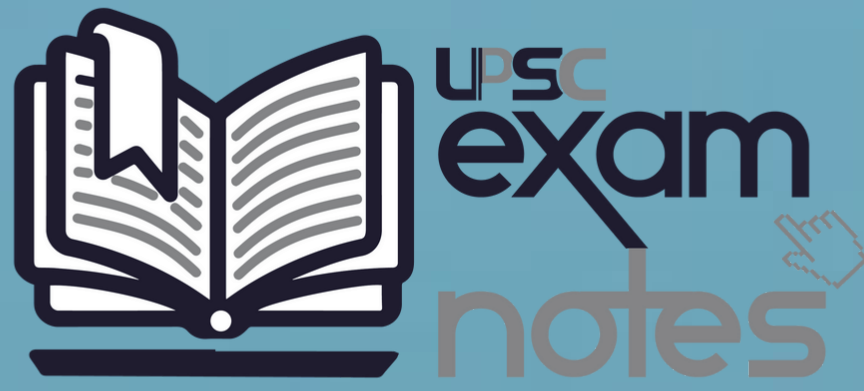




FIRST WEEK APRIL 2023 CURRENT AFFAIRS



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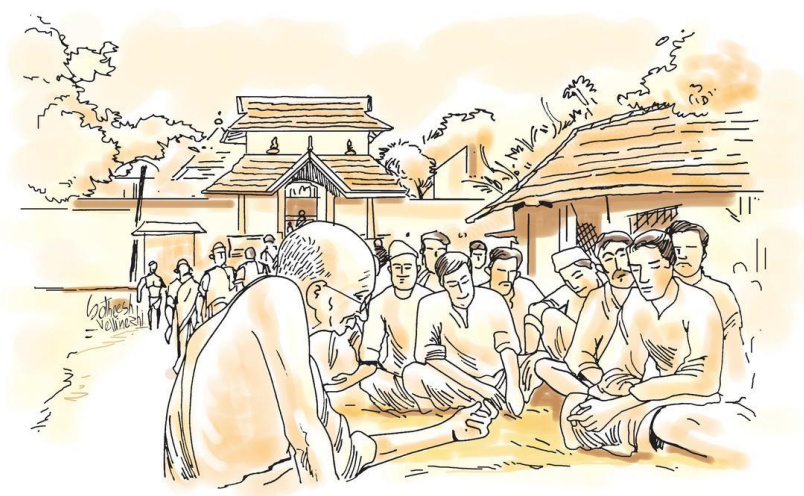


General Studies I: Modern Indian History

VAIKOM SATYAGRAHA

1. Context

March 30 was a significant day in connection with Vaikom, a serene town in Kottayam, Kerala. The date also marks the commencement of the centenary year of the Vaikom temple street entry movement that was launched in 1924, and a milestone in temple entry movements in India.



Source: Hindu

2. About Vaikom

- Vaikom is situated on the western side of Kottayam district in the Indian state of Kerala.
- It share its border with Vembanad Lake.
- Its importance in Indian history is due to the vaikom Satyagraha against untouchability, in which Mahatma Gandhi and Periyar Ramasamy participated.

3. Historical Background

- According to the prevalent caste system in Kerala and the rest of India, low-caste Hindus were not allowed to enter into the temples.
- In Kerala, they were not allowed even to walk on the roads that led to the temples also. (Kerala state was formed in 1956; earlier it was broadly divided into Malabar (North Kerala), Cochin and Travancore kingdoms).
- In the Kakinada meet of the Congress Party in 1923, T K Madhavan presented a report citing the discrimination that the depressed caste people were facing in Kerala. In Kerala, a committee was formed comprising people of different castes to fight untouchability.
- The committee chaired by K Kelappan, comprised of T K Madhavan, Velayudha Menon, K Neelakantan Namboorthiri and TR Krishnaswami Iyer.
- In February 1924, they decided to launch a 'Keralaparyatanam' in order to get temple entry and also the right to use public roads for every Hindu irrespective of caste or creed.

4. Cause of Vaikom Satyagraha

- The Vaikom movement started on March 30, 1924. At Vaikom Mahadeva Temple, lower caste people (Avarnas) were denied entry by the board.
- The Satyagrahis made the batched of three people together and entered the temple. They were resisted and arrested by the local police.
- Gandhi, Sree Narayana Guru, and Chattampi Swamikal supported the movement. The Movement gained prominence with in entire India and support came from far and wide.
- The Akalis of Punjab supported by fixing kitchens to supply food to the Satyagrahis. Even Muslim and Christian leaders were in support of the movement. However, Gandhi was not entirely happy with this as he wanted the movement to be an intra-Hindu Affair.
- On Gandhi's advice, temporarily the movement was taken back in April 1924. After the failure of discussions among Hindus, the leaders again started the movement. Leaders K P Kesava Menon and T M Madhavan were arrested.

- E V Ramaswami Naicker travelled from Tamil Nadu to support the movement. He was arrested too.
- On 1st October 1924, a team of upper caste called Savarnas moved forward during a procession and submitted a petition on the Regent Maharani Sethu Lakshmi Bai of Travancore with about 25000 signatures for allowing entry to the temple for everybody. Gandhiji also met with the Regent Maharani.
- The Procession was led by Mannath Padmanabhan from Beginning with approximately 500 people at Vaikom, the amount increased to 5000 approximately when the procession reached Thiruvananthapuram in the month of November 1924.

5. Importance of the Vaikom Satyagraha

- On 23rd November 1925, except for the eastern gate, all the gates of the temple were opened to Hindus.
- In 1928, backward castes got the right to move on public roads in the vicinity of all temples in Travancore.
- This was the primary time that an organised movement was being conducted on such a huge scale for the essential rights of the untouchables and other backward castes in Kerala.
- It became a first struggle for human rights in India.
- It became a laboratory for testing important methods such as Satyagrahas.
- Instilled rationality among the masses.

6. Role of Periyar in Vaikom Satyagraha

- The satyagraha began on March 30, 1924 with the active support of the Kerala Pradesh Congress Committee (KPCC).
- The KPCC wrote to Periyar pleading with him to lead the satyagraha.
- As he was then the president of the Tamil Nadu Congress Committee, Periyar handed over temporary charge to Rajaji before reaching Vaikom on April 13, 1924.
- He was part of every consultative meeting, peace committee, campaign party etc., including the eight-member deputaion constituted to meet the Diwan.

- Every major personality who came to Vaikom met with Periyar, this included Swami Sharaddhanda of the Arya Samaj, Rajaji met Periyar, Sree Narayana Guru and Gandhi.

TRIBENI KUMBO MAHOTSAV

1. About Kumb Mela

Kumbh Mela is considered a major pilgrimage and festival in Hinduism. Prominent Kumbha Melas are organised in Haridwar, Prayagraj, Nashik, and Ujjain. Now a suburban town in West Bengal Tribeni is gearing up to organise its Kumbh Mela

Located in Hooghly, Triveni Sangam has a rich history of reverence in Hinduism as the place is the confluence of three mythological rivers

One will find multiple Ganga ghats, Shiva temples and ancient buildings with architectural terracotta in Tribeni



2. History of the Festival

- Kumbh Mela in Tribeni has a 700-year old history. The mela had to be discontinued after an invasion
- Kumbh Mela is just the beginning as the local administration led by Neogi is planning for the revival of lost glory of Tribeni which still holds immense significance in Hinduism

- People from all over West Bengal and even Bengali diaspora living abroad visit Tribeni for a number of religious rituals
- Tribeni in Bengal is a holy place for the Hindus, the sanctity of which has been recognized for many centuries and had been mentioned in Dhoyi's Pavanadutam, a Sanskrit piece of the last quarter of the 12th century
- The Muslims took it over during early phases of their conquest of Bengal, also referred to as Turkish conquest in the thirteenth century
- The place retains its holiness for multiple centuries, primarily due to the rivers it hosted, corroborated by records of the bathers at different timelines, who thronged during the festival of Makar to Magh Sankranti
- Tribeni was also marked in history as an important business place like Tamralipta port

General Studies II: International Relations

BURCHAREST NINE (B9)

1. Context

The air chiefs of Denmark, Finland, Norway and Sweden agreed to integrate their air defences to counter the Russian threat. Together, they have nearly 300 fighter aircraft and the goal of the four countries is to eventually operate as one force. It is not often that a country seeks to combine its armed forces with that of another



2. What is Bucharest nine

- The “Bucharest Nine” is a group of nine NATO countries in Eastern Europe that became part of the US-led military alliance after the end of the Cold War
- The Bucharest Nine or Bucharest Format, often abbreviated as the B9, was founded on November 4, 2015, and takes its name from Bucharest, the capital of Romania
- The group was created on the initiative of Klaus Iohannis, who has been President of Romania since 2014, and Andrzej Duda, who became President of Poland in August 2015, at the High-Level Meeting of the States from Central and Eastern Europe in Bucharest
- According to a 2018 release from the office of the Romanian President, “the Bucharest Format (B9) offers a platform for deepening the dialogue and consultation among the participant allied states, in order to articulate their specific contribution to the ongoing processes across the North-Atlantic Alliance, in total compliance with the principles of solidarity and indivisibility of the security of the NATO Member States.”



3. Composition of Organisation

- The B9 are, apart from Romania and Poland, Hungary, Bulgaria, the Czech Republic, Slovakia, and the three Baltic republics of Estonia, Latvia, and Lithuania
- All nine countries were once closely associated with the now dissolved Soviet Union, but later chose the path of democracy
- Romania, Poland, Hungary, and Bulgaria are former signatories of the now dissolved Warsaw Pact military alliance led by the Soviet Union
- Estonia, Latvia, and Lithuania were part of the former Union of Soviet Socialist Republics (USSR)
- All members of the B9 are part of the European Union (EU) and North Atlantic Treaty Organisation (NATO)

4. Against Russia

- The B9 countries have been critical of President Vladimir Putin's aggression against Ukraine since 2014, when the war in the Donbas started and Russia annexed the Crimean peninsula
- After the Russian invasion of Ukraine on February 24, the B9 met in Warsaw, and their meeting was joined by Ursula von der Leyen, President of the European Commission.

- India, which has genuine compulsions arising from a long-standing strategic partnership with Russia, must necessarily find a way to reconnect with the central European states that are well on their way to rearranging the strategic map of Europe

5. New Warsaw Pact

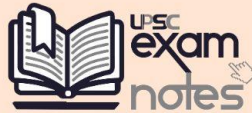
A new military alliance is emerging in eastern Europe which will redefine the geopolitical order in the region

It will also mark the emergence of Poland as a major European actor, entrench the position of the US and the UK in European affairs, and marginalise France, Germany and the EU

This is being driven by the increased threat from Russia and the desire of the eastern Europeans for security, the reluctance of the western Europeans to confront their eastern foe, the consequent necessity for the eastern Europeans to find ways to protect themselves, and the external support of the United States and Britain, which want the region to provide for its own security

5.1. Old Warsaw Pact

- The Warsaw Pact, formally the Treaty of Friendship, Cooperation and Mutual Assistance, was a collective defense treaty signed in Warsaw, Poland, between the Soviet Union and seven other Eastern Bloc socialist republics of Central and Eastern Europe in May 1955, during the Cold War
- The Warsaw Pact supplemented existing agreements. Following World War II, the Soviet Union had concluded bilateral treaties with each of the East European states except for East Germany, which was still part of the Soviet occupied-territory of Germany
- When the Federal Republic of Germany entered NATO in early May 1955, the Soviets feared the consequences of a strengthened NATO and a rearmed West Germany and hoped that the Warsaw Treaty Organization could both contain West Germany and negotiate with NATO as an equal partner



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VIENNA CONVENTION

1. Context

Hours after a group of people chanting pro-Khalistan slogans took down the Indian flag at the High Commission in London, the Indian government on Sunday summoned the "Senior-most" UK diplomat, Deputy High Commissioner Christina Scott and Lodged a strong protest.

2. Key Points

- On March 22, 2023 cement blocks that acted as barricades in front of the British High Commission in Delhi and the British High Commissioner's residence were removed, in what was seen as retaliation for the lack of visible security at the Indian High Commission in London.
- On the same day, a group of pro-Khalistan protesters attacked and damaged the Indian Consulate in San Francisco.
- Raising pro-Khalistan slogans, the protesters broke open the makeshift security barriers raised by the city police and installed two Khalistani flags inside the Consulate premises.
- Two consulate personnel soon removed these flags.
- On the London incident, a statement by the Ministry of External Affairs said, "The explanation demanded the complete absence of British security that allowed these elements to enter the High Commission premises. Dy High Commissioner Scott was reminded in this regard of the basic obligations of the UK Government under the Vienna Convention".

3. About Vienna Convention

- The term "**Vienna Convention**" can refer to any of several treaties signed in Vienna, most of which are related to the harmonisation or formalisation of the procedures of international diplomacy.

The treaty being referred to by the MEA in this instance is the Vienna Convention on Diplomatic Relations (1961), which "provides a complete framework for the establishment, maintenance and termination of diplomatic relations on a basis of

consent between independent sovereign states", as per an introductory note on the treaty in UN's Audiovisual Library of International Law.

- The Convention codifies the longstanding custom of diplomatic immunity in which diplomatic missions are granted privileges that enable diplomats to perform their functions without fear of coercion or harassment by the host country.
- It affirms the concept of "inviolability of a diplomatic mission, which has been one of the enduring cornerstones of international diplomacy.
- The Vienna Convention on Diplomatic Relations entered into force on April 24, 1964, and is nearly universally ratified, with Palau and South Sudan being the exceptions.

4. Various Vienna Conventions

1. Vienna Convention on Diplomatic Relations (1961)
2. Vienna Convention on Civil Liability for Nuclear Damage (1963)
3. Vienna Convention on Consular Relations (1963)
4. Vienna Convention on Road Traffic (1968)
5. Vienna Convention on the Law of Treaties (1969)
6. Vienna Convention for the Protection of the Ozone Layer (1985)
7. Vienna Convention on the Law of Treaties between States and International Organizations or between International Organizations (1986)
8. United Nations Convention Against Illicit Traffic in Narcotic Drugs and Psychotropic Substances (1988)

5. Obligations of a receiving state

- As per the Vienna Convention, a "receiving State" refers to the host nation where a diplomatic mission is located.
- In this case, the host nation is the UK and as per the Vienna Convention has some basic obligation towards the diplomatic missions it hosts on its sovereign territory.
- Article 22 of the Convention deals with obligations about the premises of the Mission.

- Part 2 of this article states that "The receiving State is under a special duty to take all appropriate steps to protect the premises of the mission against any intrusion or damage and prevent any disturbance of the peace of the mission or impairment of its dignity".
- The security of any High Commission or Embassy is the responsibility of the host nation.
- While diplomatic missions can also employ their security, ultimately, the host nation is accountable for security.

6. UK did not fulfil its obligations

- The fact that protestors were able to climb the walls of the High Commission premises indicates a breach.
- India finds unacceptable the indifference of the UK Government to the security of Indian Diplomatic premises and personnel in the UK.
- It is expected that the UK Government would take immediate steps to identify, arrest and prosecute each one of those involved in today's incident and put in place stringent measures to prevent the recurrence of such incidents.

7. UK response

- The UK too has reacted strongly, condemning the event. The British High Commissioner to India Alex Ellis said that the disgraceful acts today against the people and premises of the High Commission in London are unacceptable.
- The UK Foreign Office Minister Tariq Ahmad said that the UK government will "always" take the security of the Indian High Commission in London "Seriously".

CHINA TAIWAN TUSSLE

1. Context



Tensions between China and Taiwan have escalated since October 1, 2022, when China observes its National Day to mark the birth of the People's Republic of China (PRC). Coinciding with the 72nd-anniversary celebrations, China flew over 100 fighter jets into Taiwan's air defence identification zone, jangling nerves in Taiwan and setting off an alarm around the world that it was prepping to take over the island by force.

2. Brief History of Taiwan

- Taiwan, earlier known as Formosa, a tiny island off the east coast of China, is where Chinese republicans of the Kuomintang government retreated after the 1949 victory of the communists.
- It has since continued as the Republic of China (RoC).
- Although largely unrecognized by other countries as such, self-ruled Taiwan sees itself as no less than an independent nation.
- Its leaders, have vowed to defend its sovereignty against the Chinese goal of "reunification".

3. China-Taiwan Tensions

- In 1954-55, and 1958, the PRC bombed the Jinmen, Mazu, and Dachen islands under Taiwan's control, drawing in the US.
- Congress passed the Formosa Resolution authorizing President Dwight D Eisenhower to defend Taiwanese (Republic of China- ROC) territory.
- In 1955, Premier Zhou En-lai declared at the Bandung Conference that he wanted negotiations with the US. But as civil war broke out in Lebanon in 1958, China resumed the bombing, provoking the US to supply Taiwanese outposts on the islands.
- The people's Republic of China (PRC) i.e. mainland China and ROC (Taiwan) then arrived at an arrangement to bomb each other's garrisons on alternate days-this continued until 1971.
- Taiwan became the non-communist frontier against China during the Cold war. It was described as an "unsinkable aircraft carrier" underscoring its strategic significance.

- It was only in 1971 that the US inaugurated ties with Mainland China through the secret diplomacy of Henry Kissinger, national security adviser to President Richard Nixon.
- In 1975, Chiang Kai-shek died, martial law was lifted, and Taiwan got its first democratic reforms.
- U.S. recognized the communist party that ruled People's Republic of China (PRC) as the legitimate government of China in 1979, ending its official relationship with Taiwan and abrogating its mutual defense treaty with the island.
- The US has a policy of strategic ambiguity towards Taiwan. This means that it maintains ties with Taipei, and sells weapons to it, but officially subscribes to the PRC's "One China Policy" in which Taiwan does not exist as a separate entity.
- Just 14 countries around the world recognize Taiwan. Most are very small, many are remote island nations. As the British prepared to exit Hong Kong in 1999, the "One China, Two Systems" solution was offered to Taiwan as well, but it was rejected by the Taiwanese.



Image Source: The Indian Express

4. The Current Tensions Between the Two Nations

- Last year, amid worsening the US-China relations over Covid and trade, the State Department sent its highest-ranking delegation yet to Taipei.
- During the visit, the Chinese conducted a military exercise in the Taiwan Strait, which separates Taiwan from mainland China.

- In October 2020, President Xi Jinping asked the PLA to prepare for war, triggering an alarm in Taiwan, which read it as an open threat.
- Early in the Biden Administration, which declared "rock solid" commitment to Taiwan, Taipei raised an alert about an incursion by Chinese Warplanes.
- In April, Taiwan reported Chinese jets in its air defense Zone. In July, Xi warned that he would "smash" any Taiwanese move toward independence.
- At the beginning of this month, as the Chinese jets came back, Taiwanese Defence Minister Chiu Kuo-Cheng told Parliament that China already has the capacity to invade Taiwan, and would be able to "bring the cost and attrition to its lowest" by 2025.

5. US Ties with China

- Officially, the US has subscribed to PRC's "One China Policy" which means there is only one legitimate Chinese government.
- The most serious encounter was in 1995-96 when China began testing missiles in the seas around Taiwan, triggering the biggest US mobilization in the region since the Vietnam war.
- Now, the US backs Taiwan's independence, maintains ties with Taipei, and sells weapons to it.
- Taiwan is entirely dependent on the US for its defense against possible Chinese aggression.
- This is why every spike in military tensions between China and Taiwan injects more hostility into the already strained relationship between Washington and Beijing.

6. Challenges for the US

- As tensions rise, the world is watching the US, whose status as the world's pre-eminent power has been dented by the messy exit from Afghanistan.
- In East and Southeast Asia, several countries including Japan, South Korea, and the Philippines, which are sheltered under the protective umbrella of the US, are concerned about US security commitments in the Pacific region.
- President Joe Biden has been seen as walking a thin line between pledging support for Taiwan and keeping the lid on tensions with Beijing.

- After speaking with Xi in October 2021, Joe Biden said that they had agreed to abide by the "Taiwan Agreement", under which US support for the "One China Policy" is conditioned on China not invading Taiwan.
- The AUKUS pact among the US, UK, and Australia, under which Australia will be supplied with nuclear submarines, imparted a new dimension to the security dynamics of the Indo-Pacific. Taiwan welcomed the pact, while China denounced it as seriously undermining regional peace.

7. What are the implications for India

- With India facing its problems with China on the LAC, there have been suggestions that it should review its One China Policy- it has in any case long stopped reiterating this officially.
- Also, it is suggested that India use not just the Tibet Card, but also develop more robust relations with Taiwan to send a message to Beijing.
- India and Taiwan currently maintain "trade and cultural exchange" offices in each other's capitals.
- In May 2020, the swearing-in of Tsai was attended virtually by BJP MPs Meenakshi Lekhi (now MoS External Affairs) and Rahul Kaswan. In 2016, New Delhi had dropped plans to send two representatives for Tsai's first inaugural at the last minute.
- India has been reported to be in talks with Taipei to bring a \$7.5 billion semiconductor chip manufacturing plant to India. Chips are used in a range of devices from computers to 5G smartphones, to electric cars and medical equipment. The deal was reported on the heels of last year's summit of the QUAD, which discussed the need to build a "safe supply chain for semiconductors".
- India also follows asymmetric Federalism where many states enjoy greater autonomy in their functioning as compared to other states (Article 371, Schedule V & VI).
- These special provisions are also intended to deal with issues to identity & Culture. India thus needs to handle these democratically to not see Taiwan/Hongkong types of protests happening in India.
- India can always use the leverage of Taiwan and Hong Kong whenever China meddles in India's internal issues like Kashmir/Naga unrest.

NATO EXPANSIONS AND RUSSIA

1. Background

After nearly three months of debate between the two countries, Finland and Sweden have formally applied for membership in the North Atlantic Treaty Organization (NATO), the US-led security alliance forged during the Cold War to defend its members from Soviet expansion.

2. Transforming Europe

- The war in Ukraine has already changed the geopolitics of Europe and the World. The admission is **Finland and Sweden to NATO** would bring about a transformation in the continent's security map by giving NATO a contiguous long frontier in western Russia Finland and Russia share a 1. 300 km border and doubling it from the present 1, 200 km, parts of it in northern Norway, Latvia and Estonia and Poland and Lithuania.
- In addition, Sweden's island of Gotland in the middle of the Baltic Sea would give NATO a strategic advantage.
- Furthermore, when Sweden and Finland join NATO, the Baltic Sea Russia's gateway to the North Sea and the Atlantic Ocean would be ringed entirely by members of the western security alliance- Finland, Estonia, Latvia, Lithuania, Poland, Germany, Denmark and Sweden.

3. Neutrality history

- In seeking NATO membership, Sweden and Finland have abandoned their long history of neutrality, when their foreign policy and security priority was to stay out of superpower rivalry during the Cold War and maintain cordial ties with both blocs.
- Post-war Finland sought to carve out neutrality from a defence alliance with the Soviet Union called the Treaty of Friendship, Co-operation and Mutual Assistance which also gave the superpower a base on its territory.
- Finland also stayed out of the Marshall Plan, the US aid programme for Europe's post-World War II recovery.

- From the perspective of Finland whose capital Helsinki is situated just across the Gulf of Finland from St Petersburg (Leningrad)- the treaty protected it from being attacked or incorporated into the USSR like Baltic and eastern European states.
- It allowed the country to pursue the path of democracy and capitalism while staying out of the conflict between the great powers.

After the end of the Cold War and the disintegration of the Soviet Union, Finnish neutrality was manifest in its decision to stay out of NATO, even as it entered the European Union in 1995.

In recent years, the Finland model or Finlandisation was advocated by some including former US Secretary of State Henry Kissinger as the way forward for Ukraine's relations with Russia.

- Swedish neutrality traces back to the early 19th century and is largely held through WWII, though it has faced questions about its assistance to Hitler's Germany.
- Sweden's neutrality is often described as the other side of its social welfare and as the two pillars of its national identity.
- But the official policy of neutrality or non-alignment was not without contradictions.

4. Finland and Sweden's joining NATO

- Swedish Prime Minister Olaf Palme's anti-Vietnam war stand had angered the US; at the same time, it was during his tenure that Sweden entered into a secret defence pact with the US.
- Sweden's neutrality has helped it play the role of a pacifist country that preached disarmament, despite its flourishing armaments industry.
- Sweden all but shed its neutrality in the 1990s as it became involved with NATO in its international missions in Bosnia, Afghanistan and Libya.
- It joined the EU in 1995 at the same time as Finland and in 2010, became part of the European Common Security and Defence Policy.

- Although the debate over joining NATO was ongoing in both countries for nearly three decades, Russia's annexation of Crimea pushed both towards NATO's "**open door**" policy.
- Still, there was little political consensus in either country, especially in Sweden where the Social Democrats have been against the idea.
- February 24 changed everything, former Swedish Prime Minister Carl Bildt said referring to the date on which Russia invaded Ukraine.
- In Finland, the leadership was at one with the growing public clamour for admission to NATO, while in Sweden, where elections are due later this year, the ruling Social Democrats came under pressure from opinion polls that showed that a majority were in favour.
- Some may see an expanding NATO and the growing role of the US in European security as winding the clock back to a time on the continent where war was an ever-present threat, a worse situation than even during the Cold War when the US and the Soviet Union met regularly to reduce the risk of war, especially nuclear.
- However, Bildt dismissed the concerns that NATO's expansion would add to the tensions on the continent.
- He said instead "strengthening NATO and EU" would act as a deterrent against Russia.
- That is the key thing, because as long as Russian President Mr Vladimir Putin is in power.



4. Russian Response

- If Putin's invasion of Ukraine was meant to deter NATO's eastward expansion, the war has had the opposite effect.
- If admitted, Sweden and Finland will become its 31st and 32nd members. The alliance had 12 founding members in 1929.
- Back in March, the possibility of the two Nordic nations applying for NATO membership had evoked a threatening response from Russia, which said it would take retaliatory measures by stationing its nuclear and hypersonic weapons close to the Baltic Sea.
- In his first remarks after Finland and Sweden officially announced their intention to join, Putin did not sound as threatening.
- Russia has no problems with Finland and Sweden and NATO's expansion at the expense of these countries does not pose a direct threat to us.
- But the expansion of military infrastructure into this territory will certainly provoke our response.
- Sweden had already said it would not allow NATO bases or nuclear weapons on its territory.
- Finland's Prime Minister Sanna Marin told that her country is opposed to NATO deploying nuclear weapons or setting up military bases on its territory if admitted to the alliance.

5. Membership Process

- At the moment the main obstacle to their applications in Turkey, a member since 1952 and which has NATO's second-largest army after the US.
- Turkey's president Recep Tayyip Erdogan has objected to their applications on the ground that the two countries had provided a haven to the leaders of the Kurdish group PKK, an armed movement fighting for a separate Kurdistan, comprising Kurdish areas in Turkey, Iraq, Iran and Syria.
- Neither of these countries has a clear, open attitude towards terrorist organisations and both Sweden and Finland joined an arms embargo against Turkey in 2019.

Membership in NATO is open to all European nations that fulfil certain criteria that include

1. A functioning democratic political system based on a market economy
 2. Fair treatment of minority populations
 3. A commitment to resolve conflicts peacefully
 4. An ability and willingness to make a military contribution to NATO operations and
 5. A commitment to democratic civil-military relations and institutions.
- New members are admitted with the unanimous consent of all members.
 - Erdogan has said he would not entertain delegates from either country who may hope to change his mind.
 - Provided this opposition can be overcome, the seven-step membership process could take from four months to a year, raising concerns in both countries of a potential Russian attack before they are covered by Article 5 of the North Atlantic Treaty, NATO's legal framework, which pledges collective defence for all members.
 - The UK, Denmark and Norway have promised to come to their aid if this happens.

SUSTAINABLE DEVELOPMENT GOALS

1. Background

- Seven years after the adoption of Sustainable Development Goals (SDG) halfway to the 2030 deadline the visionary promises of no poverty, zero hunger, good health and well-being, social justice and a rights-based, equitable and ecologically just world for all appear to be a distant dream.
- The Global People's Assembly (GPA), organised by the Global Call to Action against Poverty (GCAP) during the 77th session of the United Nations General Assembly in September 2022, highlighted the fact that nations across the globe have failed to achieve both human security and climate change mitigation
- GPA voiced the concerns of 1,300 civil society participants from 127 countries representing diverse, excluded and marginalised people.
- The 2019 Social Progress Index, compiled by the United States-based non-profit Social Progress Imperative, ranked 149 countries' social performance over the past five years. It forecast that at the current trends, the world will not meet the 2030 targets for SDGs until 2073 more than four decades past their target date
- **It maintained that the biggest areas of underperformance are related to water and sanitation, nutrition, basic healthcare and shelter**

2. Localising SDG's

- In Keonjhar district of Odisha, Out of 65 families in the village, multiple members of 45 families were affected by kidney ailments
- Occurrence of unnatural deaths at an average age of 45 has been a trend for the last several decades
- The residents blamed it on the quality of water they have to consume from the local sources
- Various government schemes for poverty alleviation, free housing, job guarantee and social security pension have failed to provide the villagers a secured and dignified life

- The Indian government's endeavours towards localising the SDGs, which emphasises on aligning the local plans of the states and the Union territories with the SDGs scheme, seem to be quite promising
- However, they are still at a nascent stage and the result is yet to be reflected on the ground.

3. African Countries

- African countries are performing poorly in all aspects of SDGs, especially poverty, hunger, education, peace and justice
- The condition of people living in informal settlements in African countries like Kenya is miserable, Jane Anyango, director of Polycom, an organisation that works for women living in informal settlements, pointed out at the GPA
- The residents who already suffer scarcity of drinking water had a hard time maintaining hand hygiene
- Many people died of COVID-19 because they could not afford protective measures and medical facilities, she elaborated
- People in Kenya are losing hope and cases of suicide are shooting up in the current drought situation

4. Vaccine inequality

- Vaccine inequality between the countries of global South and Global North in the context of the COVID-19 pandemic is a serious matter of concern, pointed out people's representatives at the GPA
- Countries like Haiti, Madagascar and Nigeria had never heard of life saving antivirals for COVID despite being accessible widely in the global north, said Dr Fifi Rahman, civil society representative of the Access to COVID-19 Tools (ACT) Accelerator
- ACT-Accelerator is a global collaboration to accelerate development, production, and equitable access to COVID-19 tests, treatments, and vaccines
- The GPA urged the nations to establish a global roadmap for vaccine equality to ensure free and universal access to all vaccines and treatments, prioritising the most marginalized countries, people and communities to ensure that No One is Left Behind

5. Countries Catalysing the Climate Actions

- Apart from the pandemic and human rights crises, the world is also faced with a climate crisis. Most nations have done “too little, too late” towards achieving SDG 13 (climate action)
- Developing countries like India and Kenya as well as industrialised countries like the European Union, the United Kingdom and South Africa are on track to achieving goals associated with limiting global warming to 1.5-2 degrees Celsius over pre-industrial levels
- However, developed countries like the US, Japan and Canada are lagging behind the target
- #FridaysForFuture is a youth-led global movement joined by thousands on the streets of New York on Fridays to put pressure on the leaders to catalyse climate actions to secure a peaceful, clean and green planet for the future
- The global- and national-level planning to achieve SDGs must incorporate the points of the declaration prepared by GPA
- It has galvanised the voices of the most marginalised communities and focused on issues like vaccine equality, democracy and human rights, gender equity, needs to meet Paris Climate Agreement as well as debt and economic justice

IPCC'S SYNTHESIS REPORT

1. Context

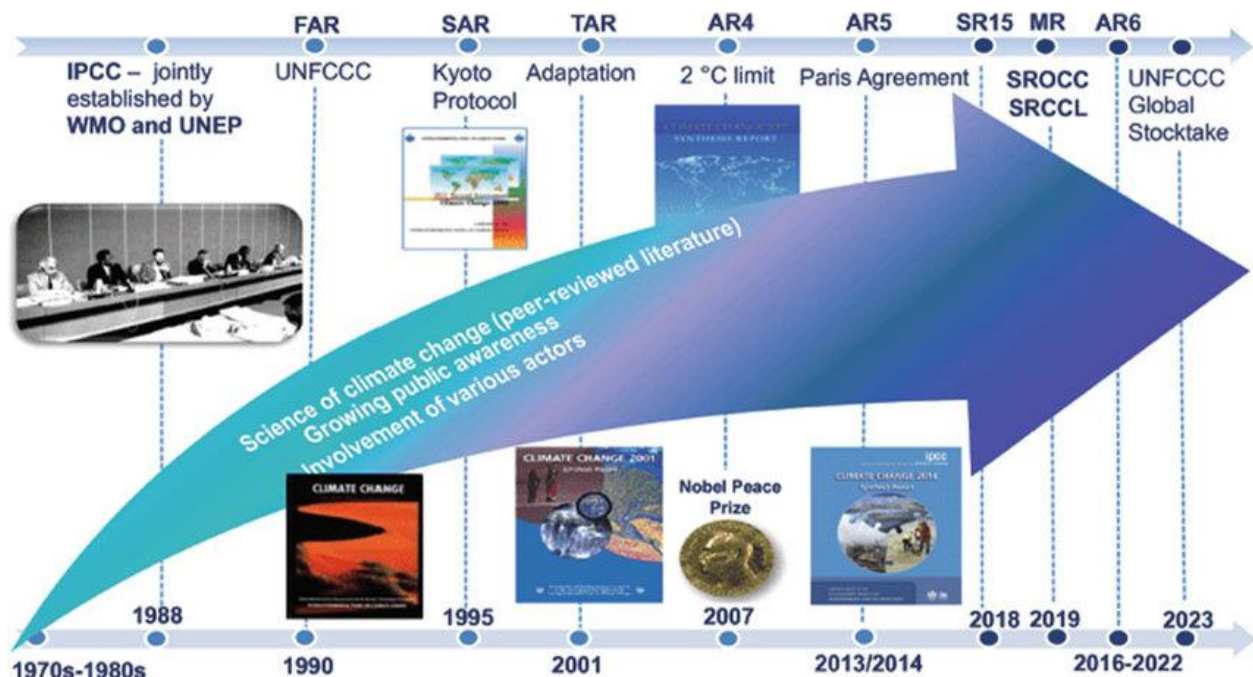
The world is on track to breach the 1.5 degree Celsius global warming limit by the 2030s, which would cause irrevocable damage to the planet's ecosystem and severely impact humans and other living beings, the Intergovernmental Panel on Climate Change (IPCC), an UN-backed body of world's leading climate scientists

2. Background

- The Synthesis Report, of its sixth assessment cycle, IPCC added that there is still a chance to avert this mass-scale destruction, but it would require an

enormous global effort to slash greenhouse gas emissions in half by 2030 and completely phase them out by 2050

- Earth has already warmed an average of 1.1 degrees Celsius since the industrial age while humans have been responsible for virtually all global heating over the last 200 years
- According to the UN " Humanity is on thin ice and that ice is melting fast, Our world needs climate action on all fronts everything, everywhere, all at once"
- The Synthesis Report has come after a week-long negotiation with the approval of 195 countries
- It is essentially a non-technical summary of the previous reports, which were released between 2018 and 2022, and sets out possible policies and measures that might help stave off the worst consequences of climate change



3. Key Takeaways

- The new report lays out the present impact of soaring global temperature and imminent ramifications in case the planet continues to get warmer
- Due to the current global warming levels, almost every region across the planet is already experiencing climate extremes, an uptick in deaths due to

heatwaves, reduced food and water security and damage to ecosystems, causing mass extinction of species on land and in the ocean

- According to report "vulnerable communities who have historically contributed the least to climate change are being disproportionately affected"
- It added that more than three billion people live in areas that are "highly vulnerable" to climate change people living in these regions were "15 times more likely to die from floods, droughts and storms between 2010-2020 than those living in regions with very low vulnerability"
- Things can get worse if the world crosses the 1.5 degree Celsius temperature limit, a target agreed to in the Paris Agreement
- This would result in an unpredictable global water cycle, drought and fires, devastating floods, extreme sea level events and more intense tropical cyclones
- According to the scientists involved in writing the report, India would also face these dire consequences of global warming and needs to take immediate action to curb the temperature
- Given the present scale, scope and pace of global action, it's most likely that Earth would overshoot this critical warming threshold somewhere in the following decade
- The report categorically states that despite some advancements towards curtailing the greenhouse gas emissions into the atmosphere, "adaptation gaps exist, and will continue to grow at current rates of implementation."
- Some of the barriers to adaptation have been limited resources, lack of private sector and citizen engagement, low climate literacy, lack of political commitment and low sense of urgency
- This report is a clarion call to massively fast-track climate efforts by every country and every sector and on every timeframe
- The Synthesis Report underlines the requirement of climate-resilient development, which is finding ways to adapt to climate change or reduce greenhouse gas emissions that provide wider benefits
- It further mentions that to be effective, these measures must be rooted in our diverse values, world views and knowledge around the globe including Indigenous knowledge
- Apart from highlighting the urgent need of limiting the use of fossil fuel, the report urges governments and policymakers to increase finance to climate

investments, expand the clean energy infrastructure, reduce nitrogen pollution from agriculture, curtail food waste, adopt measures to make it easier for people to lead low-carbon lifestyles and much more

4. About IPCC

- The Intergovernmental Panel on Climate Change (IPCC) is the United Nations body for assessing the science related to climate change.
- IPCC was created in 1988 by the World Meteorological Organization (WMO) and the United Nations Environment Programme (UNEP), the objective of the IPCC is to provide governments at all levels with scientific information that they can use to develop climate policies.

IMF BAILOUT

1. Context

Last week, the International Monetary Fund (IMF) confirmed a \$3 billion bailout plan for Sri Lanka's struggling economy. IMF officials are also in negotiations with Pakistan for a \$1.1 billion bailout plan as the country faces a severe economic crisis marked by a falling currency and price rise.

2. Why are Sri Lanka and Pakistan facing major macroeconomic risks?

- Sri Lanka's macroeconomic landscape has been characterized by fiscal dominance-high deficits and public debt.
- This has manifested in a high degree of macroeconomic volatility, evidenced by its frequent balance-of-payments crises and instability.
- Macroeconomic risks also remain high as Pakistan faces challenges associated with a large current account deficit, high public debt, and lower demand from its traditional export markets amid subdued global growth.

3. How do currency devaluation and price rise affect an economy?

A devaluation means there is a fall in the value of a currency. The main effects are:

- Exports are cheaper to foreign customers
- Imports are more expensive.
- In the short term, a devaluation tends to cause inflation, higher growth, and increased demand for exports.

4. Effects of Devaluation



Image Source: Economics help

5. International Monetary Fund (IMF)

- The International Monetary Fund (IMF) is an organization of 189 member countries, each of which has representation on the IMF's executive board in proportion to its financial importance so that the most powerful countries in the global economy have the most voting power.
- The IMF, also known as the Fund, was conceived at a UN conference in Bretton Woods, New Hampshire, United States, in July 1944.
- The 44 countries at that conference sought to build a framework for economic cooperation to avoid a repetition of the competitive devaluations that had contributed to the Great Depression of the 1930s.

- Countries were not eligible for membership in the International Bank for Reconstruction and Development (IBRD) unless they were members of the IMF.

6. Functions of IMF

- **Regulatory functions:** IMF functions as a regulatory body and as per the rules of the Articles of Agreement, it also focuses on administering a code of conduct for exchange rate policies and restrictions on payments for current account transactions.
- **Financial functions:** IMF provides financial support and resources to the member countries to meet short-term and medium-term Balance of Payments (BOP) disequilibrium.
- **Consultative functions:** IMF is a center for international cooperation for the member countries. It also acts as a source of counsel and technical assistance.

7. Special Drawing Rights (SDR)

- Special Drawing Rights (SDRs) are supplementary foreign exchange reserve assets defined and maintained by the International Monetary Fund (IMF).
- SDR is not a currency, instead represents a claim to currency held by IMF member countries for which they may be exchanged.
- The value of an SDR is defined by a weighted currency basket of four major currencies- the US dollar, the Euro, the British Pound, the Chinese Yuan, and the Japanese Yen.
- Central Bank of member countries held SDR with IMF which can be used by them to access funds from IMF in case of financial crises in their domestic market.

8. Why do nations seek an IMF bailout?

- Countries seek help from the IMF usually when their economies face a major macroeconomic risk, mostly in the form of a currency crisis.
- For instance, in the case of Sri Lanka and Pakistan, both countries have witnessed domestic prices rise rapidly and the exchange value of their currencies drop steeply against the U.S. dollar.

- Such currency crises are generally the result of gross mismanagement of the nation's currency by its central bank, often under the covert influence of the ruling government.
- A rapid unpredictable fall in the value of a currency can destroy confidence in said currency and affect economic activity as people may turn hesitant to accept the currency in exchange for goods and services.
- Foreigners may also be unwilling to invest in an economy where the value of its currency gyrates in an unpredictable manner.
- In such a scenario, many countries are forced to seek help from the IMF to meet their external debt and other obligations, purchase essential imports, and also to prop up the exchange value of their currencies.

9. How does the IMF help Countries?

- The IMF basically lends money, often in the form of special drawing rights (SDRs), to troubled economies that seek the lender's assistance.
- SDRs simply represent a basket of currencies namely the U.S. dollar, the euro, the Chinese Yuan, the Japanese Yen, and the British Pound.
- The IMF carries out its lending to troubled economies through a number of lending programs such as the extended credit facility, the flexible credit line, the standby agreement, etc.
- Countries receiving the bailout can use the SDRs for various purposes depending on their individual circumstances.
- Currently, both Sri Lanka and Pakistan are in urgent need of U.S. dollars to import essential items and also to pay their foreign debt.
- So any money that they receive from the IMF is likely to go towards addressing these urgent issues.

10. IMF Lending Instruments

- The IMF's various lending instruments are tailored to different types of balance of payments need as well as the specific circumstances of its diverse.
- All IMF members are eligible to access to Fund's resources in the General Resources Account (GRA) on non-concessional terms.

- The IMF also provides concessional financial support (currently at zero interest rates through June 2021) through the Poverty Reduction and Growth Trust which is better tailored to the diversity and needs of low-income countries.
- Historically, for emerging and advanced market economies in crises, the bulk of IMF assistance has been provided through stand-by agreements (SBAs) to address the short-term or potential balance of payments problems.
- The Standby Credit Facility (SCF) serves a similar purpose for low-income countries.
- The External Fund Facility (EFF) and the corresponding Extended Credit Facility (ECF) for low-income countries are the Fund's main tools for medium-term support to countries facing protracted balance of payments problems.
- To help prevent or mitigates crises and boost market confidence during periods of heightened risks, members with already strong policies can use the Flexible Credit Line (FCL) or the Precautionary and Liquidity Line (PLL).
- The Rapid Financing Instrument (RFI) and the corresponding Rapid Credit Facility (RCF) for low-income countries provide rapid assistance to countries with urgent balance of payments needs, including commodity price shocks, natural disasters, and domestic fragilities.

11. Why does the IMF impose certain conditions before lending money to countries?

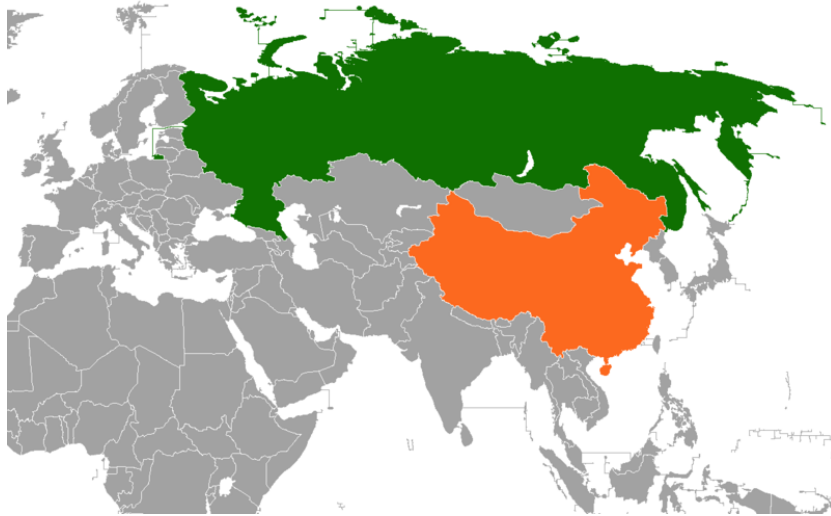
- The IMF usually imposes conditions on countries before it lends any money to them.
- For example, a country may have to agree to implement certain structural reforms as a condition to receive IMF loans.
- The IMF's conditional lending has been controversial as many believe that these reforms are too tough on the public.
- Some have also accused the IMF's lending decisions. which are taken by officials appointed by the governments of various countries, to be influenced by international politics.
- Supporters of the IMF's lending policies, however, have argued that conditions are essential for the success of IMF lending.

RUSSIA AND CHINA RELATIONSHIP

1. Context

Xi Jinping, China's leader, met **with President Vladimir Putin of Russia in Moscow** in the most high-profile visit by any world leader to Russia since before the pandemic

Coming more than a year after Russia launched its invasion of Ukraine, the meeting was watched closely by Western officials for any indications of how far China may be willing to go to act as a mediator in the conflict



Source: Wikimedia

2. China and Russia's Alliance

- China and Russia are not formal allies, meaning they have not committed to defend each other with military support
- But the two countries are close strategic partners, a relationship that deepened during the war in Ukraine as Russia became increasingly isolated from many other countries
- The partnership is fueled by a shared goal of trying to weaken U.S. power and influence
- The relationship between China and Russia has not always been so warm

- The two sides were fierce adversaries in the 1960s and clashed in 1969 over disputed territory along their border, raising fears at the time of a nuclear showdown between the two countries
- The two countries have also been competing for influence in Central Asia, a region the Kremlin has long seen as its turf but is becoming increasingly important to China's geopolitical and economic ambitions
- China is building more railroads, highways and energy pipelines in former Soviet republics such as Kazakhstan and Uzbekistan, which still rely on Russia as a crucial security partner

3. Economic relationship

- Economic ties between China and Russia have strengthened significantly since Russia's first invasion of Ukraine in 2014, when it annexed Crimea
- At the time, China helped Russia evade the sanctions imposed by the Obama administration that were supposed to cut off Russia's access to global markets
- In the wake of harsher sanctions against Russia following the start of the Ukraine war last year, China has helped to supply many of the products that Russia previously purchased from Western-allied countries, including computer chips, smartphones and raw materials needed for military equipment
- Putin needs China to help bolster his economy, which has been battered by Western sanctions
- For the Russian leader, China has increasingly become a lifeline for investment and trade
- After Western countries restricted their purchases of Russian crude oil and natural gas last year, China helped offset the decline by buying more energy from Russia
- At the start of the Ukraine war, Russia asked China for military equipment and economic assistance
- China has refrained from condemning Russia's invasion of Ukraine, even though China's foreign policy is rooted around the principles of sovereignty and territorial integrity



- Although China has portrayed itself as a neutral party in the Ukraine war, it has endorsed Russian narratives, blaming the U.S. and NATO for starting the conflict
- China has also hesitated to put its full backing behind Russia. The turmoil and instability stemming from the war could threaten China's growth and complicate its efforts to strengthen its economic ties around the world

4. Alliance against Western Dominance

- Xi wants Putin to join him as a like-minded ally in confronting U.S. and Western dominance
- China and Russia needed to cooperate to overcome challenges to their security, including “damaging acts of hegemony, domination and bullying.”
- Xi has pursued a harder stance against what he calls a U.S. effort to contain China's rise, portraying China as a nation besieged — much as Putin has done in speeches to Russians
- Xi has urged Chinese industries to reduce their reliance on Western technology and hailed China's growth as proof that it does not need to adopt Western political values
- China has been buying more advanced weapons from Russia to modernize its military, and the two nations have increased their joint military exercises
- President Joe Biden was visiting Tokyo, China and Russia sent bombers over the seas in northeast Asia as a show of force

5. Russia-Ukraine war through the prism of China

Beijing is unlikely to want an end to the Russian war in Ukraine for several reasons

1. First, being tied down in Ukraine has the effect of weakening Russia militarily, economically, and politically, This is a vacuum that China can step into, especially in Eurasia
2. Second, a prolonged conflict in Ukraine means that the West's, and in particular the United States', attention and resources are diverted and this the Chinese see as a good thing. From Beijing's point of view, it weakens the focus on and reduces the resources for any potential Western intervention on China's eastern seaboard, particularly in the scenario of a crisis over Taiwan

3. Third, a continuing crisis in Ukraine offers opportunities for international messaging about the relative rise in Chinese power vis-à-vis both the Russians and Americans



Source: BBC

- Clearly, Russia's regional and global stature has taken a hit from what it has done and what it is unable to do that is, to prosecute a quick end to the conflict
- Meanwhile, just as China's role in helping Iran and Saudi Arabia restore diplomatic ties was intended to showcase Beijing's rising influence and the decline of the US in the Middle Eastern region, the inability of the Ukrainians to expel the Russian invaders despite Western support can be used to send a signal in Europe
- If anything, China's political support at forums such as the United Nations and elsewhere has been crucial to Russia building a case for the legitimacy of the war
- The agreement between Belarus and China earlier this year has sections on industrial production, joint R&D and defence cooperation which could well allow for potential weapons production and transshipment to Russia

6. US and China

The two nations have fundamentally different interests on this and other issues, and more often than not, these are opposing interests

These differences are ideological and deep-rooted, and the recent American shooting down of a Chinese surveillance balloon in US airspace suggests that tensions in the US-China relationship are only set to grow

Even if their interests were to align temporarily, Xi has too close a relationship with Putin and sees greater value in a Russian bulwark against the West to try and actively promote Washington's brief

7. Effects of War on China

- The war brings costs to China not just economic ones but political ones, too, especially from the major Western nations that are also big markets for Chinese manufacturing and sources for high technology
- But these are costs that the Chinese economy appears large enough to bear, especially when it is able to procure oil at deep discounts from Russia, and has had its own version of technological self-reliance programmes underway for decades
- China is also able to use its economic influence to carry out trade in its own currency with Russia and other sanctioned regimes — Iran, for example
- The impact of the Russia-Ukraine conflict on China is not just external and economic but also internal.
- An unstable external environment and its economic consequences can also be used to justify both China's current economic difficulties in the wake of the pandemic as well as Xi's continuing hold over the reins of power as being essential for national stability and recovery

8. Challenges for India

- The China-Russia tango presents two challenges for India
- Delhi's exercise of "strategic autonomy" over the last year has been premised on its long-standing partnership with Russia, but Moscow's cosyng up with Beijing is putting pressure on that relationship. Putin and Xi have condemned the Quad grouping of which India is a part
- Moscow's positions on India's LAC troubles with China fall well below what Delhi would like to hear from a friend, and it is not clear how that can be changed



- Secondly, internationally, the success of India's presidency of the G20 will be measured on the outcome document, which needs the cooperation of both Moscow and Beijing

ABEL PRIZE

1. Context

Luis Caffarelli, 74, has won the 2023 Abel Prize for his seminal contributions to regularity theory for nonlinear partial differential equations including free-boundary problems and the Monge-Ampère equation”.

2. What is Abel Prize?

- The prize was established by the Norwegian Parliament (Stortinget) in 2002, marking the 200th anniversary of Niels Henrik Abel's birth.
- Notably, the prize was first proposed in 1899, when Norwegian mathematician Sophus Lie proposed establishing a prize named after Abel when he learned that Alfred Nobel's plans for annual prizes would not include a prize in mathematics. This plan never materialized.
- In 2001, as Abel's 200th birth anniversary drew close, a working group was formed to develop a proposal for such a prize.
- This group presented a proposal to the Norwegian prime minister, who soon announced the creation of the Abel prize.
- The Abel Prize is awarded and administered by the Norwegian Academy of Science and Letters on behalf of the Norwegian government.
- It is financed by the Norwegian government which also does not tax the prize money.
- The recipients are chosen by the Abel Committee, which comprises expert mathematicians, all appointed by the Norwegian Academy of Science and



Letters, under the advice of the International Mathematical Union (IMU) and the European Mathematical Society (EMS).

3. History of Abel Prize

- First awarded in 2003, the Abel prize recognizes pioneering scientific achievements in mathematics.
- It is named after Norwegian mathematician Niels Henrik Abel (1802-29), who in his short life made pioneering contributions in a multitude of fields.
- It is often considered to be an equivalent of the Nobel prize which does not have a category for mathematics and has been modelled as such.
- The prize includes a monetary award of 7.5 million kroner (roughly \$ 720,000) and a glass plaque designed by Norwegian artist Henrik Haugan.
- It is awarded by The Norwegian Academy of Science and Letters, on behalf of the Ministry of Education.

4. About Niels Henrik Abel

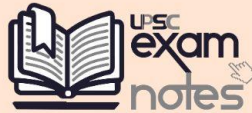
- Niels Henrik Abel (1802-1829) was a Norwegian mathematician who left a big impact on a number of fields in his rather short life.
- His most famous single result is the first complete proof demonstrating the impossibility of solving the general quintic equation in radicals.
- This question was one of the outstanding open problems of his day and had been unresolved for over 250 years.
He was also an innovator in the field of elliptic functions, and discoverer of what would later be known as Abelian functions.
- He made all his discoveries while living in crippling poverty. He died of tuberculosis at the age of 26.

5. Who is Luis Caffarelli and why did he win the Abel prize?

- Caffarelli was born and raised in Buenos Aires, Argentina, making him the first Abel laureate from South America.
- Currently, he is a professor at the University of Texas, Austin.
- He is married to fellow Argentinian mathematician Irene Martínez Gamba, who teaches at UT, Austin as well.



- Caffarelli has been one of the leading figures in the study of partial differential equations for over five decades.
- According to Abel's citation, "Partial differential equations arise naturally as laws of nature, whether to describe the flow of water or the growth of populations.
- These equations have been a constant source of intense study since the days of Newton and Leibniz."
- The Abel citation states that Caffarelli has made "groundbreaking contributions" that have "radically changed our understanding of classes of nonlinear partial differential equations with wide applications.
- The results are technically virtuous, covering many different areas of mathematics and its applications.
- Notably, he has been recognized for "combining brilliant geometric insight with ingenious analytical tools and methods" in this field of mathematics.



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General Studies II: Governance

INSURANCE REGULATORY DEVELOPMENT AUTHORITY OF INDIA (IRDAI)

1. Context

The Insurance Regulatory and Development Authority of India (IRDAI) has lifted limits on the payment of commissions to insurance intermediaries. With this, life and non-life players will have more freedom in offering commissions the compensation paid to and received by an insurance agent from an insurer for soliciting and procuring an insurance policy.

2. Insurance Regulatory Development Authority of India (IRDAI)

- The Insurance Regulatory and Development Authority of India or the IRDAI is the apex body responsible for the regulation and development of the insurance industry in India.
- It is an autonomous body.
- It was established by an act of Parliament known as the Insurance Regulatory and Development Authority Act, of 1999. Hence, it is a statutory body.

3. IRDA Functions

- Its primary purpose is to protect the rights of the policyholders in India.
- It gives the registration certificate to insurance companies in the country.
- It also engages in the renewal, modification, cancellation, etc. of this registration.
- It also creates regulations to protect policyholders interests in India.

4. What does the new IRDAI rule say?

- IRDAI has asked insurance companies, including life and non-life, to fix an overall cap on commission to agents, brokers, and other intermediaries, giving more flexibility to insurers in managing their expenses.
- This means the regulator has replaced the earlier cap on different commission payments to various types of intermediaries with an overall board-approved cap which should be within the allowed expenses.

5. What is the Objective?

The rationale of the regulation is to enable and provide flexibility to the insurers, both life and general insurers to manage their expenses within the overall limits based on their gross written premium to optimally utilize their resources for enhancing benefits to policyholders.

6. How will this move benefit insurance companies and agents?

- The insurance sector participants have welcomed the change in the regulation and termed it a major reform.
- They said the removal of the cap on commission payments will positively impact the sector.
- Currently, the limit of EOM in the general insurance business is 30 percent, and in health insurance is 35 percent.
- The insurance companies are paying insurance intermediaries a commission of 15 percent of the total premium business they are bringing in.
- The new regulation has removed the cap. However, the overall limit of EOM will remain.
- With the new regulations, an insurance company can pay a higher commission to an agent if the business brought in is good and claim-free.
- The liberty to give a commission to an agent is left to the company.
- The new norms will facilitate greater product innovation and the development of new product distribution models and lead to more customer-centric operations.
- It will also increase insurance penetration and provide flexibility to insurers in managing their expenses. Overall, it will smoothen adherence to compliance norms.

7. What benefit will consumers get?

- Post the changes in regulations, insurance agents are likely to be more interested in selling insurance products and explaining policy details to consumers beforehand.
- The claim ratio of these agents will also be better.
- When claim outgoes are within the overall manageable limit, an insurance company may not increase the premium, which will be beneficial for consumers.
- This move will also help in increasing insurance penetration as agents will get higher commissions.
- IRDAI said the regulation will come into force from April 1, 2023, and will remain in force for a period of three years thereafter.

8. What do Expenses of Management mean?

- Expenses of Management (EOM) include all expenses in the nature of operation expenses of general or health Insurance business and commission to the insurance agents or insurance intermediaries.
- It also includes commission and expenses on reinsurance inward, which are charged to the revenue account.

SMART CITY MISSION

1. Context

Union Housing and Urban Affairs Minister Hardeep Puri announced that 80 Integrated Command and Control Centres (ICCCs), an integral component of the Smart Cities Mission, have already been set up, while the remaining 20 would be completed by August 15, 2023

2. What is Smart City Mission?

- The Smart Cities Mission aims at developing 100 cities, which were shortlisted, into self-sustainable urban settlements.
- The mission was launched on June 25, 2015, and was projected as one aimed at transforming the process of urban development in the country.
- Among its strategic components is ‘area-based development, which includes city improvement (retrofitting), city renewal (redevelopment), and city extension (greenfield development), plus a pan-city initiative in which ‘smart solutions’ are applied covering larger parts of the city.

3. Key Focus areas of the Smart City Mission

- Key focus areas of the scheme include the construction of walkways, pedestrian crossings, cycling tracks, efficient waste-management systems, integrated traffic management, and assessment.
- The scheme also assesses various indices to track urban development such as the Ease of Living Index, Municipal Performance Index, City GDP framework, Climate-smart Cities assessment framework, etc.

4. Integrated Command and Control Centre (ICCC)

- The Smart Cities Mission includes setting up ICCCs for each such city as a vital step.
- These ICCCs are designed to enable authorities to monitor the status of various amenities in real time.
- Initially aimed at controlling and monitoring water and power supply, sanitation, traffic movement, integrated building management, city connectivity and Internet infrastructure, these centres have since evolved to monitor various other parameters.
- The ICCCs are now also linked to the CCTNS (Crime and Criminal Tracking Networks and Systems) network under the Ministry of Home Affairs.
- The ICCC acts of a smart city acts as a “nerve centre” for operations management.
- It processes a complex and large pool of data sets at an aggregated level. For example, it is now the go-to source for integrated traffic management monitoring.

- The ICCC is the nodal point of availability of all online data and information relating to smart services included in a smart city, such as LED street lighting, CCTV surveillance cameras, air quality sensors, smart parking system, WiFi, electricity and water supply and billing, GIS, e-hospitals, property tax management, estate management, engineering systems, asset management systems, and other services.
- During the pandemic, they also served as war rooms for Covid-19 management.

5. How did the ICCCs help in the management of Covid-19?

- During the pandemic, they also served as war rooms for Covid-19 management.
- During the peak of the first wave, when countries were struggling to figure out ways of combating the virus, the government used the ICCCs as war rooms for managing the outbreak, with real-time surveillance and monitoring of districts across the country.
- Converted into war rooms, the smart cities ICCCs used the central data dashboard and provided information about the status of Covid-positive cases in various administrative zones of these cities, officials aware of the exercise said.
- The war rooms were also used for tracking people under quarantine and suspected Covid 19 cases.

6. Current Status of Smart Cities Mission

- The ambitious project, announced by Prime Minister Narendra Modi in 2015, had an initial deadline of 2021 for the first lot of 20 smart cities out of the 100 selected.
- Although the project was announced in 2015, the cities were selected over a period of two years between 2016 and 2018, each with a deadline of completion within five years from the time of their selection.
- On the recommendation of NITI Aayog, the timeline was extended last year until 2023 due to delays caused by the pandemic.

- According to current Ministry data, the SCM has so far covered over 140 public-private partnerships, 340 smart roads, 78 vibrant public places, 118 smart water projects and over 63 solar projects.

7. What's next?

- The Ministry of Housing and Urban Affairs has begun work to finalise its recommendation for providing ICCCs as a service to states and smaller cities.
- The Ministry aims to finalise an ICCC model and implement a pilot project across Six major states- Uttar Pradesh, Maharashtra, Karnataka, Madhya Pradesh, Rajasthan and Tamil Nadu.

RAJASTHAN DAY

1. Context

Festivities celebrating Rajasthan Day are undergoing across the state today (March 30).

Rajasthan Day marks the date of the state's creation, unifying a motley group of princely states and chiefships.

2. Key Points

- The story of Rajasthan's foundation is intriguing. At the time of Independence, Rajasthan was almost wholly contained in the Rajputana Agency, a political office of the British Indian Empire.
- It consisted of 22 princely states and estates. Less than 22 months after independence, all 22 had assimilated to form what would become India's largest state. However, the story of the state's foundation did not end there.
- Modifications were made to the boundaries after the **State Reorganisation Act 1956**, giving Rajasthan its present shape.

3. The question of princely states

- Upon attaining independence from British rule, India faced multiple challenges. One of the most pressing ones was regarding princely states.
- The outgoing British administration handed over only 60 per cent of India's land to the Indian government. The rest was in the hands of rulers of 565 princely states.
- The British Empire administered India using two parallel systems direct rule in the provinces and indirect rule in the Princely states.
- Rulers of these states had a degree of autonomy about their domestic administration but accepted the suzerainty of the British Crown.

When the British left, the Crown's suzerainty lapsed. Thus, the ruler of every princely state had three options:

1. Join India,
2. Join Pakistan
3. Remain independent.

- This was a major problem for nascent India as each ruler had to be individually or collectively convinced to join the new Union of India.
- Especially in the aftermath of the Partition, it was of utmost importance to integrate these princely states into the union to maintain India's territorial integrity.
- Thus, the States Ministry, headed by Sardar Vallabhbhai Patel with VP Menon as secretary, was launched with the task of merging princely states into the Indian Union.

4. The Rajputana Agency

- The Rajputana Agency spanned roughly 330,330 sq. km with an agent under the Governor General in charge, residing at Mount Abu.
- All the princely states and estates in the agency (22 in total) were ruled by Hindu rulers except Tonk (which had a Muslim ruler).
- Most rulers were Rajput with the exception being Bharatpur and Dholpur which had Jat rulers.

- Since they largely remained loyal to the British during the revolt of 1857, there were no major administrative changes made in these areas during British rule.
- After independence, these states were slowly integrated into the Indian Union, in stages.

5. The Matsya Union

- The States Ministry believed that four princely states Alwar, Bharatpur, Dholpur and Karauli at the eastern edge of the erstwhile Rajputana Agency had "**natural, racial and economic affinities**" with each other, as per VP Menon's The Story of the Integration of Indian States (1956). Thus, the Matsya Union was inaugurated on March 18, 1948.
- At the time, it was understood that this would be a temporary formation and eventually, the Matsya Union would be merged either with the United Provinces or with the upcoming Rajasthan.

6. The Rajasthan Union in south-east Rajputana

- Almost parallelly, the idea of the state of Rajasthan began to take shape in the southeast of the erstwhile Rajputana Agency.
- Ten princely states, with Udaipur (also known as Mewar) being the largest, wanted to form a union.
- An idea to merge these into Madhya Bharat (roughly today's Madhya Pradesh) was also floated, but that did not go through.
- Another idea to merge these states into the much larger Udaipur was proposed by the Maharana of Udaipur, Bhupal Singh Bahadur.
- However, this was not agreeable to the other princely states. Hence, on March 25, 1948, the nine other states came together to form the Rajasthan Union. Within three days after its formation, Udaipur decided to join this union.
- After renewed discussions, the second Rajasthan Union was inaugurated by PM Jawaharlal Nehru on April 18, 1948.

7. Greater Rajasthan

- However, while the Matsya Union and the Rajasthan Union accounted for much of the east and south-east of the erstwhile Agency, the four largest princely states **Jaipur, Jodhpur, Bikaner and Jaisalmer** remained independent.
- The latter three also shared a border with Pakistan, making their swift integration into the Indian Union even more important.
- VP Menon suggested that these three, in addition to the other border state of Kutch (currently in Northern Gujarat) should be unified and put under the direct rule of the Centre.
- However, this move did not receive many backers. The alternative, backed by Patel was to merge all four states into the newly formed Rajasthan Union.
- Discussions to this effect bore fruit and on January 14, 1949, Sardar Patel announced "the impending reality of Greater Rajasthan".
- Greater Rajasthan was officially inaugurated by Patel on March 30, 1949, the date still celebrated as Rajasthan Day.
- The capital of the new Union was picked as Jaipur with the 36-year-old Maharaja of Jaipur, Sawai Man Singh II, selected as the Rajpramukh.
- On May 15, 1949, the Matsya Union merged with Greater Rajasthan to create a single, unified state of Rajasthan.

8. Modifications made by the State Reorganisation Commission

- After demands for states based on linguistic lines emerged in various parts of India after Independence, the State Reorganisation Commission (SRC) was formed in 1953 to recommend new state boundaries to the government.
- The commission's recommendations, with some modifications, were implemented in the State Reorganisation Act of November 1, 1956. For the state of Rajasthan, this brought some minor changes as well.
- Ajmer had continued to exist as a small, independent "**Class C**" state (under the direct control of the Centre) within the boundaries of central Rajasthan.
- It was formed in 1950 out of the former province of Ajmer-Merwara which, unlike the rest of Rajasthan, was under British administrative control.
- Given Ajmer's linguistic, cultural and geographical links to Rajasthan, the SRC deemed that "there was no reason for it to continue existing as an independent state". Thus, Ajmer was integrated into Rajasthan as a district.

- Also integrated was the Abu Road Taluk. In 1950, this taluk of the Sirohi district of Southern Rajasthan was sliced and included in the Bombay State.
- This had always been contested by Rajasthan and the SRC returned the taluk to the state.
- Finally, the enclave of Sunel in Rajasthan's southeastern edge was received from Madhya Pradesh in exchange for the enclave of Sironj, due to administrative reasons.

TAMILNADU SCHOOL EDUCATION

1. Context

A major announcement in Tamil Nadu's budget for 2023-24 was that the schools run by different departments for so long to cater to specific needs will be merged with the School Education (SE) department.

The announcement has evoked mixed reactions from civil society.

2. About these Schools

- While the government is yet to spell out finer details, the budget announcement indicated that the schools run by the **Adi Dravidar and Tribal Welfare (ADTW), Backward Classes, Most Backward Classes and Denotified Communities Welfare (BCW) Welfare of the Differently-abled Persons (WPD), Forest, and Hindu Religious and Charitable Endowments (HR &CE)** departments will be merged.
- These departments run 1, 834 schools with roughly 1.6 lakh students on their rolls.
- The ADTW department alone accounts for 80 per cent of these schools (1, 466) and students (1.26 lakh).
- Within the ADTW department, there are 1, 138 Adi Dravidar Welfare schools.
- The remaining 328 are **Government Tribal Residential (GTR) and Eklavya Model Residential Schools**, run mainly for Scheduled Tribes (ST).
- The BCW runs 295 schools, HR&CE runs 32, WPD 22 and the forest department 19.

- These schools, especially those run by ADTW and BCW departments, were created to focus on education for marginalised sections.
- For instance, the Adi Dravidar schools have their origins in the British Raj.
- They were created with the support of the labour department for the "Depressed Classes (as the Scheduled Castes were then referred)", who were denied education elsewhere.
- They were then moved to the Social Welfare department and later to ADTW when it was created.
- Similarly, the BCW runs the Kallar reclamation schools, which have their origins before Independence.
- They were created, mainly for the Piramalai Kallar community, who faced marginalisation due to the draconian Criminal Tribes Act brought by the British.

3. Reasons for the merging

- The budget mentioned that the schools will be merged to "**achieve the goal of social justice**", "**improve the quality of schools**" and to ensure "**quality education for all**".
- The relatively poor quality of these schools, especially those run by ADTW and BCW departments, has long been a concern.
- Their infrastructure is below par and a lot of teaching posts are vacant.
- Another key reason, although not officially acknowledged in the budget, was the caste identifier in the names of the schools run by ADTW and BCW departments.
- In Tamil Nadu, Adi Dravidar refers to the SCs. Similarly, the names Kallar Reclamation and GTR refer to specific communities.
- The argument by a section is that the caste identifiers, especially in case of Adi Dravidar welfare, especially in case of Adi Dravidar welfare schools, result in the students feeling isolated and prevent those from other communities from joining these schools in more numbers.
- While there was a need in the past for such schools as these communities did not have access to education elsewhere, they argue that with the situation being improved, these schools were now resulting in "**ghettoisation**".

4. Concerns

- While there seems to be a broad agreement that the poor quality of these schools needs to be addressed, there is concern over the merger being projected as the magic bullet.
- The discussion has focused on the ADTW department for many factors, including its higher share of schools, higher budget and historic and political context.
- Many have highlighted that the schools were in poor shape due to prolonged negligence and widespread irregularities.
- Merging the schools without addressing these issues would only result in them being denied the special focus they deserve by the SE department which is huge.
- With successive T.N. governments already blamed for reduced spending under the SC and Tribal Sub Plans, there is concern that the merger will result in the further diversion of funds.
- Importantly, many are surprised that such an announcement has been made without consultations with the stakeholders concerned.

COMPETITION (AMENDMENT) BILL

1. Context

The lower house of Parliament passed the Competition (Amendment) Bill, 2023 Wednesday, which seeks to amend the Competition Act, 2002. One of the major changes in the amended law is that it affords the Competition Commission of India (CCI) the ability to penalise entities found engaging in anti-competitive behaviour based on their global turnover.

2. What is Competition (Amendment) Bill, 2022?

- It was introduced by Ministry of Finance to amend the Competition Act, 2002 to bring it in line with modern development of new technology, digital market.
- The 2002 Act establishes the Competition Commission of India (CCI) for regulating market competition.

- Later, the Bill was referred to the Parliamentary Standing Committee on Finance for further scrutiny.

3. Key features of the 2022 Bill

- **Regulation of Combinations based on transaction value:** The Act prohibits any person or enterprise from entering into a combination which may cause an appreciable adverse effect on competition. Combinations imply mergers, acquisitions, or amalgamation of enterprise. The prohibition applies to transactions where parties involved have: (i) cumulative assets of more than Rs 1,000 crore, or (ii) cumulative turnover of more than Rs 3,000 crore, subject to certain other conditions. The Bill expands the definition of combinations to include transactions with a value above Rs 2,000 crore.
- **Time limit for approval of combinations:** The Act requires the CCI to pass an order on an application for approval of combinations within 210 days. The Bill reduces this time limit to 150 days.
- **Definition of control for classification of combinations:** For classification of combinations, the Act defines control as control over the affairs or management by one or more enterprises over another enterprise or group. The Bill modifies the definition of control as the ability to exercise material influence over the management, affairs, or strategic commercial decisions.
- **Anti-competitive agreements:** Under the Act, anti-competitive agreements include any agreement related to production, supply, storage, or control of goods or services, which can cause an appreciable adverse effect on competition in India. Any agreement between enterprises or persons, engaged in identical or similar businesses, will have such adverse effect on competition if it meets certain criteria.
- **Settlement and Commitment in anti-competitive proceedings:** Under the Act, CCI may initiate proceedings against enterprises on grounds of: (i) entering into anti-competitive agreements, or (ii) abuse of dominant

position. Abuse of dominant position includes: (i) discriminatory conditions in the purchase or sale of goods or services, (ii) restricting production of goods or services, or (iii) indulging in practices leading to the denial of market access. The Bill permits CCI to close inquiry proceedings if the enterprise offers: (i) settlement (may involve payment), or (ii) commitments (may be structural or behavioural in nature). The manner and implementation of the framework of settlement and commitment may be specified by CCI through regulations.

- **Decriminalisation of certain offences:** The Bill changes the nature of punishment for certain offences from imposition of fine to penalty. These offences include failure to comply with orders of CCI and directions of Director General with regard to anti-competitive agreements and abuse of dominant position.

4. Why global turnover provision could spell trouble for the Big Tech?

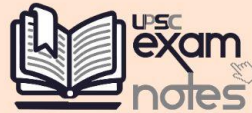
- While the new provision on global turnover will not be exclusively applicable to tech companies, they are likely to be the most aggrieved by it given the nature of their business which cuts across geographies.
- Typically, the revenue these businesses earn from their India operations is much smaller than their income in other regions such as the US and Europe.
- From a business point of view, the consideration of total turnover may lead to unfair and punitive outcomes and would also lead to discrimination between enterprises who commit a similar contravention but are penalised differently depending on the expanse of their business.
- In the European Union, the penalty imposed on an entity for anti-competitive activity has been limited to 10 percent of the overall annual turnover of the company.
- The 10 percent limit can be based on the turnover of the group to which the company belongs if the parent of that group exercised decisive influence over the operations of the subsidiary during the infringement period.

5. The jurisprudence on the definition of 'turnover' in India

- The definition of 'turnover' had been a widely debated subject in the competition law landscape, and it was in 2017 when the Supreme court had fixed how it should be determined in such cases.
- On 8 May, 2017, in a landmark judgement, the top court had upheld the principle of relevant turnover for determination of penalties in competition law contraventions.
- In a case related to alleged contravention of the Competition Act, 2002 in the public procurement of Aluminium Phosphide tablets by the Food Corporation of India, the CCI had imposed a penalty at the rate of 9 percent of the total turnover of the concerned tablet manufacturers, Excel Corp. care Limited, United Phosphorous Limited, and Sandhya Organic Chemicals Private Limited.
- The Competition Appellate Tribunal (COMPAT) had however later said that the turnover will have to be relevant turnover, that is turnover derived from the sales of goods and services.

6. Competition Commission of India

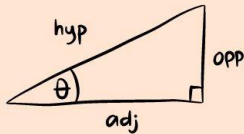
- The Competition Commission of India (CCI) was established in March 2009 by the Government of India under the Competition Act, 2002 for the administration, implementation, and enforcement of the Act.
- Competition Commission of India consists of a Chairperson and 6 Members appointed by the Central Government.



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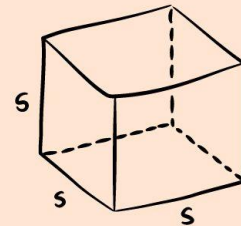
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General Studies II: Polity

SUB CATEGORISING OTHER BACKWARD CASTES(OBCs)

1. Context

Centre **extended the tenure** of The Commission to Examine Sub-categorisation of Other Backward Classes (OBCs) headed by Justice G Rohini, former Chief Justice of Delhi High Court

The Commission, constituted nearly five years ago, has got 10 extensions so far, and now has until January 31 next year to submit its report

2. What is Sub-Categorisation of OBC's

- The idea is to create sub-categories within the larger group of OBCs for the purpose of reservation
- OBCs are granted 27% reservation in jobs and education under the central government
- This has been a legal debate for other reservation categories too: in September last year, a Constitution Bench of the Supreme Court reopened the debate on sub-categorisation of Scheduled Castes and Scheduled Tribes for reservations
- For OBCs, the debate arises out of the perception that only a few affluent communities among the over 2,600 included in the Central List of OBCs have secured a major part of the 27% reservation
- The argument for creating sub-categories within OBCs is that it would ensure “equitable distribution” of representation among all OBC communities
- It was to examine this that the Rohini Commission was constituted on October 2, 2017

3. What is Commission's brief

- It was originally set up with three terms of reference:
- To examine the extent of inequitable distribution of benefits of reservation among the castes or communities included in the broad category of OBCs with reference to such classes included in the Central List
- To work out the mechanism, criteria, norms and parameters in a scientific approach for sub-categorisation within such OBCs
- To take up the exercise of identifying the respective castes or communities or sub-castes or synonyms in the Central List of OBCs and classifying them into their respective sub-categories
- To study the various entries in the Central List of OBCs and recommend correction of any repetitions, ambiguities, inconsistencies and errors of spelling or transcription
- This was added following a letter to the government from the Commission on July 30, 2019, in which it flagged “several ambiguities in the list as it stands now”

CENTRAL GOVT EMPLOYEES BY SOCIAL CATEGORY						
	TOTAL	SC	ST	OBC	EWS	OTHERS
Group-A	50,068	6,440 (12.86%)	2,826 (5.64%)	8,455 (16.88%)	11 (0.02%)	32,226 (64.58%)
Group-B	1,25,732	20,954 (16.66%)	8,244 (6.55%)	19,829 (15.77%)	5 (0.04%)	76,700 (61.0%)
Group-C (excluding safai karmacharis)	3,22,503	58,744 (18.22%)	22,296 (6.91%)	72,710 (22.54%)	84 (0.03%)	1,68,639 (52.29%)
Group-D (safai karmacharis)	13,722	4,507 (32.72%)	1,056 (7.66%)	2,774 (20.14%)	0	5,435 (39.46%)
TOTAL	5,12,075	90,675 (17.70%)	34,422 (6.72%)	1,03,768 (20.26%)	100 (0.02%)	2,83,110 (55.28%)

4. Key Takeaways

- At the time it was set up, the Commission was given 12 weeks to submit its report, but has since been given 10 extensions

- In 2021, until August 31, the National Commission for Backward Classes (NCBC) incurred an expenditure of Rs 54.01 lakh on the Commission
- This includes the salaries of Justice Rohini and Prof Bajaj, salaries of consultant and outsourcing staff, and miscellaneous and hospitality items
- In its letter on July 30, 2019, the Commission wrote that it is ready with the draft report on sub-categorisation
- Among the challenges it has faced, one has been the absence of data for the population of various communities to compare with their representation in jobs and admissions
- In 2018, the Commission analysed the data of 1.3 lakh central jobs given under OBC quota over the preceding five years and OBC admissions to central higher education institutions, including universities, IITs, NITs, IIMs and AIIMS, over the preceding three years
- The findings were: 97% of all jobs and educational seats have gone to just 25% of all sub-castes classified as OBCs; 24.95% of these jobs and seats have gone to just 10 OBC communities; 983 OBC communities 37% of the total have zero representation in jobs and educational institutions; 994 OBC sub-castes have a total representation of only 2.68% in recruitment and admissions

5. OBC Recruitment in Central Jobs

- According to data tabled in Parliament by Jitendra Singh, MoS for Personnel, Public Grievances and Pensions, in Rajya Sabha on March 17, the total number of Group A to Group C employees (including safai karmacharis) was 5.12 lakh
- Of these, 17.70% are SC, 6.72% ST, 20.26% OBC (Other Backward Classes), and 0.02% EWS (Economically Weaker Sections)
- In Group-A, the highest tier among these, the representation of SCs is just 12.86%, of STs 5.64% and of OBCs 16.88%. Reservation for these communities is 15%, 7.5% and 27% respectively
- These data cover 43 departments and government offices including Cabinet Secretariat, UPSC and Election Commission, but excluding the largest central government employers such as Railways and Department of Posts

SIGNIFICANCE OF JAAPI, XORAI, GAMOSA IN ASSAM POLL BATTLE

1.Context

As the polling date draws closer, decorative jaapis (field hats), hand-woven gamosas and bell-metal xorais are making frequent appearances in Assam.

Primarily used to felicitate important people and guests, these important symbols of Assamese identity and culture are abundantly seen in political campaigns across the state

2. Jaapi

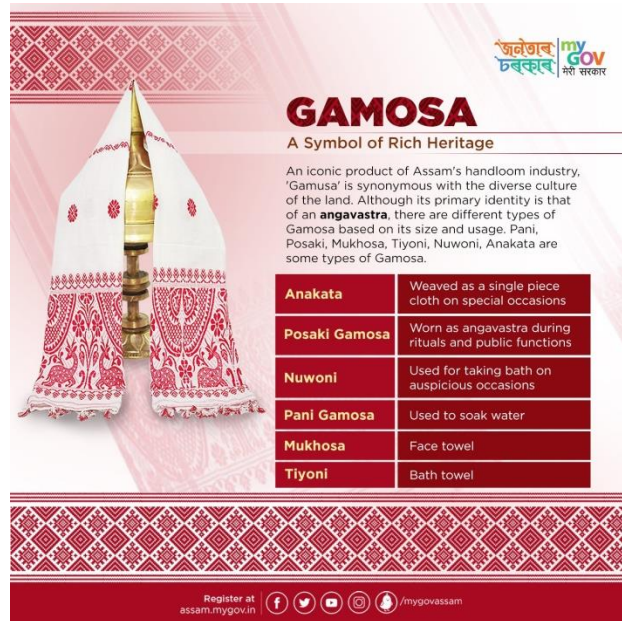
- The jaapi is a conical hat made of bamboo and covered with dried tokou (a palm tree found in rainforests of Upper Assam) leaves
- While it is most often used in official functions to felicitate guests, the landscape of rural Assam features a more utilitarian version, which farmers wear to protect themselves from the harsh weather, both sun and rain, while working in the fields
- The first possible recorded use of jaapi dates back to the Ahom-era buranjis, or chronicles
- Later, the jaapi was also seen and popularised in the first Assamese film, Joymati (1935) made by cultural icon Jyotiprasad Agarwala
- Today, the bulk of Assam's jaapis are made by artisans based in a cluster of villages in Nalbari district



Source: Wiki media commons

3. Gamosa

- The Gamosa, which literally translates to a cloth to wipe one's body, is omnipresent in Assam, with wide-ranging uses
- It can be used at home as a towel (uka gamosa) or in public functions (phulam/floral gamosa) to felicitate dignitaries or celebrities
- According to Baruah, the gamosa is a "symbol of the Assamese nation" and its use in that context can be traced back to 1916 and 1917, when the Asom Chatra Sanmillan (first student organisation) and Asom Sahitya Sabha (premier literary organisation) were founded
- However, it was only during the anti-foreigner Assam Agitation of the early 1980s, when Assamese nationalism reached its crescendo, that the gamosa assumed a new role
- Today, no public function can commence without the guest first being felicitated with the gamosa



GAMOSA
A Symbol of Rich Heritage

An iconic product of Assam's handloom industry, 'Gamusa' is synonymous with the diverse culture of the land. Although its primary identity is that of an **angavastra**, there are different types of Gamosa based on its size and usage. Pani, Posaki, Mukhosa, Tiyoni, Nuwoni, Anakata are some types of Gamosa.

Anakata	Weaved as a single piece cloth on special occasions
Posaki Gamosa	Worn as angavastra during rituals and public functions
Nuwoni	Used for taking bath on auspicious occasions
Pani Gamosa	Used to soak water
Mukhosa	Face towel
Tiyoni	Bath towel

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4. Xorai

- Made of bell-metal, the xorai essentially a tray with a stand at the bottom, with or without a cover can be found in every Assamese household
- While it is primarily used as an offering tray during prayers, or to serve tamale-paan (betel-nut) to guests, a xorai is also presented along with the jaapi and gamosa while felicitating someone
- The bulk of xorais in Assam are made in the state's bell metal hub Sarthebari in Bajali district



KERFUFFLE IN KARNATAKA

1. Context

At the cabinet meeting in Karnataka, the BJP government did away with the nearly three decade old 4% reservation for Muslims in the other Backward Classes (OBC) category and distributed it equally among the Veerashaiva Lingayats and Vokkalingas, two dominant landowning communities in the state at 2% each.

2. What is Karnataka's current reservation policy?

- Reservations for Scheduled Castes, Scheduled Tribes, Backward Classes, and Muslims are capped at 50% in accordance with an order of the supreme court.

- The quota break-up is as follows: Category I (Backward Classes) 4%; Category II A (OBCs) 15%; Category II B (Muslims) 4%; Category III A (Vokkaligas, etc.) 4%; Category III B (Lingayats, Marathas, Bunts, Christians) 5%; SCs 15%; and STs 3%.
- A total 95 communities and their sub-sects are recognised as Backward Classes, and 102 communities and their sub-sects as OBCs.

3. What are the major communities in Karnataka in terms of population?

- The Veerashaiva Lingayats are considered the single largest entity in Karnataka's 6 crore population, making up around 17%.
- Vokkalingas are at 15%, Muslims 9% and Kurubas around 8%.
- The Backward Classes block of various sub-castes minus the Kurubas make up around 25%. SCs are around 15%, and STs 3%.

4. Who are Lingayats?

- The Lingayats are a dominant community who make up nearly 17 % of Karnataka's six crore population followed by Vokkalingas. The new categories will not affect the existing reservation provided to other communities.
- The term Lingayat denote a person who wears a personal linga, an iconic form of god shiva, on the body which is received during the initiation ceremony.
- Lingayats are the followers of the 12th century social reformer- philosopher poet, Basaveshwara.
- Lingayats had been classified as a Hindu subcaste called "Veerashaiva Lingayats" and they are considered to be Shaivates.

5. Who are Vokkalingas?

- It is even believed that the Rashtrakutas and Western Gangas were of Vokkalinga origin.
- The Vokkalinga caste originates in the Indian state of Karnataka.
- As a company of warriors and cultivators, they have historically wielded tremendous demographic, political, and economic dominance in Old Mysore.

6. How has OBC and SC reservation changed?

- The Cabinet decided to exclude Muslims from the OBC category and scrapped the 4% reservation given to them under Category 2B.
- This has been divided equally among Vokkalingas and VeerashaivaLingayats for whom new categories of 2C and 2D have been created respectively.
- Following the change, the reservation quantum for Vokkalingas and others in the group went up from 4% and 6% and for VeerashaivaLingayats and others in the group, from 5% to 7%.
- Earlier, the two communities were under 3A and 3B respectively, which stand scrapped.
- The Cabinet also recommended internal reservation among the 101 SCs, a long pending demand of the SC(left) faction to the Union Government.
- Of the 17% reservation given to SCs in Karnataka, it has sliced up 6% to SC (left), 5.5 % to SC (right), 4.5 % to SC (touchable) and 1% to SC (others).
- While the basis for internal reservation was the recommendation of the A.J. Sadashiva Commission report of 2012 when reservation to SCs was pegged at 15%, the Government has adjusted the share, based on Cabinet subcommittee report, as per the new reservation quota that has been hiked to 17%.

7. How are Muslims Losing out?

- The BJP, which does not count Muslims among its voter base, has scrapped the reservation for Muslims, arguing that backward classes reservation is not based on religion.
- Since 1995, the community has been given 4% reservation under Category 2B on grounds of being socially and educationally backward.
- Since the community has now lost its social and educational backwardness reservation status, it can claim reservation under the 10% quota for Economically Weaker sections. This change has to be approved by the centre.
- However, Christians, Jains, Sikhs, Buddhists and converted Christians continue to remain in the backward classes category. Also, nomadic Muslims in Category 1 continue to remain there.

8. Why was such a decision made?

- The BJP, which draws strength from the numerically strong Panchamasalis, a subsect among Veerashaiva Lingayats, was under pressure as the community led by Kudalasangama Seer Sri Jayamruthyunjaya Swami has been agitating for two years seeking 2A status in the OBC list for the community.
- As far as Vokkalingas are concerned, the decision came much before they mounted any serious pressure on the BJP who is struggling to break into the Old Mysore region, which is the Vokkalinga heartland.

SEALED COVER JURISPRUDENCE

1. Context

The Supreme Court March 20 **said it would not accept a “confidential” submission from the Centre** on the disbursal of arrears to retired defence personnel under the One Rank One Pension (OROP) scheme

Justice Chandrachud (who was not CJI then) had criticised the practice of “sealed cover” jurisprudence, saying it set a “dangerous precedent” and made “the process of adjudication vague and opaque”

2. What is "Sealed Cover Jurisprudence"

It is the practice of seeking and accepting information from government agencies in sealed envelopes that can only be perused by judges

It has been followed by the Supreme Court in the past, and sometimes lower courts as well

This can happen in broadly two kinds of cases:

- (i) when the information is connected to an ongoing investigation and,
- (ii) when the information is personal or confidential in nature

It is understood that in the first situation, an ongoing investigation could be impeded by the disclosure, and in the second situation, an individual's privacy could be affected or there may be a breach of trust

3. Issues around it

- The secrecy could end up preventing a party from having a full overview of the charges against them
- Also, sealed covers are at a fundamental level incompatible with the idea of an open court and a transparent justice system
- the non-disclosure of relevant material to the affected party and its disclosure in a sealed-cover to the adjudicating authority sets a dangerous precedent
- The disclosure of relevant material to the adjudicating authority in a sealed cover makes the process of adjudication vague and opaque
- It Perpetuates two Problems
- Firstly, it denies the aggrieved party their legal right to effectively challenge an order since the adjudication of issues has proceeded on the basis of unshared material provided in a sealed cover
- Secondly, it perpetuates a culture of opaqueness and secrecy, It bestows absolute power in the hands of the adjudicating authority
- It also tilts the balance of power in a litigation in favour of a dominant party which has control over information. Most often than not this is the state
- A judicial order accompanied by reasons is the hallmark of the justice system... The sealed cover procedure affects the functioning of the justice delivery system both at an individual case- to case level and at an institutional level
- The Supreme Court in its judgment clarified that “this is not to say that all information must be disclosed in the public”
- It gave the example of “sensitive information affecting the privacy of individuals such as the identity of a sexual harassment victim”
- But it also underlined that “the measure of nondisclosure of sensitive information in exceptional circumstances must be proportionate to the purpose that the non-disclosure seeks to serve”, and that “the exceptions should not...become the norm”

4. Instances of Sealed Covers

- In the Rafale aircraft case, the court accepted the government’s argument that the matter pertained to the Official Secrets Act

- While refusing to stay the arrest of activists held in the Bhima-Koregaon case, it relied on “evidence” submitted by the Maharashtra police in a sealed envelope
- In the NRC exercise in Assam which led to about 19 lakh citizens being excluded from the list, the apex court sought details from the NRC coordinator in a sealed cover with neither the government nor the affected parties being allowed to look at them
- In the case involving corruption allegations against former CBI director Alok Verma, the court insisted that the Central Vigilance Commission submit its report in a sealed cover, ostensibly to maintain public confidence in the agency
- In the 2G case, in which it had cancelled a large number of licences, the court had relied on sealed covers
- During the hearing in the Chidambaram case, while trying to persuade the court to refer to information in the sealed cover, Solicitor General Tushar Mehta had referred to a case from 1997, involving P V Prabhakar Rao, the son of former Prime Minister P V Narasimha Rao

MUSLIM PERSONAL LAW

1. Context

A Muslim couple from Kerala, recently decided to get their marriage registered under the Special Marriage Act (SMA), almost 30 years after having solemnised their nikah according to Islamic principles.

They claimed to have got the marriage registered under SMA so that principles of the secular Act could apply to matters of inheritance in his family and enable his daughters to inherit the couple's property under the **Indian Succession Act, 1925**. The Couple has three daughters and no sons.

2. Islamic law says

- This decision has put the spotlight on Islamic principles of inheritance.
- The **Koran**, through Surah Nisa clearly outlines the principles of inheritance for both direct and indirect heirs.

- Verse 7 states, "For men, there is a share in what their parents and close relatives leave and for women, there is a share in what their parents and close relatives leave whether it is little or much. These are obligatory shares".

According to unanimously agreed on rules on the division of property in Islam, a daughter gets half the share of the son. So if a son inherits a plot of 100 metres from the father, the daughter gets a plot of 50 metres or half the value of the 100-metre plot.

- In marriage, according to Islam, it is the man who is supposed to bear the family expenses, including residence, food, clothing and medicine besides maintenance of his wife, education of his children and looking after his parents.
- If the husband predeceases his wife, she gets a one-eighth share of his property, if the couple has children.
- Otherwise, she gets one-fourth. There is also a share for paternal uncles, aunts, etc as long as they are blood relatives. Same for grandparents if they are alive.
- Each parent gets one-sixth if the son passes away before them and leaves the children behind.
- The problem, as in the case of the Kerala couple arises, when a couple has only a daughter or daughters.

The daughters can inherit only two-thirds of the father's property, as the holy book says, "If you leave only two or more females, their share is two-thirds of the estate". Beyond that, the shares are for the mother and paternal blood relatives.

3. Various options

- Within Islamic law, options are available to such a couple in case they want the property to remain within the family.
- The first option is to make a will or vasiyat under which a person can declare that upon his death, a particular heir shall inherit not more than one-third of the property.

- This is often done in case one of the children is not financially sound or has special needs, or has served his or her parents more than other children.
- For instance, if two children stay abroad and one child stays back with parents to look after them in old age, such a provision may be used.
- Many Muslim families used this provision during the Partition when many families were divided.
- While some children crossed over to Pakistan, others remained here with their parents.
- Besides wasiyat, there is also the concept of virasat.
- Under virasat or inheritance, there is the option of hiba which allows the unrestricted transfer of wealth or property to a person during the lifetime of the donor.
- In the case of the Kerala couple, hiba provisions could have been used to transfer all the property in the name of the daughters during the lifetime of the parents.
- This is like a gift deed. Importantly, while the Islamic division of property clauses for relatives comes into force once a person dies, a gift deed can be made during one's lifetime.
- The jury is out on whether the Kerala couple's actions went against the tenets of Islam or arose from parents' anxiety to secure the future of their children.

NATIONAL SECURITY ACT, 1980

1. Context

Punjab Advocate General Vinod Ghai has said the National Security Act has been invoked in the case of self-styled Sikh preacher and on-the-run Waris Punjab De chief Amritpal Singh.

2. What is National Security Act, 1980

- The National Security Act was passed by the Parliament in 1980 and has been amended several times since then. NSA “empowers the state to detain a person without a formal charge and without trial”

- Under the Act, a person is taken into custody to prevent them from acting in any manner prejudicial to “the security of the state” or for “maintenance of the public order”
- It is an administrative order passed either by the Divisional Commissioner or the District Magistrate (DM) and not detention ordered by police based on specific allegations or for a specific violation of the law
- Even if a person is in police custody, the District Magistrate can slap NSA against them. Or, if a person has been granted bail by a trial court, they can be immediately detained under the NSA
- If the person has been acquitted by the court, the same person can be detained under the NSA
- The law takes away an individual’s constitutional right to be produced before the magistrate within 24 hours, as is the case when the accused is in police custody
- The detained person also does not have the right to move a bail application before a criminal court

3. Grounds for Detention

- NSA can be invoked to prevent a person from acting in any manner prejudicial to the defence of India, relations of India with foreign powers or the security of India
- Among others, it can also be applied to prevent a person from acting in any manner prejudicial to the maintenance of supply and services essential to the community
- An individual can be detained without a charge for a maximum period of 12 months
- The detained person can be held for 10 to 12 days in special circumstances without being told the charges against them

4. Protection available under the Act

- The Indian Constitution allows both preventive detention and the right of protection against arrest and detention in certain cases, enshrined under Article 22 of the Constitution

- However, Article 22(3) provides that the rights available to an arrested person will not be applicable in case of preventive detention, thus an exception is carved out
- One crucial procedural safeguard under the NSA is granted under Article 22(5), where all the detained persons have the right to make an effective representation before an independent advisory board, which consists of three members; and the board is chaired by a member who is, or has been, a judge of a high court
- It was found that in all the 120 cases before the Allahabad High Court in the previous three years, the board upheld the detention
- The DM who passes the detention order is protected under the Act: no prosecution or any legal proceeding can be initiated against the official who carries out the orders
- Therefore, the writ of habeas corpus is the available remedy under the Constitution against the state's power of taking people into custody under the NSA
- The Supreme Court in earlier cases had held that to prevent “misuse of this potentially dangerous power, the law of preventive detention has to be strictly construed”, and “meticulous compliance with the procedural safeguards” has to be ensured

5. Criticism against the Act

- a. The Act vitiates Article 22 of the Constitution and various provisions under the CrPC that safeguard the interest of an arrested person, namely that the arrested person should be informed regarding the ground of arrest and his right to consult a legal practitioner
- b. Further, under the CrPC, the arrested person has to be produced before the nearest Magistrate within 24 hours, but the NSA carves out an exception
- c. Some human rights groups argue that it is often misused by authorities to silence political opponents or those who are critical of the government
- d. There have been calls for the Act to be repealed or amended to prevent its abuse

PROCEDURE TO DISQUALIFY A MEMBER OF PARLIAMENT

1. Context

Wayanad MP Rahul Gandhi's membership of Parliament has been cancelled following his conviction and sentencing by a local court in Surat. A notification issued by the Lok Sabha Secretariat said Rahul "stands disqualified from the membership of Lok Sabha from the date of his conviction i.e. 23 March, 2023 in terms of the provisions of Article 102(1)(e) of the Constitution of India read with Section 8 of the Representation of the People Act, 1951"

2. Key Takeaways

- In a note on October 13, 2015, the Election Commission of India had asked state chief secretaries to issue appropriate instructions to the department dealing with prosecutions to ensure that cases of conviction of sitting MPs or MLAs were brought to the notice of the Speaker or Chairman of the House, and to the Chief Electoral Officer of the state, along with the order of conviction within seven days of the order.
- In the case of a disqualified MLA, the notice is issued by the Vidhan Sabha concerned.
- The Supreme Court in its ruling in *Lok Prahari v Union of India* (2018) clarified that a disqualification triggered by a conviction will be reversed if the conviction is stayed by a court. "Once the conviction has been stayed during the pendency of an appeal, the disqualification which operates as a consequence of the conviction cannot take or remain in effect."
- The notification by the House Secretariat regarding Rahul will cease to be in effect if and when his conviction is stayed.

3. Article 102 of the Constitution

The disqualification of a lawmaker is prescribed in three situations

1. First is through Articles 102(1) and 191(1) for disqualification of a member of Parliament and a member of the Legislative Assembly respectively. The grounds here include holding an office of profit, being of unsound mind or insolvent or not having valid citizenship.
2. The prescription of disqualification is in the Tenth Schedule of the Constitution, which provides for the disqualification of the members on grounds of defection
3. The prescription is under The Representation of The People Act (RPA), 1951. This law provides for disqualification for conviction in criminal cases

Article 102 deals with the disqualification of MPs from either house of the Parliament

Part (1) of the article lists the reasons why an MP can be disqualified. These include

- a. if he holds any office of profit under the Government of India or the Government of any State, other than an office declared by Parliament by law not to disqualify its holder
- b. if he is of unsound mind and stands so declared by a competent court
- c. if he is an undischarged insolvent
- d. if he is not a citizen of India, or has voluntarily acquired the citizenship of a foreign State, or is under any acknowledgment of allegiance or adherence to a foreign State
- e. if he is so disqualified by or under any law made by Parliament.

4. Representation of Peoples Act 1951

- The Representation of the People Act, 1951 is an act of Parliament of India to provide for the conduct of election of the Houses of Parliament and to the House or Houses of the Legislature of each State, the qualifications and disqualifications for membership of those Houses, the corrupt practices and other offences at or in connection with such elections and the decision of doubts and disputes arising out of or in connection with such elections - It was introduced in Parliament by law minister Dr BR Ambedkar
- There are several provisions that deal with disqualification under the RPA. Section 9 deals with disqualification for dismissal for corruption or

disloyalty, and for entering into government contracts while being a lawmaker. Section 10 deals with disqualification for failure to lodge an account of election expenses. A key provision, Section 11, deals with disqualification for corrupt practices

- Section 8 of the RPA deals with disqualification for conviction of offences. The provision is aimed at “preventing criminalisation of politics” and keeping ‘tainted’ lawmakers from contesting elections
- First, disqualification is triggered for conviction under certain offences listed in Section 8(1) of The Representation of The People Act. This includes specific offences such as promoting enmity between two groups, bribery, and undue influence or personation at an election
- Section 8(2) also lists offences that deal with hoarding or profiteering, adulteration of food or drugs and for conviction and sentence of at least six months for an offence under any provisions of the Dowry Prohibition Act
- Section 8(3) states: “A person convicted of any offence and sentenced to imprisonment for not less than two years shall be disqualified from the date of such conviction and shall continue to be disqualified for a further period of six years since his release.”

5. Disqualification Process

- The disqualification can be reversed if a higher court grants a stay on the conviction or decides the appeal in favour of the convicted lawmaker
- Significantly, the stay cannot merely be a suspension of sentence under Section 389 of the Code of Criminal Procedure (CrPC), but a stay of conviction
- Over the years, the law has changed when it comes to disqualification. Under the RPA, Section 8(4) stated that the disqualification takes effect only “after three months have elapsed” from the date of conviction
- Within that period, lawmakers could file an appeal against the sentence before the High Court
- However, in the landmark **2013 ruling in ‘Lily Thomas v Union of India’**, the Supreme Court struck down Section 8(4) of the RPA as unconstitutional. This is what has allowed the Lok Sabha Secretariat to immediately disqualify Rahul Gandhi.

6. Re-Election to Vacant MP Position

The Election Commission can announce a byelection to the seat in Azam Khan's case, the schedule for the byelection to Khan's 37-Rampur seat (along with byelections to fill four other vacancies across the country) was announced within a few days

However, in the more recent case of Lakshadweep MP P P Mohammed Faisal, the EC, which had announced the bypoll on January 18 after the MP's conviction, had to withdraw the announcement on January 30 after Faisal's conviction was suspended by the Kerala High Court on January 25

7. IPC Sections 499 and 500

- Defamation is a wrong that deals with damage caused to a person's reputation
- In India, defamation can both be a civil wrong and a criminal offence, depending on the objective they seek to achieve
- A civil wrong sees a wrong being redressed with monetary compensation, while a criminal law seeks to punish a wrongdoer and send a message to others not to commit such acts, with a jail term
- In a criminal case, defamation has to be established beyond reasonable doubt but in a civil defamation suit, damages can be awarded based on probabilities
- Section 499 of the IPC defines what amounts to criminal defamation and subsequent provisions define its punishment
- Section 499 elaborates on how defamation could be through words spoken or intended to be read, through signs, and also through visible representations
- These can either be published or spoken about a person with the intention of damaging reputation of that person, or with the knowledge or reason to believe that the imputation will harm his reputation
- Section 500 stipulates imprisonment of up to two years, with or without a fine, for someone held guilty of criminal defamation

DEMAND FOR GRANTS

1. Context

The Odisha government has proposed to amend the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013 to ease the land acquisition process for various industrial and infrastructure projects.

With the amendment to the Central legislation, the Odisha government aims to do away with the mandatory provision of social impact assessment (SIA) study before the land acquisition, which it says is a time-consuming process.

2. About Demand for Grants

- It is a well-established principle among modern democracies that no money can be withdrawn from the exchequer of the country without the authority of law.
- Put simply, this means that any withdrawal or disbursement from the Consolidated Fund of India can only be done by passing a bill in the Lok Sabha.

3. Grants in Parliament

Article 113 of the Constitution requires that any proposal or estimate seeking the withdrawal of money from the Consolidated Fund of India should be presented to the Lok Sabha in the form of a demand for grants.

4. Demand for Grants proposed by Ministry

- Therefore, every ministry prepares a demand for grants for the expenditure to be incurred in the next financial year.
- These demands are collectively presented in the Lok Sabha as part of the Union Budget.

5. Demand for Grants includes

- The demand for grants includes both charged and voted expenditures.
- Charged expenditures are considered liabilities of the government of India such as payment of interest and are not put to vote in the Lok Sabha.

- The other category of expenditure is voted expenditure which includes revenue and capital expenditure to be incurred on a government scheme in the next financial year.
- Usually, there is a demand for which for each ministry, but large ministries like Finance and Defence have more than one demand for grants.

6. Preparing Demand for Grants

Each demand for a grant is prepared in two ways:

- First, it clearly distinguishes the charged expenditure and the voted expenditure.
- It also classifies expenditure as capital expenditure and revenue expenditure
- While capital expenditure results in the creation of some kind of assets for the government, revenue expenditures are operational.

In addition to giving the break-up charged and voted expenditure and revenue and capital expenditure, a demand for grants is a gross estimate of the total expenditure to be incurred.

Demand for grants also gives the following:

- Break-up of expenditure under different heads of account and
- Lists out the recoveries to be made from the scheme
- The net amount of expenditure, after deducting the recoveries is also shown.

Note that each demand for grants also includes:

- The total provisions required for a service or scheme, basically both revenue and capital expenditure
- Any assistance to be given to states and UTs
- Loans and advances related to that service or scheme

7. Powers of Lok Sabha in Demand for Grants



- Article 113 (iii) prescribes that no demand for grants can be presented in the Lok Sabha without the President of India's prior approval.
- Under Articles 117 and 274 of the Indian Constitution, a Presidential recommendation is also required for tabling a Money Bill in the Lok Sabha.
- The Finance Bill, accompanying the annual financial statement which is called the Union Budget, also carries a certificate issued by the President.

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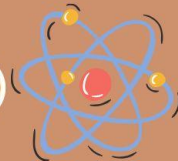
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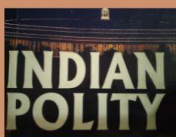
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GPT-4: WHAT IT CAN DO TO WHAT IT AUGURS

1. Context

A U.S. Company, **OpenAI**, has once again sent shock waves around the world, this time with GPT4, its latest AI model.

This large language model can understand and produce language that is creative and meaningful and will power an advanced version of the company's sensational chatbot, ChatGPT.

Currently, GPT4 is available to try a premium subscription or by getting on Open AI's waitlist.

2. What can GPT4 do

- GPT4 is a remarkable improvement over its predecessor, GPT 3.5, which first powered ChatGPT.
- GPT4 is more conversational and creative. Its biggest innovation is that it can accept text and image input simultaneously, and consider both while drafting a reply.
- For example, if given an image of ingredients and asked the question, "**What can we make from these?**" GPT4 gives a list of dish suggestions and recipes.
- The model can purportedly understand human emotions, such as humorous pictures.
- Its ability to describe images is already benefiting the visually impaired.
- While GPT 3.5 could not deal with large prompts well, GPT4 can take into context up to 25, 000 words, an improvement of more than 8x.
- GPT4 was tested in several tests that were designed for humans and performed much better than average.
- For instance, in a simulated bar examination, it had the 90th percentile, whereas its predecessor scored in the bottom 10 per cent.

- GPT4 also sailed through advanced courses in environmental science, statistics, art history, biology and economics.
- However, GPT4 failed to do well in advanced English language and literature, scoring 40 per cent in both.
- Nevertheless, its performance in language comprehension surpasses other high-performing language models, in English and 25 other languages, including Punjabi, Marathi, Bengali, Urdu and Telugu.
- ChatGPT-generated text infiltrated school essays and college assignments almost instantly after its release;
- Its prowess now threatens examination systems as well.
- OpenAI has released preliminary data to show that GPT4 can do a lot of white-collar work, especially programming and writing jobs while leaving manufacturing or scientific jobs relatively untouched.
- Wider use of language models will have effects on economies and public policy.
- The advent of GPT4 upgrades the question from what it can do, to what it augurs.
- Microsoft Research (Microsoft has invested in OpenAI) mentioned observing sparks of artificial general intelligence a system that excels at several task types and can comprehend and combine concepts such as mathematical proof in the form of a Shakespearean play in GPT4.

If we define intelligence as "a very general mental capability that, among other things, involves the ability to reason, plan, solve problems, think abstractly, comprehend complex ideas, learn quickly and learn from experience", GPT4 already succeeds at four out of these seven criteria. It is yet to master planning and learning.

3. Ethical questions

- GPT4 is still prone to a lot of the flaws of its predecessor. Its output may not always be factually correct a trait Open AI has called "**hallucination**".
- While much better at cognising facts than GPT3.5, it may still introduce fictitious information subtly.
- Ironically, Open AI has not been transparent about the inner workings of GPT4.

The GPT4 technical report clearly states: "Given both the competitive landscape and the safety implications of largescale models like GPT4, this report contains no further details about the architecture (including model size), hardware, training compute, dataset construction, training method, or similar".

- While secrecy for safety sounds like a plausible reason, OpenAI can subvert critical scrutiny of its model.
- GPT4 has been trained on data scraped from the Internet that contains several harmful biases and stereotypes.
- There is also an assumption that a large dataset is also a diverse dataset and faithfully representative of the world at large.
- This is not the case for the Internet, where people from economically developed countries, of young ages and with male voices are overrepresented.
- OpenAI's policy to fix these biases thus far has been to create another model to moderate the responses, since it finds curating the training set to be infeasible.
- Potential holes in this approach include the possibility that the moderator model is trained to detect only the biases we are aware of and mostly in the English language.
- This model may be ignorant of stereotypes prevalent in non-Western cultures, such as those rooted in caste.

4. causes of AntiGPT

- It ignores its moderation rules, as shown by its makers, thus jailbreaking it. As such, there is vast potential for GPT4 to be misused as a propaganda and disinformation engine.
- OpenAI has said that it has worked extensively to make it safer to use, such as refusing to print objectionable results, but whether these efforts will keep GPT4 from becoming a student at "WhatsApp university" remains to be seen.
- The larger question here is about where the decision to not do the wrong thing should be born: in the machine's rules or the human mind.

5. A stochastic parrot

- GPT4 is a machine that predicts the next word in an unfinished sentence, based on probabilities it learned as it trained on large corpuses of text.
- Microsoft Research has maintained that GPT4 does understand what it is saying and that not all intelligence is a type of next-word prediction.
- Professor Bender and her peers highlighted the harm of large language models two years ago, citing both ethical concerns and environmental costs.
- They also specified an opportunity cost imposed by a race for bigger models trained on larger datasets, distracting from smarter approaches that look for meaning and train on curated datasets.
- Their warnings have gone unheeded. Apart from Open AI's models, AI company Anthropic has introduced a ChatGPT competitor named Claude.
- Google recently announced PaLM, a model trained to work with more degrees of freedom than GPT3.
- More broadly, efforts are underway worldwide to build a model with a trillion degrees of freedom.
- These will be truly colossal language models that elicit questions about what they cannot do, but these concerns would be red herrings that distract us from whether we should be building models that simply test the limits of what is possible to the exclusion of society's concerns.

PIEZOELECTRIC EFFECT

1. Context

Scientists have reported evidence of the piezoelectric effect in liquids for the first time.

2. Background

- The effect has been known for 143 years and this time has been observed only in solids.
- The new finding challenges the theory that describes this effect as well as opens the door to previously unanticipated applications in electronic and mechanical systems.

- The effect was found in pure 1butyl-3methyl imidazolium bis(trifluoromethyl sulfonyl)imide and 1hexyl-3methyl imidazolium bis(trifluoromethyl sulfonyl)imide- both ionic liquids (liquids which are made of ions instead of molecules) at room temperature.

3. Piezoelectric effect

- In the piezoelectric effect, a body develops an electric current when it is squeezed.
- Quartz is the most famous piezoelectric crystal used in analog wristwatches and clocks.
- Such crystals are also used in other instruments where converting mechanical stress to a current is useful.
- Quartz is silicon dioxide (SiO_2). The quartz crystal consists of silicon and oxygen atoms at the four vertices of a threesided pyramid; each oxygen atom is shared by two pyramids.
- These pyramids repeat themselves to form the crystal. The effective charge of each pyramid is located slightly away from the center.
- When mechanical stress is applied, that is when the crystal is squeezed, the position of the charge is pushed further from the center, giving rise to a small voltage. This is the source of the effect.

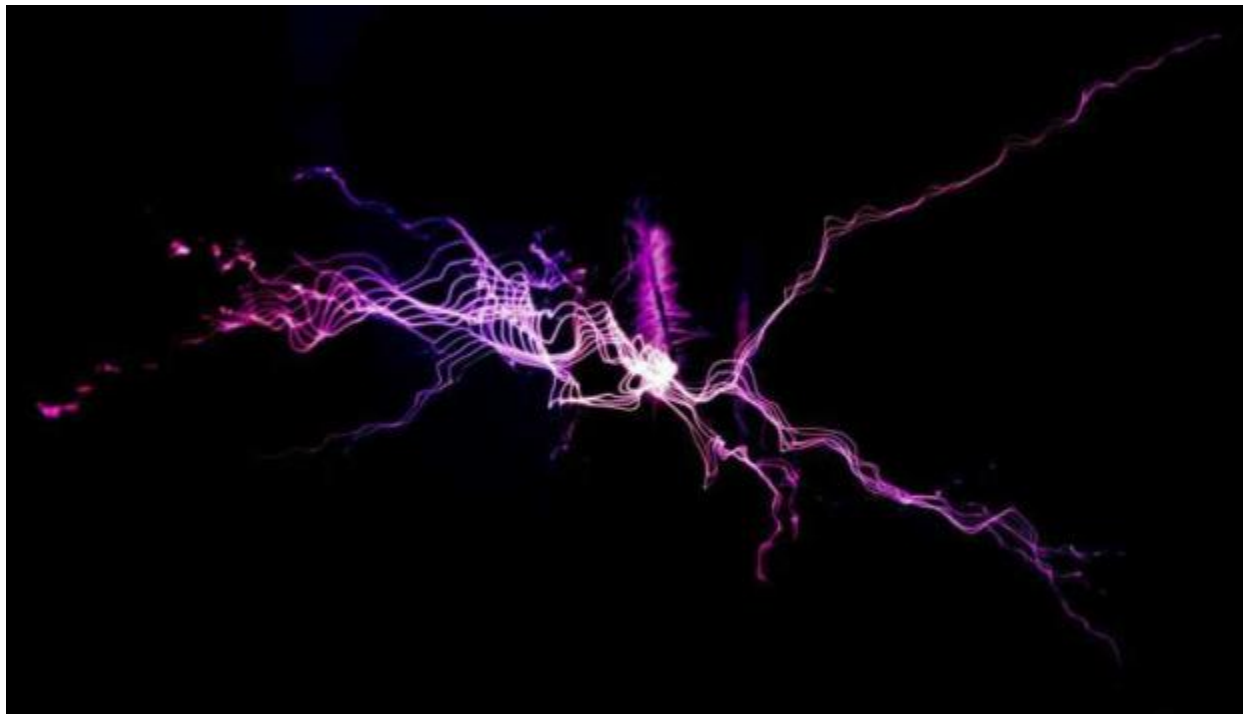


Image Source: The Hindu

4. Why is the effect in liquids surprising?

- The piezoelectric effect has only been expected in solids thus far because the body being squeezed needs to have an organized structure, like the pyramids of quartz.
- Liquids don't have much structure as they take the shape of a container.
- Physicists explain the effect using a combination of Hooke's law that the force required to squeeze an object is linearly (i.e. nonexponentially) proportional to the amount of squeezing and the properties of dielectric materials.
- These are materials that don't conduct electricity but whose electrons are still mildly affected by an electric field.
- Hooke's law is not clear when the body is not very compressible.
- The observation of the effect in ionic liquids appears on its face to be inconsistent with the current model.
- An implication of the findings is the existence of some manner of organization in ionic liquids that are not seen in 'normal' liquids.

- Normal and ionic liquids of the kind tested in the study respond very differently, at the molecular level, when an electric charge is “imposed” on them.
- Within the framework of the current understanding, the piezoelectric effect requires a ‘persistent’ order within the material.
- Normal liquids and gases have not been shown to exhibit order that persists long enough to be observed and characterized.

5. Possible New Applications

- The discovery opens the door to applications that have previously not been accessible with solidstate materials, and (roomtemperature ionic liquids) are more readily recyclable and in many instances pose fewer environmental issues than many currently used piezoelectric materials.
- The liquids also displayed the inverse piezoelectric effect: they became distorted when an electric charge was applied.
- This effect could be used to control how the liquids bent light passing through them by passing different currents through them.
- That is, using this simple control mechanism, vials of these liquids could be lenses with dynamic focusing abilities.

ISRO's LVM 3

1. Context

On March 26, 2023, the second commercial launch of the Indian Space Research Organisation’s LVM-3 saw 36 OneWeb satellites placed in orbit. This was also the second launch that ISRO performed for OneWeb, a UK-based company supported by the UK government and India’s Bharti Enterprises.

2. About LVM 3

- LVM3 is a dedicated commercial satellite mission of New Space India Limited (NSIL), a central Public Sector Enterprise (CPSE) under the Department of Space, Government of India.
- The 43.5 meter LVM3 weighing around 644 tonnes carried 36 satellites weighing 5,796 kg or about 5.7 tonnes.
- With this launch, LVM3 has made its entry into the global commercial launch service market.
- The LVM3 was conceived primarily for launching geostationary satellites with a payload capacity of 4T, which can be used for launching 6T payloads for LEO.
- The mission is very critical to meet the customer's expectations to launch 36 satellites in 9 phases with precision. The mission was designed in such a way that the C25 stage was to handle this operation using in-house built inertial navigation systems.
- It was the sixth launch of India's heaviest rocket LVM-3 – which includes the launch of Chandrayaan-2 in 2019 – and the second one where it demonstrated the capability of launching multiple satellites in low earth orbit (LEO).



Image Source: The Indian Express

3. About One Web

- OneWeb is a joint venture between India's Bharati Enterprises and the U.K. government.
- The eighteenth launch of OneWeb satellites brought the constellation's total number of satellites to 618.
- The company intends to use 588 active satellites in its first-generation constellation to provide global connectivity at high speed and low latency.

4. How did ISRO's OneWeb launch happen?

- OneWeb was initially supposed to launch its satellites through the Russian Space agency.
- It cancelled the plan after the agency halted the launch amid the Russia-Ukraine war seeking an assurance from the UK government-backed company that the satellites wouldn't be used against them and that the British government would sell its stake.
- India stepped up when we needed them the most. We had a big setback with the Russia Ukraine war-six launches that were contracted and fully paid for was taken out.
- Now, not only OneWeb is struggling to get the money back, but it has also lost 36 satellites, three very valuable, and importantly lost nearly a year.
- Europe's Arianespace was not viable as it had retired its workhorse Ariane5 rocket and there were significant delays with Ariane6.
- SpaceX, despite developing a similar satellite-based network named Starlink, launched some of the OneWeb satellites. And India, through two LVM3 launches, has put in orbit 72 OneWeb satellites.

5. India's plan to increase the Commercial launches

- The launches not only established LVM3 as a commercial vehicle propelling ISRO's entry into the commercial heavier launch market, But it also earned the agency upwards of Rs. 1,000 core.
- The service provided to OneWeb, for which the space agency had to move around a few of its missions, ended up earning it one of the highest revenues.
- And over the years there has been an increase in funds that the space agency has generated.

- The government plans to increase India's 2% share in the commercial market to 10% by 2030 through commercial launches by ISRO and launches offered by private companies like Skyroot and Agnikul, which are in the process of developing their own launch vehicles.
- Keeping the commercial sector in mins. ISRO has also developed small satellite launch vehicles (SSLV), which are meant to provide on-demand launch services commercially.
- It has a low turn around time of days and costs much more than the current workhorse Polar Satellite Launch Vehicle (PSLV).
- Two development flights of the SSLV have been completed, One successful, and one partially successful and it has been inducted into the ISRO fleet.
- Till date, ISRO has launched 384 foreign satellites from the least 36 countries, with at least 10 dedicated commercial missions and several other Indian missions where they were carried as co-passenger satellites.
- The highest number of these commercial launches have been by companies from the United States.

6. Report of the parliamentary standing committee on the budget of the space agency

- A report from the parliamentary standing committee on the budget of the space agency said that there has been an increase in the revenue generated by ISRO's commercial arm New Space India Limited, created in 2019.
- As per the report, revenue generated by NSIL has increased from Rs 1,731 crores in 2021-22 to a projected Rs 3,509 crores in 2023-24.
- This was an increase of 100% and the report added that The Committee appreciates the achievements of NSIL in such a short period of time and recommends the Department provide all support to NSIL to enable it to act as an agency of international character and quality.
- But it is not just the commercial arm, the revenue generated by the Department has also increased.
- The committee noted that the revenue generated by the Department of Space increased from Rs 929 crore in 2020-21 to Rs 2,780 in 2022-23.
- This is an increase of nearly 200% and with the budget allocation for 2023-24 being the least in the last three years.

FATTY LIVER DISEASE

1. Context

In 2018, anatomists at the Toho University Graduate School of Medicine, Tokyo, Japan, performed a sleep deprivation experiment on lab mice. Mice usually sleep for 12 hours a day. In this experiment, researchers induced sleep deprivation using the 'gentle handling method' during sleep hours so that the mice could sleep only for six hours daily.

2. Experiment Findings

They discovered that liver fat content in sleep deprived mice increased without total weight gain compared to another group of mice who were allowed to sleep normally. The liver cells were stressed, and the activity of certain genes that escalate insulin resistance and fat content within liver cells also increased with sleep deprivation.

3. Importance of Sleep

- A study of nearly 55,000 people from Europe showed that those who slept 7-8.5 hours daily had higher life expectancy than those who slept less than seven hours.
- In those between ages 50 and 75 without sleep disturbances, the expectation of living longer without chronic disease development was significantly higher.
- Yoga interventions improved overall sleep quality, efficiency, latency, and duration, contrary to all claims.

4. Healthy sleep

- Sleep is a vital function of human life and accounts for up to one third of the life span.

- Contrary to normal belief, during sleep, the brain is not 'resting' but is engaged in various activities necessary to improve wellbeing, increase life, and especially impact the liver.
- The minimum required duration for 'healthy' sleep is seven hours.
- When 10,000 persons with sleep disorders were followed up for one year, incident fatty liver disease was noted in 14, while in those without sleep disorders, it was only six.
- Non alcoholic fatty liver disease association was significantly higher among persons with shorter sleep duration (less than six hours per night) and excessive daytime sleepiness.
- A high quality study showed that inadequate sleep duration was strongly associated with an elevated risk of developing non-alcoholic fatty liver disease, and adequate sleep helped prevent it.
- With every one hour decrease in sleep time from the recommended seven to eight hours, the risk of fat deposition in the liver increased by 24% compared with those who slept adequately.

5. Non-alcoholic fatty liver disease

- Non alcoholic fatty liver disease (NAFLD) is an umbrella term for a range of liver conditions affecting people who drink little to no alcohol.
- The main characteristic of NAFLD is too much fat stored in liver cells.
- Early-stage NAFLD does not usually cause any harm however individuals with NAFLD can develop nonalcoholic steatohepatitis (NASH), an aggressive form of fatty liver disease, which is marked by liver inflammation and may progress to advanced scarring (cirrhosis) and liver failure.
- This damage is similar to the damage caused by heavy alcohol use.
- Having high levels of fat in the liver is also associated with an increased risk of serious health problems, such as diabetes, high blood pressure and kidney disease.
- Increase in NAFLD in diabetic patients will heighten the chances of developing heart problems.
- If detected and managed at an early stage, it's possible to stop NAFLD getting worse and reduce the amount of fat in the liver.

6. Risks associated with Non alcoholic fatty liver diseases

- Over the last two decades, the global burden of NASH has more than doubled. NASH caused 40 lakh prevalent cases of compensated cirrhosis in 1990, which increased to 94 lakh cases in 2017.
- Epidemiological studies suggest that prevalence of NAFLD is around 9% to 32% of the general population in India with a higher prevalence in those with overweight or obesity and those with diabetes or prediabetes.
- Once the disease develops, there is no specific cure available, and health promotion and prevention aspects targeting weight reduction, healthy lifestyle, etc. can prevent the mortality and morbidity due to NAFLD.

7. Government Initiatives

- Aligning NPCDCS programme strategies to prevent and control NAFLD by encouraging behavior changes, early diagnosis and capacity building at various levels of healthcare.
- Promoting screening of cancer, diabetes and hypertension under Ayushman Bharat Scheme.
- Along with the focus of 'Eat Right India' and 'Fit India Movement', the entire vision of the government is to move from Diagnostic cure to Preventive Health.

DRUG-RESISTANT TB

1. Context

Recently, the Indian Patent Office rejected an application by pharmaceutical giant Johnson & Johnson (J&J) to extend its patent on the drug **bedaquiline** beyond July 2023.

Bedaquiline is a drug in tablet form used to treat drug-resistant tuberculosis (TB). This opens the door for drug manufacturers to produce generic versions of bedaquiline, which are expected to be more affordable and contribute to India's goal of eliminating TB by 2025.

2. About drugresistant TB

- As of 2017, India accounted for around one-fourth of the world's burden of multidrug-resistant (**MDR**) TB and of extensively drug-resistant (**XDR**) TB and extensively drug-resistant (XDR) TB.
- MDR TB resists treatment by at least two frontline drugs in TB treatment, isoniazid and rifampicin.
- XDR TB resists these two drugs, fluoroquinolones, and any second-line injectable drug.
XDR TB is rarer than MDR TB there were 1, 24, 000 cases of the latter in India (2021) versus 2, 650 cases of the former (2017).
- TB incidence in India has been on the decline, but MDR TB and XDR TB endanger initiatives to locally eradicate the disease.
- In the first two years of the pandemic, there were reports that TB treatment was hit by disrupted supply chains, availability of healthcare workers for non-pandemic work, and access to drug distribution centres.
- A peer-reviewed 2020 study found that the incidence of MDR TB was "strongly correlated with treatment failure and spread through contact and not to treatment compliance".

3. Treatment for drug-resistant TB

- TB is an infection of the bacterium *Mycobacterium tuberculosis* in the lungs, but often in other organs as well.
- It can be treated by strictly adhering to the doses and frequencies of drugs prescribed by a physician.
- Deviations from this schedule can lead the bacteria to become drug-resistant.
- Yet they happen because the drugs often have side effects that diminish the quality of life and or because patients haven't been afforded access to the requisite drugs on time.
- Drug-resistant TB is harder to treat. One important option for those diagnosed with pulmonary MDR TB is bedaquiline.
- In 2018, the **World Health Organisation** replaced two injectable drugs for MDR TB with an oral regimen that included bedaquiline.
- At this time, bedaquiline had not completed phase III Trials.
- The recommendation was based on smaller studies, outcomes in TB elimination programmes worldwide, the difficulty of treating MDR TB and close monitoring of patients receiving the drug.

4. Effectiveness of Bedaquiline

- Typically, bedaquiline needs to be taken for six months: at a higher dose in the first two weeks followed by a lower dosage for 22 weeks.
- This period is shorter than other treatment routines for pulmonary MDR TB, which can last 924 months.
- One phase II Clinical trial observed that culture conversion (turning a patient's sputum culture from positive to negative) "at 24 weeks was durable and associated with a high likelihood of response at 120 weeks", due to bedaquiline.
- Unlike Second-line treatment options that are injected and can have severe side effects, like hearing loss, bedaquiline is available as tablets and is less harmful, although it has potential side effects of its own.
- Studies until 2018 found that it could be toxic to the heart and the liver. This is part of why it is recommended only as a treatment of last resort.
- India's Health Ministry has guidelines for bedaquiline use as part of the Programmatic Management of MDR TB under the National TB Elimination Programme.
- The WHO's decision revitalised a debate about the ethics of making a much-needed but insufficiently tested drug available quickly versus lowering the safety threshold for pharmaceutical companies producing drugs for desperate patients.

5. Reasons for the rejection of the Patent application

J&J's patent application was for a fumarate salt of a compound to produce bedaquiline tablets.

Two groups opposed the patent:

1. Network of Maharashtra people living with HIV and
2. Nandita Venkatesan and Phumeza Tisile, both TB survivors, are supported by Medecins Sans Frontieres.

- Both groups argued that J&J's method to produce a "Solid pharmaceutical composition" of bedaquiline is "obvious, known in the art" and doesn't require an "inventive step".

- According to the **Indian Patent Act 1970** Section 2 (1) (ja), an "inventive step" is an invention that is "not obvious to a person skilled in the art".
- The latter also contended that the current application drew significantly from a previous patent, WO 2004/011436, which discussed a similar compound on which bedaquiline is based and whose priority date (2002) well preceded the new application.
- The Patent Office rejected the application on these and other grounds, including Sections 3d and 3e of the Act.
- These pertain to the "mere discovery of a new form of a known substance which does not result in the enhancement of the known efficacy of that substance" and "a substance obtained by a mere admixture resulting only in the aggregation of the properties of the components thereof", respectively, which are not patentable.

6. Significance of the rejection

- India has the largest population of people living with drug-resistant TB.
- J&J's patent on bedaquiline meant the drug cost \$400 (revised to \$340 in 2020) per person, plus the cost of other drugs.
- The rejection is expected to lower the cost of bedaquiline by up to 80 per cent.
- So far, the Indian government has directly procured and distributed the drug through Statelevel TB programmes.
- After July 2023, manufacturers of generic drugs such as Lupin will be able to produce generic versions of bedaquiline.
- The argument based on WO 2004/011436 is also relevant to "evergreening a strategy where a patent owner continuously extends their rights and or applies multiple patents for the same entity. Indian law disallows this.

General Studies III: Environment & Ecology

PROJECT TIGER

1. Context



The world celebrated International Tiger Day on July 29, 2022. This year was the deadline decided in the 2010 **Global Tiger Summit in Russia**.

Then it had been decided that tiger numbers should be doubled. Nepal has done it according to new figures released on July 29.

2. About Project Tiger

- The Government of India launched "**Project Tiger**" on 1st April 1973 to promote the conservation of the tiger.
- Project Tiger has been the largest species conservation initiative of its kind in the world.
- While the field implementation of the project, protection and management in the designated reserves is done by the project States, who also provide the matching grant to recurring items of expenditure, deploy field staff/officers and give their salaries, the Project Tiger Directorate of the Ministry of Environment and Forests was mandated with the task of providing technical guidance and funding support.

3. Tiger Task Force

- The implementation of Project Tiger over the years has highlighted the need for a statutory authority with legal backing to ensure tiger conservation.
- Based on the recommendations of the National Board for Wild Life Chaired by the Hon'ble Prime Minister, a Task Force was set up to look into problems of tiger conservation in the country.
- The recommendations of the said Task Force, inter alia include strengthening Project Tiger by giving it statutory and administrative powers, apart from creating the Wildlife Crime Control Bureau.
- It has also been recommended that an annual report should be submitted to the Central government for laying in Parliament, so that commitment to Project Tiger is reviewed from time to time, in addition to addressing the concerns of local people.

Broadly the urgent recommendations of the said Task Force are

1. Reinvigorating the constitution of governance.

2. Strengthening efforts towards the protection of tigers, checking to poach, convicting wildlife criminals and breaking the international trade network in wildlife body parts and derivatives.
3. Expanding the undisturbed areas for tigers by reducing human pressure.
4. Repair the relationship with local people who share the tiger's habitat by fielding strategies for coexistence.
5. Regenerate the forest habitats in the fringes of the tiger's protective enclaves by investing in forest, water and grassland economies of the people.

4. National Tiger Conservation Authority (NTCA)

- Considering the urgency of the situation, Project Tiger has been converted into a statutory authority (NTCA) by providing enabling provisions in the Wild Life (Protection) Act, 1972 through an amendment, viz. Wild Life (Protection) Amendment Act, 2006.
- This forms one of the urgent recommendations of the Tiger Task Force appointed by the Prime Minister.
- The NTCA addresses the ecological as well as administrative concerns for conserving tigers, by providing a statutory basis for the protection of tiger reserves, apart from providing strengthened institutional mechanisms for the protection of ecologically sensitive areas and endangered species.
- The Authority also ensures enforcing guidelines for tiger conservation and monitoring compliance of the same, apart from the placement of motivated and trained officers having good track records as Field Directors of tiger reserves.
- It also facilitates capacity building of officers and staff posted in tiger reserves, apart from a time-bound staff development plan.
- The Wild Life (Protection) Amendment Act, 2006 has come into force with effect from the 4th of September, 2006 and the NTCA has also been constituted on the same date.

OCEAN DESALINATION

1. Background

- While around 70 per cent of Earth's surface is covered with water, less than 1 per cent is drinkable.
- These finite freshwater resources are very unevenly distributed. In hot, dry regions with growing populations and increasing living standards, there is not enough water to go around a situation exacerbated by climate change.
- As solutions such as cloud seeding or even iceberg harvesting remain unproven at scale, the desalination of our oceans into drinking water has emerged as the ultimate means to drought-proof regions suffering from water poverty.

2. About Ocean desalination

- The centuries-old concept uses thermal distillation or a reverse osmosis membrane to separate salt from the sea.
- The technique is now being utilized globally, with well over 20, 000 desalination plants currently operating in over 170 countries the 10 largest in Saudi Arabia, the United Arab Emirates (UAE) and Israel.
- Around 47 per cent of the world's desalinated water is produced in the Middle East and North Africa alone, Manzoor Qadir, deputy director of the United Nations University Institute for Water, Environment and Health.
- These arid regions have few other options since, according to Qadir, they generate less than 500 cubic meters of water per capita through rainfall or river runoff which is half the upper limit of water scarcity as defined by the UN.
- The United States, by contrast, produce 1, 207 cubic meters of freshwater per person.
- Water poverty is set to worsen as populations increase along with temperatures, with Sub-Saharan Africa, predicted to become a "**Hotspot of water scarcity**" by 2050.
- It is a great option in terms of enhancing water resources of desalination and costs have decreased tremendously from around \$5 (\$4.69) per cubic meter (1, 000 litres) in the 2000s to 50 cents today.
- For countries like **Cyprus**, there's no other option if they want to maintain this living standard and the hottest and driest nation in the EU, Cyprus relies on desalination for 80 per cent of its drinking water.

- With variable rainfall necessitating water restrictions in the country as far back as the 1990s, the Cyprus government first tried to make up the shortfall by shipping in water from Greece.
But it cost about ten times more than desalinating and the government started to build desalination plants in the early 2000s to avoid water shortages.

3. The marine and climate impacts of desalination

- Before becoming a magic bullet for water scarcity, desalination presents some serious environmental trade-offs in its current guise.
- Firstly, separating salt from water is highly energy intensive.
- A 2021 study on the environmental consequences of removing salt from seawater in Cyprus showed that the four desalination plants in the country generate around 2 per cent of its total greenhouse gas emissions.
- The plants also accounted for 5 per cent of the total electricity consumption in Cyprus, representing one of the largest shares by sector of electricity consumption.
- Furthermore, the report notes that desalinated water produced generated around 103 million cubic meters of toxic, high-salinity brine effluent that impacted the Mediterranean seagrass ecosystem in the region of the discharge pipes.
- In a report on the state of desalination and brine production globally, it was shown that increased salinity, combined with climate-driven temperature rise, can cause a decrease in the dissolved oxygen content, resulting in conditions called hypoxia.
- This hypersaline water can sink to the ocean bed and kill marine microorganisms that are vital to the entire food chain.
- In addition, chemical compounds such as copper and chloride are also observable in the desalination pre-treatment process and can be toxic to organisms in the receiving water.

4. Sustainability of desalination

- The solution to the relatively high CO₂ emissions is to deploy renewables to power desalination plants.

- A Berlin-based company, Boreal Light, has developed off-grid solar and wind energy desalination plants that ensure greater energy independence and immunity from price fluctuations.
- They have got the water for free and the electricity from solar and wind for free, so They can now produce 1, 000 litres (of fresh water) for 50 cents.
- The price for one cubic meter is as competitive as directly accessing freshwater from rivers or wells and is equal to today's cheaper desalination cost.
- Meanwhile, brine discharge can be better diffused through outfall pipes that are not in the vicinity of vulnerable marine life, for a better solution would be to keep the remnant solids on the land.
- The 2019 study on the state of desalination showed how sodium, magnesium, calcium, potassium, bromine, boron, strontium, lithium, rubidium and uranium could be harvested from the filtered material and reused in industry and agriculture. Recovery of these resources remains economically uncompetitive.
- This needs to change as reuse is an important sustainability solution, especially in countries producing large volumes of brine with relatively low efficiencies such as Saudi Arabia, UAK, Kuwait and Qatar.

5. Reusage of Brine

- Scientists at the US research body, the Massachusetts Institute of Technology (MIT), have suggested ways to repurpose brine by using the salt to produce caustic soda or sodium hydroxide.
- When used to pre-treat seawater entering the desalination plant, sodium hydroxide helps prevent the fouling of the reverse osmosis membranes used to filter the ocean water.
- The researchers note that such fouling is a typical source of breakdowns and adds to energy to energy inefficiency and overall cost.
- Although such brine reuse is still in the early developmental stage, more modern plants in the US that utilize the latest reverse osmosis technology already produce less brine.
- Around 12 per cent of the world's desalinated water is created in the US but only 3.9 per cent of its brine.

- By contrast, the Middle East and North Africa region generates around 47 per cent of desalinated water but 70 per cent of the total global brine output due partly to the presence of less efficient plants.
- As technology continues to improve, climate and environmental impacts will be reduced.
- Desalination is the obvious way to go to make it sustainable.

CLIMATE ANXIETY

1. Context

The Intergovernmental Panel on Climate Change, comprised of the World's most esteemed climate experts, delivered its sixth report and final warning about the climate crisis. It outlined several mental health challenges associated with increasing temperatures, trauma from extreme events, and loss of livelihoods and culture.

2. Climate Anxiety

- Climate anxiety describes a sense of panic, worry, and fear towards the consequences and uncertainty brought by climate change.
- The term "Climate anxiety" is sometimes used interchangeably with "eco-anxiety", which some health professionals and researchers refer to as anxiety felt about wider ecological issues. Researchers suggest climate anxiety can be shaped by our environments.
- For example, the type of media we see about climate change, how the people around us feel, or how our communities and governments are responding.
- Research shows climate anxiety is felt around the world, especially among young people.
- Climate anxiety is not officially recognized as a condition or a mental health disorder in the diagnostic manuals relied upon by psychologists, psychiatrists, and other health professionals.

3. Symptoms of Climate Anxiety

- Grief and sadness over the loss of natural environments or wildlife populations.
- Anger or frustration specifically towards people who don't acknowledge climate change or towards older generations for not making more progress.
- Obsessive thoughts about the climate.
- Guilt or shame related to your carbon footprint.
- After experiencing the effects of climate change-Post traumatic stress (Psychosomatic stress experienced by people of Kerala after floods)
- Feelings of depression, anxiety, or panic
- An existential dread-feeling as if you have reached a standstill.

4. How does climate change affect people?

- All irreversible climatic changes are interconnected to human life.
- The melting of polar ice will lead to rising sea levels which will, in turn, force people living near the shores and on small islands, to relocate.
- It will also cause saltwater intrusion into freshwater lakes and rivers and lead to long droughts that will cause famines.
- The warmer the summers, the colder the winters. Today, even the cities near the shores are subjected to colder nights and warmer days.
- This is due to the intense pollution and greenhouse gases in the air.
- Increased carbon monoxide, carbon dioxide, and other harmful gases are found in excessive abundance, right now.

5. Channeling climate anxiety for good

- While climate anxiety can have a negative impact on mental well-being, research findings from 32 countries have shown that some people may be channeling their climate anxiety in ways to help the environment, such as through pro-environmental behaviors and environmental activism, such as climate protests.
- Australian data shows experiencing "eco-anger" which refers to anger or frustration about ecological issues leads to better mental health outcomes and is a key adaptive emotional driver of engagement with the climate crisis.
- But the more intense experiences of frustration and anger in relation to climate change are associated with greater attempts to take personal actions

to address the issue. This suggests getting angry may help prompt some people to do something about climate change.

6. How to manage climate anxiety?

In the absence of an official diagnosis or recognized treatments, collective action against climate change may therefore be an effective solution to climate anxiety and there are other things people can do to manage climate anxiety.

While further research is needed to find the most effective strategies for climate anxiety, health professionals suggest:

- Spending time in nature
- Learning ways to ground yourself during distressing emotions
- Seeking support
- Taking breaks to prevent burnout
- Taking small everyday actions for self-care.

SARUS CRANE

1. Context

Recently, 35-year-old Mohammad Arif brought home an injured Sarus Crane he found in his village of Mandhka in Uttar Pradesh's Amethi District. The bird recovered in time but never left him.

The duo became famous on social media and officials came knocking Arif was booked under the wildlife laws and the bird was packed off first to a neighbourhood sanctuary and then to the Kanupur zoo.

2. Problem with rescuing a Sarus or animals

- Across the globe, rescuing wildlife at will is not permitted. This is because many such animals do not need rescuing.
- For example, wild cats leave their cubs to go hunting only to find them missing (rescued) on return.
- Also, many rescuers may not be equipped to either help the animals or ensure they do not become a threat to public health.

- In 2019, for example, a singer made headlines for keeping a sun bear in her Kuala Lumpur condominium.
- She claimed to have found the animal in a weakened state and decided to nurse it back to health.
- A Malaysian court tried her under the country's wildlife laws.
- In 2021, a woman was charged for rescuing wildlife without a permit in Michigan, USA.
- The Department of Natural Resources arrested her after euthanising six of her animals, including a two-week-old deer.

3. Indian laws

- Under Section 39 of the Wildlife (Protection) Act, no person is allowed to acquire or keep in his possession, custody or control any wildlife which is state property.
- If anyone does so for example, to treat an injured bird as in the present case she must report it to the nearest police station or the authorised officer within forty-eight hours of obtaining such possession.
- Further, under Section 57 of the Act, if a person is found in possession, custody or control of any wildlife, the burden of proof for establishing that the possession, custody or control is not illegal is on the person.
- Wildlife Protection Act does not allow anyone to take home an injured wild bird and keep it for months without written permission from the state's Chief Wildlife Warden.
- But it gets a little complicated when the bird in question is Sarus crane and the caregiver is a farmer in Uttar Pradesh.

4. Speciality about the Sarus

- Back in 1861, British ornithologist L H Irby wrote about Sarus cranes he observed in Oudh: "The young birds are easily reared by hand and become very tame and attached to the person who feeds them, following him like a dog".
- The behaviour was explained after 75 years when Austrian zoologist Lorenz Konrad described how young precocial birds (those born with all their

feather and able to see and move around immediately) learn to follow real or foster parents.

- Called imprinting, the process starts with hatching so that the chicks follow the appropriate adult for safety.
- In all probability, the bird in question was a young unpaired one from a flock of non-breeding Sarus cranes and that is why it bonded readily during treatment.
- The species is anyway well accustomed to farmers and has been thriving in good numbers since the Green revolution.



Image source: PTI

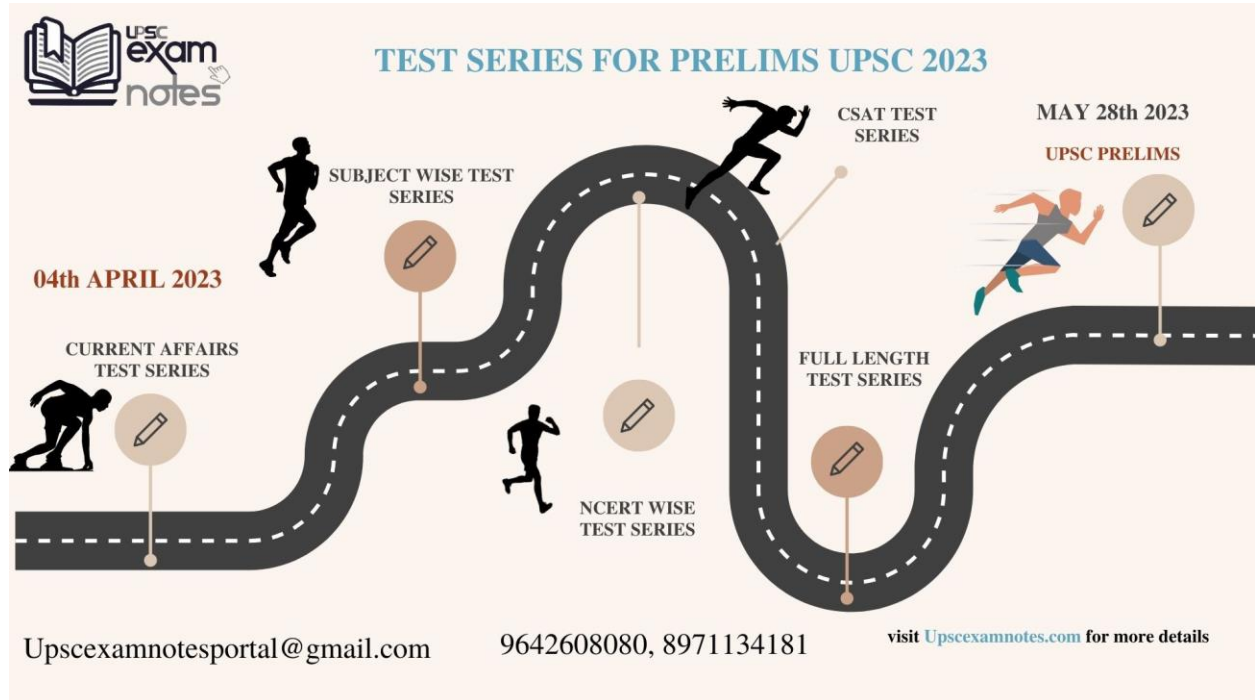
5. The farmer's attitude towards the Sarus

- Unlike in South-East Asia, Indian farmers have traditionally tolerated the species in their fields.
- So much so that the species adjusted its breeding behaviour after human activities.
- For Example, unlike elsewhere in its global range, Sarus cranes in India do not wait for the onset of monsoon to start breeding but take the cue from farmers flooding their fields in anticipation of rain.

- Barring some small farmers who resent the omnivorous bird for damaging their crops, the larger community has accepted the species for its deep cultural associations.
- As the story goes, sage Valmiki cursed a hunter for killing the male of a pair of courting Sarus cranes and the words took the form of a perfect verse, inspiring him to compose the epic.
- At the same time, the farming community also appreciates the material benefits of having Sarus cranes in their fields.
- The bird, particularly chicks, are voracious eaters of mice and other pets.
- In the night, their shrill calls alert farmers to crop-raiding nilgais and increasingly, feral cattle.

6. The way forward

- Given the biological inclination of the species to bond easily, individual Sarus cranes have moved with people on many occasions.
- For example, back in 1989, eminent photographer Raghu Rai famously documented how a Sarus crane, onomatopoeically named Kurrkutt, lived with a family in Khajuraho, feeding on Chapatis.
- The species is neither a novelty nor under threat in the Northern Indian landscape. Therefore, following the letter of the wildlife law blindly may set damaging precedence.
- In many zoos around the world, cranes have bonded with caretakers. Once that happens, the bird is usually not "**fit**" for release in the wild because the chances of it bonding with another crane reduce substantially.
- Once treated by Arif, the Sarus crane had no future in the wild. But a happy bird does not belong to a zoo or its caregiver in jail. The wisest recourse, therefore, is to reunite the two and let them be.



Mains Corner

1. Discuss the Role of the National Tiger Conservation Authority in increasing the tiger population in India. Explain the significance of the Tigers in the Ecosystem. (250 Words)
2. What were the challenges associated with the State's Reorganisation in Independent India? Discuss how effectively India achieved the merging of the Princely states in Indian Union. (250 Words)
3. What is the Piezoelectric effect and discuss why is the piezoelectric effect in liquids surprising? (250 Words)
4. Explain the historical background of Vaikom Satyagraha. Discuss the significance of it and role of periyar in vaikom satyagraha (250 Words)
5. What is the meaning 'de-hyphenation' in the foreign policy context? Do you think de-hyphenation helps India's interests better? (250 Words)

Prelims Corner

1. Consider the following statements:

1. The high seas comprise 64 per cent of the Earth
2. UNCLOS (1982) specifies a set of general rules for a range of activities in the oceans including navigation, scientific research, and deep-sea mining.

Which of the above statements are correct?

- A. 1 only B. 2 only C. Both 1 and 2 D. None of the above

Answer (B)

The high seas comprise 64 per cent of the ocean surface, and about 43 per cent of the Earth. UNCLOS (1982) defines the rights and duties of countries in the oceans, the extent of ocean areas over which countries could claim sovereignty, and the legal status of marine resources. It also specified a set of general rules for a range of activities in the oceans including navigation, scientific research, and deep-sea mining.

2. The 'Chicken's neck', often seen in news, refers to:

- A. a prevalent disease in the sub-Saharan region
- B. a geographical region in South Asia
- C. a defensive military technique
- D. None of the above

Answer (B)

Siliguri Corridor in West Bengal is also called the 'chicken's neck'.

The exercise comes amid efforts to institutionalise tactical-level jointness between the defence forces, as a precursor to the creation of integrated theatre commands.



India and China have been locked in a military standoff along the Tibetan border since 2020, where China has already fielded its Combined Arms Brigades

3. With reference to tuberculosis, consider the following statements:

1. India continues to be the largest contributor to global TB cases which is 28 percent of the world.
2. India has set 2030 as the target year for elimination of the TB which coincides with one of the sustainable development targets to be achieved by 2030 by the world.

Which of the above statements are correct?

- A. Only 1 B. Only 2 C. Both 1 and 2 D. Neither 1 nor 2

Answer (A)

Although elimination of Tuberculosis is one of the sustainable development targets to be achieved by 2030 by the world, India has set the target of 2025.

4. With reference to desalination, consider the following statements:

1. It is a centuries-old concept which uses thermal distillation or a diffusion to separate salt from the sea.
2. Cloud seeding or even iceberg harvesting have proven at scale to be better options than desalination of our oceans into drinking water for the drought-proof regions suffering water poverty.

Which of the above statements are incorrect?

- A. Only 1 B. Only 2 C. Both 1 and 2 D. Neither 1 nor 2

Answer (C)

While around 70% of Earth's surface is covered with water, less than 1% per cent is actually drinkable.

These finite freshwater resources are very unevenly distributed. In hot, dry regions with growing populations and increasing living standards, there is not enough water to go around — a situation exacerbated by climate change.

As solutions such as cloud seeding or even iceberg harvesting remain unproven at scale, the desalination of our oceans into drinking water has emerged as the ultimate means to drought-proof regions suffering water poverty.

5. *'Mere faith and blind faith is dangerous: It dulls the brain and makes a man reactionary'* are the words of:

- A. Swami Vivekananda
- B. Karl Marx
- C. Rabindranath Tagore
- D. Bhagat Singh

Answer (D)

On March 23, 1931, Indian revolutionaries Rajguru, Sukhdev and Bhagat Singh were hanged for their role in the killing of British police officer John P Saunders. The day has since been marked as Martyr's Day to remember the national heroes, with leaders across the subcontinent – even those who disagreed with their methods – hailing their bravery and chastising the British for what was termed as a 'judicial murder'

