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> SVB Financial Crisis & Its Impact On Indian Startups

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Best wishes.





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## **For Next Issue**

- > Justification of the Supreme Court's decision regarding the right of reservation for the economically weaker section
- > Legal requirement for protection of animal rights in India
- > Plan to make India a trillion-dollar digital economy through Digital India Bill
- > Need to make India's extradition treaty effective in criminal matters
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- Review of constitutional political aspects related to disqualification of MPs and parliamentary privileges
- > Indian journey of Dalit empowerment from Dalit entry movement in temples

### Restoration Of Relations Between Saudi Arabia & Iran: Effect On India

**The** politics of West Asia or the Middle East have been influencing the major powers of the world for a while now. Once again something has happened in this region which will affect the global politics, regional politics as well as the Indian interests. Recently, the Gulf country Saudi Arabia has established diplomatic relations with Iran, under the mediation of China. In 2016, Saudi Arabia hanged a Shia cleric, after which Iranian protesters stormed the Saudi embassy in Tehran. After this both countries ended their diplomatic relations. Since then, tensions have been high between Sunnimajority Saudi Arabia and Shia-majority Iran.

Now recently, after four days of talks in Beijing, the two countries have agreed to restore their diplomatic relations. This agreement has been welcomed by many western countries including USA, France. However, India has not yet given any reaction to it. White House National Security Council spokesman John Kirby said, "The Biden administration supports any such initiative to reduce tension in the region." Nevertheless, it is equally true that USA must be suspicious regarding the achievement of China.

In the last 3 years, the USA also played the role of a mediator, with the aim of strengthening its hold in the Middle East or West Asia, concluding Abraham Accord, a free trade agreement between the United Arab Emirates and Israel. It was under the leadership of America that the alliance of I2U2 (India, Israel, United Arab Emirates, and the United States of America) was launched. Due to this, China was rather compelled to redefine its role in West Asia. The Middle East is the main source of energy imports for China and Saudi Arabia is the main supplier of crude oil. With this, China has also given new strength to its energy relations with Russia. Last year, Russia became China's largest oil supplier nation, leaving Saudi Arabia behind. Further, Iraq has been China's third-largest oil supplier nation.

## Effect of Restoration of Diplomatic Relations Between Saudi Arabia and Iran on India:

The resumption of diplomatic relations between Saudi Arabia and Iran in Middle East politics will certainly impact the issues of regional peace, security, and cooperation. Further, this will intensify the activism and diplomacy in middle eastern countries like India, the US, China, and Russia for the larger interests of countries. The skepticism about the forces promoting terrorism, separatism, and extremism in the Middle East and its surrounding areas will also reduce to some extent and the polarization of economic interests among nations will also intensify.



When assessing India's position in this context, the important point that comes out is that India wants to have good relations with all Gulf countries including Saudi Arabia as well as Iran. With countries like Saudi Arabia and the United Arab Emirates, India is trying to write a new story of strengthening bilateral relations with strategic partnerships and comprehensive economic partnership agreements. However, due to the opposition to Iran's nuclear program by the US and the effects of the US CAATSA law, India and Iran relations were somewhere negatively affected. Nevertheless, we as a nation do need Iran's support for the success of Chabahar Port and International North South Trade Corridor but it is also true that ever since there has been an attempt to isolate Iran from the international community on the basis of Iran's uranium enrichment program, China has increased its interest in Iran.

China has started promoting new geopolitical moves in West Asia and this can increase China's influence in the region. China will not hold back from attempting to challenge Indian interests in the region. After Iraq, India has been importing most of its crude oil from Saudi Arabia and Indian expatriates living in Saudi

Arabia have been sending remittances to India in large quantities. The extent to which China can affect India's interests can be gauged from the fact that when Russia became India's largest oil supplier during the Ukraine war, the same thing happened with China as well. China has renewed its energy ties with Russia.

- But it is not that the cordial relations between China and Iran tarnishes India-Iran relations. India is constantly trying to redefine its relations with Iran. Last year, the two countries signed an MoU on Recognition of Certificates of Merit for Unlimited Voyages to help seafarers of both countries. This was in accordance with the provisions of the International Convention on Training, Certification, and Monitoring Standards for Voyages by Sea (1978).
- Since India Ports Global Pvt. Ltd. (IPGPL) has taken over the operations of Shahid Beheshti Port, it is handling over 4.8 million tonnes of cargo. With close cooperation between India's IGPL and Iranian stakeholders, including the Ports and Maritime Organization of Iran, Iranian Customs Administration and Chabahar Free Zone Authority, Shahid Beheshti Port Authority, and other stakeholders, the port is likely to act as a catalyst with a vision to unlock huge business potential in this sector.
- In 2020, India made a concerted effort to supply 75,000 tonnes of wheat to Afghanistan as part of humanitarian assistance program as well as supplied 40,000 liters of Malathion 96% ULV insecticide to Iran through Chabahar port to reduce the threat of locust in agriculture in the region and enhance food security. In an effort to strengthen the capacity of the Chabahar port, India rolled out six mobile harbor cranes to the Indian Ports Global Chabahar Free Trade Zone (IPGCFTZ). Both countries remain determined to make Chabahar Port a vehicle for regional development. In recent times, a meeting has also been held on the development of maritime and port cooperation between Iran and India. The delegations from both countries also discussed the opportunities and new possibilities of trade between the Central Asian countries along with South Asia, ASEAN, and even countries in the Far East like Japan and Korea.

#### **Strengthening of China-Iran relations:**

Iran and China signed a 25-year cooperation agreement in 2021. The agreement was signed at a time when both countries were facing US sanctions. The agreement was signed by the foreign ministers of Iran and China. During his two-day visit to the Middle East, the Chinese Foreign Minister met Iranian President Hassan Rouhani with the aim of giving new impetus to Iran-China relations. The two countries then set a target of increasing their bilateral trade by 10 times to \$600 billion in the next decade. Possibilities are being explored to increase China's investment in various sectors of Iran, especially on the issue of energy, infrastructure and military cooperation. There has been talk between Iran and China to ensure cooperation regarding vaccine supply to deal with Covid 19. China had given 2.5 lakh doses of its Sinopharm vaccine to Iran.

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- Both countries have talked about increasing mutual cooperation to deal with terrorism and extremism. A large number of Afghan refugees live in Iran and it is imperative to address Afghanistan's security concerns from the point of view of Iran's security. For these reasons, China started taking interest in Afghanistan. Apart from this, it is also worth noting that both China and Russia have asked the US to revive the 2015 Iran nuclear deal and lift sanctions on Iran, while Biden has refused to lift the sanctions.
- China has talked about buying oil from Iran for the next 25 years at a very low price. In return, China will invest in banking, infrastructure such as telecommunications, ports, railways, transport, etc., and at this stage, it can influence Indian interests in Iran. India's relations with Central Asian countries can be affected at the level of infrastructure partnership with Afghanistan and Iran. After the deal that China has made with Iran, Iran will have access to Baidu, which is called China's GPS. Not only this, China can help in starting 5G service in Iran. China is Iran's largest trading partner. Iran has been badly hit by US sanctions after the US pulled out of the nuclear deal in May 2018 and China has tried to win Iran's confidence in this regard.
- On the other hand, until now USA was interested in controlling oil. But, after shale gas and other discoveries, USA has become a net exporter of oil. In such a situation, its dependence on oil has reduced. This has reduced its dependence on the Middle East for energy. And the importance of this area has decreased for America. On the other hand, the main source of oil for China is the Middle East.

#### The event affecting the politics of the Middle East:

Saudi Arabia and Iran are two important nations influencing the politics and economy of the Middle East. Both countries competing



for supremacy in the Middle East have been considering each other as a threat to themselves. In this competition, both countries have been supporting rival factions in several countries in the Middle East, including Lebanon, Syria, Iraq, and Yemen. Iran supported the Houthi rebels in Yemen. The rebels then ousted the pro-Saudi government from power in 2014. After this, Saudi Arabia started fierce airstrikes against Houthi rebels, which was named Operation Decisive Storm.

Saudi Arabia has been continuously alleging that Houthi rebels are attacking it with the help of Iran. In 2019, Saudi Arabia acknowledged the role of the Houthis and Iran in the attack on large oil plants in Saudi Arabia with drones and missiles. Iran has also been accused of promoting terrorist activities in the Gulf countries by providing financial assistance to the Lebanese terrorist organization Hezbollah.

In conclusion, it can be said that by making an agreement between Iran and Saudi Arabia, China has certainly gained an initial edge in global politics, but how long this agreement will last, is still under question. Nevertheless, the speed with which China is making its strong presence felt in Iran and Saudi Arabia can prove harmful to Indian interests. In both these countries, China can create problems for India. The way these two countries are important for India, in the same way, China is also using them to step up and move forward in global politics.

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### Role Of NATGRID & Other Intelligence Agencies In Strengthening India's Intelligence System

In the Union Budget 2023-24, the budget of the National Intelligence Grid (NATGRID) has been increased by 108 percent and Rs 200.53 crore has been allocated for it, which is a proof that the central government is actively involved in the development of intelligence agencies and making all efforts to modernize the intelligence mechanism in the country's internal security. Before this financial year, an allocation of Rs 96.56 crore was made for the formation of NATGRID and its infrastructural requirements. The central government has felt that it would be difficult to deal with anti-national activities if India's intelligence system is not modernized through more financial support. This is the reason that ever since the present central government has shown activeness to materialize the formation of NATGRID as soon as possible, efforts are being made by the government to clarify the role and functions of the same.

Last year itself, the Bengaluru campus of NATGRID was inaugurated by the Home Minister of India. Since then, it is believed that the idea of the formation of NATGRID, which was conceived after the Mumbai terror attacks is now getting due seriousness.

NATGRID is currently working towards building a national database on information related to bomb blasts, terror funding, fake currency, narcotics, hawala transactions, arms smuggling, and terrorism. It will be working in close cooperation with the National Investigation Agency and Intelligence Bureau in this matter. NATGRID has been set up in India to disseminate information related to national security to all major security agencies. Along with this, the Government of India has also increased the budget of other information agencies to strengthen them.

In the financial year 2023-24 budget, the budget of the Intelligence Bureau has been increased by 13 percent and a provision of Rs 3418 crore has been made for it. On the other hand, the Ministry of Home Affairs, which is responsible for the internal security in our country, has been allocated a budget of Rs 1.96 lakh crore in this budget witnessing an increase of 5.94 percent. In the financial year 2022 - 23, the Ministry of Home Affairs was allocated a budget of Rs 1.85 lakh crore, while the budget of the National Security Council Secretariat, which works under the National Security Advisor and deals with strategic interests related to political, economic, energy and security issues, has been increased and a provision of Rs 185.70 crores has been made for it. What is NATGRID?

NATGRID stands for National Intelligence Grid.

This is a system in which information related to all anti-national criminal illegal activities will be stored on a real-time basis. This is an ambitious project of the Government of India, under which the government will collect scattered security information and data on an online platform. With the help of this information, the securityrelated policies of the government and mutual coordination between the related security agencies will be encouraged.

- By collecting information related to these national security threats in the form of big data and analyzing them, the government will be able to keep an eye on every suspicious activity so that future threats can be avoided and preparations can be made to deal with them.
- NATGRID will track following information and store information about them.
  - » Terrorist attacks,
  - » Operations of organized crime networks,
  - » Trafficking operations such as
    - Arms trafficking,
    - Drug trafficking,
    - Human trafficking,
    - Wildlife trafficking,
  - Activities of Maoists and Naxalites,
  - » Keeping an eye on the activities of separatists and extremists,
  - » Keeping an eye on the proceedings related to money laundering etc.
- Overall, it can be said that the work of collecting intelligence about each anti-national activity will be done by NATGRID.

#### Structure of NATGRID:

- NATGRID has been designed by India's best engineers and cyber experts, and the privacy of such a platform has been among the top priority. NATGRID CEO has informed that the services of NATGRID solution will be available to 11 central agencies and police of all states and union territories. It will connect user agencies with data holders, providing them access to real-time information required for intelligence services and investigations. C-DAC Pune has been appointed as the Technology Partner and IIT Bhilai as the Plan Management Consultant for the development of the NATGRID solution.
- Under the NATGRID project, a provision has been made to collect data from 21 agencies and keep it safe in the National Intelligence Grid. The NATGRID will contain information about suspicious people's bank accounts, tax money, information about immigrants, their money

transactions, phone calls, information related to air travel and rail travel, information related to their exit from India and their entry into India.

#### Access to Information stored in NATGRID by 11 Central Security Agencies:

Only 10 organizations of the Central Government will have access to the information of the National Intelligence Grid, in which security agencies like the Intelligence Bureau, Research and Analysis Wing, CBI, National Investigation Agency, Enforcement Directorate (ED), Financial Intelligence Unit, Narcotics Control Bureau, CBI etc. will be included. Security intelligence will be collected in the first phase through 21 service providers and in subsequent phases, more than 1000 organizations will be connected to the NATGRID project. These organizations will contribute to real-time management of intelligence inputs. NATGRID's office will be in New Delhi while its data storage office will be in Bengaluru.

#### Why is NATGRID needed?

Lack of coordination has been seen between all the government institutions before or after any major mis-happening or accident in India, due to which it was a difficult task to bring coordination between them. Especially after the Mumbai terrorist attack of 26/11, it was discussed that in order to prevent such attacks in the future, the information related to the planning of terrorists and other important things should be received by the security forces on time. In the 2008 Mumbai terror attack, recce was conducted for the attack sites, about which the security and intelligence agencies of the country did not have real time information, it was considered a major intelligence failure. In fact, on 26/11, 2008, Fedayeen attacks took place at five places in Mumbai and 10 terrorists were sent for this. Recce of these places was done by David Headley. He had made a total of eight visits to Mumbai from November 2006 to April 2008 but David Headley told the NIA that till his sixth visit to Mumbai, he was asked to do recce of Taj Hotel only. When Headley was arrested in the US several months after the Mumbai terror attack, an NIA team went there to interrogate him. Out of the many conspirators of 26/11, one was Sajid Mir. He was proposed by the United States to be declared a Global Terrorist in the United Nations, which was vetoed by China. According to Headley, Sajid Mir had asked him several times to complete the recce of the Taj Hotel as soon as possible. Earlier a plan was made to send only two-three terrorists to India via Bangladesh or Nepal for the attack on Taj Hotel. But after March 2008, apart from Taj

Hotel in Mumbai, it was decided to prepare for terrorist attacks at some other places and it was decided to send 10 Fedayeen to Mumbai by sea. After this, David Headley did recce of dozens of places in Mumbai.

It is clear from this that if terrorist attacks are to be stopped, then intelligence agencies like IB, RAW, and Multi-Agency Center should first know about these things and they can share this information with the responsible Law Enforcement Agencies and Central Armed Police Forces, so that timely action can be taken against terrorists, Maoists, Naxalites, separatists, Islamic Jihadis. Till now, if any one security agency had to take any information from the other, then the process took significant time and how crucial is the use of time in such incidents, can be understood by attacks like Mumbai. This is the reason why the government needed concrete steps like NATGRID.

#### NATGRID: Criticism

- According to some people, NATGRID is against the right to privacy. This right has been declared a fundamental right, in which the personal information of common people can not be misused by the government.
- ▶ The second objection is that the police of the states will not get access to NATGRID, due to which immediate action will not be possible on any suspicious incident because the local police are considered the first responder. The government initially talked about only 10 central security agencies having access to NATGRID's information but recently the CEO of NATGRID told that the services of NATGRID solution will be available to 11 central agencies and police of all states and union territories. In this way, the Central Government has tried to remove the doubt that the provisions of NATGRID will not encroach on the principle of the federal structure of India.
- The third criticism is that securing such a platform would be a huge responsibility as terrorists have become adept at cyber attacks and cyber terrorism nowadays.
- Coming to the justification of NATGRID, systems with this type of functioning have been strengthened globally as many nations have considered it necessary for national security. Countries such as the United States have centralized information systems operating since the 1990s, which have empowered organizations such as the CIA and the FBI in the United States, and have proven effective in counter-terrorism operations abroad.

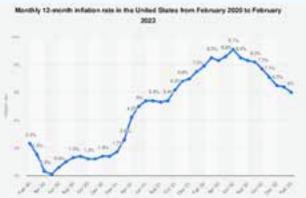


## SVB Financial Crisis & Its Impact On Indian Startups

**On** the 10th of March 2023, one of the largest banks, the Silicon valley bank (SVB), of the United States was shut down. It was the largest bank to have failed since the 2008 financial crisis and the second-largest failure in US history. The collapse of this bank has created chaos in the market, and analysts think it is going to lead to a bank run and nightmare for both Indian and American start-ups associated with the bank as the start-up funding is drying up.

#### About SVB:

- SVB, which was founded in 1983 and was the 16th largest bank in the USA. It dealt with high-growth, high-risk businesses such as technology start-ups.
- It provided multiple services to venture capital, and private equity firms in addition to offering private banking services for high-net-worth individuals.



#### How big is it?

- SVB provided financing for about half of all U.S. venture-backed technology and healthcare companies.
- It was a preferred bank for the tech sector because it supported start-up companies which not all banks would support due to higher risks.
- Based in Silicon Valley, SVB had assets totalling \$209 billion at the end of 2022, according to the Federal Deposit Insurance Corporation (FDIC).
- The bank's clients included household names like Shopify. Pinterest, etc.

#### Reason for the collapse of Silicon Valley Bank: High inflation in USA-

- The Russia-Ukraine war resulted in sudden inflation in the USA that reached near to 9.1% in June 2022.
- The sudden rise in inflation caused US Federal Reserve's to raise interest rates by 4.25%,

making the cost of borrowing for banks expensive.

#### Lack of Diversification-

- Silicon Valley Bank invested a large number of bank deposits in long-term U.S. treasuries and agency mortgage-backed securities. However, bonds and treasury values fall when interest rates increase.
- During Start-ups winter, many banks customers withdrew money as venture capital started drying up. SVB didn't have the cash on hand to liquidate these deposits because they were tied up in long-term investments. They started selling their bonds at a significant loss, which caused distress to customers and investors.
- Within 48 hours after disclosing the sale of assets, the bank collapsed.

#### Bank Run:

- When SVB announced its \$1.75 billion capital raising on March 6, people became alarmed that the bank was short on capital. Word spread, and customers started to withdraw money in waves with withdrawal requests reaching \$44 billion. SVB's stocks plummeted by 60% on March 7 after its capital raising announcement.
- It didn't take long for money to diminish during the bank run, with the escalating pace of withdrawals causing a snowball effect.
- Bank Run- A traditional bank run occurs when too many customers withdraw all their money simultaneously from their deposit accounts with a banking institution for fear that the institution may be, or will become, insolvent.

#### Action Taken by USA Federal Reserve-

- The government announced that it will not bail out SVB and its assets will go to creditors.
- FDIC formed the Deposit Insurance National Bank of Santa Clara to consolidate insured and uninsured deposits into one institution.
- All deposits of SVB were transferred to the National Bank of Santa Clara, and insured depositors had access to their funds on March 13.
- While the insured depositors of SVB will receive their insured deposits of up to \$250,000, the uninsured depositors in the bank will be paid dividends following the sale of the 40-year-old bank's assets.

#### Effect of the collapse:

SVB stockholders and investors took a big hit because, unlike customers, they were not

backed by FDIC on their investments.

- The insured up to only \$250,000 is not sufficient for companies, as they may spend millions in a month.
- It will make the Federal Reserve more cautious when raising rates.
- Damage to the financial system & USA domestic economy:
- The failure of a bank will likely damage the US domestic economy as its activities constituted a significantly large share of domestic banking activities.

#### Damage of Confidence-

The failure of a bank with a large size is also more likely to damage confidence in the banking system as a whole.

#### Possibility of failure of other banks-

Failure of one bank may have the potential to increase the probability of failure of other banks as there is a high degree of interconnectedness (contractual obligations) among banks.

#### **SVB and Indian start-ups:**

- The bank offered an easy way for start-ups in India, especially those in the Software as a Service (SaaS) sector who have a number of US clients, to park their cash — as they could set up accounts without a US Social Security Number or Income Tax Identification Number.
- SVB has invested in around 21 Indian start-ups and some start-ups that have raised funds from SVB include Bluestone, Carwale, and Loyalty Rewardz.
- According to The Economic Times, at least 40 Indian start-ups have between \$250,000 to \$1 million each, in deposits, with SVB, and over 20 of them have deposits of over \$1 million each.
- Most of these companies are SaaS companies on the west coast with operations in the US and India.

#### Impact of SVB collapse on Indian start-ups:

- Indian start-ups that have deposited at SVB might be impacted as the FDIC insurance limit is \$250K causing some start-ups a risk of losing big money.
- Lack of access to immediate working capital crucial for the day-to-day functioning of the firms, including creating payrolls.
- Hamper the funding- SVB has been a major player in the Indian start-up ecosystem, providing banking services and funding to many of the country's most successful startups, including PayTM.
- The ripple effect-This could lead to a cash crunch for many companies, which may be forced to cut costs, delay projects, or lay off employees.

Reduce global footprints- SVB has also been instrumental in helping Indian start-ups to expand into the US market, by providing them with the necessary infrastructure and support to set up operations in Silicon Valley.

#### Steps taken by Government of India:

- Minister of State for Electronics and IT, Rajeev Chandrasekhar, held a meeting with more than 400 Indian start-ups after the SVB debacle, to understand the impact and how the government can help during this crisis.
- The government urged start-ups to deposit their money in some Indian banks.
- The Ministry of Electronics and IT (Meity), had sent a letter to the Finance Ministry emphasising the need to devise a plan on how the Reserve Bank of India (RBI) can get domestic banks to offer loans to these start-ups.
- The government has offered GIFT city as an alternative to bring funds back to India from the foreign bank.
- GIFT city has been conceptualised to be an international financial hub. It aims to be the financial and IT hub for the country. Fintech platforms have partnered with banks such as RBL, ICICI, and Kotak to set up US\$ banks in GIFT City.
- According to experts, Indian banks are well placed in terms of the quality of deposits and also the possible impact of market losses on held-to-maturity books. However, by some estimates, only about 20% of the money that Indian start-ups collectively had in their SVB accounts was brought back to banks at GIFT city. The reason for the low preference for Indian banks according to start-ups are-

#### **Compliance requirements-**

GIFT city banks' reliance on SWIFT not only makes transfer expensive but also complianceheavy as it requires a six-point "know-yourcustomer" disclosure.

#### Uncertainty around regulations-

- According to experts, in India there is a lot of uncertainty in regulation related to a cap on moving funds and tax on LRS (Liberalised remittances scheme), which is currently exempted in GIFT city, however, start-ups fear that the exemptions can be removed in the future.
- High capital gain tax in India.

#### Need for counter-cyclical measures:

The collapse of the Silicon Valley Bank underscores the need to have adequate countercyclical macroprudential tools in place to provide a buffer against losses on account of



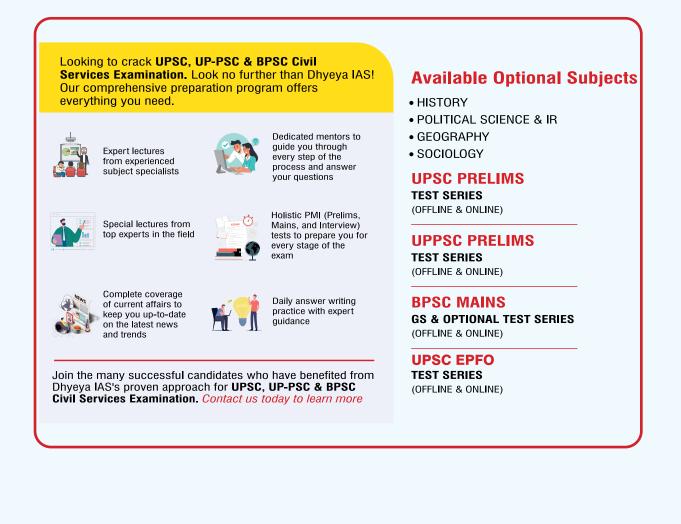
rising interest rates. One such tool in the context of Indian banking regulation is the Investment Fluctuation Reserve (IFR). This reserve is created by transferring the gains realised on sale of investments during an easing interest rate cycle. These gains act as shock absorbers during an interest rate tightening phase.

- ➢ To address the impact of sharp increase in the yields on government securities, the rules governing the IFR were refined in 2018. According to the revised rules, banks are required to transfer profits on sale of investments to the IFR until the amount of IFR is at least 2 per cent of the portfolio of government bonds available for trading and sale.
- According to the Financial Stability Report, December 2022, the banking system's IFR reached 2.2 per cent of the portfolio of securities

available for trading and sale in March 2022. This helped banks tide over losses in the first quarter of 2022-23.

#### Way Forward:

According to experts, it could not repeat the 2008 financial crisis as there are no wider issues to spread to the broader banking sector and other banks are far more diversified across multiple industries, customer bases, and geographies. In the short to medium term, it can dry fund inflow to start-ups. In the broader scope, SVB's collapse shows that financial management is necessary even when the times are good. During a recessionary environment, companies need to take extra precautions with rising interest rates, supply chain issues, and difficulties in raising capital.





## Status Of Nuclear Power Generation In India & Its Contribution To Carbon Emission Reduction

"India would never use atomic energy for evil purposes," Prime Minister Jawaharlal Nehru said as he inaugurated the country's first atomic reactor in Trombay on January 20, 1957. Context:

MoS, Atomic Energy and Space, Dr Jitendra Singh stated in parliament that presently (2020-21) nuclear power is saving 41 million tonnes of CO2 emissions annually, compared to the emissions that would be generated by equivalent electricity generation from coal based thermal power plants. As part of Low Carbon Development of Electricity Systems consistent with Enhanced Development benefits, Government is exploring a significantly greater role for nuclear power.

Nuclear energy debate in India till now used to be seen within the prism of economic growth and energy security. With India's promise to achieve net zero emission by 2070 at the COP26 Summit in Glasgow in 2021, focus of India's nuclear energy sector has shifted to climate change goals and promotion of clean energy. Government's commitment is to grow nuclear power energy capacity to align with India's climate change goals.

India is currently setting up the world's first thorium-based nuclear plant "Bhavini" at Kalpakkam in Tamil Nadu to use Uranium-233 which will be completely indigenous and the first of its kind. Whereas the experimental thorium plant "Kamini" already exists at Kalpakkam. India has started emphasizing on enhancing its capacity in the field of nuclear energy production, research and development, whose positive results have also been foreseen. There is another perspective of the achievement that India has achieved in the field of nuclear energy. While in the past Indian nuclear establishments were mostly confined to Southern and Western Indian states, the current Indian government is promoting its expansion in other parts of the country as well. The upcoming nuclear power plant in Gorakhpur, Haryana is a shining example of the efforts, which will be commissioned in the near future.

#### **Status of Nuclear Energy in India:**

Among all the developing nations, India is the only one to have generated electricity using indigenously developed, demonstrated, and deployed nuclear reactors.

- India ranks third in terms of electricity production worldwide. Nuclear energy is the fifth-largest source of electricity for India. Nuclear power currently provides 3% of electricity generation. According to the Department of Atomic Energy, India is planning to more than treble its nuclear electricity generation from the current 6,780 megawatts to 22,480 megawatts by 2031.
- ➢ India also stands at seventh position in terms of the number of nuclear reactors, with over 22 nuclear reactors in 7 power plants across the country which produces 6780 MW of nuclear power. Further, 10 reactors totalling 8000MW, are at various stages of construction. Meanwhile, the government has accorded administrative approval and financial sanction for 10 more reactors which will add 7000MW. It is expected that by 2031, nuclear power generation in India will triple (22,480MW) from the current level, which is highest in the world after China.

#### **Nuclear Programme in India:**

India formulated its three-stage nuclear power programme in the 1950s, under the guidance of physicist Homi J. Bhabha, to secure the country's long term energy independence, through the use of uranium and thorium reserves.

- The main objective of India's nuclear energy program was the utilization and development of Atomic energy for peaceful purposes.
- India's nuclear program has an ambitious threestage power production program. In the first stage of the nuclear fuel cycle the spent nuclear fuel still contains 96% of reusable material, this material is used again in the second stage and the spent fuel of the second stage is reused for the third stage. This creates a closed chain where the fuel is being reused and recycled to maximize efficiency.

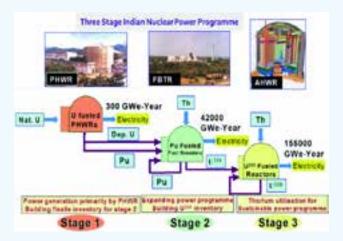
#### Stage I – Pressurised Heavy Water Reactor:

In the first stage of the prgramme, natural uranium fuelled pressurised heavy water reactors (PHWR) produce electricity while generating plutonium-239

#### Stage II - Fast Breeder Reactor

In the second stage, fast breeder reactors (FBRs) use a mixed oxide (MOX) fuel made from plutonium-239, recovered by reprocessing spent fuel from the first stage, and natural uranium.

In FBRs, plutonium-239 undergoes fission to produce energy, while the uranium-238 present in the mixed oxide fuel transmutes to additional plutonium-239. Thus, the Stage II FBRs are designed to "breed" more fuel than they consume. Once the inventory of plutonium-239 is built up thorium can be introduced as a blanket material in the reactor and transmuted to uranium-233 for use in the third stage.



#### Stage III - Thorium Based Reactors

- In this stage advanced nuclear power system involves a self-sustaining series of thorium-232 and uranium-233 fuelled reactors. This would be a thermal breeder reactor, using only naturally occurring thorium.
- The ultimate focus of the programme is on enabling the thorium reserves of India to be utilised in meeting the country's energy requirements. Thorium becomes important for India, as India has only around 1–2% of the global uranium reserves, but one of the largest shares of global thorium reserves at about 25% of the world's known thorium reserves. However, thorium is more difficult to use than uranium as a fuel because it requires breeding.

#### International Cooperation in civil nuclear energy:

- India's civil nuclear accords aim to develop mutually beneficial economic, scientific and technical cooperation for the peaceful uses of nuclear energy. The Indo-US civil nuclear deal in 2005 helped India to finalise the multilateral non-proliferation regimes and facilitated Indian nuclear establishment to augment reactor capacity with imported nuclear fuel.
- There are 14 countries with which India has signed such agreements such as USA, Australia, Canada, France, Japan, Kazakhstan, Mongolia,

Russia, South Korea, United Kingdom.

Further, India has entered into uranium purchase agreement with Russia, Canada, Kazakhstan and Uzbekistan. A strategic reserve of imported natural uranium is maintained at Nuclear Fuel Complex (NFC) for enabling uninterrupted supply of fuel to reactors under IAEA safeguards. India's commitments for cleaner energy and contribution of Nuclear energy in carbon emission reduction:

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- If the country has to meet net zero carbon emission by 2070, as declared by Prime Minister Narendra Modi in the COP26 Glasgow Climate Summit, India has to rely on production of clean energy in the form of nuclear energy. India will reach its non-fossil energy capacity to 500 GW by 2030 and India will meet 50 percent of its energy requirements from Renewable Energy by 2030.
- India is not very rich in fossil fuel resources. Considering the large and growing energy demand, nuclear power can be a clean and environment friendly option of electricity generation, which is available 24X7. It also has a huge potential and can provide the country long term energy security in a sustainable manner. Alongside renewables, nuclear power is a carbon-free source of electricity that can help meet demand around the clock. It has been a vital part of the global energy landscape and is a critical pillar in the shift to a carbon-free future. Expansion of nuclear power capacity will help in the country's energy transition for meeting the goal of net zero economy.
- Nuclear reactors do not produce greenhouse gases like power plants using coal and, therefore, can increase electricity generation without contributing to climate change. They can provide a steady supply of electricity because unlike solar and wind power sources, nuclear plants can operate when there is no sun or wind and are not affected by fluctuations in water availability like hydroelectric plants.

Presently (2020-21) nuclear power is saving 41 million tonnes of CO2 emissions annually, compared to the emissions that is generated by equivalent electricity generation from coal based thermal power plants. Further, India's nuclear power could provide a reliable solution to India's power demand as against wind and solar that is not available round the clock. This could further lead to a reduction in India's contribution to global Green House Gases (GHG) which stood at

6.55%. This in turn is going to assist the country in meeting zero energy targets along with other clean energy sources.

International Energy Agency (IEA)'s analysis shows that an expansion of nuclear power capacity globally is a key part of international efforts to ensure energy security and reach climate goals. Renewables are expected to meet the lion's share of India's rising demand, but nuclear power capacity will also need to increase six-fold in the next three decades.

#### Way Forward:

- India is on the path of nuclear energy resurgence and scaling up its nuclear power generation capacity. In the last 7 years, the installed nuclear power capacity has grown from 4780MW in 2014 to 6780MW by 2021, an increase of over 40%. If this pace is maintained, nuclear energy can contribute towards India's target to reduce Emissions Intensity of its GDP by 45 percent by 2030.
- Recognising the critical role of nuclear power in

India's clean energy transition, the government as per its de-carbonisation strategy is taking steps for development of small modular reactors (SMR) with up to 300 MW capacity that is not only cost effective but also safer as compared to large nuclear plants.

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- Again, NTPC, the country's largest coalfired power producer, is going nuclear as the government shifts focus on the nascent SMR technology in search of clean energy for achieving net zero by 2070.
- Niti Aayog has also stepped up its focus on SMRs as a key pathway towards India's clean energy transition.
- Nuclear energy carries a lot of significance for India. On 3rd December, 2021, Mr. Anil Kakodkar, the former chairman of the Atomic Energy Commission, stated that India can't meet the net-zero target without nuclear power. In the long run, the country need to increase the percentage contribution of nuclear energy to 25% of the total power capacity.





## LGBTQ Rights: The Conflict Of Social Morality Vs. Personal Liberty

#### **Reference:**

Recently, the Supreme Court has decided to refer petitions seeking legal recognition of same-sex marriages to a constitutional bench.

#### **Introduction:**

- $\geq$ In the year 2018, the Supreme Court had decriminalized relationship between same-sex couples in the Navtej Singh Johar case. Until this decision, Indian law considered such a relationship as a criminal act. Recently the Central Government has opposed same-sex marriage by filing an affidavit in the Supreme Court. The central government argued that same-sex relationships are distinctly different, which cannot be treated like a husbandwife relationship. The central government's contention is that same-sex cohabitation is not a crime, but it cannot be given the same status as that of an Indian family of husband, wife and children. Now, the Supreme Court has referred the petitions seeking legal recognition of gay marriage to a five-judge constitution bench, saying the issue is of 'fundamental importance'. Chief Justice of India D.Y. Chandrachud, Justice P.S. Narasimha and Justice J.B. Pardiwala's bench said that the issue is one of interplay between constitutional rights and special legislative enactments including the Special Marriage Act. The Supreme Court has listed the matter for hearing on April 18 and said the hearing will be live-streamed, as was done during earlier hearings before a constitution bench.
- After the decriminalization of homosexuality by the Supreme Court, demands have started to arise regarding the recognition of same-sex marriages. Some time ago some people belonging to the LGBTQ community appealed to the Delhi High Court to recognize a marriage between any two people irrespective of their gender, under the Special Marriage Act (SMA). Thereafter the matter went to the Supreme Court. Now the Supreme Court has decided to refer the matter to a constitutional bench. It may be noted that the Central Government is opposing permission for same-sex marriage.

#### The Historic Judgement by Supreme Court in 2018:

In the year 2018, the Supreme Court gave a landmark judgement regarding Section 377. A five-judge constitution bench headed by Chief Justice of India Deepak Mishra had said that same-sex relations between two adults are no longer a crime in the country. Section-5 of the Hindu Marriage Act was mentioned in the petition given by Navtej Singh Johar, according to which the marriage should be between two Hindus. Navtej Singh Johar argued in his petition that Section 5 of the Hindu Marriage Act does not discriminate between homosexual and heterosexual couples. In such a situation, gay couples should get their rights.

#### What is Homosexuality:

Homosexuality is commonly defined as the attraction between people of the same sex by nature or love, however, this is a narrower definition of homosexuality. Mainly, there are many categories in the homosexual category, which are described as follows -

- Lesbian- attraction of one woman to another woman.
- Gay- attraction of a man to another man.
- Bisexual- attraction to both the same and the opposite sex.
- Transsexual- change to the opposite sex of the natural sex.
- Queer- They are not sure about their sexual attraction.
- These categories are collectively referred to as L.G.B.T.Q. and are said to represent the homosexual category.

## Indian Society And Development of Homosexual Rights:

- In ancient Indian texts, the word kinnar possibly denoted the homosexual community. It is written in a Sukta of Rigveda that "Vikriti eva Prakriti" means that which is unnatural is also the gift of nature.
- Although this community existed even in ancient and medieval times, due to the dominance of social rules, they kept their identity secret.
- Over time, due to the increasing demand for a son in some religious beliefs and social needs, only the relationship between biological men and biological women started getting social recognition, due to which the social status of homosexuals declined.
- However, after the recognition of LGBTQ rights in the Netherlands in 2001, the demand for LGBTQ rights in India increased when a petition was filed in the Delhi High Court in 2001 by the

Nudge India Foundation.

In 2009, the Delhi High Court decriminalized same-sex relationships, but in 2013, the Supreme Court overturned the decision of the Delhi High Court.



#### **Other Facts**

## Year in which, Legislation was brought by foreign counties to make same-sex marriage legal.

countres to make same-sex mai mage legal.				
	Country	Year		
1.		2000		
2.	Belgium	2003		
3.	Canada	2005		
4.	Spain	2005		
	South Africa	2006		
6.	Norway	2008		
7.	Sweden	2009		
8.	Argentina	2010		
9.	Portugal	2010		
10.	Iceland	2010		
11.	Denmark	2012		
12.	Uruguay	2013		
13.	Brazil	2012		
14.	New Zealand	2013		
15.	England and Wales	2013		
16.	France	2013		
17.	Luxembourg	2014		
18.	Scotland	2014		
19.	USA	2015		
20.	Ireland	2015		
21.	Finland	2015,		
22.	Greenland	2015		
23.	Colombia	2016		
24.	Malta	2017		
25.	Australia	2017		
26.	Germany	2017		
27.	Austria	2019		
28.	Taiwan	2019		
29.	Ecuador	2019		
30.	Northern Ireland	2019		
31.	Costa Rica	2020		

- Again in 2016, the matter was referred to a 5-member constitutional bench. In the decision of the constitutional bench, the homosexuality provision of section 377 was decriminalized considering the relationship of two adults as private.
- However, even after the decision of the Supreme Court, the gay community is still a victim of neglect in society.

Central Government's Stand on the Petition Approving Same-Sex Marriage:

The Center has said that the family, (in the

form of husband, wife and children) is a unitary concept with a man as 'the husband', a woman as 'the wife' and the offspring born to them as children.

- The Center said registration of same-sex marriages violates existing personal as well as codified laws. The Center informed the court through an affidavit that it is in the interest of the state to recognize marriages between persons of the opposite sex only.
- The Union Government said that marriage in India is considered a sacrament and it encompasses age-old customs, cultural ethics and social values. In this case, gay marriage would violate all these things as well. Therefore, this petition should be dismissed.

## Homosexual Marriage: Recognition of Personal Rights

#### In the context of fundamental rights:

- Articles 14, 15, and 16 of the Indian Constitution prohibits discrimination based on gender, but these rights are often violated in society. Women and the gay community are more vulnerable to this problem than men and women. Therefore, it is necessary to achieve the essence of the right to equality by providing equal rights to homosexuals.
- Under Article 19 1 (a), a person has the right to freedom of sexual expression. But this right cannot be used in the case of same-sex marriage. Therefore, it is necessary to recognize gay marriages for freedom of sexual expression.
- The Supreme Court has described marriage as an interpretation of Article 19-1 (a) and Article 21 (Right to dignified life). Therefore, same-sex marriage should also be a right for homosexuals.

#### In the context of legal rights:

Couples in homosexual marriage are deprived of property, insurance, and rights obtained in the family. Along with this, laws related to adoption also create hurdles for people in same-sex marriages. In these circumstances, same-sex marriage must be given legal recognition so that the rights of these people are not compromised merely because of their orientation.

#### **Other Issues:**

- Sometimes physical or mental violence is inflicted upon, by the conservative elements of society on same-sex married couples. Apart from this, they also have to face social stigma which hinders the development of their personality as human beings.
- In this way, same-sex marriage hinders a person's reach for basic rights, social rights, and family rights.

## Homosexuality from the Perspective of Social Morality:

#### **Clear definition of marriage:**

- The definition of marriage by Parliament clearly states that marriage in India can be recognized only if the marriage is between a "biological male" and a "biological female" capable of procreating a child.
- Therefore, marriage in the gay community is not recognized.

#### Marriage: As a sacrament

According to the social beliefs of India, marriage in India is not considered a sexual necessity but rather a sacrament (especially in Hindu society) which is an indicator of the sanctity of marriage.

#### Concept of family in Indian society:

The concept of marriage in Indian society is based on one husband, one wife, and one child, which cannot be compared with a same-sex family.

#### Balance of social morality and individual freedom:

- The central government has opposed the recognition of LGBTQ marriage. The Central Government has clarified that it has been decriminalized by the Hon'ble Supreme Court, but it does not confirm to consider same-sex marriage or conduct as a fundamental right.
- The power to amend the Special Marriage Act-1954 or the Hindu Marriage Act-1955 is vested in the legislature and not in the judiciary.
- > Therefore, only the legislature can decide on the

recognition of this type of marriage by balancing the social morality and freedom of the individual.

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- In India, marriage represents a social morality rather than a personal right, in that case, recognition of same-sex marriage can lead to social conflict.
- Allowing a homosexual person not to marry indeed violates his fundamental rights, but it is clear that Indian Constitution allows restrictions on fundamental rights on the basis of public morality.
- Although so far the Supreme Court of India has many times restricted such social morality which hinders the development of the personality of the person, the Supreme Court and the Central Government jointly will succeed in establishing a balance between individual rights and social morality.

#### **Conclusion:**

Homosexual groups in India are about 8% i.e. their population is more than 100 million. Therefore it becomes a need to be careful while taking decisions regarding such a large population. Further, it is also necessary to establish a balance between the rapidly changing society and individual rights. Indian courts and constitutional benches have many times given decisions in such circumstances by balancing the progressive society and individual rights. This time also the decision should be taken keeping both these aspects in mind.





## Internationalization Of The Indian Film Industry & Recognition Of The Oscar Award

#### **Reference:**

Recently Indian film industry has created history by winning 2 Oscar Awards. This can be considered the beginning of the internationalization of the Indian film industry.

#### **Introduction:**

Recently the song "Naatu Naatu" from the Indian film 'RRR' and the short film "The Elephant Whispers" successfully won the Oscars. Surely this is one aspect of India's global rise and identity. These achievements will promote the internationalization of the Indian film industry while also showing global appreciation for the great talent, immense creativity, and sheer dedication of Indian artists. The Vice President of India also praised 'The Elephant Whispers' for 'beautifully depicting our deep connection with nature', and described the song "Naatu Naatu" as symbolic of India's dynamism and infectious energy.

#### About the Oscar Awards:

The award is an Academy Award presented by the Academy of Motion Picture Arts and Sciences of America. It is a prestigious annual award mainly given to the best directors, artists, writers, and technicians associated with the film business. It is noteworthy that the first Oscar ceremony was held on 16 May 1929. Winning an Oscar is considered the ultimate achievement for filmmakers and actors alike.

#### **Importance of Oscar Award:**

The Oscar award holds immense importance in the film industry for several reasons. Some of the main reasons why it is so important are as follows:

- Symbol of Excellence: Winning an Oscar Award has become a symbol of excellence for the film industry. It is considered to be the biggest and ultimate achievement in the film industry. The award provides international recognition for the acting, creativity, direction, etc. of filmmakers, actors, and other industry professionals.
- Commercial Benefits: Winning an Oscar also increases the commercial benefits for any film, director, or actor. Oscar-winning films often experience increased sales at the box office, as well as better crowds for their subsequent films.
- New Career Opportunities: Winning an Oscar also opens up new career opportunities for filmmakers and actors. There is a possibility of getting an easy advertisement and a high salary for the winner.
- > Promotion of the film industry: For any country

whose film industry gets an Oscar, the option of a global audience also opens up, which promotes the internationalization of that country's film industry.

#### **Indian Film Industry and Oscar Awards:**

Although the history of the Indian film industry is older than the history of the Oscar Awards, only a few Indian artists have been able to win an Oscar in the last nine decades. The details are as follows-

- Bhanu Athaiya:- She was India's first Oscar winner. He was given an Oscar in the Best Costume Design category for the 1983 film Gandhi. Although she had already designed costumes for more than 100 films.
- Satyajit Ray:- He was honored with the Honorary Life Time Achievement Oscar Award.
- AR Rahman:- He received two Oscar Awards in the year 2008-09. He won the Best Original Song and Best Original Score awards for the song "Jai Ho" in the British original film Slumdog Millionaire.
- Gulzar:- He was also given the Oscar Award in 2008-09 for writing "Jai Ho" in Slumdog Millionaire.
- Resul Pookutty:- He was also given the Oscar Award in 2008-09 for Best Sound Mixing of the film Slumdog Millionaire.
- MM Keeravani, Chandrabose:- Received the award in the category of Best Original Song for the song "Naatu Naatu" from the film RRR. It is the first Indian song to have received the award. Music composer MM Keeravani, and lyricist Chandra Bose received the award.
- Kartiki Gonsalves:- She has received the Oscar Award in the Best Short Film category for India's short film The Elephant Whispers.
- Apart from these, films like Mother India, Lagaan, Salaam Bombay, and many other actors were nominated for Best Foreign Language Films but could not receive the award.

Why Indian Films Lagged at Winning Oscar Awards? India started sending its films to the Oscars in 1957. However, so far no film has been able to get an Oscar. For which the following main reasons can be given –

- Colonial Mindset: Even today, India has to face a colonial mindset from 1st World Countries and the situation of unequal treatment is often seen in Indian and other countries. Notably, a controversy had also arisen over giving the Last sheet to the Indian camp in the 2023 award show.
- Biases of the selectors:- The selectors of the Oscar

selection committee often suffer from the prejudice that Indian films have not yet reached the extent where they should be given the excellence of the Oscars.

- Internal politics and selection of bad films:- Many directors and actors allege that the Film Federation of India does not send suitable films for Oscar due to internal politics, as a result of which Indian films do not get awards.
- Making Commercial Movies:- Film producers in India aim to earn maximum profit, in such a situation, they focus on making films full of entertainment, sensuality, action, and thrill, not on quality films.



#### **Other Facts**

- The first Academy Awards ceremony was held at the Hollywood Roosevelt Hotel on May 16, 1929.
- First Prize for Best Picture "Wings"
- First Best Actor Award Emil Jennings
- First Award for Best Actress Janet Gaynor

#### **Categories of Oscar Award:**

- Best Picture
- Best Director
- Best Actor/Actress
- Best Supporting Actor/Actress
- Other categories: Best Original Screenplay, Best Animated Feature, Best International Feature Film, Best Documentary Feature, Best Cinematography, Best Editing, Best Original Score. as well as Best Original Songs, Best Costume Design, Best Production Design

#### What do Oscar winners get?

- Coveted Gold Statuette: Each winner receives a gold-plated bronze Oscar statuette approximately 13.5 inches tall and weighing approximately 8.5 pounds.
- Recognition and Publicity
- > Opportunity to speak
- > A variety of benefits and gift bags

## Oscar Awards 2023 and Internationalization of the Indian Film Industry:

The song "Naatu Naatu" from the movie 'RRR' and the short film "The Elephant Whispers" has been successful at the Oscars. It will certainly lead to the global rise and recognition of India and the internationalization of the film industry. Even before this, Indians got Oscar in 2008-09 but Slumdog Millionaire was a British film. The 2023 Oscar Awards have given a new direction to the Indian film industry, which will have the following potential benefits-

**Foreign audience:-** "Naatu Naatu" song has got a

lot of appreciation in India as well as abroad. The Oscar Award is an indicator of its excellence. This will give foreign audiences an insight to other Indian songs and films which will promote the internationalization of Indian films.

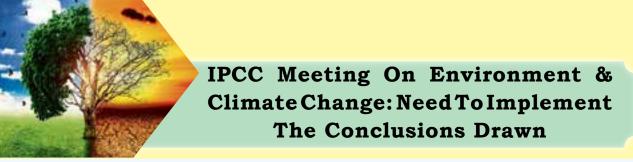
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- Inspiration to the film industry:- Oscar Awards will inspire the Indian film industry to produce quality films, which can lead to an increase in Indian representation in the Oscars in the coming times.
- Soft Power Diplomacy:- Till now Indian films and actors were popular in Third World countries which were also helpful in India's soft power diplomacy. But the excellence of Oscar can make films a tool of diplomacy in first and secondworld countries as well.
- Earning of Foreign Currency:- Internationalization of films can become an important source of foreign currency earning.
- Connection with Indian Diaspora:- Indian Diaspora living abroad feel respect and self-pride in getting Oscar and look forward to connecting with the country.

#### **Conclusion:**

Today, as India is getting global recognition in field of film scripts, music, dance, etc., it also increases the responsibility of the Central and State Governments to develop such cinema ecosystem in the country that Indian films and music become global sensation. For this, India has taken initiatives like organizing the International Science Film Festival of India as a major component of the International Science Festival, which is expected to give meaningful results. A total of 437 film entries based on science, technology and innovation were received from 59 countries in the International Science Film Festival. Organizing the International Film Festival of India in cities like Goa is also a proof of India's presence on the global cinema stage, which needs to be worked on at the policy level to further strengthen it. For this, the Ministry of Information and Technology needs to pay special attention to international alliances. India is also considering "co-production" of cinema with various countries. While the history of the Oscars begins in 1929, the history of Indian films begins around 1900. Even after this, Indians not getting more Oscar awards has been a matter of concern. However, the 2008 Awards and the 2023 Awards made it clear that if quality works are made, they can be recognized for excellence. Therefore, the Indian Film Federation, producers, directors, actors, actresses, and other sections should make efforts to win the Oscars by paying special attention to the quality, so that not only the internationalization of the Indian film industry takes place, but Indians also get self-pride and respect.

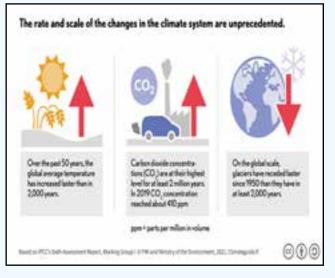


The UN's Intergovernmental Panel on Climate Change (IPCC) is known for its reports on climate change and the consequences of global warming. So far it has warned the world community about the new trends related to climate change in its 5 assessment reports and now it has released its sixth assessment report after its meeting in Switzerland. The city of Interlaken in Switzerland became an important center for the brainstorming of environmental policymakers of the world community on the crisis of climate change. Representatives of 195 countries finalized the Synthesis Report of the UN-affiliated organization IPCC on the crisis arising out of climate change. Environmentalists believe that the impact of this report will also be seen at the COP 28 which will be held in Dubai in December this year. Interlaken will be immediately followed by a ministerial meeting in Copenhagen, Denmark, to discuss ways to implement the decisions taken at COP 27 last year in Sharm el-Sheikh, Egypt. There will be a discussion on creating a fund to help the countries affected by the disaster-related to global warming. Significantly, G20 meetings related to climate change are also being held in Udaipur and Gandhinagar. This report has emphasized climate justice, climate adaptation, mitigation, climate equity, climate action for developing countries, green growth, and a low-carbon economy.

The new synthesis report of IPCC has been released titled "AR6 Synthesis Report: Climate Change 2023". This report summarizes five years of reports on global temperature rise, fossil fuel emissions and climate impacts. In this report, it has been said that the temperature of the earth is increasing continuously and if this increase in temperature continues, the global warming will be 1.5 degrees more compared to the average temperature during the industrial revolution of England in the 17-18th century, and the conditions of unseasonal and heavy rains in India will increase from 40 to 50 percent. The IPCC report says that if the temperature rises by 1.5 to 2 degrees, there will be a risk of flood in a wide area of India. At the same time, 46 percent of India's forests by 2030 and 54 percent by 2080 will be in the grip of fire and drought. The report says that the Himalayan and Western Ghat forests are at greater risk.

#### **Impact on Marine Biodiversity:**

This report assesses the effects of global warming on marine life and says that Global warming threatens 80 per cent of life in the sea, and if the temperature rises by 4 degrees Celsius, the environment will become dangerous for more than 80 per cent of the organisms in the Indian Ocean. A study of 2,584 coral reefs in India and the Pacific Ocean revealed that 17 per cent of these need protection, 28 per cent are endangered and 54 per cent need special efforts to save them. It has also been said in the report that due to the rise in the sea level, there may also be a drinking water crisis due to the salinity of groundwater in the coastal cities. This has been observed in the coastal areas of Sundarbans and Kerala. Due to this, the soil is also getting damaged.

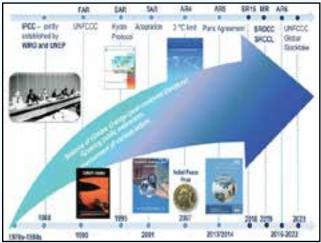


- The Environment Minister of India said about this report that this report echoes the 'Mission LiFE' launched in October 2022. CO2 is the primary greenhouse gas and needs to be reduced significantly.
- The report says that since the Industrial Revolution during the late 1800s and early 1900s, there has been a steady increase in carbon emissions worldwide as a result of human activities. The emission of carbon and other greenhouse gases result in excess heat being trapped in the Earth's atmosphere, leading to a rise in global temperature. Exceeding a certain limit, it can prove to be disastrous for life on earth, and its fatal consequences are also being seen. The damage caused by natural calamities has also been assessed in this report. In this, the loss due to the 2015 floods in Chennai is estimated at \$300 million. Whereas in 2020, a loss of \$ 1350 million was estimated due to the Amphan cyclone in Bengal and Bangladesh.

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#### Key Recommendations of the IPCC report:

- The report says that due to the slow action against the climate crisis at the global level, a lot of damage has already been done. Urgent action is needed now to bridge the gap between what is available and what is needed. The report states that rapid and sustained greenhouse gas emissions reductions are needed in all regions to keep temperatures limited to 1.5 °C above preindustrial levels. If warming is to be limited to 1.5°C, emissions must be reduced and almost halved by 2030.
- The IPCC highlights that to achieve this we need to "combine the use of fossil fuels with very low or zero-carbon energy sources, such as renewables or CCS." Hosung Lee, head of the IPCC, has said, "Effective and equitable climate measures will not only reduce harm to nature and people but will also provide wider benefits. This synthesis report underlines the urgency to act better and shows that, if we act now, we can still secure a sustainable future that is livable for all."



- The report believes that climate-friendly development becomes more challenging with an increase in temperature. This is the reason why the measures taken in the next few years will play an important role in deciding the future of us and upcoming generations. These measures must be rooted in our diverse values, attitudes and knowledge, including scientific and local knowledge.
- Such solutions, based on local knowledge, are aimed at addressing geographically specific locations with varying weather and climate conditions. The traditions of living and farming are old. These should advance with technological progress. The report says that swift action against climate change will happen only if there is a manifold increase in funds for the same. Insufficient funds are hampering this operation.

Along with the accepted ways for reducing the effects of climate change, using renewables and EVs, there is a need to develop new ways. A key point of contention in the climate debate is the issue of budget, should the budget be allocated according to a nation's share of growth and carbon emissions or should it be the same for all? It is this point that hinders the fight against climate change. Some of the financial steps suggested by the current report include budgeting by governments, providing public funds and seeking investors. Investors, central banks and financial regulators can play a significant part. There are some tried and tested policy measures that could work to reduce emissions if implemented more widely.

#### **Factual information about IPCC:**

The IPCC is a specialized body of the United Nations that assesses climate science and climate change. Scientists associated with it review the current effects of rapid climate change and the threats it poses in the future. Also, it explain the options to reduce the damage caused by it and keep the temperature of the world stable. The IPCC was established in 1988 by the World Meteorological Organization and the United Nations Environment Programme. This organization evaluates the climate and issues reports at intervals of a few years. It is issued in easy language so that more and more people can read it. Currently, the IPCC has 195 member states and brings together scientists from around the world who contribute voluntarily to its work. The IPCC does not do original research. Instead, hundreds of scientists examine the available scientific literature and turn it into a comprehensive assessment report.

One of the major conclusions of the IPCC report is that achieving the target of 1.5°C temperature is extremely difficult but it is possible. There is a need to take immediate steps for this. This means that if the world is to reach peak emissions before 2025, almost halve greenhouse gas emissions by 2030, and achieve net zero carbon emissions by 2050, then the countries, including India, need to make amendments to their nationally determined contributions and zero emissions targets. This is extremely challenging for a country like India which needs to increase its per capita GDP and where the population will continue to grow till 2050 and both of these factors contribute significantly to the increase in CO2 emissions. One aspect of this challenge is the availability of climate finance and the ability of the nation to use this finance effectively.







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## Compassionate Appointmen: Not a Vested Right

#### Why in News:

Recently, a Supreme Court bench (comprising Justice Krishna Murari and Justice B.V. Nagarathna) has dismissed some applications filed by dependents of deceased government employees in West Bengal for 'compassionate appointments', saying that such dependents of the deceased employees do not have a vested right.

#### **Court's View:**

The Court referred to a slew of its rulings from 1989 and 1994 in 'Sushma Gosain vs. Union of India' and 'Umesh Kumar Nagpal vs. State of Haryana' respectively, to say that there shouldn't be any delay in compassionate appointments and provided that the government or public authority examines the financial condition of the deceased's family and is satisfied with the situation.

#### **About Compassionate Appointment:**

- It means providing employment on compassionate grounds to the dependent family members of a Government servant who dies in harness or retires on medical grounds, and leaving the family without any source of sustenance.
- A number of factors are taken into account while assessing the request for compassionate appointments, such as the financial condition of the family, presence of earning members, size of the family, age of children and urgent needs of the family.
- The concept of compassionate appointments can be traced to Article 39 of the Indian Constitution, which talks about the right to livelihood. The DoPT stated that these appointments can be made only under "Direct Recruitment Quota for Group 'C' posts.
- Compassionate appointments are made by the Joint Secretary in charge of Administration in the concerned Ministry or Department or by the Head of the Department under Supplementary Rule-2(10) in the case of attached and subordinate offices.

#### **Eligiblity Compassionate Appointments:**

- > To be eligible, the family of the deceased must be poor or needy. The applicant must be eligible and suitable in all respects for the post under the provisions of the relevant Recruitment Rules.
- Further, dependents of the deceased can only be first-degree relatives such as their spouse,

son or daughter (including adoption), brother or sister in the case of an unmarried Government servant or member of the armed forces, who is wholly dependent.

#### Way Forward:

Anomalies in compassionate appointments have increased over time. It becomes necessary to investigate all aspects related to compassionate appointments by the Central Government and the State Governments so that only the needy can get benefit.

### BCI Allows Foreign Lawyers and Law Firms to Practice in India

Why in News:

The Bar Council of India (BCI) allowed foreign lawyers and law firms to practice in India on a reciprocity basis. Reciprocal laws are statutes of one state that give rights and privileges to the citizens of another state if it extends similar privileges to the citizens of the former. In this regard, the BCI notified, the Rules for Registration and Regulation of Foreign Lawyers and Foreign Law Firms in India, 2022.

#### **BCI (Bar Council of India):**

- The Bar Council of India is a statutory body created by Parliament under the Advocates Act, 1961 to regulate and represent the Indian bar.
- It performs the regulatory function by prescribing standards of professional conduct and etiquette and by exercising disciplinary jurisdiction over the bar.
- It also sets standards for legal education and grants recognition to universities whose degrees in law will serve as qualifications for enrolment as an advocate.
- In addition, it performs certain representative functions by protecting the rights, privileges and interests of advocates and through the creation of funds for providing financial assistance to organize welfare schemes for them.

#### **Doors Opened for Following Areas:**

- Doing work, transacting business, giving advice and opinion concerning the laws of the country of the primary qualification;
- Providing legal expertise/advise and appearing as a lawyer for a person, firm, company, corporation, trust, society etc. who/which is having an address or principal office or head office in a foreign country in any international arbitration.
- Providing legal expertise/advise concerning the laws of the Country of primary qualification and

on diverse international legal issues, provided that such legal expertise/advise unless otherwise provided for in these Rules, shall not include representation or the preparation of documents regarding procedures before.

#### **Operations of Foreign Law Firms so far:**

- For over a decade, BCI was opposed to allowing foreign law firms in India.
- The issue was raised in the Bombay High Court in 2009 (Lawyers Collective v Union of India)
- The issue of foreign law firms entering the Indian market came to courts with a challenge before the Bombay High Court in 2009.
- The Bombay High Court held that only Indians holding Indian law degrees can practice law in India.
- The HC also held that practice would include both litigious and non-litigious practice, so foreign firms can neither advise their clients in India nor appear in court.

#### SC Verdict on the Issue:

- In 2018, the Supreme Court upheld both the High Court judgments disallowing foreign law firms and lawyers.
- It passed the order with some modifications such as holding the expression fly in and fly out to cover only casual visits not amounting to practice.
- They argued that they were essentially BPOs that managed secretarial support, transcription services, proofreading etc.
- Technically, these activities do not come within the purview of the Advocates Act or the BCI Rules.

#### Way Forward:

The Bar Council of India has reason to believe that any foreign lawyer or foreign law firm registered under these Rules has been guilty of professional or other misconduct in connection with a law practice in India or has violated the terms and conditions and/or provisions of these Rules in any manner, the Bar Council of India shall refer the matter to the Disciplinary authority of the concerned foreign country for the needful.

# **3** Adultery as Misconduct and Judicial Musings

#### Why in News:

Recently, the Union of India sought clarification from the Supreme Court saying that any immoral or adulterous acts in the armed forces should be allowed to be governed by the relevant sections of the Army Act, the Air Force Act and the Navy Act. Under Article 33, Parliament has powers to restrict or abrogate fundamental rights of certain categories of persons, including members of the armed forces, for the proper discharge of their duties and the maintenance of discipline among them.

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#### **About IPC Section 497:**

It mandates that if a person has sexual intercourse with the wife of another man without the consent or connivance of that person, such intercourse does not amount to the offense of rape but is guilty of the offense of adultery. The law does not penalize his wife, as it recognizes that only a man can seduce a woman for a sexual act and that it is the husband who suffers due to a sexual relationship with his wife which occurs without his consent. Interestingly, if the husband has intercourse with an unmarried, divorced or widowed woman, he is not considered guilty of adultery.

#### **Supreme Court's Decision Regarding Adultery:**

The Supreme Court of India in its landmark judgment of Joseph Shine v. Union of India in September 2018 gave a ruling on adultery. The Honourable Court held Section 497 of the Indian Penal Code as well as Section 198 of the Criminal Procedure Code as unconstitutional on the ground that these provisions violate Articles 14, 15 and 21 of the Constitution of India.

#### Status of Adultery in Global Scenario:

Even today there are many European nations where adultery is not considered a crime. There are only 10 states in the United States that have retained various criminal laws related to adultery. Some states only ban 'open and notorious' adultery, while others ban 'habitual' adultery, which is punishable by a fine and imprisonment for up to three years. In countries such as Saudi Arabia, Yemen and Pakistan, adultery is considered a heinous crime.

#### Way Forward:

Honourable Court and Government should take decisions according to present and futuristic circumstances. The flexibility of the law in some special situations shows a positive way for the sensitive society.



#### Why in News:

The Karnataka Lokayukta has recently moved to Supreme Court challenging the Karnataka High Court's order of granting pre-arrest bail to MLA Madal Virupakshappa in a case filed under Section 7 (a) (public servant taking gratification other than legal remuneration for an official act) of the Prevention of Corruption Act.

#### 

#### **About Anticipatory Bail:**

- Although the term "bail" has not been explicitly defined in Indian statutes, the Code of Criminal Procedure (CrPC) differentiates between "bailable" and "non-bailable" offences. It enlists three types of bail – regular bail under Section 437 and 439; interim bail (when the regular or anticipatory bail application is pending before the court); and anticipatory or pre-arrest bail.
- Following the 41st Law Commission Report in 1969, it was introduced to prevent arbitrary violation of personal liberty; for exampledetention made under political strife. It is granted under Section 438 of CrPC by the High Court or the Court of Session for non-bailable offences when a person anticipates arrest, even if the actual arrest has not happened or the FIR has not been registered.
- Since states have the power to make amendments to the CrPC; several states like Maharashtra, Odisha and West Bengal follow their own modified versions of Section 438. Even Uttar Pradesh and Uttarakhand did away with it during the emergency which was later reintroduced in 2019.

**Conditions for Granting Anticipatory Bail:** 

- Provision related to pre-arrest bail was amended in 2005 which laid down certain principles for consideration of granting it, such as whether the accused is likely to flee, is a habitual offender, or is likely to tamper with evidence along with his antecedents.
- Moreover, Section 438(2) laid down conditions for granting anticipatory bail. These are –



1. The person shall make himself available for interrogation by a police officer as and when required

2. The person cannot make any inducement, threat, or promise, directly

or indirectly, to any person acquainted with the facts of the case to dissuade him from disclosing them to the court or the police

- 3. The person shall not leave India without the previous permission of the court
- Such other conditions may be imposed under sub-section (3) of section 437 "as if the bail were granted under that section"

#### Way Forward:

Anticipatory bail is an instrument to crystallize the fundamental rights of an individual but judicial caution shall always be exercised to strike a balance between crime prevention and personal liberty.



### NSA Invoked Against Khalistan Supporters in Punjab

#### Why in News:

The National Security Act (NSA) has been invoked in the case of Waris Punjab De chief Amritpal Singh along with his aides.

**About National Security Act:** 

- The National Security Act of 1980 is an act of the Indian parliament, whose purpose is "to provide for preventive detention in certain cases and for matters connected therewith".
- It is an administrative order passed either by the Divisional Commissioner or the District Magistrate (DM).
- > The act also gives power to the government to detain a foreigner in a view to regulate his presence or expel him from the country.

### WHAT IS NATIONAL SECURITY ACT?

- Introduced by Indira Gandhi in 1980
- Govt can detain anyone it considers a 'threat' to India's security
- District administration, police can order arrest
- Maximum detention for 12 months

#### **Provisions of the National Security Act 1980:**

- Any person, in police custody or who has been granted bail/acquitted by a trial court, can be slapped with NSA.
- The law takes away an individual's constitutional right to be produced before the magistrate within 24 hours.
- The detained person doesn't have the right to move a bail application before a criminal court.
- Under the NSA, a person could be kept in the dark about the reasons for his arrest for up to five days, and in exceptional circumstances up to ten days.

#### **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 supplies and services essential to the community.

An individual can be detained without a charge for a maximum period of 12 months.

#### **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.
- 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.
- Article 22(5) states that all detained persons have the right to make an effective representation before an independent advisory board.

#### Way Forward:

According to the 177th Report Of the law commission from 2001, reveals that 14,57,779 persons were arrested under preventive provisions in India. It is paramount to review the continued usage of the NSA and to close the loopholes that permit law enforcement to abuse constitutional and statutory rights.



#### Disgualification of M.P

#### Why in News:

Recently, a local court of Surat cancelled the membership of Rahul Gandhi following his conviction and sentencing over the defamation case. He has been disgualified from membership in Lok Sabha under article 102(e) of the Indian constitution and read with section 8 of the RPA act, 1951. Defamation is the act of communicating false statements about a person that injure the reputation of that person when observed through the eyes of an ordinary man.

#### **Defamation Law in India:**

- $\geq$ Article 19 of the Constitution grants freedom of speech to its citizens. However, Article 19(2) has imposed certain reasonable exemptions to this freedom such as - Contempt of Court, defamation and incitement to an offense.
- Section 499 of IPC defines the term 'defamation' which says, "Whoever, by words either spoken or intended to be read, or by signs or by visible representations, makes or publishes any imputation concerning any person intending to harm, or knowing or having reason to believe that such imputation will harm, the reputation of such person, is said, except in the cases hereinafter expected, to defame that person". Imputation of individuals, even deceased, associations or organisations may be subject to

defamation.

Section 500 of the IPC discusses the punishment under defamation charges. This includes an imprisonment term of two years, fine or both. Defamation is an offence under both civil and criminal law as it is also covered under the Law of Torts, under which a person who has been defamed can move high court or the Supreme Court.



a Member of Parliament and a Member of the Legislative Assembly through Articles 102(1) and 191(1) include holding an office of profit, being of unsound mind, being insolvent or not having a valid citizenship.

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Provision for disgualification of members on the ground of defection under the Tenth Schedule of the Constitution



#### Legal Provision Regarding Disqualification of an **M.P.:**

- The disgualification of a lawmaker is prescribed in three situations. 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.
- The second prescription of disqualification is in the Tenth Schedule of the Constitution, which provides for the disgualification of the members on grounds of defection.
- third The prescription is under The Representation of The People Act (RPA), 1951. This law provides for disqualification for conviction in criminal cases.



#### Under the RPA act, a Member of Parliament who is found guilty of any crime and receives a term of at least two years is automatically disqualified from holding public office, according to Section 8(3) of the Representation of the People (RP) Act 1951, which governs a legislator's removal from office.

- The Supreme Court's ruling in the Lok Prahari case from 2018 is also underlined by experts. The ruling stated that if the conviction is suspended on appeal, the disqualification will also remain suspended.
- According to the RP Act and its interpretation by the Supreme Court in the Lily Thomas case, the disqualification is automatic, thus any member will be disqualified immediately after his conviction.

#### Lily Thomas Case:

▶ In the Lily Thomas case (2013), the Supreme Court dismissed Section 8(4) of the RP Act, which allowed a legislator who had been convicted of an offence to continue serving on the basis that an appeal had been submitted within three months of the conviction.

#### Way Forward:

In the current political scenario, allegations and counter-allegations have become a common practice during elections, taking every case to court to obstruct the judicial process. At the same time, politicians should keep in mind the limits of freedom of expression because if defamation cases continue like this, it will not be a good sign for a vibrant democracy.

#### Status Of Daughter's Right in Family Property After Receiving Dowery

#### Why in News:

The Goa Bench of the Bombay High Court has recently held in Terezinha Martins David vs. Miguel Guarda Rosario Martins & Others that daughter's right to family property does not extinguish even if the dowry was provided to her at the time of marriage. Justice MS Sonak quashed a Transfer Deed made by brothers transferring family property without the consent of the sister.

#### About the Case:

- A Transfer Deed was executed by which her mother and two brothers transferred her a family shop to her other two brothers without her consent. She filed a suit challenging the Transfer Deed claiming she has undivided right in the suit shop.
- The trial court dismissed the appellant's suit but partly allowed the counter claim and cancelled

the Deed of Succession. She filed the appeal.

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The brothers claimed that the four daughters were settled by payment of sufficient dowry at their marriages. The suit shop wasn't ancestral property but an asset of the partnership firm formed by the three sons and their late father.



#### **Court's Observation:**

- Court said that if it is assumed that some dowry was provided to the daughters, that does not mean that the daughters cease to have any right in the family property. The rights of the daughters could not have been extinguished in the manner in which they have been attempted to be extinguished by the brothers, post the father's demise.
- ➢ In present case limitation is also not applied because the court noted that there is no evidence to show that the appellant was aware of the Transfer Deed more than three years before filing the suit. Once the appellant produced her evidence, the burden was on the defendants to establish that she had knowledge of the Transfer Deed more than three years before the suit, the court said. However, they did not even attempt to discharge this burden. Therefore, the trial and appellate court's finding on limitation was perverse, the HC held.
- The limitation period was governed by the provisions of Article 59 of the Schedule to The Limitation Act 1963. For a suit to cancel or set aside, an instrument or a decree or for the rescission of a contract, the period of limitation prescribed is three years.

#### **Conclusion:**

As per Article 1565 of the Portuguese Civil Code, the mother was not entitled to transfer her share in the suit shop to her two sons without the consent of other sons and daughters, the court said. Further, as per Article 2177 of the Code, a co-owner cannot dispose of any part of the common property unless it is allotted to him in partition. Therefore, the Transfer Deed was null and void.





#### **Exercise 'BOLD KURUKSHETRA'**

#### Why in News:

The Singapore Army and Indian Army participated in the 13th edition of Exercise Bold Kurukshetra, a bilateral armour exercise at Jodhpur Military Station, India.

#### About Exercise 'Bold Kurukshetra':

- It is a bilateral armour exercise between the armies of Singapore and India.
- It was first conducted in 2005.
- The exercise underscores the strong and longstanding bilateral defence relationship between both countries and enhances cooperation between the two armies.
- Both defence establishments also interact regularly through high-level visits, policy dialogues, courses, and other professional exchanges.

#### Highlights of the 13th Exercise:

- For the first time in the exercise series, both armies participated in a command post exercise, which involved Battalion and Brigade level planning elements and computer wargaming.
- The 42nd Battalion, Singapore Armoured Regiment, and an Armoured Brigade of the Indian Army participated in the exercise, which was hosted by the Indian Army.

#### **Importance:**

- The ten-day joint training promoted a shared understanding of mechanized warfare regarding new threats and developing technologies.
- It also developed inter-operability through a computer simulation-based Wargame using joint operational and tactical procedures controlled through a joint command post.
- Both contingents learned about each other's operating drills and procedures, and also exchanged ideas and best practices followed in a modern combat zone.

#### **Defence And Security Cooperation:**

- Singapore participates in the Indian Ocean Naval Symposium (IONS) and multilateral Exercise MILAN hosted by Indian Navy.
- India's membership of ADDM+ (ASEAN Defence Minster's Meeting- Plus) and Singapore's membership of the Indian Ocean Rim Association (IORA) provides a platform for both countries to converge and cooperate.
- India and Singapore participate in the trilateral Maritime Exercise, SITMEX (India, Singapore, and Thailand).
- Both countries share similar concerns with regard to terrorism, and extremism and have a

#### longstanding partnership.

#### Way Forward

The close relationship shared by India and Singapore is based on the convergence of economic and political interests. The recent linkage of India's UPI and Singapore's PayNow will further enhance the ties between the two.



#### US Senate resolution to underline India's support for McMahon Line

#### Why in News:

Recently, two US senators (one from Republican Party and the other from Democrat) introduced a bipartisan resolution in the upper house of Congress reiterating that the US recognizes the McMahon Line in Arunachal Pradesh as the international boundary between China and India. The resolution reaffirms India's well-known and established position that Arunachal Pradesh (which China calls 'South Tibet') is an integral part of India.



#### About the McMahon Line:

It serves as the de facto border between China and India in the eastern region. It specifically delineates the border between Arunachal Pradesh and Tibet, from Bhutan in the west to Myanmar in the east. The McMahon Line was drawn during the Shimla Agreement of 1914, officially described as a convention between Great Britain, Tibet and then the mainland government that ruled China from 1912 to 1949.

#### Why Does China not Accept the McMahon Line?

China believes that Tibet has always been part of its territory, so Tibetan representatives are not authorized to accept any agreement without Chinese consent. In the 1950s, China started asserting its authority over Arunachal Pradesh only after full control of Tibet, since then China has neither accepted nor recognized the McMahon Line.

#### India's Stand on the McMahon Line:

India believes that when the McMahon Line was

determined in 1914, Tibet was an independent country, and had every right to negotiate a border settlement with any country. When the McMahon Line was drawn, Tibet was not ruled by China, so the McMahon Line is the clear and legal boundary line between India and China. Notably, even after the Chinese occupation of Tibet; the Tawang region remained an integral part of India.

#### Way Forward:

China has used this situation according to its need because when it was isolated from the world, it considered India as its good neighbour and friend. Currently, China wants to recognize each agreement by comparing it with today's situation which is against international law. All the countries of the world including India need to be careful with the double standard of China.



#### ICC Issues Warrant Against Russian President

#### Why in News:

Recently, the International Criminal Court (ICC) issued an arrest warrant against Russian President Vladimir Putin and the Commissioner for Children's Rights for the alleged war crime of unlawfully deporting and transferring children from occupied areas of Ukraine to the Russian Federation.

#### **Rationale Behind the Issue of Arrest Warrant:**

- According to the Rome Statute, president Putin and Maria Lvova-Belova are responsible for the war crime of transferring children to the Russian Federation under articles 8(2)(a)(vii) and 8(2)(b) (viii).
- The ICC claimed that it had reasonable grounds to believe that Putin bears personal criminal responsibility for offenses committed directly, jointly with others or through others under Article 25(3) (a).

#### **Implications of the Warrants:**

- Human rights organizations and many heads of state, including the US President, have welcomed the warrant for war crimes in Ukraine.
- The trial appears unlikely as long as Putin remains in power because the court cannot hear defendants in absentia and Russia has said it will not hand over its officials.
- If President Putin visits a country that is a party to the ICC, that country must arrest him in accordance with its obligations under international law.

#### **About International Criminal Court (ICC):**

It is an intergovernmental international tribunal, established under the Rome Statute adopted on July 1, 2002, that hears criminal incidents around the world. This court mainly hears crimes against humanity, genocide and crimes committed during the war. Its headquarters are located in The Hague, the capital of the Netherlands, but its proceedings can be conducted anywhere. Currently, 123 countries are its members, it is not a part of the United Nations, yet it has an agreement with the United Nations for cooperation. India, America, China, Israel and Russia are not member countries.

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#### Way Forward:

The International Criminal Court, which is an autonomous organization, before taking any decision, should consider its implications. Its work should not be inspired by any country or ideology but should be inspired by the desire to get justice.

#### India is the World's Largest Arms Importer – SIPRI

#### Why in News:

A recent report published by the Stockholm International Peace Research Institute (SIPRI) states that despite a decline over the past five years, India remains the world's top arms importer. The report says that European countries have also aggressively imported weapons during this period.

#### **Key Findings:**

- India, Saudi Arabia, Qatar, Australia, and China are the top five arms-importing countries in 2018-22.
- The five largest arms exporters are the US, Russia, France, China, and Germany. The five countries alone account for 76% of global arms transfers between 2018 and 2022.
- India was the world's largest arms importer between 2018-2022 accounting for 11% of global imports.
- Russia remains the largest supplier of arms to India in both 2013-17 and 2018-22. Russia accounts for 45% of India's imports, followed by France (29%) and the US (11%).
- Among the top 10 arms exporters for the period 2018-22, India was the largest arms export market for three countries - Russia, France, and Israel and the second largest for South Korea.
- India was also the third largest market for South Africa, which ranked 21st in the list of arms exporters.

#### **Decline in Global Arms Trade:**

- The global volume of international arms transfers declined by 5.1%. Significant arms imports by European countries increased by 47% between 2013–17 and 2018–22. The Russia-Ukraine war has played a big role in this.
- Since its independence, by 2021, Ukraine had

greatly reduced the import of weapons. However, this changed after the Russian invasion of Ukraine in February 2022, as the United States and several European states began sending large amounts of military aid to Ukraine.

Of the 29 countries expected to supply arms to Ukraine in 2022, the US remained the dominant supplier, accounting for 35% of Ukraine's total arms imports.

## About Stockholm International Peace Research Institute (SIPRI):

It is an independent international institute dedicated to research into conflict, armaments, arms control, and disarmament. Established in 1966, the organization provides data, analysis, and recommendations to policymakers, researchers, the media, and the interested public.

#### Way Forward:

The report states that ongoing geopolitical tensions have increased the demand for arms imports. However, in global trade, India has started indigenously producing defence equipment and this process is likely to accelerate further in the future.

### **5** Africa-India Field Training Exercise (AFINDEX 2023)

#### Why in News:

Recently, the second edition of the Africa-India Field Training Exercise (AFINDEX 2023) began at the Indian Army's Foreign Training Node (FTN) at Aundh Military Station in Pune. The 10-day exercise focused on operations such as humanitarian assistance and UN peacekeeping.

#### **About AFINDEX:**

- The first Africa-India field training exercise was held in Pune in March 2019 to undertake a range of activities in planning and conducting Humanitarian Mine Assistance by the 18 nations.
- The exercise focused on a technical level and exchange of best practices for team building operations among the participating countries in the conduct of Humanitarian Mine Assistance and Peacekeeping Operations based on the guidelines issued by the United Nations.
- The India-Africa Defence Ministers' Conclave was held on the side-lines of DefExpo 2020 in Lucknow, which adopted the Lucknow Declaration paving the way for defence cooperation between India and African countries.

#### **Objective:**

Continuation of initiatives taken to strengthen India-Africa relations with a focus on enhancing peace and security, creating opportunities for the exchange of ideas and perspectives. Learning from the African experience in cooperative security, managing security crises and conflicts, and promoting collaborative approaches in capacity building of African militaries.

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#### Focus Point:

- The focus of the event is to develop an institutional framework for joint training and for better and more efficient military cooperation to strengthen the existing defence ties between various nations and to address emerging global challenges.
- To inform the participants about ongoing incentives under various mechanisms like Indian Defence Industry, Make in India and Atmanirbhar Bharat.
- This Joint Exercise for Regional Integration (AMRUT) focuses on building cohesion between African-Indian forces and incorporating the current dynamics of UN peacekeeping operations through practical discussions and tactical exercises.

#### Way Forward:

Through this exercise, peace, stability and open movement will be promoted in the countries located around the Indian Ocean, which will reduce the hegemony of any country. With this, UN peacekeeping missions can run more actively.



#### Why in News:

Recently Japanese Prime Minister Fumio Kishida came on a two-day visit to India and participated in delegation-level talks with Prime Minister Modi. During this visit, two documents were also signed.

#### **Issues Discussed:**

- During the meeting there was extensive discussion on the Free and Open Indo-Pacific (FOIP), where China's aggression fuels regional instability.
- Both countries agreed to promote respect for sovereignty and territorial integrity to resist unilateral changes by any one country and improve cooperation to address global challenges.
- Japan will focus on Southeast Asia, South Asia (especially Northeast India) and the Pacific Islands and Japan also will promote the Bay of Bengal-Northeast India industrial value chain concept.
- > Japan's concept of FOIP complements India's concept of the Indo-Pacific Initiative (IPOI).

#### **Diplomatic Relations:**

After the establishment of diplomatic relations in 1952, several high-level exchanges took place, including the visit of the Japanese Prime

Minister to India in 1957. The Act East Forum, established in 2017, aims to provide a platform for India-Japan cooperation under India's 'Act East Policy' and Japan's 'Free and Open Indo-Pacific Vision'.

#### **Economic Relations:**

Japan provided financial assistance to India during the 1991 balance of payments crisis. Both countries signed a Comprehensive Economic Partnership Agreement in 2011. Japan was India's 12th largest trading partner in 2020. Also, there has been an increase in direct investment in India from Japan and Japan was the fourth largest investor in India in FY20. Bilateral trade between both countries is around US\$ 20 billion with immense potential to reach new heights.

#### **Defence And Security:**

India-Japan is working together for peace and prosperity in the Indo-Pacific region and the world under Vision 2025. The two countries have a "2+2" dialogue and are enhancing cooperation through military exercises like Dharma Guardian (Army), Veer Guardian (Air Force), JIMEX (Navy) and MILAN.

#### Way Forward:

India-Japan are having extensive exchanges in areas such as artificial intelligence, 5G, telecom network security, cyber security, infrastructure development, health, education, climate change etc. Both countries are also working on multilateral areas like Quad, G4 and Malabar exercises to work together for the betterment of their people.



#### Why in News:

The UN 2023 Water Conference was held from March 22 to 24 in New York. It took 46 long years for the UN to organize this Water Conference in 2023, the first being held in 1977 in Mar de Plata, Argentina. The conference was a watershed moment to mobilize member states, the UN system, and stakeholders alike to take action and bring successful solutions on a global scale.

#### **Importance of the UN 2023 Water Conference:**

The UN 2023 Water Conference could be a crucial step to ensure the sustainable management of water and sanitation for all, as per UN Sustainable Development Goal 6. It also marks the halfway point through the International Decade for Action "Water for Sustainable Development" to raise awareness of the global water crisis and decide on an action to achieve internationally agreed water-related goals.

Main Challenges for the World:

According to the World Meteorological Organization, around 3.6 billion people struggle to get enough water to meet their needs for at least one month every year. Despite safe water and sanitation being a human right, billions of

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people lack access to these essentials for life, as stated by the United Nations.

The world's growing population, coupled with economic development and changing consumption patterns, means that the demands on water resources are far greater than 50 years ago. The gap between water demand and supply is estimated to be 40% by 2030, with a dramatic and unequal increase in demand between countries, as stated in the World Economic Forum's Global Risks Report 2023.

#### India's Missions:

#### Jal Jeevan Mission:

Jal Jeevan Mission is envisioned to provide safe and adequate drinking water through individual household tap connections by 2024 to all households in rural India.

#### **Atal Bhujal Yojana:**

Atal Bhujal Yojana (ATAL JAL) is a Central Sector Scheme for facilitating sustainable groundwater management with an outlay of INR 6000 crore. The scheme emphasizes community participation and demand-side interventions for sustainable groundwater management in identified waterstressed areas in seven States of the country.

#### **Conclusion:**

The conference adopted the Water Action Agenda, which represents the voluntary commitments of countries and stakeholders to meet global waterrelated goals and targets. The Water Action Agenda aligns with the five themes that support the SDG 6 Global Acceleration Framework, including water for health, water for sustainable development, water for climate, resilience, and environment, water for cooperation, and the Water Action Decade. Thus, Agenda can become a watershed movement for solving water crises.



#### Annual World Air Quality Report

#### Why in News:

Delhi ranked fourth on a list of 50 of the World's most polluted cities in terms of PM2.5 levels in 2022, according to the World Air Quality Report prepared by IQAir.

#### **About World Air Quality Report:**

- The report is released by IQAir, a Swiss air quality technology company. The report is prepared on the basis of data from monitoring stations operated by governments and other institutions and organisations across the world.
- The 2022 report is based on PM2.5 data from 7,323 cities and 131 countries.

#### Highlights of the 2022 Report:

- The most polluted city in the world was found to be Lahore, followed by Hotan in China, and Bhiwadi in Rajasthan.
- Chad, Iraq, Pakistan, Bahrain, Bangladesh, Burkina Faso, Kuwait, India, Egypt, and Tajikistan are the 10 most polluted countries in 2022.
- Australia, Estonia, Finland, Grenada, Iceland, and New Zealand met the World Health Organization (WHO) PM2.5 guideline (annual average of 5µ/m3 or less).
- New Delhi is the second most polluted city in the world, with N'Djamena in Chad topping the list.

#### **India-Specific Findings of the Report:**

- India improved its ranking as it dropped from 5th to 8th place.
- Delhi ranked 4th in the top 50 most polluted cities with an average PM2.5 level of 92.65µ/m3 in 2022, a little below the average of 96.45µ/m3 in 2021.
- The report makes a distinction between New Delhi and Delhi, with New Delhi having an annual average PM2.5 level of 89.15µ/m3.
- In India, the transportation sector contributed almost 20-35% of the PM2.5 pollution. Other sources are industrial units, coal-fired power plants, and biomass burning.
- As per the report, among the six metro cities, Kolkata was ranked the most polluted after Delhi.
- A total of 39 Indian cities (including 'Delhi' and 'New Delhi') are on the list of 50 of the World's most polluted cities in 2022.

#### About PM2.5:

- It is an atmospheric particulate matter with a diameter of fewer than 2.5 micrometers.
- PM2.5 particles are small enough to penetrate deep into the lungs and even enter the

#### bloodstream.

Long-term exposure to PM 2.5 can lead to lung cancer, heart disease, stroke, and other chronic health conditions.

#### Way Forward:

India's national strategy aims to reduce PM emissions by as much as 30% by 2024. There is a need to create better architecture that can ensure a smooth transition to green energy sources apart from other initiatives in order to improve air quality.

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#### Africa's Plates May Break And Give Rise to A New Ocean

#### Why in News:

According to recently published research, the continent of Africa will gradually split into two separate parts. This split of the continent would be caused by the East African Rift which stretches for 56 kilometres and appeared in the Ethiopian desert in 2005. Following this geological process, currently, landlocked countries such as Uganda and Zambia would be joined by coastlines.

#### **About Rifting:**

Rifting refers to the geological process in which a single tectonic plate splits into two or more plates separated by divergent plate boundaries. The Earth's lithosphere, which includes the crust and the upper part of the mantle, is divided into several tectonic plates that are not stationary, but move with respect to each other at different speeds. Tectonic forces not only move the plates but also have the potential to cause them to rupture, resulting in the formation of a rift and potentially the formation of new plate boundaries.

#### **Rifting in the African Continent:**

The continent of Africa lies on the African Plate, one of Earth's major tectonic plates. The continent of Africa has several geological features, including the Rift Valley. The most prominent example of rifting in Africa is the East African Rift System, which extends over 6,000 km from the Red Sea in the north to the Zambezi River in the south. The process of rifting over time has resulted in the formation of several large lakes in the region including Lake Victoria, Lake Tanganyika and Lake Malawi.

#### **Challenges and Consequences of Rifting:**

- Africa has been the most affected region in terms of displacement, with a larger number of countries affected than any other continent. As of 2015, more than 15 million people were internally displaced in Africa, according to a report by the United Nations Environment Programme.
- Due to climate change, it will affect their habitats, resulting in environmental degradation. Rapid urbanization will put pressure on natural



resources, creating challenges for water, energy and food.

Uncontrolled waste disposal is also a significant  $\geq$ concern as it will damage the habitats of many species, causing many to become endangered.

#### Way Forward:

Protecting nature has not only become a duty, it has become a necessity because its bad effects threaten the existence of not just one person, but the entire human civilization. While nature has its own course one should be better equipped for adaptation and living in consonance with nature. Because at times, it is not a natural phenomenon but rather humanmade adaptations that cause calamities.

#### Asiatic Lion Finds New Home in **Barda Wildlife Sanctuary**

#### Why in News:

The Gujarat government has planned to translocate 40 adult and sub-adult lions to the Barda Wildlife Sanctuary in the state, according to a new report by the Wildlife Institute of India (WII) under the Union Ministry of Environment Forest and Climate Change. **Barda Wildlife Sanctuary:** 

- Barda Wildlife Sanctuary is located in Gujarat, India. It is situated approximately 15 kilometers from Porbandar and 100 kilometers west of Gir Forest National Park. Previous to its 1979 establishment as a wildlife sanctuary, Barda was a private reserve for Porbandar and Jamnagar. Approximately 4,00,000 people live in Barda.
- There are two rivers, the Bileshvary River and Joghri River, and two dams, Khambala and Fodara. The Sanctuary exhibits a great variety of fauna including a variety of butterflies, Lions, Chinkara, Sambar, crocodile and chameleon, ratel, leopard, wolves, Spotted Eagles and Crested Hawk-Eagle.
- > A very high percentage of rare and endangered plants occurring in the area form an important component of the sanctuary.
- The area has the maximum floral diversity in the state (650 plant species). Gorad, Babul, Dhav, Rayan, Ber, Jamun, Amli, Dhudhlo, Bamboo etc. **Project Lion:**

- The stated goal for Project Lion is to ensure  $\triangleright$ that Asiatic lions "perform their ecological role in the ecosystem and retain their evolutionary potential."
- It envisages landscape ecolog-based conservation of the Asiatic Lion in Gujarat by integrating conservation and eco-development.
- The Asiatic Lion Project began in 1972 with the goal of saving 21 critically endangered lion species in Gujarat's Gir landscape. This was a dedicated project for lion conservation that was

funded by the Indian government. **About Asiatic Lion:** 

- The Asiatic lion, also known as the Persian lion is a population of Panthera leo that today survives in the wild only in India.
- It was decided that the Kuno Wildlife Sanctuary was the most suitable habitat for the reintroduction of Asiatic Lions. The other sites were rejected on account of being inadequate in prey, unstable terrain or too much likelihood of human interference.
- IUCN Red List:- Endangered.

#### Way Forward:

This step can prove to be a major conservation step towards consolidating the presence of Asiatic Lions in the wild and expanding their habitat. The Barda region is distinct in terms of landscape and biodiversity. One can enjoy trekking in the Barda Hills, this however requires prior permission from the forest department. The area has trekking camps which are conducted by the private authorities and Maldharis tribes. Nevertheless, tourism should not come at the cost of loss of habitat.



#### Eurasian Otter in J&K

#### Why in News:

Three Eurasian Otters were recently spotted in the Neeru stream of the Chenab catchment in Jammu and Kashmir.

#### **Eurasian Otter:**

- The Eurasian otter has a large distribution including temperate, Mediterranean, and tropical regions, covering parts of three continents (Africa, Asia, and Europe).
- Eurasian Otter is a semi-aquatic carnivorous mammal.
- It lives in a wide variety of aquatic habitats, including highland and lowland lakes, rivers, streams, marshes, swamp forests, and coastal areas.
- It prefers a habitat with abundant food, fresh water, and a natural bank with vegetation, tree roots, rock piles, wood and other debris in which to build holts (i.e. otter dens).
- Most population estimates are conducted by searching for otter signs like tracks and feces on the river banks.
- The Eurasian otter's diet mainly consists of fish. Fish is its most preferred choice of food in Mediterranean and temperate freshwater habitats.

#### **Conservation Status:**

- IUCN List: Near threatened
- >Wildlife Protection Act, 1972: Schedule II
- $\triangleright$ CITES: Appendix I
- Scientific Name: Lutra lutra

#### Neeru river:

- The Neeru River is a tributary of the Chenab River, which begins at Sonbain Ashapati Glacier in Bhaderwah and joins the Chenab at Pul Doda in the Doda district.
- The historic Shiv temple, which is entirely composed of stone slabs, is located 0.5 km to the east of the town on the bank of the river Neeru. Long stone slabs were used in its construction, which is similar to that of a tomb.
- The Gupta Ganga temple of Bhaderwah is situated on the banks of this river.
- It is believed that during their exile, the Pandavas used a long cave to go from Bhadarwah to Kashmir, which is near this river.

#### Way Forward:

In conclusion, the presence of the Eurasian otter in the Neeru stream is an encouraging sign for the health of the aquatic ecosystem. However, the species is under threat, and steps need to be taken to conserve it and its habitat. The findings of this study highlight the importance of conducting surveys to monitor and conserve endangered species, such as the Eurasian otter, and to take steps to protect their habitats.



#### Transfer and Import of Captive Wild Animals in India

#### Why in News:

Recently, the Supreme Court has enhanced the jurisdiction and powers of a committee to conduct necessary inquiries and fact-finding, with respect to the import, transfer, purchase, rescue and rehabilitation of wild animals kept in captivity across India.

#### **High Powered Committee on Wild Animals:**

- It has been formed under the chairmanship of former judge Justice Deepak Verma.
- The committee will consider any approval, dispute or complaint relating to the transfer or import of wild animals into India or their purchase or welfare by any rescue or rehabilitation center or zoo.

#### Wild Animals:

- > Wild animals are generally hunters.
- These animals are not domesticated and are very difficult to tame as they can only live in their natural habitat.
- > They are generally mammals and eat meat.
- Most of wild animals are known as dangerous animals.
- A wild animal is one that lives in the wild, is not domesticated, and is dependent on other animals.

#### Wildlife (Protection) Amendment Bill 2022:

Rajya Sabha passed the Wild Life (Protection) Amendment Bill, 2022, which seeks to give effect to India's obligations under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).

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- The Wild Life (Protection) Amendment Bill 2022 was introduced in the Lok Sabha on December 17, 2022, by the Minister of Environment, Forest and Climate Change.
- The Bill seeks to increase the number of species protected under the law and implement the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).

#### CITES:

- CITES is an international agreement between governments to ensure that international trade in specimens of wild animals and plants does not threaten the survival of species.
- It also seeks to regulate the possession of live animal specimens.
- Under CITES, specimens of plants and animals are classified into three categories (Appendix) based on their threat of extinction.
- The CITES Secretariat is administered by UNEP (United Nations Environment Programme) and is located in Geneva, Switzerland.

#### Way Forward:

The committee can approve, resolve any dispute or consider the request for a complaint, regarding the transfer or import or purchase of wild animals in India by any rescue or rehabilitation center or zoo, by taking assistance and co-operation whenever necessary from all departments and authorities throughout India.



#### Why in News:

To be better prepared in controlling a forest fire, officials from the Karnataka state forest department have been holding a series of meetings with authorities from the Indian Air Force and the fire and emergency department. The same process is being prepared by Kerala and Himachal Pradesh forest departments for better forest management.

#### **About the Forest Fire:**

Forest fires are wildfires that spread uncontrollably, burning plants, animals. grasslands and brushlands that fall in their path. Forest fires pose a serious threat to forest ecosystems and the well-being of humans. Globally only around 4 % of all forest fires have natural causes such as lightning. In all other cases, humans are responsible for the fires – be it directly or indirectly, deliberately or due to carelessness.

A forest fire can be divided into three phases-Grass, undergrowth and crown fires. Usually, grass and dry undergrowth ignite first and are easy to control. If the fire reaches the treetops, especially in the case of conifers, leading to a crown or canopy fire it becomes considerably

more difficult to control.

#### **Reason for Widespread Forest Fire:**

- There are many socio-economic issues that lead to forest fires in India like as Tendu – Mahua Collection in Central India, Jhum/Shifting Cultivation(North-East India), Pine-Needle accumulation-palatable grass(West -Himalayan), Encroachment, Man-Animal Conflict, Hunting by Burning(Parda – Odisha), Pilgrimage Campfires, Terai belt Clearing and Mining etc.
- It is very difficult to control forest fires inaccessible areas.
- Slows the response time for forest fire management.

#### **Possible Solutions:**

- Through the National Program on Forest Fire Management, attention should be paid to critical areas such as Central India, Western Himalayas and North-East India to reduce the area burnt.
- For better prevention initiatives like Fire Risk Analysis, Fire Danger Rating System, Early Warning System, Use of Fire Weather Index and Prioritization of Fire Prone Areas, Creation and Maintenance of Fire Lines, Establishment of Fire watch towers for Surveillance and Wireless Communication system etc. can be taken up.
- For better mitigation, steps can be taken like Controlled burning, Cool Season Burning, Collection and Use of Pine needles, Weed Control, Silviculture Practices to reduce fuel load, Soil and Moisture conservation works and development of water bodies etc.

#### **Conclusion:**

India has a strong legal and institutional arrangement for forest fire prevention and management. The national laws strictly forbid setting fires in forests. As per, sections 26 and 33 of the Indian Forest Act of 1927 it is a criminal offence to burn or to allow a fire to remain burning in reserved and protected forests. Several Forest Fire Prevention and Management (FFPM) Practices are used to prevent forest fires. The most common methods of prevention employed by forest departments in India include the clearance of fire lines. Over the past 10-15 years, remote sensing has been used extensively for forest fire detection in India.

### 7 Plastic Rocks

#### Why in News:

Brazilian researchers find 'terrifying' plastic rocks on the remote island of Trindade. Plastic reaching Trindade despite it being hundreds of miles away from the mainland was evidence of humans' growing influence over the earth's geological cycles

#### About the Rock:

- Melted plastic has become intertwined with rocks on the island.
- These rocks are called "plastiglomerates" because

they are made of a mixture of sedimentary granules and other debris held together by plastic.

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- Sources of plastic can be fishing nets, bottles etc. which are dragged by the marine currents and accumulate on the beach
- When the temperature rises, this plastic melts and becomes embedded with the beach's natural material.

Uniqueness of the Island:

- Trindade Island is the easternmost and most remote point in Brazilian territory, located about 1,140 km from the southeastern state of Espírito Santo.
- Trindade surfaced owing to volcanic activity under the Atlantic Ocean about three million years ago and its geology has fascinated scientists for years.
- Trindade, along with the Martim Vaz archipelago about 40 km away, hosts many species of native flora and fauna including seabirds and marine creatures.
- It is also one of the world's most important conservation spots for green turtles, or Chelonia mydas, with thousands arriving each year to lay their eggs. The only human inhabitants on Trindade are members of the Brazilian navy, which maintains a base on the island and protects the nesting turtles.

#### Significance of the Discovery:

- Clear manifestation of the Anthropocene, a proposed geological epoch defined by humans' impact on the planet's geology and ecosystems.
- > The pollution, the garbage in the sea and the plastic dumped incorrectly in the oceans are becoming geological material preserved in the earth's geological records.

#### **About Marine Pollution:**

- Nearly 12 million tonnes of plastics are swept into the oceans annually and gyres, which are described as 'islands of plastic', have cropped up.
- While most plastics remain intact for years and even centuries, some erode to form 'micro-plastics', which are then consumed by marine wildlife and finally humans.

#### **Steps Taken to Combat Marine Pollution:**

- ▶ UN-led Clean Seas Campaign, 2017
- Ocean Cleanup Project aims at developing advanced technologies to rid the world's oceans of plastic.
- Marpol Convention, 1973 for Prevention of Pollution from Ships.
- BOBLME (Bay of Bengal Large Marine Ecosystem) project 2009 by FAO, which involves all 8 Indian Ocean countries, aims to promote sustainable fishing, reduce marine Pollution and improve coastal livelihood.

#### Way Forward:

Marine pollution must be treated as a global issue and all nations should act in concert to implement SDG 14 i.e. to conserve and sustainably use the oceans, seas and marine resources for sustainable development.



**Science-Tech** 



### Green, Self-Powered Desalination Plant in Lakshadweep by NIOT

### Why in News:

Stepping up from its ongoing initiative of providing potable water in six islands of Lakshadweep using Low-Temperature Thermal Desalination (LTTD) technology, the National Institute of Ocean Technology (NIOT) is working at making this process free of emissions. Currently, the desalination plants are powered by diesel generator sets; there is no other source of power in the islands.

About Low-Temperature Thermal Desalination Technology:

- > LTTD is a desalination technology in which seawater is turned into drinkable water.
- LTTD exploits the difference in temperature (nearly 150C) in the ocean water at the surface and depths of about 600 feet.
- This cold water condenses at the surface, which is warmer but whose pressure has been lowered using vacuum pumps.
- Such de-pressurized water can evaporate even at ambient temperatures and this resulting vapour when condensed is free of salts and contaminants and fit to consume.
- However, the process of LTTD is not fossil-fuel free and consumes diesel generator sets, a precious commodity in the islands that has to be shipped from mainland India.
- The proposed self-sustaining desalination plant will use a combination of renewable energy sources like solar, wind, and wave energy to power the plant.
- This plant will be the first of its kind in the world as it will generate drinking water from the sea using indigenous technology, green energy, and eco-friendly processes. This is self-powered.

### **About NIOT:**

- It is an autonomous institute under the aegis of the Ministry of Earth Sciences (MoES).
- It was established in 1993 with the objective to develop reliable indigenous technologies to solve various engineering problems associated with the harvesting of non-living resources in the Indian Exclusive Economic Zone (EEZ) which is about 2/3rd of the land in India.
- > Headquarters- Chennai, Tamil Nadu.

### Way Forward:

The effective implementation of NIOT's desalination plant in Lakshadweep requires a concerted effort from various stakeholders to make the project sustainable for water scarcity issues on the island and the other coastal communities facing similar challenges.



Starberry-Sense

### Why in News:

Researchers at the Indian Institute of Astrophysics (IIA) have developed a low-cost star sensor called Starberry-Sense.

### **About Starberry-Sense:**

Starberry-Sense is a low-cost star sensor that can help small CubeSat class satellite missions find their orientation in space. The brain of the instrument is a single-board Linux computer called Raspberry Pi. The system was developed around the very popular Raspberry Pi Zero (a 1 GHz single-board computer, smaller than a credit card) as the main processing unit and its camera module. The entire setup is housed inside a protective aerospace-grade aluminium enclosure. StarBerry-Sense captures sky images and identifies the stars in the field by comparing their location with an onboard catalogue of bright stars.

### **About Star Sensor:**

Any satellite needs to know where it is pointed in space and the instrument used for this purpose is called a star sensor. The position of stars in the sky is fixed relative to each other and can be used as a stable reference frame to calculate the orientation of a satellite in orbit. This is done by correctly identifying the stars in the sky towards which the star sensor is pointed. Hence, the star sensor is essentially a celestial compass.

### **Indian Institute of Astrophysics:**

The IIA was established in 1971 with its headquarters in Bengaluru. It is an autonomous Research Institute wholly financed by the Department of Science and Technology of the Government of India. IIA conducts research primarily in the areas of astronomy, astrophysics and related fields

### **Indian Astronomical Observatory:**

The Indian Astronomical Observatory is a highaltitude astronomy station located in Hanle, India and operated by the Indian Institute of Astrophysics. Situated in the Western Himalayas at an elevation of 4,500 meters, the IAO is one of the world's highest-located sites for optical, infrared and gamma-ray telescopes. It was located within the Changthang Wildlife Sanctuary. The Department of Science and Technology and the Indian Institute of Astrophysics (IIA) in Bengaluru oversee the facility.

### **Conclusion:**

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The StarBerry-Sense, which has been built

using easily available commercial or off-the-shelf components, was estimated to cost less than 10% of similar devices available on the market. The device had a short development cycle. The modular design of the Sensor enabled the device to be easily customized for various requirements.

# **3** States Demand Declaration of Lightning as a Natural Disaster

### Why in News:

Recently many States have demanded that lightning should be declared a natural disaster. The states argued that deaths caused by lightning are more than many disasters in India. The observations were made at the National Platform for Disaster Risk Reduction Conference (NPDRR) in Delhi. Presently cyclones, drought, earthquakes, fire, floods, tsunamis, hailstorms, landslides, avalanches, cloudbursts, pest attacks, frost and cold waves are considered natural disasters in India. These are covered under the State Disaster Response Fund (SDRF), 75% of which is funded by the Centre government.

### **About lightening:**

- Lightening is a natural process of an electrical discharge of very little duration and high voltage between a cloud and the ground or within a cloud, accompanied by a bright flash, a loud sound, and occasional thunderstorms. Lightning is caused by a difference in electrical charge between the top and bottom of a cloud, which generates a huge current of electricity.
- Cloud-to-ground (CG) lightening is dangerous because it can electrocute people due to its high electric voltage and current. Inter- or intra-cloud lightning is visible and safe.

### **Effect of Climate Change on lightening:**

- Climate change has led to an increase in the frequency of lightening strikes around the world, a new study has found. This can lead to a higher risk of lightning-induced wildfires in the future.
- Total lightning incidences have gone up 43 per cent globally, along with a 41 per cent increase in long-continuing current (LCC) lightning, according to a study published in the journal Nature Communications, February 10, 2023.

### Lightning Strikes in India:

- According to government statistics, more than 100,000 individuals have died in the nation as a result of lightning strikes between 1967 and 2019. This represents more than a third of the deaths brought on by natural disasters throughout this time.
- The frequency of lightning was the highest in north-eastern States and West Bengal, Sikkim, Jharkhand, Odisha and Bihar, but the number

of deaths was higher in Madhya Pradesh, Maharashtra, Chhattisgarh and Odisha.

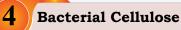
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Lightning characteristics are different for different regions, the prevalence is more at night and the early hours in hilly States and more during the day in the plains.

### **Conclusion:**

By declaring lighting as a natural disaster, The Indian government would be able to provide financial assistance to states affected by lightning strikes. This would help to ensure that states are able to respond effectively to lighting-related disasters and that the burden of such disasters is not disproportionately borne by poorer states.



### Why in News:

Bacterial cellulose (BC), an emerging industrial product can help develop vegan leather and other environmentally safe material.

### **About Bacterial Cellulose:**

- 'Cellulose' generally refers to plant-derived fibres. Plant cellulose is contaminated with lignin, wax and hemicelluloses.
- BC, also known as Microbial cellulose (MC), is the cellulose synthesised by various species of bacteria, including the genera Acetobacter, Gluconobacter, Komagataeibacter, Rhizobium, Agrobacteria, and Sarcin.
- BC has a nano-structure which determines its physical and mechanical properties and their shaping can be controlled.

### **Characteristics:**

- BC provides relatively outstanding mechanical strength, a high degree of polymerization and crystallinity (about 90%), and water-retention capacity.
- Bacterial cellulose is free from impurities such as lignin, wax, hemicelluloses, etc.
- Compared with Plant cellulose, BC, being thinner, and nanofiber weaved 3D network allows an increase in the surface-area-to-volume ratio, enabling strong interaction with neighbouring components.

### **Applications:**

- Food Industry- BC possesses manifold potentialities in food industries owing to its high purity, variety of textures and shapes, capability to acquire in-situ changes, and easy production process.
- Biomedical Industry- there is demand for immediate applications in medical fields such as-
  - 1. Wound healing,
  - 2. Tissue engineering,

- 3. Drug delivery, and
- 4. Dental implants,
- 5. Artificial blood vessels, etc.
- Sustainable Eco-materials- due to BC's inherent and unique properties, including biocompatibility, non-toxicity, biodegradability, gas permeability, suspension stability, low viscosity, and tolerance to acid/salt/ethanol, it has great potential to produce eco-friendly products.
- BC can replace leather in the making of various products.
- Engineered living materials (ELMs)- Since BCs are produced by bacteria culture, it is possible to impart desirable properties by engineering the bacteria.

### **Challenges with BC:**

- High manufacturing cost;
- Low yield due to the labour-intensive and timeconsuming process of production.
- Expensive compared to the plant cellulose.

### Way Forward:

BC is emerging as a versatile industrial product. Indepth discussions and research are needed to focus on key advances in order to take advantage of BC for creating a sustainable world.

### Glowscope for Fluorescent Microscopy

### Why in News:

Researchers at Winona State University, Minnesota, have created a design of fluorescence microscope which they have called "glowscope" at a very low cost. It will make fluorescence microscopy more accessible and affordable for school-going children.

### **About Fluorescence Microscope:**

- While an optical microscope views an object by studying the principle of absorption, reflection and scattering of visible light by it; a fluorescence microscope views an object by studying how it reemits the light it has absorbed. There are different types of fluorescent microscope available, such as epifluorescence and confocal laser scanning microscopes.
- ➢ In this type of microscope an object is illuminated with a specific wavelength of light. The object is already infused with particles called fluorophores which absorb the light and re-emit it at a higher wavelength. As a result, these particles glow with a different color making the microscopic object visible. These fluorophores move inside the object thus revealing its internal structure and characteristics. For example, a fluorophore called the Hoechst stain which gets excited by ultraviolent light binds to DNA.

### **Study Conducted using Glowscope:**

Scientists have used this device to detect red and

green fluorophores in order to monitor changes to the heart rate and rhythmicity in embryonic zebrafish. It may also be used to image the creatures' brain, spinal cord, heart, head and jaw bones.

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- ➢ It is easy to set up as it does not use any complex scientific components. It consists of two plexiglass surfaces, an LED flashlight, three theatre stage-lighting filters, a clip-on macro lens, and a smartphone. The smartphone (with the lens attached) is placed on one surface that is suspended at a height and the sheet is placed below which holds the object.
- All of this comes at a minimum cost of \$30-50 (Rs 2500-4100). But it has its own limitations such as the clip-on lenses may achieve only a resolution of up to 10 µm. Moreover, fluorescence sensitivity and signal noise may not work well for all applications.

### Way Forward:

The democratization of optical microscopy through the invention of foldscope will democratize the world of fluorescence microscopy. It will further promote path-breaking findings and research.



### **Ceramic Radome Technology**

### Why in News:

Murugappa Group-owned Carborundum Universal Limited (CUMI) has signed a licensing agreement for transfer of technology with DRDO's Research Centre Imarat (RCI) laboratory to manufacture 'Ceramic Radomes' (GELCAST Process) Technology used in missile systems.

### **About Ceramic Radome Technology:**

- Ceramic Radome Technology is the state-of-theart technology for ballistic and tactical missiles and high-performance aircraft.
- As, high Mach missiles like ASTRA/ QRSAM, experience high surface temperatures during their traverse due to atmospheric thermal heating.
- > To mitigate the thermal heating, Ceramic is considered a radome material and radomes located at the tip of a missile are made of ceramic.
- Ceramic Radome fabrication is a two-stage process, gel-casting followed by sintering.

### **About Ceramics:**

Ceramics are classified as inorganic and non-metallic materials that are essential to our daily lifestyle. **Properties of Ceramics-**

- > They are corrosion-resistant, hard, and brittle.
- > The majority of ceramics are also excellent insulators and can withstand high temperatures.

### Applications of Advanced Ceramics-

Fridge magnets, metals production and

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processing, aerospace, electronics, automotive and personnel protection.

### **About Radomes:**

- Radomes are structures or enclosures designed to protect an antenna and associated electronics from the surrounding environment and elements such as rain, snow, UV light, strong wind or build-up of snow and ice.
- The key functionality of these structures is to extend the system's ability to perform under adverse conditions while creating a safe working environment.

### Other usage of the Technology:

- Its lightweight variant, engineered with Alumina, Zirconia-Toughened Alumina, and Silicon Carbide, can be used in bulletproof vests.
- It offers highest levels of ballistic and blast-proof protection for armoured vehicles.

### Way Forward:

The design of ceramic radomes for defence activities requires deep expertise and stringent testing at every stage to ensure reliability and accuracy. Further, awarding Indian company technology will boost indigenisation in defence and reduce import dependency.

### **Biotransformation Technology**

### Why in News:

Recently, Polymateria, a London based start-up, engaged in R&D to deal with plastic pollution, have developed Bio-transformation technology that can alter the state of plastics and make them biodegradable without leaving behind any microplastic.

### **About Bio-transformation Technology:**

- Bio-transformation is the process of transforming the polymer into a substrate which is accessible for microbes.
- This technology has the ability to 'Biotransform' the hard crystalline structure of both Polyethylene & Polypropylene (Plastics composed of polymers) into a wax-like material. It then attracts microbes, fungi and bacteria to fully consume the wax-like material.
- Bio-transformation fully biodegrades common forms of plastic, leaving behind zero microplastics with no environmental harm in the process.

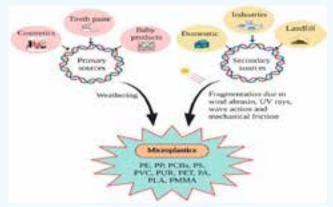
### **About Micro Plastic:**

- Microplastic are small pieces of plastic which are less than 5 mm (0.2 inches) in size. They occur in the environment due to plastic pollution and are harmful for ocean and aquatic life.
- Microplastics are present in a variety of products like Cosmetics, plastic bags, bottles, synthetic clothing etc. Many of these products easily enters the environment through wastes.

 Microplastics are divided into two types: primary and secondary.

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- Primary microplastics include microbeads found in personal care products, plastic pellets used in industrial manufacturing, and plastic fibres used in synthetic textiles. They enter the environment directly e.g., personal care products being washed into wastewater systems.
- Secondary microplastics comes from the breakdown of larger plastics. This happens when larger plastics undergo weathering through exposure to wind abrasion and ultraviolet radiation from sunlight.

### **Challenges Posed by Microplastic:**

- Microplastics are non biodegradable. Thus, once in the environment, primary and secondary microplastics accumulate and persist.
- They are found in both oceans and freshwater ecosystems. In oceans alone, annual plastic pollution was estimated at 4 million to 14 million tons in the early 21st century.
- > They are also a source of air pollution occurring in dust and airborne fibrous particles.
- Microplastics are found to be lodged in the digestive tracts and Fish and other ocean animals. Again, birds are likely to ingest microplastics floating on the water surface. These microplastics further become part of the marine food chains ultimately reaching to the humans.
- Recently, Brazilian researchers have found plastic rocks at Trindade island. This was formed due to melting of microplastic which became intertwined with the rocks.

### Way Forward:

Considering the challenges posed by microplastic to the global ecology and biodiversity, research and development to contain this menace is need of the hour. Biotransformation technology has the potential to convert non-biodegradable plastic to biodegradable material thereby eliminating the plastic pollution.

# **Economic Issues**



### Tamil Nadu, Karnataka, Among 7 States to Get Textile Parks

### Why in News:

The Centre has selected sites in Tamil Nadu, Telangana, Karnataka, Maharashtra, Gujarat, Madhya Pradesh and Uttar Pradesh to set up new textile parks under the PM Mega Integrated Textile Regions and Apparel (PM MITRA) scheme.

## About PM Mega Integrated Textile Regions and Apparel Scheme:

- ➢ In 2021, the Ministry of Textiles (MoT) launched PM Mega Integrated Textile Regions and Apparel Parks (MITRAs) Scheme to strengthen the Indian textile industry by way of generating employment and augmenting export potential, reducing logistics costs by housing the entire value chain at one location, attracting investment, enabling the scale of operations.
- PM MITRA is inspired by the 5F vision- Farm to Fibre to Factory to Fashion to Foreign.
- It aspires to fulfil the vision of building an Aatmanirbhar Bharat and to position India strongly on the Global textiles map.
- > The scheme would provide state-of-the-art infrastructure for the textiles sector, attracting investment and creating jobs.

### Significance:

- It is expected that these parks will enhance the competitiveness of the textiles industry by helping it achieve economies of scale as well as attract global players to manufacture in India.
- > The parks will also attract cutting-edge technology and boost local & foreign investment in the textiles sector.
- Centre-State Collaboration- The Centre and State Governments will work together to increase investment, promote innovation, create job opportunities, and ultimately make India a global hub for textile manufacturing and exports.
- Infrastructure and Plug-and-Play Facilities will be offered in the parks along with training and research facilities for the industry.

### **Conclusion:**

The parks establishment under the PM MITRA is a significant step towards boosting the textile sector and creating jobs in the country. This will help drive the growth of the Indian economy and achieve the United Nations SDG 9:" Building resilient infrastructure, promote sustainable industrialization and foster innovation".



### IPES Report Highlights Global Hunger Crisis Amid High Debt

### Why in News:

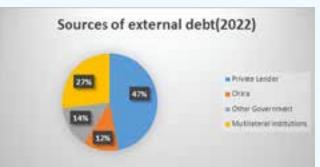
According to a special report by the International Panel of Experts on Sustainable Food Systems (IPES-Food), titled 'Breaking the cycle of unsustainable food systems, hunger, and debt', the global hunger crisis is intensifying amid the rising debt of the countries. As per the report, at least 21 countries — including Afghanistan, Cameroon, Ethiopia, Haiti, Lebanon, Somalia, Sri Lanka, Sudan and Zimbabwe — were nearing catastrophic levels of both debt distress and rising hunger in 2022.

### **About Current Scenario of Global Public Debt:**

- Global public debt was at its highest levels in almost 60 years.
- About 60 per cent of low-income countries and 30 per cent of middle-income countries were considered at high risk of (or already in) debt distress.
- As per the report, the world's poorest countries saw the costs of servicing their debt increase by 35 per cent in 2022.

## What is the current scenario of the global hunger crisis?

As per the report, by November 2022, 45 countries were in need of external food assistance and some 349 million people in these countries were facing acute food insecurity, with 49 million on the brink of famine.



## What is the relationship between rising debt and the hunger crisis?

### Make choice on the use of scarce resources-

- The countries had to choose between repaying debts and feeding people.
- As per the report, 62 developing countries spent more on debt payments than on healthcare during the first year of the COVID-19 pandemic.

The debt crisis that could plunge millions more into hunger-

For debt repayments for the foreseeable future, dozens of low-income countries will gradually lose the capacity to address the burgeoning food crises they face.

### Why there is rising debt and hunger?

- Import dependencies- Oil price rise due to Russia Ukraine War has increased the cost of energy imports.
- Extractive financial flows- The tightening of monetary policy in developed countries saw capital outflow from most low and mid-income countries.
- Boom-bust in commodity cycles- Due to the disruption of global supply chain first due to the COVID-19 pandemic and then due to the Russia-Ukraine war.
- Climate-vulnerable food systems.

### Way Forward:

The report called for urgent action to provide debt relief and development finance on a scale to meet the needs of COVID-19 recovery, climate-resilient food systems and sustainable development goals. It also urged policymakers to repair 'historical injustices' faced by the global south— through climate justice, aid and repaying for 'ecological' and 'historical' debts by the global north.



### Environment, Social &Governance Regulations (ESG)

### Why in News:

According to SEBI, the increase in ESG investing and the demand by investors for information on ESG risks, caused a substantial revision of the annual Business Responsibility and Sustainability Report (BRSR) required by the 1,000 largest listed companies in India.

### What is ESG?

It is a framework that helps stakeholders understand how an organization is managing risks and opportunities related to environmental, social, and governance criteria. It was introduced by United Nations Principles for Responsible Investing (UNPRI) in 2006.

### **Environmental aspect:**

- It refers to an organization's environmental impact(s) and risk management practices.
- Like greenhouse gas emissions, use of natural resources, etc.
- The firm's overall resiliency against physical climate risks.

### Social aspect:

- It refers to an organization's relationships with stakeholders.
- An organization's impact on the communities in which it operates.

### **Governance aspect:**

- It refers to how an organization is led and managed.
- It will seek to understand better how leadership's incentives are aligned with stakeholder expectations.

### Significance:

- Companies have a distinct responsibility as corporate citizens.
- These considerations need to be included by investors in a company's risk profile in order to accurately assess the enterprise.



### Why it is relevant for India?

- While there are various laws in India related to the environment, the well-being of employees and corporate governance, there has not been any single piece of legislation covering all elements of ESG.
- Compliance by Indian companies with the ESG regulations of the U.S., the U.K., the EU and elsewhere will be critical for India to attract investment at time when world is decoupling from China.

## What Initiatives have been taken to Ensure ESG Compliance?

- SEBI making the Business Responsibility and Sustainability Report (BRSR) mandatory for the top 1,000 listed companies by market capitalization from FY 2022-23.
- Corporate Social Responsibility (CSR) reporting and spending, being made mandatory under the Companies Act, 2013.
- ➤ The setting up of the Select Focus Group (SFG) by the RBI, recognition by RBI of the importance of green finance in India, like the announcement in January by RBI for auctioning ₹80 billion in green bonds.
- Release of a consultation paper by SEBI on 'Environmental, Social and Governance Rating Providers for Securities Markets' that proposes a framework to regulate ESG rating providers in India.

### Way Forward:

The evolution of ESG laws and regulations is still at a nascent stage in India, where the focus is often on providing protections regarding the environment or workplace conditions without incorporating the controls and disclosure that are a hallmark of contemporary ESG regulation. Therefore, legislation related to ESG can remove these deficiencies and help India play an active role in the global climate forum.



### Tamil Nadu Assembly Re-Adopts Bill Against Online Gambling

### Why in News:

Tamil Nadu Legislative Assembly on 23rd March, 2023 re-adopted the Tamil Nadu Prohibition of Online Gambling and Regulation of Online Games Bill, 2022.

### **About Online Gambling:**

- It refers to the participation in the gambling activities which involves placing bets or wagers on various games and events with the aim of winning money or other prizes.
- Online gambling is done through devices such as computers, laptops, smartphones, etc. and involves the use of virtual chips or digital currencies instead of physical cash.

### **Global scenario:**

- The global market size of online gambling stands at USD 63.55 billion in 2022 and is expected to grow at a compound annual growth rate of 11.7% from 2023 to 2030.
- Asia-pacific region is the largest market for online gambling.
- China and Japan are the top online gambling markets in the region.
- Major types of online gambling include- casino games, Sports betting, poker, lottery, etc.
- Online gambling is regulated in majority of the countries, including India.

### **Online Gambling in India:**

- Ministry of Electronics and IT (MeitY) has released the Draft Rules of Online Gaming (an amendment to the IT Rules, 2021) which provisions for a Self-Regulatory Body and other regulations.
- Public Gambling Act, 1867- The law prohibits operating a gambling house.
- IT Act, 2011- It included the provisions regarding online gambling which states that a website offering gambling must be located outside India.
- Online gaming is a state subject. States such as Goa and Sikkim have legalized certain forms of gambling and issues licenses to the operators.

### **Challenges of Online Gambling:**

- Addiction- Online gambling can lead to physical and psychological harm, and can interfere with daily life activities.
- Security Risks- online gamers are the potential targets of cyber-attacks and data breaches.
- Cheating & Hacking- the gaming is not immune to cheating and hacking, thus ruining the gameplay experience.

- Lack of Regulation- The online gambling is generally unregulated which gives great scope for fraudulent activities.
- Money Laundering- Online gambling can be used as a mean to park black money.
- Social Isolation- Players may spend hours playing online games, leading to a lack of social interaction.

### Way Forward:

The online gambling industry is India continues to grow along with its challenges. The regulators and policymakers need to ensure that players are protected and fairness is maintained.



### Why in News:

As per the Ministry of Food Processing Industries, PM Formalisation of Micro Food Processing Enterprises Scheme (PMFME) has received over 1,02,515 loan applications, out of which 25,774 have been sanctioned.



### **About PM FME Scheme:**

- The Ministry of Food Processing Industry (MoFPI) has launched the PMFME scheme under the Aatmanirbhar Bharat Abhiyan with the aim to enhance the competitiveness of existing individual micro-enterprises in the unorganized segment of the food processing industry and promote formalization of the sector.
- Duration- It will be implemented over a period of 5 years (2020-21 to 2024-25).
- The scheme has a special focus on supporting Groups engaged in Agri-food processing such as Farmer Producer Organizations (FPOs), Self Help Groups (SHGs) and Producers Cooperatives along their entire value chain.
- > The scheme adopts the One District One Product (ODOP) approach.
- It is a centrally sponsored scheme-1 60:40 ratio between Control and
  - 1. 60:40 ratio between Central and State

Governments,

- 2. 90:10 ratio with North Eastern and Himalayan States,
- 3. 60:40 ratio with UTs with the legislature, and
- 4. 100% by the Centre for other UTs.

### Features of the scheme:

- Formalization of micro units will be done by registering them with FSSAI, Udyog Aadhar and GST.
- Quality improvement and skill development will be provided through effective training.
- Branding and marketing support will be provided to FPOs, SHGs, and producer cooperatives.
- One District One Product (ODOP) states would identify food products for districts keeping in view the existing clusters and availability of raw materials.

### **Financial support:**

- Credit-linked capital subsidy at 35% of the project cost with a maximum ceiling of Rs.10 lakh per unit for existing individual micro food processing units.
- A seed capital of Rs.40,000 per SHG member would be provided for working capital and the purchase of small tools.
- Support would be given through credit-linked grants at 35% for the development of common infrastructure including common processing facility, lab, warehouse, etc through FPOs/ SHGs/cooperatives or state-owned agencies or private enterprises.

### Way Forward:

The unorganized food processing sector comprises nearly 25 lakh units, largely within the category of micro-enterprises. With PM FME, these units can overcome their inherent challenges and continue to contribute towards the growth of the nation.



### Why in News:

Recently, the International Monetary Fund (IMF) confirmed a \$3 billion bailout plan for Sri Lanka's struggling economy. The IMF is 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. The bailout involves extending financial support to a company or a country facing a potential bankruptcy threat.

### **Reason for such crises:**

Economic crises happens in a nation due to gross mismanagement of the nation's currency by the central bank, often under the covert influence of the ruling government. The government may force Central banks to create fresh money out of thin air to fund populist measures which eventually result in a rapid rise in the overall money supply causing a rise in inflation and a drop in the exchange value of the currency.

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- Foreigners may not invest in an economy where the currency is unstable. In such a scenario, many countries are forced to seek help from the IMF to meet their external debt and other obligations, purchase of essential imports, and also to prop up the exchange value of their currencies.
- ➢ For instance, in the case of Sri Lanka and Pakistan, both countries have witnessed high domestic inflation and a steep drop in their currency's exchange value against the U.S. dollar.



### IMF's help to countries:

- The IMF generally lends money often in the form of special drawing rights (SDRs) to troubled economies that seek the lender's assistance. Special drawing rights (SDRs) represent a basket of five 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 several programs such as

the extended credit facility, the flexible credit line, the stand-by agreement, etc. Countries receiving the bailout can use the SDRs for various purposes depending on their circumstances.

### **Conditions Imposed by IMF:**

The IMF usually imposes certain conditions on countries before it lends any money to them. For instance, a country may have to agree to implement certain structural reforms in order to receive IMF loans. The IMF may ask a country affected by high price inflation to ensure the independence of its central bank.

### **Issues with the Bailout Package:**

- The IMF's conditional lending has been controversial as many believe that these reforms are too harsh on the public.
- IMF has been criticized for its non-transparent and interventionist approach in domestic affairs, promoting privatization and liberalization, for designing a "one size fits all" program without considering the recipient country's unique economic, social, and cultural conditions.
- The IMF has also been accused of focusing on short-term solutions.

### **Conclusion:**

Even if the program is fully implemented, there is a high potential for a sharp increase in poverty and unemployment rates due to conditions imposed under the IMF program, such as ensuring austerity measures and restructuring public enterprises to reduce unemployment and poverty. There are risks of growth involved. Therefore, it would be prudent for the government to prepare a contingency plan.



### Why in News:

In a bid to make India a hub for green shipbuilding by 2030, the Ministry of Ports, Shipping & Waterways (MoPSW) has recently launched Green Tug Transition Programme (GTTP).

### **About Green Tug Transition Programme:**

- It envisages building Green Hybrid Tugs which will be powered by green hybrid propulsion systems, subsequently adopting non-fossil fuel solutions such as methanol, ammonia, and hydrogen. It has set the initial target of green tugs to start working in all major ports by 2025. Along with this, at least 50% of all the tugs will be converted into green tugs by 2030.
- To achieve this, a National Centre of Excellence in Green Port & Shipping has been inaugurated in Gurugram, Haryana. It is set up through the collaboration of the Ministry of Ports, Shipping

& Waterways and The Energy and Resources Institute (TERI).

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It will help in developing the regulatory framework and alternative technology adoption roadmap for green shipping in India. Also, it will act as a technological arm of MoPSW for providing the needed support on Policy, Research and Cooperation in Green Shipping areas.



### Significance of this programme:

- India as a hub of green shipbuilding will create employment opportunities and huge business potential in green technologies.
- It will help in achieving India's "panchamrit" commitments and obligations under Paris Agreement as the ports have aimed to reduce carbon emissions per ton of cargo handled by 30% by 2030.
- It is in line with the LiFE movement, which is an India-led global movement to adopt an environmentally conscious lifestyle.
- Along with this, it is in line with the Maritime Vision Document 2030 which is a 10 Year blueprint on India's vision of a sustainable Maritime sector and vibrant blue economy.
- It will also provide impetus to National Green Hydrogen Mission as some ports will be developed as green hydrogen exporting hubs. The MoPSW has already identified Paradip port, Deendayal port and V.O. Chidambaram port for this purpose.
- In view of PM Gati Shakti and Green Ports Initiative, it will facilitate the development of a green logistic supply chain in the country.

### Way Forward:

India is the first country to be selected under the IMO Green Voyage 2050 project to conduct a pilot project related to Green Shipping. This programme will add to India's image as a global leader in green shipping and technology.

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**Miscellaneous Issues** 



### Bumchu Buddhist Festival Celebrated in Sikkim

### Why in News:

Recently Bumchu Festival was celebrated at Tashiding Monastery in Sikkim. Devotees from all over Sikkim as well as neighboring countries like Bhutan, Nepal etc. came to participate in this festival.

### **About Bumchu Festival:**

- The Bumchu Festival is a holy water urn ritual at Tashiding Monastery, a unique and important occasion that attracts travellers from all over the world.
- Bumchu means "holy water vessel" in Tibetan.
- In Sikkim, the Bumchu festival is a time of great joy and celebration. In this event, pilgrims travel to Tashiding from all over India as well as nearby countries like Bhutan, Nepal and Sri Lanka.
- This festival takes place on the 14th and 15th of a lunar month, which usually falls in February or March.
- It is said that sages make predictions for the year by studying the level of water in pots. If the vase is full, the year will be prosperous. If less, then the famine is imminent. When dusty, an inauspicious year of strife and discord is predicted.

### **Tashiding Monastery:**

- It is a temple complex that attracts visitors from all over the country.
- This temple of Sikkim is located at a distance of 11 km from Gangtok on the way to another famous place Nathula.
- It includes a small part of Gangtok city as well as the surrounding attractive hills and valleys.
- Hanuman Tok is the highest and a holy and sacred place in Gangtok, dedicated to the Hindu deity Lord Hanuman.
- The summer months (March-June) are ideal for viewing Kangchenjunga and neighboring mountains as the weather is clear at this time.
- It is situated on the top of a hill between Rathong Chu and Rangit River, 40 km from Gyalshing and 19 km to the southeast of Yuksam.

### **Buddhist monk:**

A Buddhist monk can be a person who decides to dedicate his life to the service of others and to the service of God, it can be a monk who voluntarily leaves mainstream society to live his life in prayer and contemplation.

### Way Forward:

Bumchu festival is famous in West Sikkim. Through this festival, a vessel filled with holy water is opened by the lamas present in the monastery. During the whole process, a small portion of the holy water is distributed among the disciples and the pot is refilled with water and consecrated, when the festival is over and opened at the time of the next bumchu.

### Jhamarkotra and Zawar: Geo-heritage sites of India

### Why in News:

The Society of Earth Scientists (SES) initiated a national event for International Geodiversity Day to attract the attention of local governments, industry and the public. As part of the same programme, a group of geologists, professors, archaeologists, and representatives of the mining industry from the region, gathered to explore a fossil park at Jhamarkotra and metallurgical remains at Zawar. What is Geoheritage?

### what is Geoneritage?

Geodiversity is the variety of rocks, fossils, minerals and natural processes that shape our landscape. These refer to sites that provide insight into the evolution of the Earth.

### **Important points About Jhamarkotra:**

- A short, dusty climb from Jhameshwar Mahadev Talab, with no walls, fences or signboards. It is a Stromatolite Fossil Park. It hosts stromatolites that are 1.8 billion years old.
- A stromatolite is a layered sedimentary rock formed by microorganisms. Stromatolite fossils preserve the record of cyanobacteria.
- The fossils of Jhamarkotra are rich in phosphates as the trapped sediments were mainly phosphate minerals.
- Phosphates are mined as they have been used as agricultural fertilizers. However, the industry is expanded with more mining operations in the area. This could damage these records of our geological past.

### **Important points About Zawar:**

- Zawar, about 40 km south of Udaipur, is the world's oldest known zinc-smelting site of archaeological and metallurgical importance.
- The landscape around Zawar bears many traces of zinc mining and smelting operations in ancient times, including open pits, ditches, chambers, galleries, shafts and open-pit mines. Particularly significant is the discovery of eggplant-shaped, long-necked pottery.

- Before the advent of high-pressure technology, extracting zinc was a major challenge. Zinc has a low boiling and melting point but the people of Zawar succeeded in extracting zinc using a distillation process.
- In 1988, the American Society of Metals recognized it as the oldest zinc smelting site in the archaeological record.

### Way Forward:

Local bodies have clubbed these specimens together for their scientific value and in the hope of preserving them for the future. UNESCO also has criteria for 'Global Geoparks'. Both Jhamarkotra and Zawar can qualify if they fulfil certain other conditions as well. Geologists, national tourism boards, and industry representatives may try to draft a roadmap for recognizing these places as geo-heritage sites.

# **3** Parliamentary Privileges

### Why in News:

Senior Congress leader and Member of Parliament KC Venugopal has moved a privilege motion against Prime Minister Narendra Modi for alleged derogatory remarks against Rahul and Sonia Gandhi. Rajya Sabha Chairman Jagdeep Dhankhar also directed a parliamentary committee to probe the alleged breach of privilege by 12 Opposition MPs for their "disorderly conduct" that resulted in frequent adjournments during the first phase of the Budget session, which concluded on February 13.

### **About Parliamentary Privileges:**

- Parliamentary privileges refer to a set of special rights and immunities that are granted to Members of Parliament, in order to enable them to perform their duties effectively without fear of persecution or prosecution.
- These privileges are enshrined in the Indian Constitution under Articles 105 and 194 for Members of Parliament and Members of Legislative Assemblies, respectively.
- Under these articles, Members of Parliament and Legislative Assemblies enjoy certain privileges and immunities, including the freedom of speech and expression in the Houses, the right to be free from arrest or detention during the session of the Houses, and the right to publish proceedings of the House without prior permission.
- These privileges are granted to ensure that Members can carry out their functions without fear or favour and to protect the dignity and integrity of the Houses.
- However, these privileges are not absolute, and

they must be exercised in accordance with the rules and regulations of the Houses.

### **Committee of Privileges:**

- This Committee consists of 15 members (10 members in the case of Rajya Sabha) nominated by the Speaker (Chairman in the case of Rajya Sabha).
- In the Lok Sabha, the Speaker nominates the head of the committee of privileges.
- In the Rajya Sabha, the deputy chairperson heads the committee of privileges.
- Its function is to examine every question involving a breach of privilege of the House or the members of any Committee thereof referred to it by the House or by the Speaker/Chairman.
- It determines with reference to the facts of each case whether a breach of privilege is involved or not and makes suitable recommendations in its report.

### **Sources of the Privileges:**

- Constitutional provisions
- Various laws made by Parliament
- Rules of both the Houses
- Parliamentary conventions
- Judicial interpretations

### **Conclusion:**

According to Parliamentary rules, if individuals or authorities violate or disregard any of the privileges, powers, and immunities of the House or members or committees thereof, they are liable for punishment for breach of privilege or contempt of the House. The House has the power to determine what constitutes a breach of privilege and contempt. The penal jurisdiction of the House in this regard covers its members as well as strangers and every act of violation of privileges, whether committed in the immediate presence of the House or outside of it.

### 4 Antiquities Abroad: Indian and International Law

### Why in News:

An investigation by The Indian Express in collaboration with the International Consortium of Investigative Journalists and Finance Uncovered has found that at least 77 items in the catalogue of the Metropolitan Museum of Art in New York are linked to Subhash Kapoor. Subhash Kapoor has been sentenced for 10 years, for smuggling antiquities.

### What is Antiquity?

The Antiquities and Art Treasures Act, 1972, which came into force on April 1, 1976, defined "antiquity" as "any coin, sculpture, painting, epigraph or other work of art or craftsmanship". Any article other than a building or cave, any article or object of historical interest exemplifying

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science, art, craft, literature, religion, customs, morals or politics in bygone ages and which has existed for at least one hundred years can be defined as an antiquity.

### **International Treaties:**

- The UNESCO 1970 Convention on the Means of Prohibiting and Preventing the Illicit Import, Export and Transfer of Ownership of Cultural Property defined "cultural property" as property designated by countries to have "significance for archaeology, prehistory, history, literature, art or science".
- Illegal import, export and transfer of ownership of cultural property are some of the main causes of impoverishment of the cultural heritage of the countries of origin of such property, and international cooperation is one of the most efficient means of protecting the cultural property of each country.
- The United Nations General Assembly in 2000 and the United Nations Security Council in 2015 and 2016 also expressed concern over the issue.

### **Indian Laws:**

- In India, Item-67 of the Union List, Item-12 of the State List and Item-40 of the Concurrent List of the Constitution are related to the heritage of the country.
- Before independence, the Antiquities (Export Control) Act was passed in April 1947 to ensure that "no antiquities can be exported without a licence."
- In 1958, the Ancient Monuments and Archaeological Sites and Remains Act was enacted.
- In 1971, Parliament witnessed an uproar over the theft of a bronze statue from Chamba and some important sandstone sculptures from other places.
- The UNESCO convention prompted the government to enact the Antiquities and Art Treasures Act, 1972 (AATA) with effect from 1 April 1976. Under this, it shall not be lawful for any person to export any antique or art treasure other than the Central Government or any authority authorized by the Central Government.
- The license is granted by the Archaeological Survey of India (ASI).
- So far, the National Mission on Monuments and Antiquities, launched in March 2007, has registered 3.52 lakh antiquities out of 16.70 lakh antiquities to "effectively check" illegal activities. According to a statement by the Ministry of Culture in Parliament in July 2022, this is a very small part of the total number of antiquities in the country, which is estimated by the government to be around 5.8 million.

### Way Forward:

The return of antiquities taken out from preindependent India needs to be taken up bilaterally or through international forums. Like Maharashtra government is working to bring back the sword of Chhatrapati Shivaji Maharaj from London. This sword was given by Shivaji IV to Edward, Prince of Wales (later King Edward VII) in 1875-76. From the Vagdevi of Dhar (Madhya Pradesh) to the Kohinoor diamond, from the Amravati marbles to the Sultanganj Buddha, to antiquities belonging to Rani Laxmibai and Tipu Sultan, many antiquities are currently abroad. Antiquities that have gone out of the country after independence can be easily retrieved by raising the issue bilaterally, with proof of ownership and with the help of the UNESCO convention.



### Why in News:

Recently, the Election Commission of India has taken up a proposal to amend the Conduct of Elections Rules, 1961 to facilitate the electronically transmitted postal ballot system for overseas voters. The matter is being discussed with the Ministry of External Affairs to address the logistical challenges involved in the implementation of the proposal.

### **Election Commission of India (ECI):**

 The Election Commission of India (ECI) is an autonomous and permanent constitutional body



responsible for conducting free and fair elections in the union and states of India. Ttwas established by the Constitution of India to conduct and regulate elections in the country. Article 324

of the Constitution provides that the power of superintendence, direction and control of elections to Parliament, State Legislatures, the office of the President of India and the office of the Vice-President of India shall be vested in the Election Commission.

- It was formed in 1950 in New Delhi
- At present, it has a Chief Election Commissioner and two other Election Commissioners.

The present Chief Election Commissioner is Mr Rajeev Kumar.

### **Overseas Citizen of India (OCI):**

- A person who was a citizen of India on or at any time after January 26, 1950.
- Those who belonged to an area which became a part of India after 15th August 1947.
- Any person who is a child or grandchild or greatgrandchild of such citizen.
- Overseas Citizen of India (OCI) is a form of permanent residence available to people of Indian origin and their spouses, which allows them to live and work in India indefinitely.

### **Electronically Transmitted Postal Ballot System (ETPBS):**

- The Electronically Transmitted Postal Ballot System (ETPBS) was developed by the Election Commission of India with the help of Center for Development of Advanced Computing (C-DAC).
- This system has been implemented along with the existing postal ballot system.
- A postal ballot will be sent to voters electronically.
- It enables voters to cast their vote on their electronically received postal ballot from a location of their choice, which is outside their originally designated polling area.
- This system will be an easy option to facilitate voting by voters as using this system the time constraint for sending postal ballots has been removed.

### Way Forward:

So it can be said that if the postal ballot is allowed for overseas Indians then they will get a chance to vote and they will get the right to structure in the Indian constitution and there will be transparency in voting and participation of more and more people in voting will be ensured.



### World's 1st Sand Battery

### Why in News:

Finland has installed the world's first sand battery that can store heat from renewable energy sources for months.

### What is a Sand Battery?

- A "sand battery" is a high-temperature thermal energy storage that uses sand or sand-like materials as its storage medium. It stores energy in the sand as heat.
- Sand can be heated up to 600 degrees Celsius (°C), whereas water starts to boil at 100°C. It also has low heat conductivity, which reduces energy loss.
- The energy is stored as heat, which can be used to heat homes or to provide hot steam and high-

temperature process heat to industries that are often fossil-fuel dependent.

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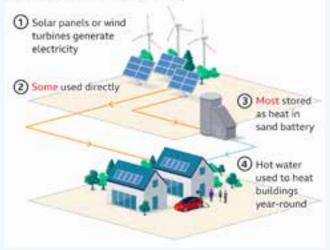
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Its main purpose is to work as a high-capacity reservoir for excess wind and solar energy.

### What are the benefits of using a Sand Battery?

- Sand can be heated up to 600 degrees Celsius (°C). It also has low heat conductivity, which reduces energy loss.
- 1,000 times more power is discharged as heat than is used as electricity.
- > It can be a great source of renewable internal

### How sand batteries work



heating energy.

- The sand battery is also useful to a country like Finland, one of the countries closest to the North Pole, where the sun sets early in winter months with temperatures as low as minus 30 degrees Celsius.
- Sand is a very effective medium for storing power for months at a time.

### The working mechanism of Sand Battery:

- > Wind turbines and solar panels generate electricity.
- > 30% of the energy is used straight away to power local infrastructure.
- The 70% is stored in the sand battery, heating the sand up to 600-1000 °C.
- > During winter months, when solar energy is weaker, then this stored energy can be used.

### **Way Forward**

The installation of sand batteries is a major breakthrough, as heat alone accounts for half of the world's energy use, followed by transport (30 per cent) and electricity (20 per cent), as per the intergovernmental organisation International Energy Agency (IEA). This technology has a huge potential for a smooth transition to green energy.

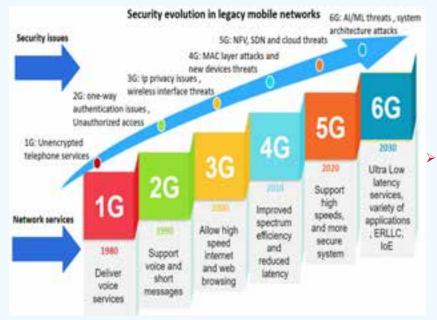
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### **6G Vision Document**

### Why in News:

The Prime Minister of India, Narendra Modi recently unveiled the Bharat 6G Vision Document and launched the 6G R&D Test Bed. According to the vision document, India is gearing up to roll out high-speed 6G communication services by 2030. For this, the nation has set up a Bharat 6G project to identify the key areas and fund its research and deployment of this next-generation technology in the country.



### **About Bharat 6G Project:**

- India's 6G project will be implemented in two phases, the first one from 2023 to 2025 and the second one from 2025 to 2030.
- The government has also appointed an apex council to oversee the project and focus on issues such as standardization, identification of the spectrum for 6G usage, creating an ecosystem for devices and systems, and figuring out finances for research and development, among other things.

### **Objective:**

It aims to enable India to become a leading global supplier of intellectual property, products and solutions of affordable 6G telecom solutions and identify priority areas for 6G research, based on India's competitive advantages.

### Significance:

The project will provide an R&D platform to start-ups, researchers, industry and other broadband wireless applications in India like e-Governance, smart cities, rural Broadband and other Digital India initiatives under Atmanirbhar Bharat.

### **About 6G Technology:**

A 6G network is defined as a cellular network that operates in untapped radio frequencies and uses cognitive technologies like AI to enable high-speed, low-latency communication at a pace multiple times faster than fifth-generation networks. 6G networks are currently under research and development, and they are yet to be released. These networks seek to utilize

> the terahertz band of frequency which is currently unutilized. Terahertz waves fall between infrared waves and microwaves on the electromagnetic spectrum. These waves are extremely tiny and fragile, but there's a huge amount of free spectrum up there that would allow for spectacular data rates.

Although technically 6G does not exist today, it is already conceived as a much superior successor to the widely anticipated 5G. The new 5G technology promises a speed range of 40 – 1,100 Mbps with the potential to hit maximum speeds of 10,000 Mbps. 5G does this through technologies such as millimetre-wave spectrum and beamforming. While 5G itself seems very futuristic as of now,

6G will offer ultra-low latency with speeds up to 1 Tbps that will amp up the machine-tomachine and human-to-machine interactions to unprecedented heights. It will transform the development and use of virtual and augmented reality (VR/AR), mobile edge computing, Artificial Intelligence (AI), etc.

### **Conclusion:**

As the world's second-largest telecom market, India must evolve to become a net technology provider and manufacturer to the world. This means that we must actively participate in defining the contours of the next sixth generation (6G) and drive the innovations such that we address the pressing needs not only for India but for every other country with similar requirements. We must pivot to the position of a leading global provider of technology and solutions for the greater good.

### **News Of National and International Importance**

### 1. Phase IV of Sagar Parikrama Launched

Sagar Parikrama Phase IV journey has been started on 18 March. It aims to address the issues related to fishermen and other stakeholders and to promote their economic development through various government schemes and initiatives. The fourth phase of Sagar Parikrama will cover parts of Uttara Kannada, Udupi and Dakshina Kannada. The two-day visit will be attended by government officials, representatives of fishermen, fish-farmers, entrepreneurs, stakeholders, professionals and scientists from across the country.

### 2. Spring Fiesta 2023

The National Gallery of Modern Art (NGMA) in New Delhi, India, is celebrating its 69th anniversary in 2023 with its first ever "Spring Fiesta" event. The objective of the event is to showcase and promote locally made, handcrafted and curated products. The event will provide an opportunity to these enthusiastic participants to display and sell creative products.

### 3. Chandrayaan-3 Spacecraft Tested

The Indian Space Research Organization (ISRO) has achieved another milestone in its space exploration journey by testing Chandrayaan-3 spacecraft. The primary objective of the Chandrayaan-3 mission is to reach the lunar surface. But a soft landing has to be demonstrated which was not achieved in Chandrayaan-2 mission. The spacecraft would consist of a lander, rover and propulsion module, which would act as a communications relay satellite. The propulsion module will take the lander and rover configuration to the 100 km lunar orbit. Once in lunar orbit, the lander and rover will separate from the propulsion module and soft-land on the lunar surface. After this, the lander and rover will conduct scientific experiments on the surface of the moon.

### 4. Mario Molina

Google has honored Mario Molina, the great scientist of Mexico, through a doodle. He is mainly known as protector of the ozone layer. It was he who made the world aware about the depletion of ozone layer and its effects. World Ozone Day or the International Day for the Preservation of the Ozone Layer is observed worldwide on 16 September. The ozone layer is a layer located in the stratosphere 15 to 30 km above the Earth, which protects Earth from the harmful ultraviolet radiation of the Sun.

### 5. Governor of the Year Award, 2023

Reserve Bank of India Governor Shaktikanta Das has been named "Governor of the Year" for 2023 by Central Banking, an international economic research journal. Shaktikanta Das' steady leadership during challenging periods including the COVID-19 pandemic, non-banking company collapse, and inflationary pressures due to Russia's invasion of Ukraine earned him this achievement. Shaktikanta Das efficiently faced political and economic crises with his efforts.

### 6. Gudhi Padwa

Gudhi Padwa is a festival celebrated with great enthusiasm and joy by Marathi and Konkani Hindus. The word 'gudhi' means flag or banner, and 'padwa' refers to the first day of the lunar fortnight . According to one belief, Lord Brahma created the universe on this day, and it is believed that he hoisted a flag or 'Gudhi' to indicate his victory over evil. Thus, the festival of Gudhi Padwa is a reminder of this victory of good over evil and marks the beginning of a new era of prosperity, happiness and success.





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### 7. Lakkhi Mela, Rajasthan

Lakkhi Mela is also known as Kaila Devi Chaitra Mela. The festival is celebrated with great enthusiasm and devotion by people from different communities, who come together to pay respect to Goddess Kaila. Lakhi Mela is not just a religious gathering, it is also a platform to showcase the craftsmanship of many people. Handcrafted wooden, lac and metal products, tribal headgear, silver jewellery, mirror work, hand-woven and embroidered textiles and much more are displayed during this fair. Cultural performances and wrestling demonstrations by great wrestlers are also shown.

### 8. Nepal, India Literature Festival

The Nepal-India Literature Festival was a three-day literary festival organized by the Krantidhara Sahitya Akademi of Biratnagar Metropolitan City and Meerut, India. The festival saw the participation of more than 350 litterateurs from all the seven provinces of Nepal and most of the states of India. The event concluded with the adoption of the 10-point Biratnagar Declaration with the aim of promoting literature between Nepal and India.

### 9. LVM3

The Indian Space Agency, ISRO has announced that it will launch its largest rocket LVM3 on 26 March for its second commercial mission. This is the shortest duration in which ISRO has carried out two missions of the rocket as it aims to meet the deadlines of the customers whose satellites are being launched.

### 10. Polio Outbreak in Burundi

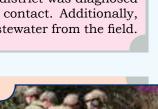
The landlocked East African nation of Burundi has declared its first polio outbreak in 30 years. The outbreak was confirmed after a four-year-old child in western Burundi's Islay district was diagnosed with vaccine-associated polio along with two other children who came into contact. Additionally, poliovirus type 2 was detected in five environmental monitoring samples of wastewater from the field.

### **11. Operation Interflex**

On June 7, 2022, Operation Interflex began, in which the United Kingdom and several other countries trained approximately 2,000 Ukrainian military recruits for five weeks. The initiative is part of the UK's £2.3bn commitment to military aid and support to Ukraine, and is a collaborative effort between Canada, New Zealand, Australia, Norway, Denmark, Finland, Sweden, Lithuania and the Netherlands.

### 12. Mission Arikomban

A wild elephant named Arikomban is causing havoc in the high hills of Idukki district. Arikomban is in news for raiding rice shops and creating mayhem in his path. In the past few years, Arikomban has killed at least 10 people and destroyed about 60 houses and shops. The forest department has come up with a plan to capture Arikomban and train it as a 'kumki'. Kumki is a captive elephant used for operations against rogue elephants.









### **13. Tactical Nuclear Weapons**

Russian President Vladimir Putin's announcement that Russia will deploy tactical nuclear weapons (TNWs) in Belarus has raised concerns about the growing risks of a nuclear conflict. Belarus is a neighbor of NATO member states, deploying nuclear weapons there is likely to escalate tensions between Russia and the West. Tactical nuclear weapons are defined as nuclear weapons intended to be used for specific tactical advantage on the battlefield. They can be delivered by various types of missiles, torpedoes and by naval, air or ground forces. Russia is believed to have about 2,000 operational TNWs, while the US has about 200.

### 14. Aravalli Green Wall Project

On March 25, 2023, Union Environment, Forest and Climate Change Minister Shri Bhupendra Yadav inaugurated the Aravalli Green Wall Project. The objective of the project is to green a 5 km buffer zone around the Aravalli hill range in four states – Haryana, Rajasthan, Gujarat and Delhi. The project was launched on the International Day of Forests. The Aravalli Green Wall Project aims to improve the ecological health of the Aravalli range, prevent land degradation, combat desertification, improve biodiversity, mitigate climate change and promote sustainable development.

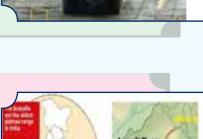
### **15. Vedic Heritage Portal**

Indira Gandhi National Center for the Arts (IGNCA) recently launched the Vedic Heritage Portal, a digital repository of Vedic knowledge and traditions from across the country. The portal is the result of seven years of effort and an estimated cost of Rs 5 crore. The Vedic Heritage Portal is a one-stop solution for researchers and others seeking information on India's Vedic heritage. It was launched by the Union Home Minister Amit Shah and Union Culture Minister G Kishan Reddy during the 36th Foundation Day celebrations of IGNCA.

### 16. INS Sumedha

INS Sumedha is an indigenously built stealth offshore patrol vessel, fitted with state-of-the-art weapons and sensors package, which makes it a valuable asset to the Indian Navy. The ship is regularly deployed for Fleet Support functions such as Anti-Piracy Patrolling, SAR, HADR, Surveillance and Escort missions. In addition to this, it is also capable of carrying Advanced Light Combat Helicopter. It also showcases the Indian Navy's outreach to friendly maritime nations.





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### 17. Chenab Bridge

Indian Railways is building the world's highest railway bridge across the challenging Himalayan terrain, which is expected to be completed in the coming months. Chenab Bridge, an engineering marvel, is a part of the strategically important Udhampur-Srinagar-Baramulla (USBRL) railway link that will connect Jammu and Kashmir to the rest of India. The 1.3 km long bridge has a design speed of 100 kmph for trains and a lifespan of 120 years. The USBRL project is expected to be completed by December 2023 or January 2024. Vande Bharat Express trains will run on the Chenab bridge, and a maintenance facility for Vande Bharat trains will be set up at Budgam. The new Vande Metro developed for short distance inter-city travel will also run between Jammu and Srinagar. The 111 km stretch from Katra to Banihal is essential, and the 1.3 km long Chenab bridge is an important part of this section. Once completed, the entire USBRL railway project will provide allweather connectivity and connect Jammu and Kashmir with the rest of India.

### 18. Gaj Utsav

The Government of India is going to celebrate the 30th anniversary of Project Elephant with Gaj Utsav 2023. The two-day event aims to promote elephant conservation, protect their habitats and corridors, and prevent human-elephant conflict. The Gaja Utsav 2023 will be inaugurated by President Draupadi Murmu on April 9 at the Kaziranga National Park in Assam. The event is significant as Kaziranga is a UNESCO World Heritage Site and home to the highest density of tigers in the world. Project Elephant is a centrally sponsored scheme started in 1991-92 to protect elephants and their habitats in India.

### 19. Hyle Drone

Recently North Korea has unveiled its new nuclear underwater drone, which has created concern in the international community. The drones, called "hails" or tsunamis, are designed to create massive radioactive waves through underwater explosions. The North Korean state news agency KCNA claims that this drone can be deployed on any coast and port. The nuclear tsunami drone was launched earlier this week off the coast of Riwon County in South Hamgyong Province. It reportedly went under water for 59 hours at a depth of 80 to 150 meters before detonating at the target location. North Korea also launched four strategic cruise missiles attached to mock nuclear warheads.

### 20. TV-D1 (test vehicle demonstration – TV-D1)

Its objective is to test the abort procedure in mid-air, the parachute system and the recovery of crew members after splashdown. This demonstration consists of using a single liquid propellant-based rocket stage to lift the crew module to the sub-orbital level.







Chenab Bridge

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### **Current Affairs at a Glance**

- 1. The first meeting of the G-20 Chief Scientific Adviser Round Table Conference was held in Ramnagar, Uttarakhand.
- 2. The Indian Coast Guard conducted a Search and Rescue Area (SAR) exercise at Kakinada in Andhra Pradesh.
- 3. The first Trade and Investment Working Group meeting is being held in Mumbai from March 28 to 30, 2023 under the G20 chairmanship of India.
- 4. The Maharashtra Cow Service Commission Bill has recently been introduced in the state assembly, which aims to promote and protect indigenous cattle breeds.
- 5. On March 5, 2023, Indian Space Research Organization (ISRO) and NewSpace India Limited (NSIL) successfully launched OneWeb India-2 mission, which is a significant achievement in space connectivity.
- 6. Under Operation Interflex United Kingdom and several other countries are training Ukrainian military recruits.
- 7. The Ministry of Electronics and Information Technology will soon enact the Digital India Act, 2022 which will replace the Information Technology Act (IT Act), 2000.
- 8. The World Bank has approved a US\$ 1 billion loan to India to help the country prepare for future pandemics and strengthen its healthcare infrastructure.
- 9. The Central Government has given full exemption from customs duty to all imported drugs and food items keeping in view the special medical purpose for personal use in relation to the treatment of all rare diseases.
- 10. A 3.85 kilometer long public transport ropeway is being constructed in Varanasi at a cost of Rs 644 crore.
- 11. The second meeting of the Agriculture Representatives of the Agriculture Working Group (AWG), under the G20 chairmanship of India, began in Chandigarh on 29 March.
- **12.** The second edition of the Africa-India joint military exercise Field Training Exercise (AFINDEX-23) concluded today at the Foreign Training Node, Aundh, Pune.
- **13.** The second meeting of the Environment and Climate Sustainability Working Group (ECSWG) concluded in Gandhinagar with the G20 member states reaffirming their commitment to tackle the environmental and climate crisis.
- 14. The Prime Minister, Shri Narendra Modi has congratulated the people of Karnataka for setting up the PM Mitra Mega Textiles Park at Kalaburagi.
- **15.** The 2nd Startup20 Collaborative Group meeting successfully concluded in Gangtok, Sikkim, serves as a platform for dialogue with various stakeholders of the global startup ecosystem.
- 16. In continuation of the Amrit Mahotsav of Independence, the second edition of "Vitasta The Festival of Kashmir" will be organized in Pune, Maharashtra from March 31 to April 2, 2023. The festival is organized by the Union Ministry of Culture going .
- 17. National Aluminum Company Limited, a Navratna CPSE under Ministry of Mines, Government of India, in collaboration with Bhabha Atomic Research Center (BARC) has successfully developed a Bauxite Certified Reference Material (CRM) named `BARC B 1201`. It is first of its kind in India and 5th CRM in the world.
- 18. Prime Minister Shri Narendra Modi addressed the One World TB Summit on 24 March at Rudraksha Convention Centre, Varanasi.
- **19.** The annual bilateral maritime exercise between the Indian Navy and the Royal Navy Konkan 2023 was conducted off the Konkan coast of the Arabian Sea from March 20 to 22, 2023.
- 20. The National Institute of Urban Affairs (NIUA) is organizing the first Urban Climate Film Festival through the CITIIS (City Investments to Innovate, Integrate and Sustain) program under U20 participatory programmes.

The Digital India Act (DIA) will be a four-pronged legislation, out of which a draft Digital Personal Data Protection Bill was put out by the government last year.The other prongs are:* The DIA rules,* The National Data Governance Policy,* Amendments to the Indian Penal Code.	Need Of The Digital India Act India today has 850 million internet users, compared to 5.5 million users in 2000. According to the central government, India is the world's largest "digitally connected democracy". The internet is largely governed by the IT Act, 2000, which was created for the nascent internet ecosystem in pre-digital India. A lack of provisions on user rights, and trust and safety, among other challenges, limit the IT Act. The internet has evolved from being a platform for disinformation to also being a platform for disinformation and fake news. Lack of data and privacy protection are also shortcomings of the current laws that regulate the internet and cyberspace in India, giving rise to the need for an overhaul.	
<ul> <li>The Digital India Act (DIA) will be a four which a draft Digital Personal Data Protec government last year.</li> <li>The other prongs are: <ul> <li>The DIA rules,</li> <li>The National Data Governance Policy,</li> </ul> </li> </ul>	India 1 India 1 India 1 Comparative Accord Accord Accord Act, 20 Interne Act, 20 Interne Act, 20 Interne Act, 20 Interne Interne Act, 20 Interne Interne Act, 20 Interne Interne Act, 20 Interne Inter	<ul> <li>the DIA</li> <li>Adjudicatory Mechanism: Offer an easily accessible adjudicatory mechanism for online civil and criminal offences.</li> <li>Principles and Rules-Based Approach: The DIA will provide a legislative framework keeping overarching governing principles in mind to ensure compliance.</li> </ul>
Why In Broadcast The Union government formally outlined a proposed version of the Digital India Act, 2023 — the legislative framework expected to replace the Information Technology (IT) Act, 2000	<ul> <li>Global Standard Cyber Laws</li> <li>Global standard cyber laws, proposed under the Digital India Act, 2023, are aimed at helping India reach the target of a \$1 trillion digital economy.</li> <li>Objectives of Global Standard Cyber Laws</li> <li>1. Ensure Indian internet is open, safe and trusted and accountable.</li> <li>2. Accelerate the growth of innovation and technology ecosystem.</li> <li>3. Manage the internet's complexities and expansion of intermediary types.</li> <li>4. Create a framework for accelerating digitalisation of government and strengthen democracy and governance</li> <li>5. Protect citizens' rights.</li> <li>6. Address emerging technologies and risks.</li> <li>7. Be future-proof and future-ready.</li> </ul>	<ul> <li>Aim of th The Digital India Act, 2023 aims to achieve the following goals:</li> <li>Evolvable Digital Law: Form evolvable rules that are consistent with the changing trends in technologies and can be updated according to the needs of the country's digital infrastructure.</li> </ul>

Types of Waste	> There are different types of waste which	are generated from our daily or industrial	acuviues sucn as organic waste, e-waste, hazardous waste, inert waste etc.	<ul> <li>Organic waste refers to waste which degrades</li> </ul>	or broken down by microorganisms over		The organic fraction of waste can be	further classified as non-biodegradable and	biodegradable organic waste		utat can be utilized for food by naturally occurring micro-organisms within a	reasonable length of time.	ē		» Food processing rejections, Municipal solid unsta (food unstall action)	» MULLICIPAL SOLID WASTE (1000 WASTE, JEAVES from parden waste namer cloths / rags	etc.),	» Waste from poultry farms,	» Cattle farm slaughter houses,		<ul> <li>Distillery, Paper,</li> <li>Oil extraction plant.</li> </ul>		industries.	<ul> <li>Non-Biodegradable organic materials are organics resistant to biological degradation</li> </ul>	or have a very low degradation rate. This	primarily includes:	» Cardboard,	» Cartons, containers, » Wrannings nouches	» Discarded clothing	» Wooden fiimitire		<ul> <li>ngrituritat uty waste,</li> <li>Decesso mod hindt.</li> </ul>	" Lagasse, lice liusk
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Technologies Available	(WTE) techno	recover the energy from the waste in the form	of Electricity and Biogas/Syngas are given as below:		Biomethanation is anaerobic digestion of	organic materials which is converted into		Biomethanation has dual benefits. It gives	biogas as well as manure as end product.		incineration technology is complete comblistion of waste with the recovery	of heat to produce steam that in turn	produces power through steam turbines.	The resultant ash from incineration of	solid waste can be used as construction	the residue can be sofely discoved of in a	e sarery uispe		process	s (500-1800°C) in the	presence of limited amounts of oxygen to decompose materials to produce synthetic	gas (a mixture of carbon monoxide (CO)	).	This gas further can be used for thermal or power generation purposes.		Statewise Waste Generation, Bio-CNG Potential and Energy Potential Estimate	State		Uttar Pradesh	Maharashtra	Gujarat	Tamil Nadu	Punjab
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	Waste-to-Energy	ecover tl	ot Electri helow:	1. Biomethanation:	Biom	orgar	biogas.	Biom	bioga	2. Incineration:	comb	of he		The J	solid	the re	landfill.	3. Gasification:	Gasif	high	prese	gas (á		This gor por									
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PM Shri Narendra Modi inaugurated the Global Millets (Shree Anna) Conference in New Delhi on 18 March, 2023.

# Way Forward

- The Indian Prime Minister in his message said that it it is a symbol of India's responsibilities towards the global good.
- International Year of Millets' is providing a unique opportunity to increase global production, ensure efficient processing, consumption, and subsequently promote better utilization of crop rotations.
  - The extended trade of millets on a global level can encourage better connectivity throughout food systems while also promoting it as a key component of the food basket.

# Anna) Conference

**Global Millets (Shree** 

# **Millets in India**

- bajra (3.67%), jowar (2.13%), and ragi (0.48%), accounted for about 7 per cent of Millets are mainly a kharif crop in India. During 2018-19, three millet crops i,e. the gross cropped area in the country.
- As per DGCIS data, India has total export of millets around 159,331.16 metric tonnes against 147, 501.08 metric tonnes last year, thus the country registered a growth of 8.02% in millet exports. A
- India's major export destination are UAE, Nepal, Saudi Arabia, Libya, Oman, Egypt, Tunisia, Yemen, UK and USA. А

# Aim of the Conference

The two-day global conference had sessions on all important issues related to millets (Shree Anna) like promotion and awareness of millets among producers, consumers and other stakeholders; millets' value chain development; health and nutritional aspects of millets; market linkages; research and development etc.

# About Millets

Millet is a collective term for a number of smallseeded annual grasses cultivated as grain crops, primarily on marginal lands in dry areas in temperate, subtropical and tropical regions. They include cereals like sorghum (jowar), pearl millet (bajra), foxtail millet (kangni/ Italian millet), little millet (kutki), kodo millet, finger millet (ragi/ mandua) etc.

There is evidence for consumption of millets in the Indus-Sarasvati civilisation (3,300 to 1300 BCE), they were the first crops to be domesticated.

# **Millets Around the World**

- Millets are now grown in more than 130 countries, and are the traditional food for more than half a billion people in Asia and Africa.
- Globally, sorghum (jowar) is the biggest millet crop. The major producers of jowar are the United States, China, Australia, India, Argentina, Nigeria, and Sudan.
- Bajra is another major millet crop and countries like India and some other African countries are its major producers.
   Major millet importing countries in the world include Indonesia, Belgium, Japan, Mexico, Italy, USA, UK, Brazil and Netherlands.

Objectives Harness the potential of the fisheries sector in a sustainable, responsible, inclusive and equitable manner. Enhance fish production and productivity through expansion, intensification, diversification and productive utilization of land and water. Modernize and strengthen the value chain including post-harvest management and quality improvement. Double fishers and fish farmers' incomes and generate meaningful employment. Enhance the contribution of the fisheries sector to Agricultural GVA and exports. Ensure social, physical and economic security for fishers and fish farmers. Build a robust fisheries management and regulatory framework.	<ul> <li>Targets of PMMSY</li> <li>Fish Production And Productivity</li> <li>Increasing fish production to 22 million metric tons in 2018-19.</li> <li>Enhancing aquaculture productivity to 5 tons per hectare from the current national average of 3 tons. Augmenting domestic fish consumption from 5 kg to 12 kg per capita.</li> <li>Economic Value Addition</li> <li>Increasing contribution of fisheries sector to the Agriculture GVA to about 9% by 2024-25 from 7.28% in 2018-19.</li> <li>Doubling export earnings to Rs.1,00,000 crores by 2024-25 from 7.28% in 2018-19.</li> <li>Poubling export earnings to Rs.1,00,000 crores by 2024-25 from Rs.46,589 crores in 2018-19.</li> <li>Boubling export earnings to Rs.1,00,000 crores by 2024-25 from Rs.46,589 crores in 2018-19.</li> <li>Boubling export earnings to Rs.1,00,000 crores by 2024-25 from Rs.46,589 crores in 2018-19.</li> <li>Boubling export earnings to Rs.1,00,000 crores by 2024-25 from Rs.46,589 crores in 2018-19.</li> <li>Doubling export earnings to Rs.1,00,000 crores by 2024-25 from Rs.46,589 crores in 2018-19.</li> <li>Doubling export earnings to Rs.1,00,000 crores by 2024-25 from Rs.46,589 crores in 2018-19.</li> <li>Boubling export earnings to Rs.1,00,000 crores by 2024-25 from Rs.46,589 crores in 2018-19.</li> <li>Doubling export earnings to Rs.1,00,000 crores by 2024-25 from Rs.46,589 crores in 2018-19.</li> <li>Poubling export earnings to Rs.1,00,000 crores by 2024-25 from Rs.46,589 crores in 2018-19.</li> <li>Poubling export earnings to Rs.1,00,000 crores by 2024-25 from Rs.46,589 crores in 2018-19.</li> <li>Poubling export earnings to Rs.1,00,000 crores by 2024-25 from Rs.46,589 crores in 2018-19.</li> <li>Poubling private investment and growth of entrepreneurship in the fisheries sector.</li> <li>Buancing Income and Employment Generation</li> <li>Co-25% to about 10%.</li> <li>Doubling the value chain.</li> <li>Doubling the incomes of fishers and fish farmers.</li> </ul>
	al and ducts dards rit the nostic nobile on.
Why In Broadcast The Prime Minister, Shri Narendra Modi has praised the efforts of farmers of Sirsa for highlighting the benefits of PM Matasya Sampada Yojana. PM said that this effort is a symbol of women empowerment.	<ul> <li>PMMSY</li> <li></li></ul>
d, ag iiles se 7.3 triet	<ul> <li>and diversify inland fisheries and diversify inlusion, establishing new freshwater hatcheries and brood banks, constructing new rearing and growout ponds, constructing cages and pens in reservoirs.</li> <li>Fishermen's Welfare</li> <li>Through PMMSY, the Gol will strive to promote socio-economic welfare of fishers and fish farmers by providing safety kits, replacement boats and nets, insurance for fishing vessels and fisherment, livelihood and nutritional support to fishing bans and lean periods.</li> <li>Infrastructure &amp; Post-Harvest Management and modernized.</li> <li>Requisite infrastructure for processing, storage, value addition, packaging, transportation and</li> </ul>

About MAIA Currently in development, MAIA will make radiometric and polarimetric measurements		agencies with investigate the nearth impacts of air pollution in the world's most populated cities. The MAIA observatory, which is set to launch before the end of 2024 will consist of the	PLATiNO-2 satellite, which will be provided by ASI, and a science instrument that will be built at NASA's Jet Propulsion Laboratory (JPL). The MAIA mission will collect and analyse data from the observatory, sensors on the ground and atmospheric models.	<ul> <li>JPL will host a "pointable spectropolarimetric camera," which</li> </ul>	<ul> <li>captures images from multiple angles in the ultraviolet, visible, near-infrared and shortwave infrared portions of the electromagnetic spectrum</li> <li>Using this data, the MAIA science team will</li> </ul>	<ul> <li>explore the size, geographic distribution, composition and abundance of airborne particles.</li> <li>They will also investigate how these factors relate to the patterns and prevalence of</li> </ul>	<ul> <li>health problems stemming from poor air quality.</li> <li>During the three-year mission, MAIA will focus on 11 primary target areas that include motion include motion include motion that the problem of the statement of the state</li></ul>	Morld: Los Angeles, Atlanta Boston, Rome, World: Los Angeles, Atlanta Boston, Rome, Addis Ababa, Ethiopia, Barcelona, Spain, Beijing, Johannesburg, New Delhi, Taipei, Taiwan; and Tel Aviv.
Curre radio	needed to and qua: pollution. The joint	agend pollui The I before	PLAT ASI, a at NA at NA The N from atmos			\$		
	A	A	A		Multi-Angle Imager For Aerosols		solid particles, or very small liquid droplets, . Aerosols consisting of solid particles can be arily by large dust storms, volcanic eruptions, or	r (PM2.5 and PM10) among other rganic carbon. stimate of the aerosol present in asurement of PM2.5.
Why In Broadcast Becently NASA announced that	Space Agency ASI (Agenzia Space Agency ASI (Agenzia Spaziale Italiana) to build and launch MAIA, the Multi-Angle	Imager for Aerosols missions. Way Forward	As part of the MAIA investigation, researchers will combine MAIA measurements with population health records to better understand the connections between aerosol pollutants and health problems such as adverse	birth outcomes, cardiovascular and respiratory diseases, and premature deaths. This has the potential to revolutionise healthcare and environment	un, with more focus on and mitigation rather than h consequences.		Aerosols are extremely small solid particles, or very small liquid droplets, suspended in the atmosphere. Aerosols consisting of solid particles can be placed in the atmosphere primarily by large dust storms, volcanic eruptions, or the solid marticles from large first.	<ul> <li>High aerosol amounts include particulate matter (PM2.5 and PM10) among other pollutants as well as sea salt, dust, black and organic carbon.</li> <li>Aerosol optical depth (AOD) is the quantitative estimate of the aerosol present in the atmosphere and can be used as a proxy measurement of PM2.5.</li> </ul>
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The Report	<ul> <li>The Synthesis Report is a compilation of the main findings of the IPCC's Sixth Assessment Report, based on results from three Working Groups (WGs):</li> <li>WG I evaluated the physical science basis of climate change.</li> <li>WG II evaluated the impacts, adaptation, and vulnerability.</li> </ul>	* The redu and 1.5 Pari	Other Sources         Special Reports based on Global         Warming of 1.5°C (October 2018).         Climate Change and Land (August 2019).	Decan and Cryosphere in ing Climate (September 2019).	Implications for India         With a large vulnerable population, India needs to prioritise grants and policies that focusses on adapting to the effects of climate change.         India's priority should be to minimise loss and damage in terms of lives, livelihood and biodiversity, and accelerate equitable	action mitigation and adaptation. Warming has already reached 1.1 C, this is unequivocally due to climate change and the impacts are likely to be greater at a particular temperature than earlier thought. As a developing country, India can lower its per-capita emissions through energy efficiency policies already being implemented in almost every sector. It can also decarbonise the energy sector by using cleaner options like solar and renewable energy.
	Change (IPCC) th Assessment rland. ce greenhouse aused climate and equitable for all."	A		PCC Synthe Report	, India needs to prioritise grants and pol ise loss and damage in terms of lives, live	C, this is unequivocally due to climate change and the impacts thought. lower its per-capita emissions through energy efficiency policies sector by using cleaner options like solar and renewable energy.
Why In Broadcast	<ul> <li>The Intergovernmental Panel on Climate Change (IPCC) released its Synthesis Report for the Sixth Assessment Cycle on March 20 in Interlaken, Switzerland.</li> <li>The report emphasised the need to reduce greenhouse gas emissions and adapt to human-caused climate change through "mainstream effective and equitable action" for a "liveable sustainable future for all."</li> </ul>	Way Forward The report suggests climate resilient development that will not only mitigate the effects of climate change but also provide wider benefits.	to increasing employment opportunities, boosting healthcare through technology, and delivering equity are among the report's recommended goals to help adapt to climate change.	financial investments to achieve climate goals and encouraged public funding through central banks, government and financial regulators to reduce emissions, scale up climate resilience, and protect low- income and marginalised communities.	<ul> <li>With a large vulnerable population, climate change.</li> <li>India's priority should be to minimis</li> </ul>	<ul> <li>action mitigation and adaptation.</li> <li>Warming has already reached 1.1 C particular temperature than earlier</li> <li>As a developing country, India can 1 in almost every sector.</li> <li>It can also decarbonise the energy s</li> </ul>
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the Indian Parliament passed the Wild Life rtain areas as Sanctuaries or National Parks. etc. and impose punishment for violating the	Salient Features	Act contains 66 Sections divided into seven ders and six schedules. Chapter - I contains short title and definitions. Chapter - II deals with Authorities under the Act.	Chapter – IV provides for declaration of anctuaries, National Parks and Closed Areas. Chapter – IV – A deals with Central Zoo Authority and Recognition of Zoos. Chapter- V deals with Trade or Commerce in Wild Animals. Animal Articles and Trophies.	Chapter – V - A deals with prohibition of Trade or Commerce in Trophies, Animal Articles etc. Chapter- VI relates to Prevention and Detection of offences. Chapter- VII contains Miscellaneous Provisions.	Wild Life Advisory Board It is constituted in each State or Union Territory to advise the State govt. in selection and declaration of Sanctuaries, National Parks, r to Closed Areas etc. for protection and conservation of wild life.
struction declare of als; birds	i	The Chal	AAA	AAA	animals. animals. ons. or woun defense o d is not certain
n order to protect the wildlife from de Protection) Act in the year 1972. The Act empowers the Central Govt. to The Act prohibits hunting of wild anima ame.		Concertor Concertor	The second second	e Mild Life Protection Act	<ul> <li>Hunting of Wild Animals</li> <li>The Act prohibits hunting of wild animals.</li> <li>No person shall hunt any wild animals as specified in the Schedules.</li> <li>However, there are certain exceptions.</li> <li>The State Govt. may order to kill or wound in good faith any wild animal for self-defense or to protect or save another.</li> <li>Any animal so killed or wounded is not and offence and shall be govt. property.</li> <li>The Govt. may permit killing of certain wild animals for academic purpose.</li> </ul>
		may erved tuary ection	lare an area by reason of ds needed to the purpose	the providence of the sion of the keep it in a keep it in a	is Act entry, f any e can - wild plant is the
Why In Broadcast An Uttar Pradesh man who became popular on social media for rescuing a sarus crane and taking care of it for 13 months has been booked	under the Wildlife Protection Act	The State govt. by notification, declare any area within the rese forest or territorial waters as a sanct if it considers fit the area for protec and conservation of wild life.	The State govt. by notification may declar whether within a sanctuary or not, is b ts ecological or other technical grounds be constituted as a national, park for the constituted as a national park for the	Protectuot, propagating of developing wirchase of Animal: The person who of nimals with the previous permissi withorities shall not sell it. He shall k tabitat and healthy conditions. Power of Entry, Search, Arrest	<ul> <li>Any authorized person under this Act is entitled and has power of entry, search, arrest and detention of any premises.</li> <li>He can stop vehicle or vessel. He can enter any premises.</li> <li>He can seize any captive animal – wild animal, animal article, meat, trophy or uncured trophy or any specified plant or part of derivative thereof forms the possessor.</li> </ul>
		<ul> <li>In order to protect the wildlife from destruc (Protection) Act in the year 1972.</li> <li>The Act empowers the Central Govt. to decla</li> <li>The Act prohibits hunting of wild animals; b same.</li> </ul>	may served ctuary ection	<ul> <li>a order to protect the wildlife from destruction, the Indian Participation and the Act empowers the Central Govt. to declare certain areas as She Act prohibits hunting of wild animals; birds etc. and impose and.</li> <li>a me.</li> <li>a</li></ul>	order to protect the wildlife from destruction, the Indian Parotection) Act in the year 1972. e Act prohibits hunting of wild animals; birds etc. and impose the contrained of wild animals; birds etc. and impose the contains of the provision of wild animals; birds etc. and impose the contained of wild animals; birds etc. and impose the contained of wild animals; birds etc. and impose the contained of wild animals; birds etc. and impose the contained of wild animals; birds etc. and impose the contained of wild animals; birds etc. and impose the contained of wild animals; birds etc. and impose the contained of wild animals; birds etc. and impose the contained of wild animals; birds etc. and impose the contained of the contained o

### Summit and Conference

### **NITI Aayog**

On August 7, 2022 7th Governing Council meeting was held at Rashtrapati Bhawan Cultural Centre in New Delhi. It was chaired by Prime Minister Narendra Modi. Agenda of the NITI Aayog meeting were; to achieve self-sufficiency in pulses, oilseeds & other agri-communities.

### **Moscow Conference**

- The Moscow Conference on International Security-2022 was held from August 15 to August 17, 2022. Defence Minister Rajnath Singh addressed the plenary session conference virtually.
- The Moscow Conference on International Security-2022 was attended by Defense Ministers of various countries besides experts from the military sector and key stakeholders. This conference on international security is organized with the aim of sharing practical ideas and finding solutions on global security issues.

### Shanghai Cooperation Organization (SCO) Summit

The 2022 Shanghai Cooperation Organization (SCO) Summit was held Uzbekistan. The 2022 SCO Summit was held in Samarkand – a city in Uzbekistan on the ancient trade route of Silk Road that connects China with the Mediterranean. The SCO summit in Uzbekistan would focus central Asian development.

### **UN World Geospatial International Congress**

The second edition of the UN World Geospatial International was held in Hyderabad; Telangana. The 2nd United Nations World Geospatial Information Congress (UNWGIC 2022) was hosted by the Department of Science and Technology (DST) and convened by the United Nations Committee of Experts on Global Geospatial Information Management.

### G-20 Summit

17th annual summit of G-20 was hosted by the Indonesian G20 presidency in Bali under the theme Recover Together, Recover Stronger. Now, India has assumed the charge of the G20 presidency and the 18th summit will be held in India in 2023.

### **Paris Peace Forum**

The 5th edition of the Paris Peace Forum was organised. The Paris Peace Forum is a French non-profit organization established in 2018. It hosts annual gathering of world leaders and heads of international organizations as well as leaders from civil society and private sector from across the world.

### No Money for Terror Conference

The 3rd Ministerial "No Money for Terror" Conference was held in New Delhi, India. The Ministerial No Money for Terror (NMFT) Conference aims to create platform for international discussions on countering terror financing.

### **Global Technology Summit (GTS)**

The 7th edition of the Global Technology Summit (GTS) was held in New Delhi. The Global Technology Summit is India's flagship annual event on geo-technology that brings together industry experts, policymakers, scientists and other key stakeholders from across the world to discuss technology and changing geopolitics.

### **Conference on Anti-Microbial Resistance**

The 3rd Global High-Level Conference on Anti-Microbial Resistance was organized in Muscat, Oman . The 3rd Global High-Level Conference on Anti-Microbial Resistance (AMR) aims to accelerate countermeasures for antimicrobial resistance at the national, regional and global levels and boost international cooperation in this issue.

### **25th National Conference on e-Governance**

Union Minister Dr Jitendra Singh was inaugurate the 25th National Conference on e-Governance (NCeG) in Katra, Jammu & Kashmir. Theme is: "Bringing citizens, industry and government closer". The main objective of the conference to recognize and promote Excellence in implementation of e-Governance initiatives.

### **Report and Index**

### World Bank

- Remittance Report
- Universal Health Coverage Index
- > The Service trade restriction index
- Ease of Living Index
- Global Economic Prospect (GEP) Report
- > World Development Report

Ease of Doing Business

### **World Economic Forum**

- Engaging Tomorrow Consumer Report
- Global Gender Gap Report
- Global Information Technology Report
- Human Capital Report
- Global Risk Report
- > Travel and Tourism Competitiveness Report
- Global Competitive Index
- Global Energy Architecture Performance Index Report
- > Inclusive growth & Development Report
- > Environmental Performance Index

### **International Energy Agency (IEA)**

- World Energy Outlook (WEO)
- Net Zero by 2050: a Roadmap for the Global Energy Sector

### United Nations Conference on Trade and Development (UNCTAD)

- > The Technology and Innovation Report
- World Investment Report
- > The Information Economy Report
- The Trade & Development Report

### **UN-Habitat**

World Cities Report

### International Labour Organisation

- World Employment and Social Outlook
- Global Wage Report
- World Social protection report

### **United Nations Environment Programme**

- Emission Gap Report
- Global Environment Outlook

### Food and Agriculture Organisation Report

World State of Forest Report

### **World Intellectual Property Organisation**

World Intellectual Property Report (WIPR)

### **Concern Worldwide and Wealthungerhlife**

Global Hunger Index Report

### **Reporters Without Borders**

World Press Freedom Index

### UNDP (United Nations Development Programme)

Gender Inequality Index

### World Wide Fund for Nature (WWF)

- > The Energy Report
- Living Planet Report

### UN-Sustainable Development Solutions Network (SDSN)

> World Happiness Report

### United Nations Industrial Development Organisation (UNIDO)

- Industrial Development Report
- United Nations Office on Drugs and Crime (UNODC)
- World Wildlife Crime Report

### United Nations Educational, Scientific and Cultural Organisation (UNESCO)

- Global Education Monitoring Report
- Gender Parity Index

### **Transparency International**

- Corruption Perception Index
- Global Corruption Report (GCR)

### World Health Organisation (WHO)

> Ambient Air pollution Report

### **Bank for International Settlements (BIS)**

Global Financial System Report

### **Financial Action Task Force (FATF)**

Global Money Laundering Report

### **International Monetary Fund (IMF)**

- World Economic Outlook
- Global Financial Stability Report

### Organisation for Economic Development (OECD)

 The Programme for International Student Assessment (PISA)

### Sports

### **Commonwealth Games 2022**

The Commonwealth Games 2022 were held from July 28 to August 8, 2022, in which India has been ranked at 4th place, in terms of medals. India bagged a total of 61 medals, comprising of 22 Gold, 16 Silver, and 23 Bronze. This was India's 4th best performance at the CWG with respect to winning.

### Dahi Handi

Dahi Handi has been given the status of a game in Maharashtra. It will be considered as a type of



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adventure sports in Maharashtra.

### Lausanne Diamond League

Olympic gold medalist Neeraj Chopra won the Lausanne Diamond League with a best throw of 89.08m. He became the first Indian to win the Diamond League meeting title.

### **Fifth Khelo India Youth Games**

- Khelo India Youth Games 2023, the fifth edition of the flagship event under the Indian government's Khelo India initiative, concluded on February 11, 2023.
- Maharashtra won the Khelo India Youth Games 2023 title after topping the medals tally with 56 gold medals, 55 silvers and 50 bronze.

### **36th National Games 2022**

The National Games 2022 were held in Gujarat from September 29 to October 12. India's prestigious multi-event sporting showcase returns after a gap of seven years. It was last held in Kerala in 2015. Gujarat host the National Games for the first time. This was the 36th edition of the National Games, and an estimated 7,000 athletes took part across 36 sporting disciplines. Services Sports Control Board topped the medals tally with 61 gold medals.

### **Awards and Personality**

### **Indermit Gill**

The World Bank has appointed Indermit Gill as the chief economist and senior vice president for development economics. Gill is the second Indian, after Kaushik Basu, to become the chief economist of the international financial institution that grants loan to middle and lowerincome countries.

### Dr. Nallathamby Kalaiselvi

Dr Nallathamby Kalaiselvi is the first woman to head the Council for Scientific and Industrial Research (CSIR), Dr Nallathamby Kalaiselvi, is credited with developing novel materials to be used as electrodes in lithium-ion batteries that improve their storage capacities.

### dPal rNgam Duston Award

Highest civilian honour of Ladakh "dPal rNgam Duston" was conferred to Tibetan spiritual leader Dalai Lama. He was honoured for his contribution towards humanity.

### Fahmida Azim

Bangladesh-born Fahmida Azim working for the Insider online magazine of the US has been selected for the Pulitzer Prize 2022. She was awarded under the category of Illustrated Reporting and Commentary.

### **UNESCO Peace Prize**

- Former German chancellor Angela Merkel was awarded the UNESCO peace prize. According to Politico, the former German leader received the UN prize for her choice to accept the refugees into German territory back in 2015.
- UNESCO Global Network of Learning Cities
- Warangal, Nilambur, and Thrissur have joined the UNESCO Global Network of Learning Cities (GNLC).
- As the cultural capital of Kerala, Thrissur is home to academic and research institutions. It is also known for its jewellery industry, especially gold.
- Nilambur is an eco-tourism destination in the Kerala.
- Warangal has a rich cultural heritage.

### **Ramon Magsaysay Awards**

The four recipients of Asia's premier prize and highest honor, namely Gary Bencheghib from Indonesia, Sotheara Chhim from Cambodia, Tadashi Hattori from Japan and Bernadette J. Madrid from the Philippines, received the Ramon Magsaysay Awards for 2022.

### **Krishnamurthy Subramanian**

- Former Chief Economic Adviser Krishnamurthy Subramanian has been appointed as Executive Director (ED) at the International Monetary Fund.
- The Appointments Committee of the Cabinet has approved the appointment of Subramanian to the post of Executive Director (India) at the IMF, with effect from November 1, 2022 for a period of three years or until further orders.

### Samir V Kamat

The Defence Research and Development Organisation (DRDO) appointed distinguished scientist, Dr Samir V Kamat, as chairman, succeed G Satheesh Reddy. Reddy was appointed as DRDO chief in August 2018 for two years. He was given two years' extension in the post in August 2020.

### UN High Commissioner for Human Right

UN Secretary-General Antonio Guterres has appointed Austrian diplomat Volker Turk as the

next UN High Commissioner for Human Rights. Earlier, his appointment was approved by the UN General Assembly.

### Ayushman Utkrishta Award 2022

Uttar Pradesh was awarded the 'Ayushman Utkrishta Award 2022' at the Aarogya Manthan programme held in Delhi on 26th September, 2022 for adding various facilities to the National Health Facility Register.

### **Nobel Prize in Literature**

The 2022 Nobel Prize in Literature is awarded to the French author Annie Ernaux. Ernaux, was honoured her book "for the courage and clinical acuity with which she uncovers the roots, estrangements and collective restraints of personal memory.

### SASTRA Ramanujan Prize

- Yunqing Tang was honoured with the SASTRA Ramanujan Prize for 2022. Tang is an assistant professor at the University of California, Berkeley, U.S.A.
- The award is presented annually to a person aged 32 and below for outstanding contributions in the field of mathematics, influenced by Srinivasa Ramanujan in a broad way. The award is instituted by the Shanmugha Arts, Science, Technology, and Research Academy(SASTRA) in 2005 including a cash prize of \$10,000.

### **Nobel Peace Prize**

2022 Nobel Peace Prize was awarded to human rights advocate Ales Bialiatski from Belarus, the Russian human rights organisation Memorial, and the Ukrainian human rights organisation Center for Civil Liberties. The Prize recognizes their contribution for many years, promoting the right to criticize power and protecting the fundamental rights of citizens.

### **Booker Prize 2022**

Sri Lankan writer Shehan Karunatilaka won the Booker Prize 2022 for his novel "The Seven Moons of Maali Almeida".

### World Green City Award 2022

Hyderabad has bagged the prestigious 'World Green City Award 2022'. The city has won in the category Living Green for Economic Recovery and Inclusive Growth at the International Association of Horticulture Producers (AIPH) 2022 World Green Cities Awards which was organised in Jeju, South Korea.

### **UNESCO-Madanjeet Singh Prize**

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The UNESCO-Madanjeet Singh Prize for the Promotion of Tolerance and Non-Violence, for this 2022 Edition, has been given to Franca Maih Sulem Yong from Cameroon, President of the NGOs "Afrogiveness and Positive Youths Africa".

### **National Energy Conservation Award**

 The Karnataka Renewable Energy Development Ltd (KREDL) has won the first prize in the State Designated Agency (SDA Group-1) sector at the National Energy Conservation Awards
 2022, given by the Union Ministry of Power. The National Energy Conservation Awards – 2022 was organised by the Bureau of Energy Efficiency (BEE) as part of the 'National Energy Conservation Day' in New Delhi.

### Pravasi Bharatiya Samman Award

President Draupadi Murmu honored 27 overseas Indians with Pravasi Bharatiya Samman Awards on 10 January 2023 at the concluding session of the 17th Pravasi Bharatiya Divas Convention .The Pravasi Bharatiya Samman Award is the highest honour conferred on a Non-Resident Indian; a Person of Indian Origin; or an organisation or institution established and run by them.

### **UN-Habitat Award**

Odisha has been awarded by the United Nations-Habitat (UN-Habitat) for its efforts to empower the lives of slum dwellers and create a slum-free state in India through, Jaga Mission. The Habitat Awards were established in 1985 to recognise and highlight innovative, outstanding and sometimes revolutionary housing ideas, projects and programmes from across the world.

### Lifetime Achievement Honour

Former PM Manmohan Singh conferred Lifetime Achievement Honour in UK .Every year the National Indian Students and Alumni Union presents the Lifetime Achievement Honour. The NISAU is a UK organization. It represents Indian students in the UK. This is the first time the NISAU is introducing the India UK achievers Honours. Over 75 highly qualified professionals will be honored with the award. Number 75 was chosen to mark the 75th year of India's independence.

### Padma Awards 2023

A total of 106 Padma Awards with six Padma Vibhushan, nine Padma Bhushan, and 91 Padma Shri conferred across various categories.

- Padma Vibhushan is awarded for 'exceptional and distinguished service;
- Padma Bhushan is awarded for 'distinguished service of a high order'; and

Padma Shri is awarded for 'distinguished service'.Padma Vibhushan (6):

- Shri Balkrishna Doshi (Posthumous) (Others -Architecture)
- Shri Zakir Hussain (Art)
- Shri S M Krishna (Public Affairs)
- Shri Dilip Mahalanabis (Posthumous) (Medicine)
- Shri Srinivas Varadhan (Science & Engineering)
- Shri Mulayam Singh Yadav (Posthumous) (Public Affairs)

### Padma Bhushan(9):

- Shri S L Bhyrappa (Literature & Education)
- Shri Kumar Mangalam Birla (Trade & Industry)
- Shri Deepak Dhar (Science & Engineering)
- Ms. Vani Jairam (Art)
- Swami Chinna Jeeyar (Others Spiritualism)
- Ms. Suman Kalyanpur (Art)
- Shri Kapil Kapoor (Literature & Education)
- Ms. Sudha Murty (Social Work)
- Shri Kamlesh D Patel (Others Spiritualism)

### BVR Subrahmanyam

Former IAS officer BVR Subrahmanyam was appointed as the new Chief Executive Officer of Niti Aayog. The former Commerce Secretary takes over from Parameswaran lyer, who has been named as the Executive Director of World Bank.

### Ajay Banga

From Washington, US President Joe Biden is nominating former Mastercard Chief Executive Ajay Banga to lead the World Bank, after its current chief David Malpass announced plans to step down early.

### **Bola Tinubu**

Bola Tinubu recently became the president-elect of Nigeria, beating his rival, Atiku Abubakar. The country's current president, Muhammadu Buhari, will step down after serving two terms.

### Places in News

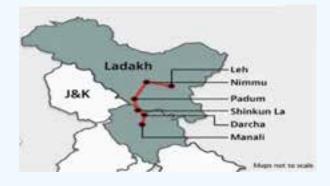
### Shinku La Tunnel

The Union Cabinet gave its nod for the construction of the 4.1-km Shinku La tunnel on the Nimu-Padam-Darcha road link to provide all-weather connectivity to the border areas of Ladakh. Shinku-La Tunnel, also known as Shinkula Tunnel or Shingo-La Tunnel, is a planned motorable tunnel linking Himachal Pradesh's Lahaul Valley and Ladakh's Zanskar Valley in Northern India.

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The Shinku La tunnel is a part of Project Yojak. This project is implemented by BRO. The main objective of the project is to make sure Manali – Leh route is accessible all through the year.



### **Gurudongmar Lake**

The Gurudongmar lake is situated at an altitude of approximately 17,800 feet in the Mangan district of Sikkim. It is close to the Indo-China border. It is one of the highest lakes in India. This lake is situated in the Great Himalayas and is considered to be sacred by Buddhists, Sikhs and Hindus. It is named after Guru Padmasambhava – the founder of Tibetan Buddhism. Guru Padmasambhava visited this lake in the 8th century.

### Bakhmut

The Ukrainian military is planning a strategic pull-back from Bakhmut, which was an important stronghold for Ukraine. Russia is currently involved in a months-long offensive to capture this city. Bakhmut, though strategically and industrially not important, its annexation



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creates symbolic significance for Russia. It is a key transport hub and has numerous supply lines running through it. This eastern city is noted for its salt mining activity.

### **Sigur Plateau**

A study recently warned that vultures in the Sigur plateau are at risk from poisoning events due to the availability of harmful NSAIDs (Non-Steroidal Anti Inflammatory Drugs) near their habitats .The Sigur Plateau, situated in the Nilgiri District of Tamil Nadu, is a vast plateau covering an area of 778.8 square kilometres (300.7 sq mi) and lies on the northern slopes of the Nilgiri Hills. The plateau connects several protected areas, including the Nilgiri Biosphere Reserve and is part of the UNESCO World Network of Biosphere Reserves.

### Keeladi Museum

➤ The Keeladi museum was inaugurated by Tamil Nadu Chief Minister M.K. Stalin in the Sivaganga district. This museum showcases the life of ancient Tamils during the Sangam Age. It is built on a 2-acre land in Keeladi at a cost of □18.43 crore. The museum features a variety of antiques, virtual reality experiences of the excavations, and models of the ships of the Sangam Age.

### **Yellowstone National Park**

Yellowstone National Park in the US, which celebrated its 151st anniversary .Yellowstone National Park is an American national park located in the western United States. Yellowstone National Park was the first national park in the US and is also widely held to be the first national park in the world. The park is known for its wildlife and its many geothermal features, especially the Old Faithful geyser, one of its most popular.



**Chernobyl Exclusion Zone** 

The Chernobyl Exclusion Zone was captured by the Russian forces during the Ukraine invasion in 2022. According to Ukraine, the radiation levels increased after the invasion. The International Energy Agency is currently unable to get access to the plant. The Chernobyl Exclusion Zone is a designated area around the site of the Chernobyl nuclear reactor disaster. It was established by the Soviet Armed Forces after the 1986 disaster and was initially a 30 km radius area. The zone's borders have been expanded since then, covering a larger area of Ukraine, and it shares a border with the Polesie State Radioecological Reserve in Belarus.

### **Chitwan National Park (CNP)**

Threats such as illegal fishing and sand mining are causing major threats to the mugger crocodile of the Rapti River that flows along the Chitwan National Park (CNP). Chitwan National Park is the first-ever national park set up in Nepal. It was founded in 1973 as the Royal Chitwan National Park. It became a World Heritage Site in 1984.

### Zoji La Pass

Zoji La is the name of a high mountain pass that is located in the Himalayas in the Union Territory of Ladakh. It is located in the Dras and this pass connects the Dras and Suru valleys to its northeast, the Kashmir Valley to its west and the Indus valley further east.



### Lake Sils

Lake Sils is a stunning natural wonder in the Upper Engadine valley of Grisons, Switzerland. Named after the village of Sils im Engadin, the lake is a popular tourist destination and is known for its clear waters and surrounding mountain ranges. Recently, a Czech man achieved an unprecedented feat of human endurance by diving into this frigid lake without a wetsuit to reach a depth of 52.1 feet.

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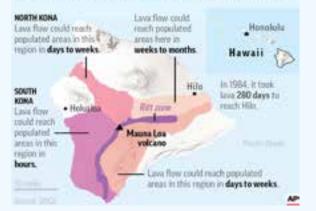
### Kamchatka Peninsula

- Two volcanoes in the Kamchatka Peninsula erupted recently. They are among the six volcanoes in the northeastern part of Russia that are currently showing signs of increased activity.
- The Kamchatka Peninsula is part of the "Ring of Fire" – a region along the path of the Pacific Ocean that is characterized by active volcanoes and frequent earthquakes. This peninsula extends into the Pacific Ocean some 6,600 km east of Moscow. It is among the world's most concentrated areas of geothermal activity.This peninsula hosts 29 active volcanoes, most of which are surrounded by sparsely populated forest and tundra.



### Mauna Loa Volcano

Time for lava to reach populated areas in Hawaii varies



Mauna Loa, the world's largest volcano, erupted for the first time in 38 years. Mauna Loa is among the 5 volcanoes that together make up the Big Island of Hawaii – the Hawaiian archipelago's southernmost island. Its name means "long mountain" in Hawaiian. This volcano takes up more than 50 per cent of the Big Island's land mass and it rises 30,000 feet from the bottom of the sea, much higher than the Mount Everest. It is the largest (not tallest) volcano in the world. The tallest volcano is Mauna Kea.

### Culture

### **Anang Taal Lake**

Anang Tal Lake which dates back to 1060 AD, is situated to north of Jog Maya temple and northwest of Qutub Complex in South Delhi. It was created by Tomar King, Anangpal II.

### Kanaganahalli Buddhist Site

Kanaganahalli Buddhist Site was excavated by the ASI during 1994-2001. However, it was left neglected for around 20 years. This is an ancient Buddhist site, situated on the bank of River Bhima River near Kanaganahalli in Kalaburagi district in Karnataka.

### 1,300-year-old Buddhist Stupa

- The Archaeological Survey of India (ASI) has discovered a 1,300-year-old buddhist stupa at a mining site in the Jajpur district of Odisha. This is an important development as far as the ancient history of the country is concerned.
- The site, known as Parabhadi, supplied Khondalite stones for the beautification project around the 12th century Shree Jagannath Temple in Puri. The stupa is estimated to be 4.5 meters tall, and it is believed to belong to the 7th or 8th century.

### World's Largest Museum of Harappan Culture

The world's largest museum of Harappan culture is coming up in Rakhigarhi in Haryana to showcase about 5,000-year-old Indus Valley artifacts. The village of Rakhigarhi was part of the Indus Valley Civilisation from 2600-1900 BC.

### **Bathukamma Festival**

Bathukamma festival was celebrated in Telangana with full fervour and joy. It is flower festival of Telangana and some part of Andra Pradesh.

### Kati Bihu

Kati Bihu is celebrated in Assam and is one of

the three Bihu festivals. The Kati Bihu is also called as Kangali Bihu, the festival of the poor (the word "Kongal" means "poor"). It is celebrated in mid-October when the crops are at growing stage and the granaries of the farmers are empty.

### Nuakhai Festival

Nuakhai is an annual harvest festival celebrated in Odisha. In Nuakhai, Nua means new and Khai means food. The festival of Nuakhai is celebrated by the farmers of Odisha after the harvesting of grain. On this festival, Odia people, even those living in far off lands return to their native places to be the part of the celebration. The festival is celebrated by wearing new clothes and offering prayers to God, following which a feast is thrown and food prepared using newly harvested crops is consumed.

### Wangala Festival

The Wangala is also known as the Festival of Hundred Drums and is celebrated with different forms of dances on the tunes of folk songs played on drums and primitive flute made of buffalo horns. The festival is celebrated in honour of the Sun God and marks the end of the long harvest season. For the Garo Tribe in Meghalaya, the festival is a way to preserve and promote their cultural identity and they exhibit their tradition in their celebrations.

### Baliyatra

Baliyatra literally means "voyage to Bali". It is one of India's largest open-air fairs. The festival commemorates the 2,000-year-old maritime and cultural links between the ancient Kalinga (present-day Odisha) and Bali and other South and Southeast Asian regions that include Java, Sumatra, Borneo, Burma (Myanmar) and Ceylon (Sri Lanka). The celebrations commence on Kartik Purnima (full moon night in the month of Kartik). This is the day when sadhavas (traders) traditionally began their voyage across the sea, when the winds are favourable for the boita (boats).

### **Different New Years in India**

- Baisakhi in Punjab
- Rongali Bihu in Assam,
- Puthandu in Tamil Nadu
- Vishu in Kerala,
- Pana Sankranti or Odia Nababarsa in Odisha
- Poila Boishakh in Bengal

### Gaan Ngai Festival

The Gaan Ngai festival is a major event in the state of Manipur, celebrated by the Zeliarong community every year after the harvest season. the community is come together to show their gratitude for a good harvest, pray for a prosperous year ahead, and mark the beginning of the new year with the production of new fire. The festival is a celebration of culture, music, dance, and spiritual rituals that brings the community together in unity and joy.

### Perini Natyam

Perini Natyam is an ancient dance form that originated and thrived in the southern state of Telangana during the Kakatiya dynasty. It is a tribute to Lord Siva, the Hindu god of destruction. Soldiers traditionally performed the dance form before going to war. Hence, it is known as the 'Dance of Warriors'.

### Karakattam

Karakattam is a form of folk dance performed at festivals, conferences, road shows, and primarily at Mariamman festivals. It is one of the many creative traditions that owe their existence to Mariamman, the rain goddess. While the dance form is not dying, it has undergone radical change and adaptation in recent years. Mariamman pooja is held in the month of Medam after Makarakkoythu (harvest season) in Kerala. Karakattam is mostly famous in Tamil Nadu, it's performed in different parts of Kerala as well.

### **Losar Festival**

Losar is a 3-day festival, which is celebrated with great pomp and show in Tawang. The term Losar is made of two words, 'Lo'-which means year and 'Sar' - meaning new. The festival is observed to ward off evil spirits and welcome the the new year that shall be filled with happiness and prosperity.

### Garba

Recently Garba dance is nominated in UNESCO heritage list. Garba is a form of dance, as well as a religious and social event that originated in Gujarat. If approved for the list, it will become the first intangible cultural heritage of Gujarat to be listed by UNESCO.

### Geography

### Seti Hydropower Project

> The Government of Nepal has decided to hand

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over the agreement of the 750-megawatt (MW) West Seti Hydropower Project and 308 MW SR6 Storage Hydroelectric Project to India's National Hydro Power Company Limited (NHPC).

- West Seti is a 750MW hydro power project.
- It is planned on West Seti river/basin in Seti, Nepal.

### **Zmiinyi Island**

- Zmiinyi Island is also known as Snake or Serpent Island.
- It is a small piece of rock less than 700 metres from end to end, that has been described as being "X-shaped".
- It is located 35 km from the coast in the Black Sea, to the east of the mouth of the Danube and roughly southwest of the port city of Odessa.

### Sardar Sarovar Project:

- The Project is one of the largest water resources projects of India covering four major states – Maharashtra, Madhya Pradesh, Gujrat, and Rajasthan.
- The dam's spillway discharging capacity (30.7 lakhs cusecs) would be the third highest in the world.
- > The Narmada Main Canal would be the largest irrigation canal in the world.

### **Triple La Nina**

- A triple La Niña or a 'triple dip' La Nina is a rare occurrence, lasting for three years in a row. It has happened only twice since 1950.
- On the contrary, the occurrence of two consecutive La Nina winters in the Northern Hemisphere is common.
- Impact of El Nino and La Nina
- El Nino is associated with drought or weak monsoons.
- La Nina is associated with strong monsoons and above average rains and colder winters.

### Impact on India:

Monsoon: India may experience an extended monsoon lasting up to October due to La Niña.

### Mauna Loa Volcano

It is the World's largest active Volcano in the Island of Hawaii in the U.S. state of Hawaii in the Pacific Ocean. The volcano makes up 51% of the Hawaii Island landmass. It is an active shield volcano with relatively gentle slopes, with a volume estimated at 18,000 cubic miles (75,000 km3). Lava eruptions from Mauna Loa are silica-poor and very fluid, and they tend to be non-explosive. It last erupted in 1984 which led to destruction on the Island.

### Earthquake

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### Indonesia

- The recent Earthquake (Magnitude 5.6) in West Java province of Indonesia led to massive devastation in the island country.
- The Island is prone to frequent earth quakes, Tsunamis, volcanic eruptions.
- West Javais a province of Indonesia on the western part of the island of Java, with its provincial capital in Bandung.
- West Java is bordered by the country's capital region of Jakartato the west, the Java Sea to the north, the province of Central Java to the east and the Indian Ocean to the south.
- Tectonics and seismicity of Jakarta and adjacent areas is highly influenced by the convergence of the Australian Plate toward the Eurasian Plate.

### Turkey

- Recently, Turkey witnessed a 7.8 magnitude earthquake which is one of the most powerful earthquakes in the past two decades with more than 1,300 people killed and thousands still believed to be trapped under rubble.
- Turkey is a country that occupies a unique geographic position, lying partly in Asia and partly in Europe. Turkey is situated at the crossroads of the Balkans, Caucasus, Middle East, and eastern Mediterranean. It is among the larger countries of the region in terms of territory and population, and its land area is greater than that of any European state. The country has a north-south extent that ranges from about 300 to 400 miles (480 to 640 km), and it stretches about 1,000 miles from west to east. The capital is Ankara, and its largest city and seaport is Istanbul.

### Shifting of Capital from Jakarta to Borneo

Recently, Indonesian government authorities unveiled the site of the country's new capital, from Jakarta to Borneo. The proposed location near the regional cities of Balikpapan and Samarinda—is an area at "minimal" risk of natural disasters. Borneo is a large island in Southeast Asia that is divided among three countries: Malaysia, Indonesia, and Brunei. Borneo is the third largest island in the world, after Greenland and New Guinea.

### Jakarta (the Indonesian Island)

Jakarta is the largest city and capital of Indonesia. The city lies on the northwest coast of Java at the mouth of the Ciliwung (Liwung River), on Jakarta Bay (an embayment of the Java Sea). It is coextensive with the metropolitan district of Greater Jakarta (Jakarta Raya). Jakarta is home to about 10 million people and three times that number in the greater metropolitan area.

### **Committee and Commission**

### **V K Paul Committee**

- For consideration of legally enforceable mechanism for regulating the marketing practices of pharmaceutical firms
- Suresh Prabhu Committee
- For drafting of the national cooperation policy

### **Arun Goel Committee**

To strengthen the Capital Goods(CG) Sector and contribute more actively to the national goal of achieving a USD 5 trillion economy and a USD 1 trillion manufacturing sector

### **PK Mohanty Committee**

To review present ownership guidelines and corporate structure for Indian Private Sector Banks

### **Company Law Committee**

to suggest measures to de-clog and improve the functioning of the National Company Law Tribunal (NCLT) and make recommendations on various issues pertaining to the implementation of the Companies Act and the Limited Liability Partnership Act; headed by Rajesh Verma

### **Rajesh Pant Expert Committee**

To evaluate the implications of digital surveillance by Data Information Technology Co. Limited and assess any violations of law and submit its recommendations; under the National Cyber Security Coordinator

### **KV Kamath Committee**

Setting parameters for Loan Restructuring, to undertake a process validation of resolution plans for borrow accounts above a specified threshold

### **Pradip Shah Committee**

 To develop international retail business at the International Financial Services Centre (IFSC)

### **GK Pillai Committee**

To decide ceiling rates under duty reimbursement scheme for exporters

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### **Ramesh Chand Committee**

The report of the NITI Aayog panel, headed by Ramesh Chand, has recommended linking of sugarcane prices to sugar rates to ensure the financial stability of the industry.

### Abhijeet Sen Committee

> Agricultural commodity support price

### Abid Hussain Committee

Small scale industries and Trade Policy Reform

### **Chakravarty Committee**

Monetary policy

### G V Ramakrishna Committee

 Constituted in 1993 for recommendation on disinvestment

### JJ Irani Committee

Government had constituted committee in 2004 for making recommendation on companies act.

### Kelkar Committee (2015)

- Assessing PPP in India and Tax Structure Reforms
- Revisiting and Revitalising the PPP model
- Constituted by government in 2015

### Raja Chelliah Committee

- The Government of India set up a highpowered committee in August 1991, under the chairmanship of Dr Raja J Chelliah.
- The committee made recommendations for a comprehensive reform of the system of central taxes.

### **Khusro** Committee

To examine the problems of agricultural and rural credits, measure the structural and operational deficiencies and recommend major systematic improvements.

### Sarkaria Commission

- The Sarkaria Commission was set up in 1983 by the central government of India.
- The Sarkaria Commission's charter was to examine the central-state relationship on various portfolios and suggest changes within the framework of Constitution of India.

### **Malegam Committee**

Related to microfinance

### Narasimhan Committee (1998)

The objective of the Narasimham Committee was to read all the points that relate to the structure, role, organization, and method of the banking systems and to suggest to them how to improve very efficiently

### Suresh Tendulkar Committee

Constituted by planning commission of India in 2009 for methodology of estimation of poverty in India

### **Tarapore Committee**

The Reserve Bank of India established the Committee on Capital Account Convertibility (CAC) or S.S Tarapore Committee to propose a roadmap for full convertibility of the rupee on the capital account. In May 1997, the committee submitted its report.

### **A Ghosh Committee**

The RBI set up a High Level Committee on Frauds and Malpractices in Banks under the Chairmanship of Shri A Ghosh to enquire into various aspects of frauds and malpractices in banks with a view to make recommendation to reduce such incidence. The Committee submitted its Report in June, 1992

### **Bhagwati Committee**

Unemployment and Public Welfare

### **C Rao Committee**

The Chalapathi Rao Committee was constituted for the restructuring of Regional Rural Banks in India. The genesis of the RRBs can be traced to the need for a stronger institutional arrangement for providing rural credit.

### **Dharia Committee**

Public Distribution System

### **Rangarajan Committee**

Rangarajan committee was computed the average requirements of calories, proteins and fats based on ICMR norms differentiated by age, gender and activity for all-India rural and urban regions to derive the normative levels of nourishment.

### **Bibek Debroy Committee**

Railway restructuring

### Ajit Kumar Committee

Army pay scales

### **Athreya Committee**

Restructuring of IDBI

### **Bhurelal Committee**

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Increase in Motor Vehicle Tax

### **Bimal Jalan Committee**

The Reserve Bank of India (RBI), in consultation with the government, has set up a sixmember committee headed by the former RBI Governor Bimal Jalan to review the economic capital framework of the Reserve Bank of India.

### **Dave Committee**

Pension Scheme for Unorganized Sector

### **Deepak Parekh Committee**

The committee was first set up in November 2010 under the chairmanship of Rakesh Mohan, former Deputy Governor of Reserve Bank of India. The committee was mandated to review existing policies and suggest necessary changes in the investment framework in the high-priority infrastructure sector.

### Hanumant Rao Committee

C H Hanumantha Rao committee on fertiliser pricing has recommended deregulation of the fertiliser industry and discontinuation of the unit-wise retention price scheme for urea plants.

### Janakiramanan Committee

The Janakiraman Committee was set up by the RBI after it became alarmed by the irregularities in the economic market conditions of the country starting in 1988.

### **Books and Authors**

- Shashi Tharoor Ambedkar: A Life
- Dr. Ashvini Kumar Dwivedi- Human Anatomy
- Sanjeev Sanyal- Revolutionaries: The Other Story of How India Won Its Freedom
- Ma. Subramanian- Come! Let's Run
- Vikram Sampath Brave Hearts of Bharat, Vignettes from Indian History
- Michelle Obama- The Light We Carry: Overcoming in Uncertain Times
- C Rangarajan- Forks in the Road: My Days at RBI and Beyond
  - Bob Dylan The Philosophy of Modern Song
- Dr Bimal Jalan- From dependence to Self Reliance: Mapping India's Rise as a Global Superpower
- S Jaishankar- Modi@20: Dreams Meet Delivery
- S Jaishankar- The India Way: Strategies for an Uncertain World

# **MCOs based on Preliminary Exam**

- Consider the following statements regarding 1. Aerosols :
  - 1. Some aerosols are reflective, i.e. when the sun's rays fall on them, they bounce the rays back out of the atmosphere.
  - 2. Mist, dust, particulate air pollutants and smoke are examples of anthropogenic aerosols.

Which of the above statement/s is/are correct? (a) 1 only

- (b) 2 only
- (c) Both 1 and 2 (d) Neither 1 nor 2
- 2. Consider the following statements regarding funding of WHO (World Health Organisation) :
  - 1. WHO is funded entirely by its member countries.
  - 2. India is a member state of the WHO South East Asian Region.
  - 3. The decision on, which country gets how much funds, depends on the situation in the countries

Which of the above statement/s is/are correct?

- (a) 1 and 2 (b) 1 and 3
- (c) 2 and 3(d) 1, 2 and 3
- 3. Consider the following statements regarding Bioplastics :
  - 1. Bio plastics can be made from agricultural by products and also from used plastic bottles and other containers using micro organisms.
  - 2. Some bio plastics are soil and marine safe and they safely degrade in the environment within weeks or months, leaving no harmful residues.
  - 3. Bioplastics save more non-renewable energy than conventional plastics.

Which of the above statement/s is/are correct?

- (a) 1 and 2 (b) 1 and 3
- (c) 2 and 3 (d) 1, 2 and 3
- 4. Consider the following statements :
  - 1. India became the member of the United Nations after getting independence from the British Raj.
  - 2. Vijay Lakshmi Pandit was elected the first woman president of the UN General Assembly.
  - 3. United Nations Security Council is the only UN body with the authority to issue binding resolutions to member states.

Which of the above statement/s is/are correct? (a) 1 and 2 (b) 1 and 3

- (c) 2 and 3 (d) 1, 2 and 3
- Consider the following statements about Low 5. Earth Orbit (LEO) :

1. It is an earth-centered orbit with an altitude of 2000 km. or less.

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- The International Space Station conducts 2. operations in LEO.
- 3. Major disadvantage of low earth orbit is that it requires high amount of energy for satellite placement.
- 4. Spy satellites cannot use LEO.

Which of the above statement/s is/are incorrect?

- (b) 1, 2 and 3 (a) 1 and 2
- (c) 3 and 4 (d) 2, 3 and 4
- 6. The Basic Structure doctrine is an Indian judicial principle which states that constitution of India has certain unalterable tenets. The 'basic structure' doctrine has been interpreted to include:
  - 1. Supremacy of the constitution.
  - The rule of law 2.
  - 3. Doctrine of separation of powers.
  - 4. Parliamentary system of government.
  - The principle of free and fair elections. 5.
  - 6. Welfare state.

Select the correct answer from the code given below:

(a)	1, 2, 3, 4, 5	(b) 1, 3, 4, 5, 6
(c)	1, 2, 4, 5, 6	(d) 1, 2, 3, 4, 5, 6

- Consider the following statements regarding "No 7. First Use Nuclear Doctrine":
  - 1. It refers to a pledge or a policy by a nuclear power not to use nuclear weapons as a means of warfare unless first attacked by an adversary using nuclear weapons.
  - 2. Now the concept is also applied to chemical and biological warfare.
  - 3. India became the first nation to propose and pledge no first use nuclear policy when she conducted nuclear tests under Pokhran-II in 1998.

Which of the above statement/s is/are incorrect?

- (a) 2 only (b) 1 and 2
- (c) 2 and 3 (d) 3 only
- Which one the following states of the Indian 8. Union enjoy the special status under articles 371 to 371-J in Part XXI of the Constitution?
  - 1. Karnataka 2.Gujarat
  - 3. Odisha 4.Telangana
  - 5. Uttarakhand 6.Himachal Pradesh
  - 7. Sikkim

Select the correct answer using the code given below:

- (a) 3, 5, 6 and 7 only (b) 1, 2, 4 and 7 only (c) 2, 4, 6 and 7 only
  - (d) All of the above

#### 9. Consider the following statements :

- 1. Lord Mayo's resolution of 1870 is called as the 'Magna Carta of local government in India'.
- 2. The Government of India Act of 1919 passed the responsibility of local bodies from district officer to the elected chairmen.

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

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

10. Consider the following statements :

- 1. A share in taxes, duties, tolls etc. that are levied and collected by the State Government may be assigned to the municipal bodies.
- 2 Only one-third of the members of a metropolitan planning committee are elected by the elected members of the municipalities and chairpersons of the panchayats from amongst themselves.

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

- (a) 1 only (b) 2 only
- (d) Neither 1 nor 2 (c) Both 1 and 2
- 11. Which of the following statement/s is/are correct about Panchayati Raj Institutions?
  - 1. The Chairman at the Zila (District) and Block levels are elected by indirect elections.
  - 2. The members of the Rajya Sabha, Lok Sabha and Legislative Assembly representing that area can be the members of the Block Samiti and Zila Samiti.

Select the correct answer using the code given below:

(a) 1 only	(b) 2 only
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- (c) Both 1 and 2 (d) Neither 1 nor 2
- Which of the following statement/s is/are **not** 12. correct about Delimitation of Constituencies in India?
  - The functions of delimitation, reservation 1. and rotation of seats should be vested in a Delimitation Commission and not in the State Election Commission.
  - 2. The orders of the Delimitation Commission can be challenged in a Court of Law.

Select the correct answer using the code given below:

(a)	l only	(b) 2 only
(c)	Both l and 2	(d) Neither 1 nor 2

- Which of the following statement/s is/are **not** 13. correct?
  - 1. The Chief Electoral Officer supervises Election work in every constituency.
  - Expenditure Observers appointed from State 2. Government Services keep a close watch on

election expenditure of the candidates. Select the correct answer using the code given below:

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

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- Consider the following statements about Anti 14. Defection Law :
  - 1. The Presiding officer of a House has been given exemptions vis-a-vis member of the House under this law.
  - 2. It protects elected candidates from one party forming or joining a new party if they comprise more than one-third of the original party in the legislature.
  - 3. Any question regarding disqualification arising out of defection is to be decided by the Presiding officer of the House.
  - 4. The decision of the Presiding officer in anti defection matters cannot be challenged in a court of law.

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

- (a) 1 and 2 only(b) 2, 3 and 4 only
- (c) 1 and 3 only (d)1, 2 and 3 only
- Consider the following statements regarding the 15. Pressure Groups :
  - 1. Being the largest democracy in the world, pressure groups are more developed in India than in nations like the USA, Britain and France.
  - 2. These groups are organized as well as unorganized.
  - 3. They may help a political party.

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

- (a) 1 and 2 only(b) 3 only
- (d) 2 and 3 only (c) 1 and 3 only
- Which of the following constitutional provisions 16. are associated with the Co-operative Societies?
  - 1. 97<sup>th</sup> Constitutional Amendment Act, 2011
  - Article 19 2
  - 3. Article 43-B
  - 4. Part IX-B

Select the correct answer using the code given below:

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

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17. Which of the following pairs are correctly matched?

Parliamentary	Function
Committee	

1.	Business Advisory	:	To regulate
	committee		program and time
			-table of the
			house.
2.	Public Accounts		: Examine annual

Committee

	Committee	audit reports of
		CAG
		CAU
3.	Estimates	: Suggest economic
	Committee	policies.
4.	Committee on	: To examine
	Public	the appropriation
	Undertakings	accounts.
Sel	ect the correct a	answer using the code given
bel	ow:	- 0
(a)	1.2 and 3 only	$(\mathbf{b})$ 2 and 3 only

audit reports of

(a)	i, z and s only	(0) 2 and 3 only
(c)	3 and 4 only	(d) 2, 3 and 4 only

- **18.** Which of the following is true regarding the *composition of Legislative Council*?
  - (a) One-third members are elected by electorates consisting of members of Municipalities, District Boards and other local authorities in the State.
  - (b) One-sixth members are elected by members of the Legislative Assembly of the State.
  - (c) One-twelfth members are nominated by the Governor from amongst those having special knowledge or practical experience in literature, science, art, cooperative movement and social service.
  - (d) One-sixth members are elected by teachers who have taught in secondary schools and above for at least three years.
- **19.** Which of the following statements is correct regarding the *High Court*?
  - (a) A judge of High Court submits his resignation to the Chief Justice of High Court.
  - (b) A retired High Court judge can also be appointed to act as a judge in High Court by the Governor.
  - (c) One can be appointed as a judge of the High Court if he has been an advocate of a High Court for five years.
  - (d) The President of India may increase the number of judges or appoint Additional Judges if so required in High Court.
- **20.** Consider the following statements :
  - 1. Both the Cabinet and the Council of Ministers are mentioned in the Indian Constitution.
  - 2. The anti-country advice given to the President by the ministers is found to be in the category of crime if found correct after investigation by the Supreme Court.

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

- (a) 1 only (b) 2 only
- (c) Both 1 and 2 (d) Neither 1 nor 2
- **21.** According to Article 156, the Governor will take office for a period of 5 years from the date of his assuming office, it can be concluded that :
  - 1. No Governor can be removed from his post before his term is over.

2. No Governor can remain in his post after a period of 5 years.

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

(a) 1 only (b) 2 only

(c) Both 1 and 2 (d) Neither 1 nor 2

- **22.** The proposal for lack of confidence in the Lok Sabha can be brought in the following way/s:
  - 1. By not passing vote of thanks on President's inauguration speech.
  - 2. By rejecting the money bill
  - 3. By passing an adjournment motion or censure motion
  - 4. By passing Closure motion

Select the correct answer using the code given below:

- (a) 1 and 2 only (b) 1, 2 and 4 only
- (c) 1 and 4 only (d) 1, 2, 3 and 4
- **23.** If a person is elected to 2 seats in the same House of Parliament, he has the right to vacate one seat voluntarily, otherwise :
  - (a) His seat in which rural population is more will be vacant
  - (b) His seat in which urban population is more will be vacant
  - (c) Membership of the House will be cancelled.
  - (d) He can hold membership of both seats.
- **24**. In the context of *Scramjet engine* which of the following statements is **not** correct?
  - (a) The scramjet engine works on the Airbreathing Propulsion System
  - (b) The system uses natural oxygen present in the atmosphere to burn the fuel stored in the rocket
  - (c) The scramjet uses solid and liquid fuels
  - (d) Scramjet does not have any rotating parts so the chances of failure are also measurably reduced
- **25.** Which of the following is **not** the recommendation of *'L.M. Singhavi Committee'* on Revitalization of Panchayati Raj Institutions?
  - (a) Local self-government should be constitutionally recognised by the inclusion of new chapter in the Constitution
  - (b) Non-involvement of political parties in Panchayat elections
  - (c) Nayaya panchayat should be established for some cluster of villages
  - (d) Parliament may by law provide for constitution of a Legislative Council in each State, consisting of members elected by the local governments
- **26.** Consider the following informations:
  - 1. Charles Wood Dispatch
  - 2. 1st Railway line connecting Bombay and

76

Thane

- 3. Post Office Act, 1854
- 4. Establishment of Public Works Department
- 5. Engineering College was established at Roorkee
- The above information is related to :
- (a) Charles Canning (b) Lord Elgin
- (c) Lord Lytton (d) None of the above
- **27.** It is a seamless connected network system of embedded objects/ devices , in which communication without any human intervention is possible using standard and interoperable communication protocols. Which of the following is related with above statement?
  - (a) Internet of Things
  - (b) Net Neutrality
  - (c) Near Field Communication
  - (d) Internet.org
- **28.** A way to surf the Internet anonymously and securely able to encrypt any data over the public internet, less secure internet that provides users access to their organization's network while maintaining the security of the information transmitted is called:
  - (a) Router (b) VPN
  - (c) WAN (d) Wi-Max
- **29.** With reference to the '*Wavell Plan*', consider the following statements:
  - 1. The responsibility of defence of India would be transferred to Indians.
  - 2. All the members of the Council would be Indians.
  - 3. Other minorities would be given representation.
  - 4. An Indian would be appointed as the member for Foreign Affairs.

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

- (a) 1 and 2 only (b) 3 and 4 only
- (c) 2 and 3 only (d) 1, 2, 3 and 4
- **30.** With reference to 'Sangam', consider the following statements:
  - 1. The term 'Sangam' literally means 'confluence'
  - 2. The Sangam membership was compulsory to recognized poets
  - 3. It was similar to a Round Table Conference, which allowed sitting room only to an authentic poet
  - Which of the statement/s given above is/are correct?
  - (a) 1 only (b)1 and 3 only
  - (c) 2 and 3 only (d)1, 2 and 3
- **31.** Which of the following statement/s is/are correct regarding *Indian President*?

1. Election of the President cannot be held

if some seats in the Electoral College are vacant

- 2. The elected members of a suspended Assembly are not entitled to take part in the Presidential election
- 3. The Constitution provides for the election of the President by the system of proportional representation by means of the single transferable vote

Select the correct answer from the code given below:

- (a) 1 only (b) 1 and 2 only
  - (c) 3 only (d) 1, 2 and 3

**32.** Consider the following statements:

(c)

- 1. Anyone can be convicted for an act that was not an offence at the time of its commission
- 2. No one can be given punishment greater than what was provided in law prevalent at the time of its commission
- 3. No one can be prosecuted and punished for the same offence more than once
- 4. No one can be forced to bear witness against his ownself

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

- (a) 1, 2 and 3 only (b) 2, 3 and 4 only
  - 1, 3 and 4 only (d) 1, 2, 3 and 4
- **33.** With reference to *Comptroller and Auditor General of India*, which of the following statements is correct?
  - (a) The administrative expenses of the office of the Comptroller and Auditor General of India, are not charged upon the Consolidated Fund of India
  - (b) The Comptroller and Auditor General of India performs such duties and exercises such powers as may be prescribed by the President of India
  - (c) The accounts of the Union and of the States are kept in such forms as the Parliament prescribes on the advice of the Comptroller and Auditor General of India
  - (d) The reports of the Comptroller and Auditor General of India relating to the accounts of the Union are submitted to the President

**34.** Although the expansion of the Mughal Empire reached its zenith during the reign of Aurangzeb, but the disintegration of the empire also began simultaneously due to his policies. Which of the following is/ are considered under such policies?

- (a) Aurangzeb sought to restore the Islamic character of the state
- (b) Aurangzeb inspired the Sikhs in Punjab and Marathas in Maharashtra to rose against the imperial empire
- (c) Deccan policy of continuous warfare drained the resources of the empire

- All of the above (d)
- 35. Consider the following statements:
  - The Public Distribution System(PDS) 1. provides only food items in rationed amounts at below-market prices
  - 2 The National Food Security Act primarily focuses on providing food security via expansion of the Public Distribution System Which of the statement/s given above is/are correct?
  - 1 only (b) 2 only(a)
  - Both 1 and 2 (d) Neither 1 nor 2 (c)
- 36. With reference to Antarctica continent, consider the following statements:
  - Antarctica is divided into two by the Trans 1. Antarctic Mountains between the Ross Sea and the Weddell Sea.
  - Lake Vostok is the largest of Antarctica's 2. almost 400 known subglacial lakes.
  - Due to its location at the South Pole, 3. Antarctica receives relatively low solar radiation.

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

- (a) 1 and 2 only (b) 2 and 3 only
- 1,2 and 3(d) None of the above (c)
- 37. Technology Development Board (TDB), plays vital role in the field of technological development in India, which of the following statement/s regarding TDB is/ are correct?
  - 1. TDB is a statutory body.
  - It provides financial assistance to research 2. and development institutions
  - 3. Its mandate is to promote development and commercialization of indigenous technology only.

Select the correct answer using code given below:

- 1 and 2 only (b)1 and 3 only (a)
- (c) 2 only (d)1, 2 and 3
- 38. Consider the following statements:
  - India exports electricity to Bangladesh, and 1. Myanmar.
  - India imports electricity from Nepal and 2. Bhutan.

Which of the above statement/s is/are correct?

- 1 only (b) 2 only(a)
- (c) Both 1 and 2(d) Neither 1, nor 2
- 39. Consider the following statements regarding Cyber Physical Systems programme :
  - Cyber Physical System 1. is an interdisciplinary field that deals with the deployment of computer-based systems.
  - 2. It can be turned into a huge opportunity by ensuring that India's future workforce is skilled in robotics.

Which of the above statement/s is/are correct?

- (a) 1 only (b) 2 only
- Both 1 and 2(d) Neither 1 nor 2 (c)
- 40. Which one of the following pairs is **not** correctly matched?
  - **Governor Generals Committees** Lord Chelmsford : Babington Smith (a) Commission : Muddiman (b)Lord Reading
    - Lord Irwin
  - (c)Lord Irwin (d)
- : Whitley Commission

Committee

: Sapru Commission

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- 41. This national park is home to unique, threatened and endangered biodiversity including liontailed macaques, tigers, Malabar civets and great pied hornbills. Its more than 630 so km area of montane grasslands and tropical rainforests form the largest protected block within the Western Ghats. The rivers Tunga, Bhadra and Netravati, which originate from the heart of the park, sustain millions of rural people in south India. It is a part of the world's 36 'hotspots' of biological diversity. Which of the following could be this ?
  - Bandipur National Park (a)
  - Kudremukh National Park (b)
  - Mudumalai National Park (c)
  - Silent Valley National Park (d)
- 42. Waste minimization can be done bu:
  - Developing wide dumping yard 1.
  - 2. Optimizing the consumption of raw materials
  - 3. Reducing waste generation through changes in routine lifestyle
  - 4. Reducing recycling and producing new items

Adopting suitable production techniques 5. Select the correct answer using the code given

- below:
- 1, 2 and 3 only(b) 3, 4 and 5 only (a) (c)
  - 2, 3 and 5 only(d) All of the above

43. Consider the following pairs:

	States		Minerals
1.	Chhattisgarh	:	Principal gold
			producing State
2.	Rajasthan	:	Richest state in
			terms of
			availability and
			variety of
			minerals
3.	Madhya Pradesh	:	Only diamond
			producing State
4.	Karnataka	:	Sole producer of
			tin concentrates

Which of the pair/s given above is/are correctly

matched?

(c)

- (a) 1 only
  - 3 and 4 only (d) 1, 2, 3 and 4

(b) 2 and 3 only

- **44.** In view of the pollution rules and regulations, the Central Pollution Control Board (CPCB) often remains in the newspapers. With reference to this, consider the following statements:
  - 1. The CPCB was constituted under the Air (Protection and Pollution) Act, 1981.
  - 2. The CPCB coordinates the activities of the State Pollution Control Boards (SPCBs) and resolves their disputes.

Which of the above statement(s) is/are **incorrect**?

- (a) 1 only (b) 2 only
- (c) Both 1 and 2 (d) Neither 1 nor 2
- **45.** With reference to *PM CARES Fund and Prime Minister's National Relief Fund (PMNRF)*, consider the following statements:
  - 1. While PM CARES Fund is a trust, PMNRF was a fund based on Consolidated Fund of India.
  - 2. In PM CARES Fund, funds are allocated by the budget.
  - PM CARES Fund was created exclusively for COVID-19.
  - 4. PMNRF was created to help immigrants from Pakistan during the partition of India.
  - Which of the above statement(s) is/are true?
  - (a) 1 and 2 only (b) 2 and 3 only
  - (c) 3 and 4 only (d) 2 and 4 only
- **46.** With reference to the '*National Marine Turtle Action Plan-2021-26*', which of the following statement(s) is/are true?
  - 1. Under this, special focus will be given on the recovery of degraded coral reefs and mangroves.
  - 2. To promote ecotourism, alternative livelihood opportunities will be developed for coastal and local communities.
  - 3. To make this successful, the help of local and industrial cooperation like CSR fund will also be taken.

Select the correct answer using the code given below:

(a)	1 and 2 only	(b) 2 and 3 only

- (c) 1, 2 and 3 (d) 1 and 3 only
- **47.** With reference to 'Ayushman Sahakar Yojana', consider the following statements:
  - 1. The main objective of this scheme is to provide viable health care through cooperative societies through hospitals, health care and education establishments.
  - 2. This is a scheme of the National Cooperative Development Corporation (NCDC).
  - 3. This scheme will play a supporting role in

fulfilling the goals of the National Health Policy.

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

- (a) 1 and 2 only (b) 1 and 3 only
- (c) 2 and 3 only (d) 1, 2 and 3
- **48.** With reference to *'Himalayan Serow'* which of the following statement(s) is/are correct?
  - 1. Himalayan Serow is a mammal species similar to goat and antelope.
  - 2. It has been included in the list of IUCN as vulnerable and in Schedule-I of the Wildlife Protection Act.

Select the correct answer using the code given below

- (a) 1 only (b) 2 only
- (c) Both 1 and 2 (d) Neither 1, nor 2
- **49.** The word *'Just Transition'*, which is often discussed, is used for which of the following?
  - (a) For the transformation of the Economy from fossil fuels to renewable energy
  - (b) To adopt a system of alternative politics to prevent increasing political criminalization
  - (c) To adopt state-of-the-art weapons in place of conventional weapons in the Indian armies
  - (d) To convert it into a completely online system at the earliest, in view of the condition of the education system in the Corona pendemic.

#### **50.** What is 'Sagittarius A'?

- (a) A new nuclear reactor
  - (b) A new galaxy
  - (c) A new black hole
  - (d) A new robotic machine

# ANSWER

1.	(a)	14.	(c)	27.	(a)	40.	(c)
2.	(c)	15.	(b)	28.	(b)	41.	(b)
3.	(d)	16.	(d)	29.	(b)	42.	(c)
4.	(c	17.	(a)	30.	(b)	43.	(b)
5.	(c)	18.	(a)	31.	(c)	44.	(a)
6.	(d)	19.	(d)	32.	(b)	45.	(c)
7.	(c)	20.	(a)	33.	(d)	46.	(c)
8.	(b)	21.	(d)	34.	(d)	47.	(d)
9.	(b)	22.	(d)	35.	(b)	48.	(c)
10.	(a)	23.	(c)	36.	(c)	49.	(a)
11.	(c)	24.	(c)	37.	(a)	50.	(c)
12.	(b)	25.	(d)	38.	(a)		
13.	(c)	26.	(d)	39.	(c)		

## **MCQs Based on Current Affairs**

1. Consider the following statements-

1. Exercise Bold Kurukshetra is a bilateral armoury exercise between the armies of Singapore and India.

2. The 13th edition of Exercise Bold Kurukshetra was recently held in Singapore.

3. Exercise SITMEX involves Indian, Myanmar and Singapore army.

Choose the right option-

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

### Answer – B

2. Consider the following statements regarding the recently released global air quality report:

1. The report has been released by IQAir, a Swiss air quality technology company.

2. In 2022, India dropped its ranking from 10th to 8th position.

3. Delhi ranks fourth among the top 50 most polluted cities with an average PM2.5 level of  $92.65\mu/m3$ .

Which of the above statements is/are correct? A.1 and 2 B. 3 only

C.1 and 3 D. All Of The Above Answer – C

3. Consider the following statements.

1. Low Temperature Thermal Desalination (LTTD) technology takes advantage of the difference in ocean temperature to convert seawater into potable water.

2. National Institute of Ocean Technology (NIOT) is an autonomous institute under the aegis of Ministry of Earth Sciences (MoES).

Which of the above statement(s) is/are incorrect? A.1 only B. 2 only

C. Both 1 and 2 D. None of the above Answer – D

4. Consider the following statements regarding PM MITRA.

1. Ministry of Commerce is the nodal ministry of PM MITRA scheme.

2. The scheme will provide state-of-the-art infrastructure to the textile sector, attract investment and generate employment.

3. PM Mitra is inspired by 5F Vision- Farm to Fiber to Factory to Fashion to Foreign.

Select the correct statements-

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

### Answer- A

- 5. Consider the following statements-
  - 1. A report titled 'Breaking the cycle of unsustainable food systems, hunger and debt' has been released by the World Economic Forum.

2. According to the report, the increase in public debt is causing the problem of global hunger crisis.

Select the correct option-

- A. Statement 1 is correct.
- B. Statement 2 is correct.
- C. All the statements are correct.
- D. None of the statements is correct.

### Answer – B

6. Consider the following statements related to environmental, social and governance rules in India-

1. It determines how a company performs in conserving the natural environment and managing relationships with its stakeholders.

2. It is given a statutory basis by the Companies Act, 2013.

Select the correct option-

A. Statement 1 is correct.

B. Statement 2 is correct.

- C. All the statements are correct.
- D. None of the statements is correct.

### Answer-A

7. Consider the following statements related to the island of Trinidad-

1. It is situated in the Pacific Ocean.

2. Recently plastic rocks were found on this island.

Select the correct option-

A. Statement 1 is correct.

- B. Statement 2 is correct.
- C. All the statements are correct.
- D. None of the statements is correct.

### Answer – B

8. Consider the following statements regarding sand battery.

1. A "sand battery" is a high-temperature thermal energy storage that uses sand or a sand-like material as its storage medium.

2. It stores energy in the form of heat in the sand.

3. Finland has installed the world's first sand battery.



Which of the statements given above is/are true? A 1 oplar D 1 and 0

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

### Answer – D

9. Consider the following statements regarding National Security Act (NSA), 1980.

1. The NSA can be invoked to prevent a person from acting in a manner prejudicial to the maintenance of supplies and services essential to the community.

2. The person in custody does not have the right to file a bail application before the criminal court.

Which of the above statements is/are correct? B. 2 only A.1 only C. Both 1 and 2 D. Neither 1 nor 2

### Answer – C

10. Consider the following statements with respect to Bacterial Cellulose (BC).

1. Acetobacter and Komagataibacter bacteria are used to synthesize cellulose.

2. Bacterial cellulose is free from impurities like lignin, wax and hemicellulose.

3. BC can be used to replace leather products in the market.

Which of the above statements is/are correct? A.1, 2 B.2, 3

C.1, 3	D.1, 2, 3
D D	

### Answer – D

11. The term ceramic radome technology seen in news is related to-

A. Use of inorganic materials as protection for designing prostheses.

B. Use of high pressure furnace to reduce emissions from coal power plants.

C. Technology for ballistic and tactical missiles and high performance aircraft.

D. Increase in crop yield in mild climate change due to global warming.

### Answer – C

12. Consider the following statements-

1. Online gambling often involves the use of virtual chips or digital currencies instead of physical cash.

2. Ministry of Electronics and IT (MeitY) has released the Draft Rules of Online Gaming (an amendment to the IT Rules, 2021) for regulation of online gambling.

3. Goa and Sikkim have legalized all forms of

gambling in their states. Which of the statements given above is/are correct? A. 1 and 2 B. 2 and 3 C. 1 and 3

D. All of the above

### Answer-A

1

3.	Cons	sider the	following	g state	ments	regare	ding
	the l	PM Forma	lisation o	f Micro	Food	Proces	sing
	Ente	erprises Sc	heme (PN	AFME).			
	1. 1	The Minis	stry of	Consur	ner A	ffairs	has
	laun	iched the	PMFM	E sche	eme ı	under	the
	Aatn	nanirbhar	Bharat A	bhiyan			
	2. 7	The schem	e has a sp	ecial foo	cuson	suppor	ting
	grou	ips engage	d in Agri	-food pr	ocessi	ng.	
	Whie	ch of the a	bove stat	ements	is/are	e correc	ct?
	Α.	1 only		B. 2	2 only		
	C. 1	Both 1 and	12	D. I	None o	f the al	oove
1	www.ml	D					

### Answer- B

14. Berry borer infestation is a common problem in the production of

A. Coffee	B. sugar
C. wheat	D. corn

### Answer-A

15. Consider the following statements:

1. The Parliament (Prevention of Disgualification) Act, 1959 exempts several offices from disqualification on the ground of 'office of profit'. 2. The above Act has been amended five times. 3. The term 'office of profit' is well defined in the

Constitution of India.

Which of the statements given above is/are correct?

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

Answer-A

correct?

16. Consider the following statements about the United Nations 2023 water conference:

1. The United Nations 2023 Water Conference was held in New York from 22 to 24 March.

2. It was first held in 1977 in Mar de Plata, Argentina.

3. The conference is an important platform for member states, the United Nations system and stakeholders alike to mobilize action and bring about successful solutions at the global level. Which of the statements given above is/are

A. 1 and 2 only	B. 3 only
C. 2 and 3 only	D.1, 2 and 3
Answer – D	

# PERFECT

# • Personality



Dr. B. R. Ambedkar

Dr. Bhimrao Ambedkar is considered one of the modern builders of India. His ideas and principles have always been relevant to Indian politics. Dr. Bhimrao Ambedkar, the architect of India's constitution, thinker and social reformer, was born on April 14, 1891, in Mhow, Madhya Pradesh. His father's name was Ramji Maloji Sakpal and mother's name was Bhimabai Ramji Sakpal. He devoted his whole life to the struggle against social evils like untouchability and casteism. In 1927, Ambedkar organized the Mahar Satyagraha. Ambedkar converted to Buddhism along with many of his followers on October 14, 1956. After getting independence, he was also made the first law minister of India.

A few days after independence, on 29 August 1947, the Constituent Assembly constituted the Drafting Committee under the leadership of Dr. Bhimrao Ambedkar to prepare the draft of the Constitution. Thus Bhimrao Ambedkar was the chairman of the committee that drafted the Indian Constitution. Ramchandra Guha writes in 'India After Gandhi' that - Jawaharlal Nehru and Dr. Bhimrao Ambedkar wanted to implement the Uniform Civil Code in India.

His ideas and principles have always been relevant to Indian politics. In fact, he was a strong supporter of such a political system, in which the state should give equal political opportunities to all and there should be no discrimination on the basis of religion, caste, race and sex etc. This political philosophy of his emphasizes the relationship between the individual and the society. Dr. Ambedkar was very committed to equality. He believed that the right to equality should be above religion and caste. Providing equal opportunities for development to every individual should be the first and last moral responsibility of any society. Article 14 to 18 of the Constitution of India provides for the right to equality. Ambedkar had strongly criticized the Varna system, describing it as unscientific, tyrannical and narrow.

Ambedkar introduced the 'Hindu Code Bill' in the Parliament while being the first law minister of independent India and he made extensive provisions in this bill to make a just system for Hindu women. However, he resigned from the cabinet after his Hindu Code Bill draft was opposed in Parliament. In this draft, gender equality was talked about in the laws of succession, marriage and economy.

He devoted his whole life to the struggle against social evils like untouchability and casteism. Babasaheb fought for the rights of the poor, downtrodden and downtrodden. He died on 6 December 1956 in Delhi which is celebrated every year as Mahaparinirvana Divas. Ambedkar was awarded the Bharat Ratna posthumously in the year 1990. Ambedkar's social thought shows great potential for the upliftment of the untouchables, downtrodden and oppressed classes. Through his upliftment, he wanted to establish an ideal society in which the elements of equality, liberty and fraternity are the basic principles of society.

### Dr. B. R. Ambedkar's works:

- Dr. B. R. Ambedkar in his work titled 'The problem of the rupee: 15 origin and its solution' from 1800 to 1893, examined the development of the Indian currency (rupee) as a medium of exchange and found a suitable monetary system. The problem of selection was also explained.
- Ambedkar gave a clear overview of the Indian agricultural system in his article Small Holdings in India and their Remedies published in 1918.
- > Another of his research, The Evolution of Provincial Finance in British India, remains relevant even today.
- ▶ On April 3, 1927, Ambedkar also started a newspaper named 'Bahishkrit Bharat'.







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