally?

- Crude oil prices have gone up 20% over the last week in-part due to fears and also due to possible disruptions in supply since Russia is a major supplier of oil and gas through pipelines as well as ships. Black Sea is home to the few warm water ports the country has and is the theater of the war.
- As crude oil prices go up, the price of ship fuel, called Bunker fuel, is going up as well. Fuel cost is the biggest contributor to the operating costs of a ship and the increase will have a cascading effect on shipping costs and freight.
- The pandemic drove up container freight rates which have seen a further escalation. Pritam Banerjee however, says the escalation may only be short-term and is largely due to the oligopolistic control some firms have over container shipping. He explains that Russia or even Ukraine matter little in container trade, so global container freight rates should not be affected greatly.
- Bulk shipping including oil and gas tankers will be significantly affected. Russia and Ukraine are major traders in grain, minerals and oil. High insurance premiums, disruption in supply will rile the sector. In case of escalation, the Baltics and the North Sea shipping traffic may also be affected. War risk will hike insurance premiums.
- While Russia may not attack in the Mediterranean, insurance costs may go up for ships serving those routes also, which are the hub of European trade.

What is the role of Turkey in this conflict?

- Turkey controls the entry and exit of Black Sea and hence has a say over ship traffic in the Black Sea. It has banned Russian naval ships from passing through the Bosphorus Strait.
- Turkey is not a signatory to the United Nations Convention on the Law of the Sea which sees the oceans as commons and allows even warships innocent passage through territorial waters of a nation.
- Turkey abides by the Montreaux convention which gives it greater control over the straits. Free passage is guaranteed for merchant vessels belonging to belligerents in war, especially if Turkey is not a belligerent.
- The convention also lays down clearly what is a warship and what is not. Having said that, any interpretation to curb Russian merchant ship movement will be a significant escalation and inflame the scenario.

The pandemic saw a disruption in crew change in merchant ships. Will this conflict have a similar impact?
- A less discussed impact of the war is the share of Ukrainian and Russian seafarers in the global seafarer workforce.
- China, Philippines and India contribute significantly to the international seafarer workforce. Pritam Banerjee estimates that Russia and Ukraine together supply nearly 15% of the seafarers. It is common for Russian and Ukrainian seafarers to serve together on merchant ships.
- Their joining and disembarking merchant ships will be severely affected, mounting a challenge to the manning requirements of global shipping.
- The pandemic had disrupted the free movement of crew and things were just about settling down.

The Gujarat International Finance Tec-City (GIFT)

(Source: The Hindu)

Context: *A subsidiary of the National Stock Exchange on Thursday introduced a facility by which Indian retail investors can directly trade in stocks that are listed on the U.S. stock exchanges. The NSE arm would invest the funds in those specific stocks against which investors would receive depository receipts in lieu of actual shares. The subsidiary – NSE IFSC – is registered at the International Financial Services Centre (IFSC) at the Gujarat International Finance Tec-City (GIFT), a financial district located between Ahmedabad and Gandhinagar in Gujarat.*

Global ambitions
- The City was conceptualised as an alternative to global financial hubs such as Hong Kong, Singapore or London.
- Though the idea was mooted in 2007, work on the physical infrastructure started in 2012. It was only in 2015 that business regulations were introduced; 2017 saw the setting up of an international exchange.
- The GIFT City SEZ — with demarcations for domestic and export-oriented units — is the only place in India to be designated as an IFSC.
- "A jurisdiction that provides financial services to non-residents and residents, to the extent permissible under the current regulations, in any currency except Indian Rupee," is how GIFT City defines the IFSC.
- Doing business inside the IFSC comes with the benefit of a relaxed tax regime — a 10-year tax holiday with no securities transaction tax, commodities transaction tax, or tax on long-term capital gains.
- The Global Financial Centers Index report, London, had in March 2021 placed the IFSC in GIFT City at the top among 15 centres globally, which are likely to become more significant over the subsequent two to three years.

A step at a time

- In recent years, the IFSC has seen a trickle of regulations or developments. For instance, February 2021 saw regulations for registration of aircraft leasing firms inside the IFSC in place; in a year from then, 13 companies had registered under this umbrella.
- In May 2021, a gazette notification clarified that foreign investors in a certain category of alternative investment funds would not need a PAN number to bring their funds into the financial jurisdiction.
- The announcement of the IFSC Authority (IFSCA) in late 2020 under the chairmanship of former Insolvency Law Committee chair Injeti Srinivas infused welcome energy to the project. The IFSCA assumes responsibility as a unified regulator — across realms overseen by the RBI, SEBI, IRDAI and the PFRDA.
- The nature of business in IFSCs requires a high degree of inter-regulatory coordination within the financial sector. Businesses had likely found it slow-going when it came to approvals from each of these regulators.
- The IFSCA recently urged the RBI to include aircraft leasing as a financial service, so that banks can become eligible to fund such leasing.
- In October 2021, the NSE agreed to establish a data connection with SGX via the IFSC, allowing SGX investors access to real-time data. After close to two decades of partnership, the NSE had blocked SGX's access to real-time data in 2018.
- The pipeline is seen as the first step towards migrating Nifty futures trades that were taking place on the SGX, to the NSE IFSC. In 2021, the SGX witnessed trades, on average, that numbered twice the volume of Nifty futures traded on the NSE. Open interest, or unsettled derivatives contracts, were also higher, at 3.38 times. Starting this April, trading of Nifty Future to the IFSC will begin in a phased manner.
- Currently, more than 200 entities have taken up office space in the City, where 12,000 people work.
- Both the BSE and the NSE have set up their international stock exchanges inside the IFSC; 17 banks, of which five are international banks, have been issued licences to operate, more than 100 units offer broking services, depository, and clearing operations, and 19 companies have begun operations for non-life reinsurance.

Investor concerns

- Despite these incremental steps, investors have been slow to take up offers. Most new trading jurisdictions tend to allow benefits to financial trading firms for early participation or to encourage liquidity of stock, but the aim is to eventually spur genuine participation from retail investors.
- Media reports have indicated that even as late as in February 2021 much of the trade on stock exchanges inside the IFSC were proprietary — that is, trading done by companies for their own profit, rather than using funds of investors to generate profit for participants.
- Predominant among concerns for institutional investors have been that the Indian currency has not become fully convertible, that the country has not been visibly consistent in its tax laws and their interpretation, and that the speed of dispute resolution has been less than satisfactory.
- India's rupee is currently partially convertible, meaning that there is freedom to exchange currencies at market rates but when larger amounts are involved, approvals are necessary. A fully convertible currency would also not have authorities intervening in markets to stem volatility or bring the rate to a certain level.
- A case in point is the RBI which enters the market to prop up the currency should global events or oil prices drive extreme weakness in the rupee, as was the case on Friday, when the rupee dropped below the 76-to-a-dollar level.
- India's move to nix the retrospective tax laws to bring to closure cases against the likes of Cairn Energy and Vodafone were likely viewed favourably.
- On dispute resolution, Budget 2022 had proposed the setting up of an International Arbitration Centre; this aims to offer offshore investors in the IFSC an assurance on intent, given the uncertainty that comes with corporate litigation in India.

Cross-border insolvency

- Insolvency norms in the country did get a leg up with the introduction of the Insolvency and Bankruptcy Code; but under this umbrella too, the time taken for lenders to retrieve funds due to them – even allowing for significant haircuts – is keeping investors wary of venturing in with gusto.
- Legal experts have pitched for cross-border insolvency norms that meet the IFSC's requirements as a way to initiate broader insolvency reforms in the country. While there are some provisions on this count in the IBC, a stronger framework is seen needed to assure investors of intent. In 2018, the Insolvency Law Committee had submitted to the government its recommendations for the adoption of the 'UNCITRAL Model Law on Cross Border Insolvency'.
- The United Nations Commission On International Trade Law (UNCITRAL) says the law is 'designed to assist States in developing a modern, harmonised and fair insolvency framework to more effectively address instances of cross-border proceedings concerning debtors experiencing severe financial distress or insolvency'.
- Significantly, India can take some learnings from the Dubai International Financial Centre and the Abu Dhabi Global Market, which have adopted the UNCITRAL law even though the United Arab Emirates as a nation does not have a law yet to address cross-border insolvency. These are cited as examples for the IFSC to set the pace independently.

Commodity Inflation

(Source: The Hindu)

Context: *Commodity prices have gone into a tizzy after Russian forces invaded Ukraine last month. The Bloomberg Commodity Index recorded its biggest weekly rally since 1960 last week with gains of 13%. Many fear that a drop in the supply of essential commodities such as oil, metals, and agricultural goods could negatively affect the global economy that is still recovering from the pandemic. The price of Brent crude oil on Thursday almost hit $120 per barrel, the highest in a decade.*

Why are commodity prices shooting up?

- The military conflict between Russia and Ukraine has led to disruptions in the global commodity supply chain. Commodity traders have been unwilling to purchase oil and other commodities from Russia fearing that they may be unable to sell them in the global market due to sanctions imposed by Western governments.
- The United States and European Union have been taking measures to debilitate Russia's economy by cutting Russian banks off the SWIFT payment messaging system and freezing Russia's foreign reserves.
- There are also logistical difficulties in transporting commodities from war zones. Exports from the region have already been affected and are likely to be further hit going forward, and this risk has been priced in by traders.
- It should be noted that in 2020 Russia produced about 12% of the world's oil and about 16% of the world's natural gas. It also produced nearly half of the world's palladium (the shiny white metal which is a critical component in catalytic converters — a part of a car's exhaust system that controls emissions, for example). Ukraine, on the other hand, supplies about 12% of global wheat exports and 13% of global corn exports.
- In fact, the country supplied almost 90% of China's corn imports in 2019. Disruptions in such significant commodity supplies can affect global commodity prices.
- At the same time, suppliers in other parts of the world have failed to increase their production to make up for the loss of output in Russia and Ukraine.

- The Organisation of the Petroleum Exporting Countries (OPEC), for instance, has made no effort to increase its output despite repeated calls by various world leaders to ensure energy security. In fact, the OPEC meet last week was wrapped up in minutes.

Is commodity inflation just about the Russia-Ukraine war?

- No. Commodity prices have risen significantly since at least 2021 when lockdowns were slowly lifted by governments and economies were allowed to open up. It should be noted that, owing to various frictions in the global economy, it took a while for supply chains disrupted by lockdowns to return to normalcy. The supply of goods was limited and this scarcity was reflected in the form of higher prices.
- Some analysts have also blamed policies in several countries to replace fossil fuels with renewable energy as a possible reason behind the increase in commodity prices. The emphasis on renewable energy, they argue, has discouraged investors from investing in the production of traditional fossil fuels.
- Meanwhile, the pandemic also witnessed major global central banks such as the U.S. Federal Reserve and the European Central Bank injecting massive amounts of fresh money into their economies. This led to an increase in the demand for all goods and services and caused their prices to rise. In short, too much money printed by central banks chasing too few goods has led to a rapid increase in commodity prices.
- Global commodity prices, as measured by the Bloomberg Commodity Index, have risen by over 60% since the start of 2021. Meanwhile, the price of an essential commodity like oil has risen even more.

Way Forward

- The course of the Russia-Ukraine war, which is unpredictable at the moment, will naturally affect the price of commodities going forward. The hit to commodity supplies could be greater the longer the war lasts and the uglier it gets.
- It should be noted that cutting off Russia's economy from the rest of the world can affect not just Russia but also affect businesses and consumers that depend on the Russian economy. Countries like Germany, for instance, rely heavily on energy supplies coming from Russia.
- This could be why the West is yet to impose sanctions on Russia's export of crude oil and natural gas. It is not just Russia that will suffer from the war and sanctions but also the rest of the world.
- Also, as the global economy struggles to grow while prices rise fast, analysts have warned about the risk of stagflation, which is marked by high price inflation and low growth.

Water management needs a hydro-social approach

(Source: The Hindu)

Context: *The Global Water System Project, which was launched in 2003 as a joint initiative of the Earth System Science Partnership (ESSP) and Global Environmental Change (GEC) programme, epitomises global concern about the human-induced transformation of fresh water and its impact on the earth system and society. The fact is that freshwater resources are under stress, the principal driver being human activities in their various forms.*

Fresh water, water valuation

- In its fourth assessment report in 2007, the Intergovernmental Panel on Climate Change (IPCC) highlighted the link between societal vulnerability and modifications of water systems. It is globally estimated that the gap between demand for and supply of fresh water may reach up to 40% by 2030 if present practices continue.
- The formation of the 2030 Water Resource Group in 2008, at the instance of the World Economic Forum, and the World Bank's promotion of the group's activity since 2018, is in recognition of this

problem and to help achieve the Sustainable Development Goal (SDG) on water availability and sanitation for all by 2030 (SDG 6).

- Formally, it is: "to ensure safe drinking water and sanitation for all, focusing on the sustainable management of water resources, wastewater and ecosystems...."
- The latest UN World Water Development Report, 2021, titled 'Valuing Water', has laid stress on the proper valuation of water by considering five interrelated perspectives: water sources; water infrastructure; water services; water as an input to production and socio-economic development, and sociocultural values of water.
- Designing a comprehensive mix of divergent views about water (along with ecological and environmental issues) held by stakeholder groups is necessary. In this context, a hydro-social cycle approach provides an appropriate framework.
- It repositions the natural hydrological cycle in a human-nature interactive structure and considers water and society as part of a historical and relational-dialectical process.

Inter-basin transfer projects

- The anthropogenic factors directly influencing a freshwater system are the engineering of river channels, irrigation and other consumptive use of water, widespread land use/land cover change, change in an aquatic habitat, and point and non-point source pollution affecting water quality.
- The intra- and inter-basin transfer (IBT) of water is a major hydrological intervention to rectify the imbalance in water availability due to naturally prevailing unequal distribution of water resources within a given territory.
- There are several IBT initiatives across the world. One recent document indicates that there are 110 water transfer mega projects that have either been executed (34 projects) or being planned/under construction (76 projects) across the world.
- The National River Linking Project of India is one of those under construction. These projects, if executed, will create artificial water courses that are more than twice the length of the earth's equator and will transfer 1,910 km3 of water annually. They will reengineer the hydrological system with considerable local, regional and global ramifications.
- Based on a multi-country case study analysis, the World Wildlife Fund/World Wide Fund for Nature (2009) has suggested a cautious approach and the necessity to adhere to sustainability principles set out by the World Commission on Dams while taking up IBT projects.

Some of the key assumptions

- Recently, inter-basin transfer of water drew attention in India due to a provision made in Budget 2022 for the Ken Betwa river link project which is a part of the National River Linking project (mooted in 1970 and revived in 1999).
- This decision raises larger questions about hydrological assumptions and the use and the management of freshwater resources in the country. We shall ponder over some of them.
  - First, the basic premise of IBT is to export water from the surplus basin to a deficit basin.
    - However, there is contestation on the concept of the surplus and deficit basin itself as the exercise is substantially hydrological.
    - Water demand within the donor basin by factoring present and future land use, especially cropping patterns, population growth, urbanisation, industrialisation, socio-economic development and environmental flow are hardly worked out.
    - Besides this, rainfall in many surplus basins has been reported as declining. The status of the surplus basin may alter if these issues are considered.
  - Second, there is concern about the present capacity utilisation of water resources created in the country.
    - By 2016, India created an irrigation potential for 112 million hectares, but the gross irrigated area was 93 million hectares.

- There is a 19% gap, which is more in the case of canal irrigation. In 1950-51, canal irrigation used to contribute 40% of net irrigated area, but by 2014-15, the net irrigated area under canal irrigation came down to less than 24%.
- Ground water irrigation now covers 62.8% of net irrigated area. The average water use efficiency of irrigation projects in India is only 38% against 50%-60% in the case of developed countries.
- Even at the crop level we consume more water than the global average. Rice and wheat, the two principal crops accounting for more than 75% of agricultural production use 2,850 m3/tonnes and 1,654 m3/tonnes of water, respectively, against the global average of 2,291m3/tonnes and 1,334m3/ tonnes in the same order.
- The agriculture sector uses a little over 90% of total water use in India. And in industrial plants, consumption is 2 times to 3.5 times higher per unit of production of similar plants in other countries.
- Similarly, the domestic sector experiences a 30% to 40% loss of water due to leakage.
  - Third, grey water is hardly used in our country.
    - It is estimated that 55% to 75% of domestic water use turns into grey water depending on its nature of use, people's habits, climatic conditions, etc. At present, average water consumption in the domestic sector in urban areas is 135 litres to 196 litres a head a day.
    - Given the size of India's urban population (469 million estimated for 2021), the amount of grey water production can be well imagined. If grey water production in the rural areas is considered it will be a huge amount.
    - The discharge of untreated grey water and industrial effluents into freshwater bodies is cause for concern. The situation will be further complicated if groundwater is affected.
- Apart from the inefficient use of water in all sectors, there is also a reduction in natural storage capacity and deterioration in catchment efficiency. The issues are source sustainability, renovation and maintenance of traditional water harvesting structures, grey water management infrastructure, groundwater recharge, increasing water use efficiency, and reuse of water.

Planning ahead
- Looking into these issues may not be adequate to address all the problems. Nevertheless, these measures will help to reduce demand supply gap in many places, and the remaining areas of scarcity can be catered to using small-scale projects.
- The axiom that today's water system is co-evolving and the challenges are mainly management and governance has been globally well accepted. Water projects are politically charged and manifest an interplay of social relations, social power, and technology.
- It is important to include less predictable variables, revise binary ways of thinking of 'either or', and involve non-state actors in decision-making processes.
- A hybrid water management system is necessary, where (along with professionals and policy makers) the individual, a community and society have definite roles in the value chain. The challenge is not to be techno-centric but anthropogenic.

Reviving the inland water transport system for the Northeast

(Source: The Hindu)

Context: *A month after setting sail on the Ganga from Patna, the MV Lal Bahadur Shastri carrying 200 metric tonnes of food grains for the Food Corporation of India (FCI), docked at Guwahati's Pandu port on*

the southern bank of the Brahmaputra on March 6. The occasion is believed to have taken inland water transport, on two of India's largest river systems, to the future.

Why is a Ganga-Brahmaputra cargo vessel in focus?

- There is nothing unusual about a cargo vessel setting sail from or docking at any river port. But a host of VIPs lined up to receive MV Lal Bahadur Shastri, a cargo vessel operated by the IWAI (Inland Waterways Authority of India), at Guwahati's Pandu port on March 6.
- They included Union Minister of Ports, Shipping and Waterways, Sarbananda Sonowal, Assam Chief Minister Himanta Biswa Sarma, Guwahati MP Queen Oja and IWAI chairperson Sanjay Bandopadhyay.
- The vessel had on February 5 started sailing from Patna on National Waterway-1 (NW1, river Ganga).
- It passed through Bhagalpur, Manihari, Sahibganj, Farakka, Tribeni, Kolkata, Haldia, Hemnagar in India, Khulna, Narayanganj, Sirajganj and Chilmari in Bangladesh and again to India on National Waterway-2 (NW2, river Brahmaputra) through Dhubri and Jogighopa covering 2,350 km.
- The docking of the vessel carrying 200 MT of food grains for the FCI has rekindled hope for the inland water transport system which the landlocked northeast depended on heavily before India's independence in 1947.

Is this the first such shipping of cargo?

- The shipping of cargo from Patna to Pandu via Bangladesh was FCI's pilot project. A similar experiment was carried out in 2018 when two 1,000-tonne barges carrying 1,233 tonnes of bagged fly ash travelled 2,085 km from Bihar's Kahalgaon to Pandu for more than a month.
- A private firm had procured the fly ash from the National Thermal Power Corporation's plant in Bihar for use in its cement factories in Assam and Meghalaya. But the FCI cargo is expected to lead to regular services between NW1 and NW2 "heralding a new age of inland water transport" for the northeast.
- According to the IWAI, the process has already started with a 252 MT cargo destined for eastern Assam's Numaligarh bio-refinery having reached central Assam's Silghat from Haldia in West Bengal on February 15.
- Another vessel, MV Ram Prasad Bismil with two barges named Kalpana Chawla and APJ Abdul Kalam started its voyage from Haldia on February 17 and is expected to reach Pandu soon.

How would regular inland water service impact the northeast?

- Around Independence, Assam's per capita income was the highest in the country primarily because of access for its tea, timber, coal and oil industries to seaports on the Bay of Bengal via the Brahmaputra and the Barak River (southern Assam) systems.
- Ferry services continued sporadically after 1947 but stopped after the 1965 war with Pakistan, as Bangladesh used to be East Pakistan then.
- The scenario changed after the river routes were cut off and rail and road through the "Chicken's Neck", a narrow strip in West Bengal, became costlier alternatives. "The start of cargo movement through the Indo-Bangladesh Protocol (IBP) route is going to provide the business community a viable, economic and ecological alternative. Seamless cargo transportation has been a necessity for the northeast," Mr Sonowal said.
- He attributed the rejuvenation of the historical trade routes via Bangladesh to the PM Gati Shakti initiative envisaged to slowly convert the northeast into a connectivity hub and ramp up the swift movement of cargo on the Brahmaputra, which meets the Ganga in Bangladesh. These rivers are called Jamuna and Padma in that country.

How did the water cargo service through Bangladesh come about?

- The resumption of cargo transport service through the waterways in Bangladesh has come at a cost since the Protocol on Inland Water Transit and Trade was signed between the two countries.
- India has invested 80% of ₹305.84 crore to improve the navigability of the two stretches of the IBP (Indo-Bangladesh Protocol) routes — Sirajganj-Daikhowa and Ashuganj-Zakiganj in Bangladesh.

- The seven-year dredging project on these two stretches till 2026 is expected to yield seamless navigation to the north-eastern region.
- IWAI officials said the distance between NW1 and NW2 will reduce by almost 1,000 km once the IBP routes are cleared for navigation.
- The Government has also undertaken the Jal Marg Vikas project with an investment of ₹4,600-crore to augment the capacity of NW1 for sustainable movement of vessels weighing up to 2,000 tonnes.
- A few issues remain, though. Sailors who made the cargo trips possible have had difficulties steering clear of fishing nets and angry fishermen in Bangladesh.

Current Affairs Quiz

1) Which of the following statements is/are incorrect with respect to Karewas?
1. They are highly fertile alluvial soil deposits, that remain tucked in the folds of the Pir Panjal Range of the Himalayas.
2. They are found in abundance at the confluence of the river Ganges and the Terai region in the state of Uttar Pradesh and Bihar.

Select the correct answer code:
a. 1 only
b. 2 only
c. Both 1 and 2
d. Neither 1 nor 2

Answer : b

It is the plateau-like landforms that remain tucked away in the folds of the surrounding mountains, particularly the Pir Panjal Range of the Himalayas that borders the valley on the southwest.

2) Consider the following statement:
1. Bosnia and Herzegovina were the two air spaces over which the no-fly-zone concept was first implemented.
2. The right to announce an air space as a no-fly zone at the time of the conflict lies only with the United Nations Security Council (UNSC).

Which of the statements given above is/are incorrect?
a. 1 only
b. 2 only
c. Both 1 and 2
d. Neither 1 nor 2

Answer : c

The first instance of no-fly-one occurred, following the 1991 Gulf War, the United States along with other Coalition nations established two no-fly zones in Iraq.

3) Consider the following statements:
1. Humanitarian corridors are demilitarized zones for a specific time in a specific area when both sides of an armed conflict agree on a ceasefire.
2. Humanitarian corridors can only be used to evacuate the civilians caught up in the conflict zone.

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

Via these corridors, either food and medical aid can be brought to areas of conflict, or civilians can be evacuated.

4) Consider the following statements:
1. It occurs when the price inflation slows down temporarily.

2. Stagflation is used in calculating the misery index, which is the sum of the inflation rate and unemployment rate.

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 : b

Stagflation refers to an economy that is experiencing a simultaneous increase in inflation and stagnation of economic output. It is simultaneously accompanied by rising prices (i.e. inflation).

5) Consider the following statements regarding (PMBJP):

1. The Pradhan Mantri Bhartiya Janaushadhi Pariyojana scheme was launched by the Ministry of Health and Family welfare.
2. The scheme aims to provide quality medicines at affordable prices for people above the age of 60.
3. The Pharmaceuticals & Medical Devices Bureau of India (PMBI), is the implementing agency of the scheme.

Which of the statements given above is/are correct?

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

Answer : b

It was launched by the Department of Pharmaceuticals of the Ministry of Chemicals and Fertilizers.

It aims to provide quality medicines at affordable prices to all, through special Kendra's known as Pradhan Mantri Bhartiya Janaushadhi Kendra.

6) Consider the following statements with respect to moon:

1. The moon is defenseless against the barrage of meteors and asteroids, due to the absence of atmosphere.
2. Since there is no weather system on the moon, there is no erosion and hence, the impact of craters is permanent.

Select the CORRECT answer code:

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

Answer : c

7) Which of the following statements is/are correct with respect to Sagar Parikrama?

1. It is a navigation journey to be conducted in all coastal states/UTs to show solidarity with all fishing communities.
2. The initiative is launched by the Ministry of home affairs.

Select the correct answer code:

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

Answer : a

Union Minister for Fisheries, Animal Husbandry and Dairying, Shri Parshottam Rupala to inaugurate the 'Sagar Parikrama'on 5th March 2022.

8) Which of the following statements is/are correct with respect to Plasma?
1. It has equal numbers of positively and negatively charges particles.
2. Plasma is produced when the atoms in a gas become ionized.

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

Answer : c

9) Consider the following statements with reference to the Temporary Protection Directive:
1. It is an exceptional measure by the European Commission used to protect the displaced persons from the non-EU countries.
2. Germany and France are the European Union members who are not part of the Temporary Protection Directive.

Which of the statements given above is/are incorrect?
a. 1 only
b. 2 only
c. Both 1 and 2
d. Neither 1 nor 2

Answer : b

All members of the European Union are members of the Temporary protection directive.

10) Consider the following statements:
1. Reconnaissance satellites are used only to spy on the military activities of one country by another.
2. The Radar imaging satellite-2 (RISAT-2) is an Indian reconnaissance satellite.

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 : b

There are four major types.
- Early-warning satellites detect enemy missile launchings.
- Nuclear-explosion detection satellites are designed to detect and identify nuclear explosions in space.
- Photo-surveillance satellites provide photographs of enemy military activities.
- Electronic-reconnaissance satellites pickup and record radio and radar transmissions while passing over a foreign country.

11) Which of the following statements is/are correct with respect to Silicosis?
1. It is a chronic respiratory ailment caused by inhaling silica smaller than 0.5 microns over a long period of time.
2. The silica particles get embedded in the alveoli and the respiratory passage causing the thickening of the lungs.

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

Answer : c

12) Consider the following statements with respect to the Unified Payment Interface (UPI):
1. The UPI service, can be used both in smartphones and features phones without the internet.
2. The Scan and pay function of UPI, available on smartphones, is not available on UPI123Pay, launched by RBI.
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 : c

13) Consider the following statements with respect to the Urban Heat Island (UHI) effect:
1. It is the part of a metropolitan area that is marked by remarkably high temperatures as compared to its rural counterpart.
2. Urban Heat Island effect is caused by a land breeze that is obstructed by the concrete jungle from reaching the sea.
3. The difference in temperature is noticed during both day and night and both in the summer and winter seasons are at their peak.
Which of the statements given above is/are correct?
   a. 2 and 3 only
   b. 1 only
   c. 1 and 3 only
   d. 1, 2 and 3
Answer : b
An Urban Heat Island (UHI) is a part of an urban or a metropolitan area that is marked by remarkably high temperatures as compared to its rural counterpart due to excessive human activity.
The difference in temperature is noticed usually during the night and when winds are weak.

14) Consider the following statements:
1. National Waterway-1 is the second-longest inland waterway in India and the fourth largest inland waterway in the World.
2. All the National Waterways declared under the National Waterways Act, are not operational for shipping and navigation and cargo or passenger vessels.
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 : b
National Waterway-1 with a length of 1620 km is the longest National waterway in India.

15) Consider the following statements:
1. The Red Corridor is an area in the forest, where the red sandalwood is found in abundance.
2. Every state has the right to identify and announce the area with red sandalwood as a Red corridor.
Which of the statements given above is/are incorrect?
   a. 1 only
   b. 2 only
   c. Both 1 and 2
   d. Neither 1 nor 2
Answer : c
The red corridor region is demarcated by the Union Government (Ministry of Home Affairs) to notify the districts which are affected by left-wing extremism.

16) Consider the following statements:
1. The Passport Act states that a foreigner unless exempted through a government order needs to be in possession of a valid passport to continue to stay in India.
2. The Passport (Entry in India) Act, 1920 prescribes the rules for foreigners authorizing their stay here on the basis of visas affixed to passports or other travel documents.

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 : c

17) Consider the following statements with respect to the Sohrai Artform:
1. The Sohrai Art is a form of painting done on sarees using paint extracted from leaves and tree barks.
2. The art form is practiced by the tribal communities in the state of Andhra Pradesh and Telangana only.

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 : d
   The Sohrai art, practised by many tribal communities in Jharkhand, Odisha.
   The women paint their walls as a celebration of the harvest and as a thanksgiving to Nature.

18) Which of the following best describes the term "Trojan Horse"?
   a) A malware which monitors users' keystrokes
   b) A malware which disables victim's access to data until ransom is paid
   c) A type of malware that is often disguised as legitimate software
   d) None of the above

Answer: c)

19) Consider the following statements with respect to the Doctrine of Public Trust:
1. The Doctrine of Public Trust mandates affirmative state action for effective management of resources and empowers citizens to question ineffective management of natural resources.
2. Doctrine of Public Trust has grown from Article 21 of the Constitution of India.

Which of the above statements is/are correct?
   a) 1 only
   b) 2 only
   c) Both 1 and 2
   d) Neither 1 nor 2

Answer: c)

20) Consider the following countries:
1. Angola
2. Nigeria
3. Indonesia
4. Venezuela
5. Qatar

Which of the above are the member countries of Organization of the Petroleum Exporting Countries?
   a) 1, 2 and 3 only
   b) 1, 2 and 4 only
   c) 1, 3, 4 and 5 only
   d) 1, 2, 3 and 5 only
Answer: b)
OPEC members **:** Algeria, **Angola**, Equatorial Guinea, Gabon, Iran, Iraq, Kuwait, Libya, **Nigeria**, the Republic of the Congo, Saudi Arabia (the de facto leader), the United Arab Emirates and **Venezuela**. **Ecuador, Indonesia and Qatar are former members**.