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## IMPORTANT ARTICLES

# THE US HAS BANNED THE SALE OF ADVANCED COMPUTER CHIPS TO CHINA

The US has banned the sale of advanced computer chips to China, escalating efforts to contain China's tech and military ambitions.

The moves are designed to cut off supplies of critical technology to China that may be used across sectors including advanced computing and weapons manufacture.

The crackdown marks the most significant action by USA against China on technology exports in decades, escalating a trade battle between the world's two most powerful economies.

### What are the Highlights of the Ban?

- The US imposed a sweeping set of export controls that included measures to cut China off from certain semiconductor chips and chip-making equipment.
- Under the rules, US companies must cease supplying Chinese chipmakers with equipment that can produce relatively advanced chips unless they first obtain a licence.
- The new regulations also add controls on advance semiconductor production items and transactions for specific end-uses of some integrated circuits or chips.
- The US also wants to increase its export controls to include semiconductor products and software, technology, and other things used to develop and make integrated circuits.
- US Citizens and green-card holders will also be banned from working on certain technology for Chinese companies and entities.

### What will be the Ramifications of this Move?

- **Unreasonable Grounds for Imposing Sanctions:** US has given the pretext of strategic advantage in critical technologies will prompt other countries too to impose bans like these which will lead to a trade war like situation. The far-reaching nature of these sanctions will have implications for the reliability of the global trading and financial order.
- **Neo-colonial in Nature:** USA ban on the export of chip-making equipment will not affect only China but also make other countries devoid of the potential benefits. The legitimacy of the order that the Americans seek to maintain will not be enhanced by mercantilist rather than global public good justifications.
- **Disruption of Supply Chains:** At the very least these sanctions are a recipe for creating immense uncertainty in global supply chains. Some countries, like India, may be salivating at the prospect of opportunistically gaining from this moment. But it is likely that these gains can be hugely diminished by the cumulative uncertainties in the world trading system. China is too important to isolate.
- **Hamper Efforts to Control Climate Change:** It is clear that the principal arena where global cooperation is required, climate change, is on the back burner. It is difficult to imagine concerted global action on climate change while the superpowers are in a mercantilist war.

### What are the Semiconductor Chips?

- **About:** Semiconductors are materials which have a conductivity between conductors and insulators. They can be pure elements, silicon or germanium or compounds, gallium, arsenide or cadmium selenide.
- **Significance of Semiconductor Chips:** They are the basic building blocks that serve as the heart and brain of all modern electronics and information and communications technology products.
- These chips are now an integral part of contemporary automobiles, household gadgets and essential medical devices such as ECG machines.

- **Recent Increase in Demand:** The Covid-19 pandemic-driven push to take sizable parts of daily economic and essential activity online, or at least digitally enable them, has highlighted the centrality of the chip-powered computers and smartphones in people's lives.
- Its shortage causes cascading effects, given that the first one creates pent-up demand that becomes the cause for the follow-up famine.

#### **What is the Significance of Semiconductors?**

- Semiconductors are essential to almost all sectors of the economy including aerospace, automobiles, communications, clean energy, information technology and medical devices etc.
- Demand for these critical components has outstripped supply, creating a global chip shortage and resulting in lost growth and jobs in the economy.
- In December 2021, the centre govt sanctioned ₹76,000 crore under the Production-Linked Incentive (PLI) scheme to encourage the manufacturing of various semiconductor goods within India.
- Semiconductors and displays are the foundation of modern electronics driving the next phase of digital transformation under Industry 4.0.

#### **Why is there a Need for Promoting the Semiconductor Industry?**

- Semiconductor chips are the lifeblood of the modern information age. They enable electronic products to compute and control actions that simplify our lives.
- These semiconductor chips are the drivers for ICT (Information and Communication Technologies) development and one of the key reasons for the current flattening of the world.
- They are used in critical infrastructures such as communication, power transmission, etc., that have implications for national security.
- Development of the semiconductor and display ecosystem will have a multiplier effect across different sectors of the economy with deeper integration to the global value chain.
- There are not many countries in the world that manufacture these chips.
- The industry is dominated by the United States of America, Taiwan, South Korea, Japan, and the Netherlands.
- Germany is also an emerging producer of ICTs.

#### **Where does India Stand in the Semiconductor Market?**

- India currently imports all chips and the market is estimated to touch \$100 billion by 2025 from \$24 billion now. However, for the domestic manufacturing of semiconductor chips, India has recently launched several initiatives:
- The Union Cabinet has allocated an amount of ₹76,000 crore for supporting the development of a 'semiconductors and display manufacturing ecosystem'.
- Consequently, a significant amount of incentives would be provided to design companies to design chips.
- India has also launched the Scheme for Promotion of Manufacturing of Electronic Components and Semiconductors (SPECS) for manufacturing of electronics components and semiconductors.
- In 2021, the MeitY also launched the Design Linked Incentive (DLI) Scheme to nurture at least 20 domestic companies involved in semiconductor design and facilitate them to achieve a turnover of more than Rs.1500 Crore in the next 5 years.
- India's own consumption of semiconductors is expected to cross USD 80 billion by 2026 and to USD 110 billion by 2030.

#### **What are the Challenges for India?**

- **High Investments Required:** Semiconductors and display manufacturing is a very complex and technology-intensive sector involving huge capital investments, high risk, long gestation and payback periods, and rapid changes in technology, which require significant and sustained investments.

- **Minimal Fiscal Support from Government:** The level of fiscal support currently envisioned is minuscule when one considers the scale of investments typically required to set up manufacturing capacities in the various sub-sectors of the semiconductor industry.
- **Lack of Fabrication Capacities:** India has a decent chip design talent but it never built up chip fab capacity. The ISRO and the DRDO have their respective fab foundries but they are primarily for their own requirements and are also not as sophisticated as the latest in the world.
  - India has only one old fab which is located in Mohali, Punjab.
- **Extremely Expensive Fab Setup:** A semiconductor fabrication facility (or fab) can cost multiples of a billion dollars to set up even on a relatively small scale and lagging by a generation or two behind the latest in technology.
- **Resource Inefficient Sector:** Chip fabs are also very thirsty units requiring millions of litres of clean water, an extremely stable power supply, a lot of land and a highly skilled workforce.

#### **What can be the Way Forward?**

- **Need to Become a Key Player:** India should aim to become a key player in a trusted, plurilateral semiconductor ecosystem that keeps key adversaries out.
  - Favourable trade policies are critical for building a plurilateral semiconductor ecosystem.
- **Sufficient Fiscal Support for All the Elements:** Considering India's considerable talent and experience, it may be best if the new mission focuses fiscal support, at least for now, on other parts of the chip-making chain including design centres, testing facilities, packaging, etc.
- **Maximising Self-Reliance:** Future chip production shouldn't be a one-trick pony and must develop an ecosystem from design to fabrication, to packing and testing.
  - India must also improvise research and development in this sector where it is currently lacking.
- **Connectivity and Capability Related Measures:** Many factors need to come together for India to make a mark in the niche chip-making and designing industry.
  - The immediate need for the Indian government is to connect related industries in India to create the chip manufacturing ecosystem. National capability needs to be enhanced.
- **High Investments Required:** Semiconductors and display manufacturing is a very complex and technology-intensive sector involving huge capital investments, high risk, long gestation and payback periods, and rapid changes in technology, which require significant and sustained investments.
- **Enhancing the Important Component:** There are three components of the chip:
  - Hardware (raw materials)
  - Design
  - Fabrication
- The design itself is the component that creates the value and if India is able to harness this capability the no one in the world can beat the country

#### **Conclusion**

As there is a need of Semiconductors as well as a global demand also to which India can cater to but that would require building upon the existing capabilities, putting robust policy mechanisms and ecosystems in place. It is also required for the industry and the government to work together. All these advantages have been there for a long time and it's now necessary to connect with them.

## **GOVERNOR AND STATE LEGISLATURE**

The post of Governor of a State is of immense importance in our political system. The Governor acts as a bridge between the Centre and the States. It is considered as one of the pivotal parts of cooperative governance that our democracy is proud of.

But for a long time, the role, powers, and discretion of the Governor's office in multiple states have been hotly debated in the political, constitutional, and legal realms.

Governor-State friction has recently flared up. The power spat between the Delhi government and the Lieutenant Governor over the appointment of bureaucrats and deadlock between the Tamil Nadu government and Governor's assent to the National Eligibility cum Entrance Test (NEET) exemption Bill are instances of a tussle.

To advance towards cooperative federalism, this topic needs closer scrutiny, considering different aspects from detached perspectives.

### **How did the Post of Governor Come About?**

- Before Independence:
  - Since 1858, when India was administered by the British Crown. Provincial Governors were agents of the crown, functioning under the supervision of the Governor-General.
  - With the Government of India Act, 1935, the governor was now to act in accordance with the advice of Ministers of a province's legislature, but retained special responsibilities and discretionary power.
- Post-Independence:
  - The post of the governor was extensively debated in the Constituent Assembly, which decided to retain it while re-orienting its role from the British era.
  - Currently, under the parliamentary and cabinet systems of governance adopted by India, the Governor was envisaged to be the Constitutional Head of a State.

### **What are Constitutional Provisions Related to the Governor?**

- Article 153 says that there shall be a Governor for each State. One person can be appointed as Governor for two or more States.
- The Governor is appointed by the President by warrant under his hand and seal and holds office under the pleasure of the President (Article 155 and 156).
- Article 161 states that the governor has the power to grant pardons, reprieves, etc.
- The Supreme Court stated that the sovereign power of a Governor to pardon a prisoner is actually exercised in consensus with the State government and not the Governor on his own.
- The advice of the government binds the Head of the State.
- Article 163 states that there is a council of ministers headed by the Chief Minister to aid and advise the Governor in the exercise of his functions, except some conditions for discretion.
- Discretionary powers include:
  - Appointment of a chief minister when no party has a clear majority in the state legislative assembly
  - In times of no-confidence motions
  - In case of failure of constitutional machinery in the State( Article 356)
- Article 200 gives power to the Governor to give assent, withholds assent, or reserves the bill for the consideration of the President passed by the Legislative Assembly.
- Article 361 states that the Governor of a State, shall not be answerable to any court for the exercise and performance of the powers and duties.

### **What Are the Issues Related to the Post of Governor in India?**

- Affiliation Based Appointment: Politicians and former bureaucrats affiliated with the ruling party have been appointed in several instances as Governors.
- This has led to questions about the post's impartiality and non-partisanship. Also, the convention of consulting the Chief Minister before appointing the Governor is often ignored.
- From Centre's Representative to Centre's Agent: Critics refer to governors as the 'agents of the Centre' today.

- In 2001, the National Commission to Review the Working of the Constitution, held that the Governor owes his appointment and his continuation to the Union. Apprehensions exist that he will follow instructions given by the Union Council of Ministers.
- This goes against the constitutionally mandated neutral seat and has resulted in bias.
- Misuse of Discretionary Powers: The discretionary powers of governor have been misused in many instances.
- For instance, it has been argued by critics that the Governor's recommendation for President's Rule in a state has not always been based on 'objective material', but on political whim or fancy.
- Removal of Governors: Having no written grounds or procedures for removing governors, several times governors were removed arbitrarily.
- No Clear Distinction Between Constitutional and Statutory Role: The constitutional mandate to act on advice of the council of ministers is not clearly distinguished from the statutory authority as chancellor, resulting in many conflicts between the governor and the state government.
- For instance, there was a recent appointment of a Vice Chancellor in a university by the Kerala Governor, bypassing government nominations.
- Constitutional Loopholes: In the Constitution, there are no guidelines for exercise of the governor's powers in-case of appointment of Chief Minister or dissolving the Assembly.
- Also, there is no limit set for how long a Governor can withhold assent to a Bill.
- As a result, friction between the governor and concerned state governments is likely to arise.

#### **What are Reforms Proposed by Various Commissions?**

- Punchhi Commission: The impeachment procedure for the President can be adapted to impeach governors as well.
- The Convention of Governors serving as Chancellors of Universities and holding other statutory positions should be abolished because it opens their office to controversies and public criticism.
- 2nd Administrative Reforms Commission: The Inter-State Council should formulate guidelines on how governors should exercise discretionary power.
- Rajamannar Committee: The Rajamannar Committee emphasised that the governor of the state should not consider himself as an agent of the centre but play his role as the constitutional head of the State.
- Sarkaria Commission: In its report, the Commission recommended that Article 356 should only be used in very rare instances when it is impossible to prevent a breakdown of constitutional machinery within a State.
- Venkatachaliah Commission: It recommended allowing Governors to complete their five-year terms ordinarily.
- The central government should consult with the Chief Minister before removing them before the end of their term.

#### **What Should be the Way Forward?**

- Reimagining Appointment Procedure: It would be appropriate to devise a committee comprising the Prime Minister, the Home Minister, the Speaker of the Lok Sabha and the Chief Minister of the State concerned to select the Governor.
- Neutral Constitutional Stand: The Governor is supposed to be an independent, non-partisan person. He/she is supposed to keep the interests of the State in mind and also ensure that the link between the State and the Centre is maintained in a smooth way.
  - Framing a Code of Conduct: There is a need to devise a 'Code of Conduct' that should define certain 'norms and principles' that should guide the governor's discretion and constitutional mandate.
- Discretion must be a choice dictated by reason, actuated by good faith and tempered by caution.

# GENDER EQUITY AND UNIFORM CIVIL CODE

The Preamble of the Indian Constitution states that India is a Secular Democratic Republic and thereby it means that the State does not endorse any specific religion. A secular State is one which shall not discriminate against anyone on the ground of religion.

The Indian Constitution also contains articles mandating equality and non-discrimination on the grounds of sex (Articles 14-18). However, several laws exist that apparently violate these principles and continue to be there especially in personal laws of certain communities which contain provisions that are deemed to be highly discriminatory against women.

Women, who make up nearly a half of India, continue to demand for a gender just code to enjoy equality and justice irrespective of the community to which they belong. However, the ideal of Uniform Civil Code (UCC) is yet to be achieved in India.

Since the Uniform Civil Code was a politically sensitive issue, the founding fathers of the Constitution arrived at a compromise by placing it under Article 44 as a directive principle of state policy.

As India strives for gender equality, a close examination of the UCC for the country is necessary.

## What is Uniform Civil Code?

- Article 44 of the Directive Principles of the State Policy (DPSP) states that it is the duty of the State to secure Uniform Civil Code (UCC) for the citizens throughout the country.
- It mainly aims to replace Personal Laws based on the scriptures and customs of each major religious community in India with a common set of rules governing every citizen.
- "Uniform" in UCC signifies:
  - Uniformity of laws between communities.
  - Uniformity of laws within communities ensuring equalities between the rights of men and women.

## What are the Efforts Towards UCC in India?

- Special Marriage Act, 1954: The Special Marriage Act of 1954 provides for civil marriage for any citizen irrespective of religion, thus, permitting any Indian to have their marriage outside the boundaries of any religious personal law.
- Shah Bano Case 1985: In this case, Shah Bano was refused her claim for maintenance. The Supreme Court ruled in her favour under Section 125 of Code of Criminal Procedure (CrPC), which applied to all citizens the order for maintenance of wives, children and parents.
  - The Supreme Court further recommended that the long pending Uniform Civil Code should be finally enacted.
- The Supreme Court also called on the government to implement the UCC in the 1995 Sarla Mudgal judgement as well as in the Paulo Coutinho vs Maria Luiza Valentina Pereira case (2019).

## What are the Arguments in Favour of UCC?

- Accommodating the Aspirations of the Youth: As the world transitions into the digital age, the social attitude and aspiration of the young population is shaping by universal and global principles of equality, humanity and modernity.
  - Thus, the enactment of Uniform Civil Code will help in utilising their full potential towards nation building.
- Support National Integration: The Constitution guarantees all citizens equal treatment in courts of law whether it is criminal laws or other civil laws (except Personal Laws).
  - Thus, the implementation of Uniform Civil Code will grant equal set of personal laws to all, resulting in the end of politicization of issues of the discrimination or concessions or on the other hand exceptional benefits appreciated by a specific community on the basis of their specific religious personal laws.



- The Rise Above the Patriarchal Mindset: The existing personal laws of most religions are based upon the upper-class patriarchal notions of the society. Thus, the codification and implementation of the Uniform Civil Code will destroy the sanctity of the patriarchal orthodox.
- Thus, the Uniform Civil Code will promote gender equality and will bring both men and women at par.
- Convenient for Judicial Process: There exist many personal laws, including Hindu Code, Sharia Law, etc. The presence of so many laws leads to confusion, complexity, and inconsistencies in the adjudication of personal matters, sometimes resulting in delayed or incomplete justice.
- UCC will help the judiciary deliver justice efficiently and within a reasonable timeframe.

#### **What are the Arguments Against UCC?**

- 21st Law Commission Report: The Law Commission of India has opined that a Uniform Civil Code (UCC) is neither necessary nor desirable to reconcile conflicts in personal/family laws.
- It stated that many countries are now moving towards recognition of difference, and the mere existence of difference does not imply discrimination, but is indicative of a robust democracy.
- Therefore, the Commission has suggested amendments to existing family laws to tackle discrimination and inequality in personal laws, rather than do away with differences between them altogether.
- Against Cultural Diversity India: Practical difficulties due to diversity in India, it is difficult to come up with a uniform set of rules for personal issues like marriage due to the tremendous diverse culture in India across the religions, sects, castes, states, etc.
- Encroachment on Religious Freedom: Articles 25 to 28 of Indian Constitution provide the Right to Freedom of religion. The Uniform Civil Code is viewed as a threat to religious freedom ( Article 25) by many communities, especially the minority communities.
- According to them, the Uniform Civil Code will neglect their traditions and impose rules which will be mainly influenced by the majority religious communities.
- Against the Indigenous Rights of Tribes: The Naga Community has claimed that the implementation of UCC would bring about clear trouble for their culture and dignity.
- It can potentially cause social disorder, as the personal and social life of the tribes are quite distinct from the rest of the people in the country.

#### **Conclusion**

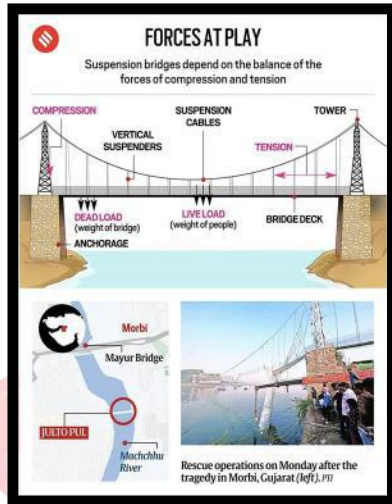
- The goal of a UCC should ideally be reached in a piecemeal manner through a brick-by-brick approach rather than an omnibus approach. A just code is far more important than a uniform code.
- There is a need to consider social adaptability of UCC while forming a blueprint for a uniform civil code. Whether a single law is framed for all religions or reforms are made to our personal laws, they should be based on gender justice and ensure that the principle of equality enshrined in our Constitution remains intact.
- The bottom line is that the government and society need to build trust in order to proceed towards a Uniform Civil Society that respects human rights and promotes gender equality, that holds more importance than a Uniform Civil Code.

# CURRENT AFFAIRS

## NATIONAL NEWS

**RECENTLY, A SUSPENSION BRIDGE COLLAPSED OVER THE RIVER MACHCHU, IN GUJARAT'S MORBI DISTRICT, WHICH KILLED ALMOST 135 PEOPLE-**

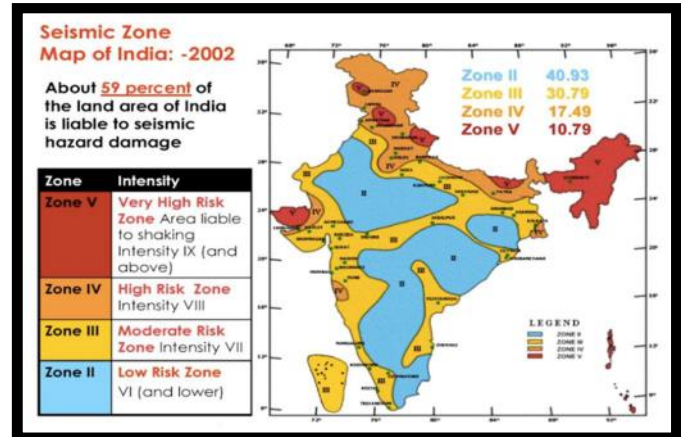
- The suspension bridge, or Jhulta Pul, was built by the ruler of the princely state of Morbi, Sir Waghji Thakor, in 1877.
- It was made to reflect the 'progressive and scientific nature of the rulers of Morbi'. It was inaugurated by the then-Bombay governor, Richard Temple, in 1879.
- A suspension bridge is a type of bridge in which the deck is hung below suspension cables on vertical suspenders.
- The basic structural components include stiffening girders, two or more main suspension cables, and towers and anchorages for cables at either end of the bridge.
- The main cables are suspended between the towers and are connected to the anchorage or the bridge itself. The vertical suspenders carry the weight of the deck and the commuter load on it.



**RECENTLY, POWERFUL TREMORS WERE FELT IN INDIA AFTER AN EARTHQUAKE OF MAGNITUDE 6.6 STRUCK NEPAL, WHICH KILLED A FEW PEOPLE AND DESTROYED MULTIPLE HOUSES-**

- According to the United States Geological Survey (USGS) the tremors are attributed to the continental collisions of India and Eurasia

Plates, which is the dominating force for the Seismicity in the Himalayas.



- These plates are converging at a relative rate of 40-50 millimeters per year.
- Northward under thrusting of India beneath Eurasia generates numerous earthquakes and consequently makes this area one of the most seismically hazardous regions on Earth.
- The Himalayas and their vicinity have witnessed some of the most lethal earthquakes such as one of magnitude 8.1 Bihar in 1934, the 1905 magnitude 7.5 quake in Kangra and the 2005 magnitude 7.6 quake in Kashmir.
- An earthquake in simple words is the shaking of the earth. It is a natural event. It is caused due to release of energy, which generates waves that travel in all directions.
- The vibrations called seismic waves are generated from earthquakes that travel through the Earth and are recorded on instruments called seismographs.
- The location below the earth's surface where the earthquake starts is called the hypocenter, and the location directly above it on the surface of the earth is called the epicenter.
- Types of Earthquake- Fault Zones, Tectonic Earthquakes, Volcanic Earthquake, Human Induced Earthquakes.

- The earthquake events are scaled either according to the magnitude or intensity of the shock. The magnitude scale is known as the Richter scale. The magnitude relates to the energy released during the quake. The magnitude is expressed in absolute numbers, 0-10.

**SUPREME COURT UPHOLDS EWS QUOTA-**



- Recently, the Supreme Court has upheld the validity of the 103rd Constitutional Amendment which provides 10% reservation for the Economically Weaker Sections (EWS) among forward castes in government jobs and colleges across India.

**Majority View-**

- The 103rd constitutional amendment cannot be said to breach the basic structure of the Constitution.
- The EWS quota does not violate equality and the basic structure of the constitution. Reservation in addition to existing reservation does not violate provisions of the Constitution.
- Reservations for EWS does not violate basic structure on account of 50% ceiling limit fixed by Mandal Commission because ceiling limit is not inflexible. 50% rule formed by the Supreme Court in the Indira Sawhney judgment in 1992 was "not inflexible".

**Minority View-**

- Reservations were designed as a powerful tool to enable equal access. Introduction of economic criteria and excluding SC (Scheduled Castes), ST (Scheduled Tribe), OBC (Other Backward Classes), saying they had these pre-existing benefits is injustice.
- The EWS quota may have a reparative mechanism to have a level playing field and the exclusion of

SC, ST, OBC discriminates against equality code and violates basic structure.

- Permitting the breach of 50% ceiling limit would become "a gateway for further infractions and result in compartmentalization (division into sections).

**Economically Weaker Section (EWS) Quota-**

- The 10% EWS quota was introduced under the 103rd Constitution (Amendment) Act, 2019 by amending Articles 15 and 16.
- It inserted Article 15 (6) and Article 16 (6).
- It is for economic reservation in jobs and admissions in educational institutes for Economically Weaker Sections (EWS).
- It was enacted to promote the welfare of the poor not covered by the 50% reservation policy for Scheduled Castes (SCs), Scheduled Tribes (STs) and Socially and Educationally Backward Classes (SEBC).
- It enables both the Centre and the States to provide reservations to the EWS of society.

**THE UNION CABINET HAS RECENTLY APPROVED THE NAMING OF HOLLONGI GREENFIELD AIRPORT IN ITANAGAR OF ARUNACHAL PRADESH AS "DONYI POLO AIRPORT, ITANAGAR"-**



- The name reflect the people's reverence of the Sun as Donyi and the Moon as Polo to symbolize the traditions and rich cultural heritage of the State.
- In January, 2019, the Central government granted in-principle 'approval for development of Hollongi Greenfield Airport.
- The project is being developed by Airports Authority of India with the help of Central Government and the State Government of at a cost of ₹646 crore.

- With a 2,300 metre runway, the greenfield airport is the first in Arunachal Pradesh to have the capacity to land big aircraft.
- The Hollongi airport is the state's third after Pasighat and Tezu airports and only airport in the capital city.
- The central government had earlier accorded its approval for setting up of the "greenfield airport" under the `Capital Connectivity Scheme` to build up fixed wing air connectivity facility to the state capital.
- The Donyi Polo airport in Itanagar is northeast India's 16th airport.

**RECENTLY, THE PRIME MINISTER OF INDIA UNVEILED A 108-FOOT STATUE OF NADAPRABHU KEMPEGOWDA AND INAUGURATED TERMINAL 2 OF BENGALURU AIRPORT-**

- Recently, the Prime Minister of India unveiled a 108-foot statue of Nadaprabhu Kempegowda and inaugurated Terminal 2 of Bengaluru airport, which is named after the 16th-century figure credited with founding the city.
- The status is called the "Statue of Prosperity".
- As per the 'World Book of Records', it is the first and the tallest bronze statue of a founder of a city.
- Renowned sculptor and Padma Bhushan awardee Ram Vanji Sutar has designed the statue.
- Sutar had built the 'Statue of Unity' in Gujarat and the statue of Mahatma Gandhi in Bengaluru's 'Vidhana Soudha'.
- Nadaprabhu Kempegowda was born in 1513 in a village near Yelahanka.
- He is an iconic figure among Vokkaligas, Karnataka's second most dominant community after Lingayats.



- He studied for nine years in a GuruKula near Aigondapura (present day Hesaraghatta) where he learnt statecraft and martial skills.
- He is widely acknowledged as the founder of Bengaluru, Karnataka. It is said that he conceived the idea of a new city while hunting with his minister, and later marked its territory by erecting towers in four corners of the proposed city.
- He is also credited with having developed around 1,000 lakes in the city to cater to its drinking and agricultural needs.

**INDIAN RAILWAYS ACCOMPLISHES ELECTRIFICATION OF 82% OF THE TOTAL BG NETWORK-**

- The Indian Railways said it completed the electrification of 82 per cent of its broad gauge network.
- The national transporter said it achieved 1,223 route km of electrification in the 2022-23 financial year till October 2022, as compared to 895 route km (RKMs) during the corresponding period of FY 2021-22.
- The railway is working steadily towards achieving net zero Carbon Emissions by 2030 to become the world's largest Green Railway.
- As on October 31, out of 65,141 RKM of broad gauge (BG) network of Indian Railways, 53,470 BG RKM have been electrified, which is 82.08 per cent of the total BG network.
- It is worth mentioning that record electrification of 6,366 RKMs was achieved in Indian Railways' history during 2021-22. Earlier, highest electrification was 6,015 RKM during 2020-21.



**RECENTLY, A POLITICAL PARTY CALLED FOR A PROPOSAL TO REMOVE THE TAMIL NADU GOVERNOR-**

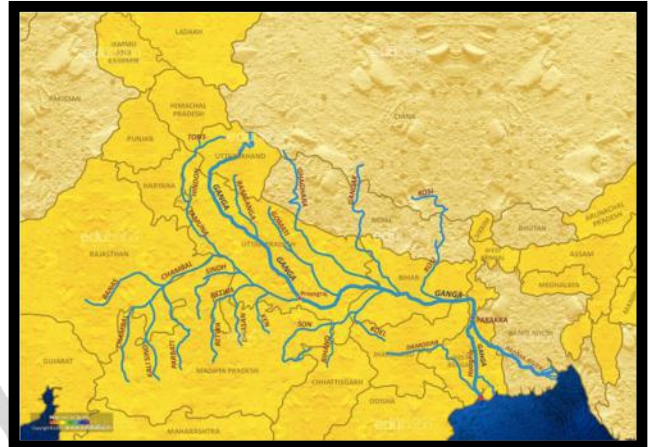
- In recent years, the bitterness between states and Governors has been largely about the selection of the party to form a government, deadline for proving majority, sitting on Bills, and passing negative remarks on the state administration.
- Due to this, Governor is referred to with negative terms like an agent of the Centre, Puppet and rubber stamps.
- Under Article 155 and 156 of the Constitution, a Governor is appointed by the President and holds office "during the pleasure of the President".
- If this pleasure is withdrawn before completion of the five-year term, the Governor has to step down.
- As the President works on the aid and advice of the Prime Minister and the council of ministers, in effect, the Governor can be appointed and removed by the central government.
- There are no provisions laid down in the Constitution for the manner in which the Governor and the state must engage publicly when there is a difference of opinion.
- The management of differences has traditionally been guided by respect for each other's boundaries.
- Surya Narain Choudhary vs Union of India (1981): The Rajasthan High Court held that the pleasure of the President was not justiciable as the Governor had no security of tenure and can be removed at any time by the President withdrawing pleasure.
- BP Singhal vs Union of India (2010): The Supreme Court elaborated on the pleasure doctrine. It upheld that "no limitations or restrictions are



placed on the 'at pleasure 'doctrine', but that "does not dispense with the need for a cause for withdrawal of the pleasure".

- The Bench held that the court will presume that the President had "compelling and valid" reasons for the removal but if a sacked he/she comes to the court, the Centre will have to justify its decision.

**GANGA UTSAV 2022-**



- Recently, the Ministry of Jal Shakti by the collaboration of The National Mission for Clean Ganga (NMCG) has organized Ganga Utsav- The River Festivals 2022.
- The NMCG celebrates the festival every year to strengthen the Public – River Connection.
- NMCG is the implementation wing of National Ganga Council, set up in 2016, which replaced the National Ganga River Basin Authority (NRGBA).
- It highlights the significance of Jan Bhagidari (People's Participation) in the revival of Ganga, with a focus on encouraging stakeholder engagement and public participation towards the rejuvenation of river Ganga.

**Government Initiatives on River Ganga-**

- Ganga Action Plan:** It was the first river action plan to improve the water quality by the interception, diversion and treatment of domestic sewage.
- The National River Conservation Plan** is an extension to this plan, which aims at cleaning the Ganga River under the Ganga Action Plan phase-2.

- C. National River Ganga Basin Authority: It was formed in the year 2009 under Section-3 of the Environment Protection Act 1986.
  - D. Clean Ganga Fund: In 2014, it was formed for cleaning up of the Ganga, setting up of waste treatment plants and conservation of biotic diversity of the river.
  - E. Bhuvan-Ganga Web App: It ensures the involvement of the public in the monitoring of pollution entering into the river Ganga.
- Ban on Waste Disposal: In 2017, the National Green Tribunal (NGT) banned the disposal of any waste in the Ganga.

**PRIME MINISTER OF INDIA VISITED JHANSI ON THE EVE OF RANI LAKSHMIBAI'S BIRTH ANNIVERSARY-**



- Rani Lakshmbai is also known as Jhansi Ki Rani. She was the queen of the Maratha-ruled princely state of Jhansi.
- She was one of the leading figures of the Indian Revolt of 1857. She's seen as a symbol of resistance to British rule in India.
- She was born on 19th November 1828 in Varanasi, Uttar Pradesh. She was originally named Manikarnika.
- While pursuing studies, she also took formal training in martial arts, which included horse riding, shooting and fencing. Manu's companions

- included Nana Sahib (the adopted son of the Peshwa) and Taty Tope.
- At the age of 14, Manu got married to the Maharaja of Jhansi, Gangadhar Rao Newalkar, whose first wife had passed away before having a child and who was trying to have an heir to succeed him at the throne.
- Hence, Manikarnika became Laxmibai, Rani of Jhansi. Rani Lakshmbai gave birth to a son in who died after just three months of birth. The couple later adopted a son, Damodar Rao, from Gangadhar Rao's extended family.
- Rani Lakshmbai was one of the brave warriors of India's struggle for Independence. In 1853, when the Maharaja of Jhansi died, Lord Dalhousie refused to acknowledge the (adopted) child and applied the Doctrine of Lapse, and annexed the state.
- Rani Lakshmbai fought bravely against the British so as to save her empire from annexation. She died fighting on the battlefield on 17th June 1858. When the Indian National Army started its first female unit (in 1943), it was named after the valiant queen of Jhansi.

**Doctrine of Lapse-**

- It was an annexation policy followed widely by Lord Dalhousie when he was India's Governor-General from 1848 to 1856.
- According to this, any princely state that was under the direct or indirect control of the East India Company where the ruler did not have a legal male heir would be annexed by the company.
- As per this, any adopted son of the Indian ruler could not be proclaimed as heir to the kingdom.

**WOMEN REPRESENTATION IN PARLIAMENT-**

- Recently, the representation of women in parliament in New Zealand crossed the 50% mark.
- According to the Inter-Parliamentary Union, New Zealand is among a half-dozen nations in the world that can claim at least 50% female representation in their parliament by 2022.
- Other nations include Cuba, Mexico, Nicaragua, Rwanda and the United Arab Emirates. Globally, about 26% of lawmakers are women.

**As per the latest Election Commission of India (ECI) data-**

- As of October 2021, Women represent 10.5% of the total members of the Parliament.
- The scenario for women Members of Legislative Assemblies (MLAs) across all state assemblies in India is even worse, with the national average being just 9%.
- In the last 75 years of independence, women's representation in Lok Sabha has not even increased by 10%.
- In electoral representation, India has fallen several places in the Inter-Parliamentary Union's global ranking of women's parliamentary presence, from 117 after the 2014 election to 143 as of January 2020.
- India is currently behind Pakistan (106), Bangladesh (98) and Nepal (43) and ahead of Sri Lanka (182).

**STATES TO HAVE NIA OFFICE BY 2024-**

- Recently, Union Home Minister announced all states in the country will have National Investigation Agency (NIA) offices by 2024 as a strategy to counter terrorism.
- The Minister was addressing a two-day 'Chintan Shivr' organised with the objective to prepare an action plan for the implementation of 'Vision 2047' and 'Panch Pran' announced by India's Prime Minister during the Independence Day Speech.

**NATGRID-**

- States have been urged to utilise the National Intelligence Grid (NATGRID) that was operational now.
- NATGRID brings datasets of 11 agencies on a common platform.

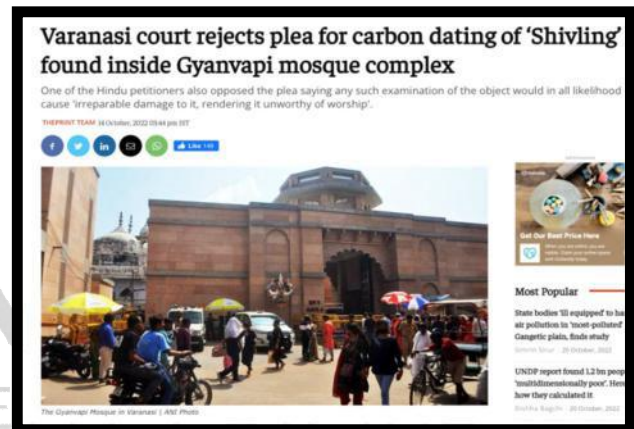
**Revamping Criminal Justice System-**

- Parliament will soon be presented with amendments to the Indian Penal Code (IPC) and Code of Criminal Procedure (CrPC).

**RECENTLY, A VARANASI DISTRICT COURT HAS REJECTED THE PLEA TO CONDUCT CARBON-DATING OF THE DISPUTED STRUCTURE KNOWN TO HAVE BEEN FOUND**

**INSIDE THE PREMISES OF THE GYANVAPI MOSQUE-**

- Carbon dating is a widely-used method to establish the age of organic materials, things that were once living.
- Living things have carbon in them in various forms. The dating method is based on the fact that Carbon-14 (C-14) is radioactive, and decays at a well-known rate.
- C-14 is an isotope of carbon with an atomic mass of 14. The most abundant isotope of carbon in the atmosphere is C-12. A very small amount of C-14 is also present.



- The ratio of C-12 to C-14 in the atmosphere is almost static, and is known. The Carbon Dating method cannot be used to determine the age of non-living things like rocks, for example.
- Also, the age of things that are more than 40,000-50,000 years old cannot be arrived at through carbon dating. This is because after 8-10 cycles of half-lives, the amount of C-14 becomes almost very small and is almost undetectable.

**RECENTLY, THE MINISTER OF CIVIL AVIATION HAS INAUGURATED THE 4TH HELI-INDIA SUMMIT 2022 IN THE UNION TERRITORY OF JAMMU AND KASHMIR-**

- Theme- Helicopters for Last Mile Connectivity.
- Announcing the achievements in the Civil Aviation sector, it was noted that the country had only 74 airports from 1947 to 2014, but it now has 141, with 67 added in the last seven years.
- Announced to develop Fractional Ownership Model and HEMS (Helicopter Emergency Medical Services) pilot called Project.

- Fractional Ownership Model helps to grow the non-scheduled operations. It will lower the barrier on the cost of acquisition of helicopters and airplanes through pooled capital by multiple owners.
- HEMS is called Project Sanjeevani; a helicopter will be deployed to provide emergency medical services at AIIMS Rishikesh. The helicopter will be based at the hospital at 20-minute notice and will have a service covering an area of 150 km radius.
- India is currently the 7th largest civil aviation market in the world and is expected to become the third-largest civil aviation market within the next 10 years.
- India is expected to overtake China and the United States as the world's third-largest air passenger market in the next ten years, by 2030, according to the International Air Transport Association (IATA).
- In FY22, airports in India pegged the domestic passenger traffic to be 166.8 million, a 58.5% YoY increase, and international passenger traffic to be 22.1 million, a 118% YoY increase, as compared to FY 2020-21.

**PRIME MINISTER'S DEVELOPMENT INITIATIVE FOR NORTH EAST REGION (PM-DEVINE)-**



- Recently, the Union Cabinet approved a new Scheme, Prime Minister's Development Initiative for North East Region (PM-DevINE).
- PM-DevINE was announced in the Union Budget 2022-23 to address development gaps in the North Eastern Region (NER).

- It is a Central Sector Scheme with 100% Central funding. The new scheme, to be implemented during the remaining four years of the 15th Finance Commission from 2022-23 to 2025-26 have an outlay of Rs.6,600 crore.
- The PM-DevINE is in addition to the quantum of resources available for the development of the NE region. It will not be a substitute for existing central and state schemes.
- The scheme will be implemented by the Ministry of Development of North Eastern Region through North Eastern Council or Central Ministries/agencies.

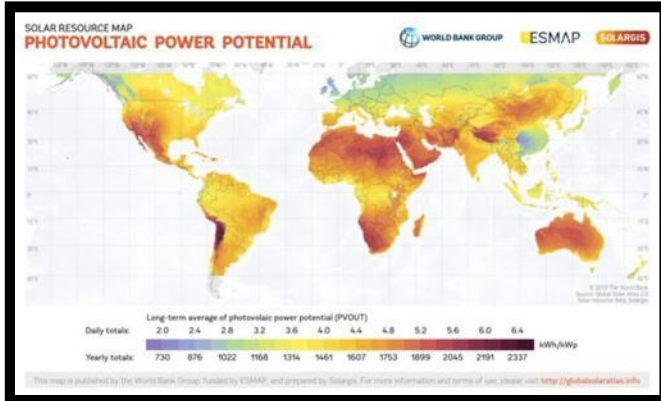
**Objective-**

- A. Fund infrastructure convergently, in the spirit of PM Gati Shakti
  - B. Support social development projects based on felt needs of the NER
  - C. Enable livelihood activities for youth and women
  - D. Fill the development gaps in various sectors
- North-East India is the gateway to South-East Asia and beyond. It is India's land-bridge to Myanmar.
  - India's Act East Policy places the northeastern states on the territorial frontier of India's eastward engagement.

**RECENTLY, THE PRIME MINISTER DECLARED MODHERA, A VILLAGE IN THE MEHSANA DISTRICT OF GUJARAT AS INDIA'S FIRST SOLAR-POWERED VILLAGE-**

- Modhera is famous for its Sun temple, a protected ancient site, which is situated on the river Pushpavati. It was built by King Bhima-I of the Chalukya dynasty in 1026-27.
- The temple will acquire a 3-D projection facility which will inform tourists about the history of Modhera.
- The solar power village would be self-sufficient in solar energy generation, as it will utilise 1000 solar panels that have been installed on the village houses, generating electricity round the clock for the villagers.





- It is developed through Ground Mounted Solar power plant and more than 1300 Rooftop solar systems on residential and Government buildings, all integrated with Battery Energy storage systems (BESS).
- A BESS is a type of energy storage system that uses batteries to store and distribute energy in the form of electricity.
- The project will demonstrate how India's renewable energy prowess can empower people at the grassroots.
- The people in the village wouldn't pay for electricity, rather they could start selling it and earn from energy produced by the solar panel by selling it to the government grid.
- It will generate employment at the village level, and ultimately improve the standard of living.
- Residents of the area will be able to save 60-100% of their electricity bills.
- The installed solar energy capacity in India has increased by 19.3 times in the last 8 years and stands at 56.6 GW.
- Further, India has set an ambitious target to achieve a capacity of 175 GW worth of renewable energy by the end of 2022, which expands to 500 GW by 2030. This is the world's largest expansion plan for renewable energy.
- India was the second-largest market in Asia for new solar PV capacity and third globally. It ranked fourth for total installations (60.4 GW), overtaking Germany (59.2 GW) for the first time.
- As of June 2022, Rajasthan and Gujarat were the top states for large-scale solar, accounting for 53% and 14% of installations, respectively, followed by Maharashtra with 9%.

RECENTLY, THE PRIME MINISTER INAUGURATED THE FIRST PHASE OF THE ' SHRI MAHAKAL LOK ' CORRIDOR IN UJJAIN, MADHYA PRADESH-

**12 Jyotirlinga in India**

**12-Jyotirlinga**

**Jyotirlinga List with Location**

No	Jyotirlinga	Location
1	Somnath Jyotirlinga	Saurashtra, Gujarat
2	Mahakaleshwar Jyotirlinga	Ujjain, Madhya Pradesh
3	Omkareshwar Jyotirlinga	Shivpuri, Madhya Pradesh
4	Mallikarjuna Jyotirlinga	Srisailem, Andhra Pradesh
5	Vajinath Jyotirlinga	Parli, Maharashtra
6	Kedarnath Jyotirlinga	Kedarnath, Uttarakhand
7	Nageshwar Jyotirlinga	Darukavanam, Gujarat
8	Trimbakeshwar Jyotirlinga	Nasik, Maharashtra
9	Bhimashankar Jyotirlinga	Pune, Maharashtra
10	Rameshwar Jyotirlinga	Rameshwaram, Tamil Nadu
11	Grishneshwar Jyotirlinga	Aurangabad, Maharashtra
12	Kashi Vishwanath Jyotirlinga	Varanasi, Uttar Pradesh

- After Vishwanath temple in Varanasi and the Kedarnath shrine in Uttarakhand, Mahakal temple is the third 'jyotirlinga' site to see a major upliftment exercise.
- The Rs 800-crore Mahakal corridor is four times the size of the Kashi Vishwanath Corridor.
- Mahakal Maharaj Mandir Parisar Vistar Yojna is a plan for the expansion, beautification, and decongestion of the Mahakaleshwar temple and its adjoining area in Ujjain district.
- Under the plan, the Mahakaleshwar temple premises of around 2.82 hectares is being increased to 47 hectares, which will be developed in two phases by the Ujjain district administration.
- This will include the 17 hectares of Rudrasagar lake. The project is expected to increase annual footfall in the city from the current 1.50 crore to nearly three crores.

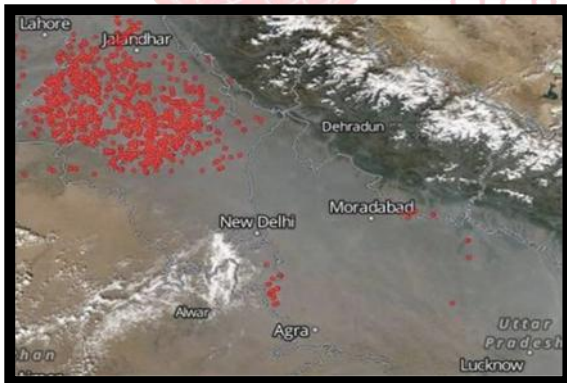
**STUBBLE BURNING-**

- Recently, the Delhi government announced that it would spray Pusa bio-decomposer free of cost over 5,000 acres of paddy fields in the city as this would help in controlling stubble burning and air pollution during winter.

- Stubble (parali) burning is a method of removing paddy crop residues from the field to sow wheat from the last week of September to November, coinciding with the withdrawal of southwest monsoon.
- Stubble burning is a process of setting on fire the straw stubble, left after the harvesting of grains, like paddy, wheat, etc. It is usually required in areas that use the combined harvesting method which leaves crop residue behind.
- It is a common practice in October and November across North West India, but primarily in Punjab, Haryana, and Uttar Pradesh.

**Effects of Stubble Burning-**

- Pollution- Emits large amounts of toxic pollutants in the atmosphere which contain harmful gases like methane (CH<sub>4</sub>), Carbon Monoxide (CO), Volatile Organic compounds (VOC) and carcinogenic polycyclic aromatic hydrocarbons.
- These pollutants disperse in the surroundings, may undergo a physical and chemical transformation and eventually adversely affect human health by causing a thick blanket of smog.
- Soil Fertility- Burning husk on the ground destroys the nutrients in the soil, making it less fertile.



- Heat Penetration- The heat generated by stubble burning penetrates into the soil, leading to the loss of moisture and useful microbes.

**Pusa Bio-Decomposer-**

- It is essentially a fungi-based liquid solution that can soften hard stubble to the extent that it can be easily mixed with soil in the field to act as compost.
- It produce enzymes to digest cellulose, lignin and pectin in paddy straw.

- It is developed by the Indian Council of Agricultural Research (ICAR) and named after ICAR's campus at Pusa in Delhi.
- It rapidly converts crop residues, animal waste, dung and other waste into organic manure.
- The decomposer improves the fertility and productivity of the soil as the stubble works as manure and compost for the crops and lesser fertiliser consumption is required in the future.

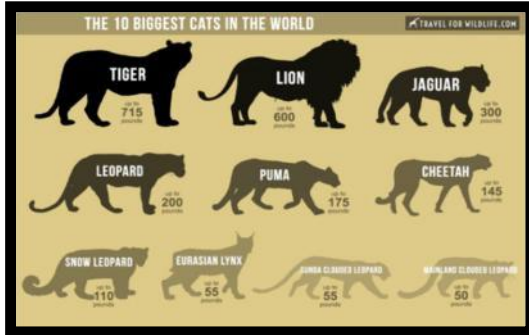
**RECENTLY, THE GOVERNMENT HAS LAUNCHED A NATIONAL LOGISTICS POLICY (NLP) 2022, AIMING TO ACHIEVE 'QUICK LAST-MILE DELIVERY', END TRANSPORT-RELATED CHALLENGES-**

- Logistics encompasses planning, coordinating, storing, and moving resources—people, raw materials, inventory, equipment, etc., from one location to another, from the production points to consumption, distribution, or other production points.
- The term "logistics" describes the total process of controlling the acquisition, storage, and delivery of resources to their intended location.
- It entails locating potential distributors and suppliers and evaluating the viability and accessibility of such parties.
- The policy focuses on key areas such as process re-engineering, digitisation, and multi-modal transport. It is a crucial move as high logistics cost impacts the competitiveness of domestic goods in the international market.
- The need for a national logistics policy was felt since the logistics cost in India is high as compared to other developed economies.
- Logistics costs have to be cut by half to be near global benchmarks by 2030 by reducing the cost of logistics from 14-18% of GDP to global best practices of 8%.
- Countries like the US, South Korea, Singapore, and certain European nations have such a low logistics cost-to-GDP ratio.
- The current cost is 16% of GDP.
- Being the 5th largest economy in the world, India aims to be among the top 10 in the LPI (Logistics Performance Index) by 2030. It has to match the

pace of South Korea. In 2018, India was ranked 44th in the LPI.

**PM RELEASES WILD CHEETAHS IN KUNO NATIONAL PARK, MADHYA PRADESH-**

- PM Narendra Modi has released 8 wild Cheetahs in Kuno National Park, Madhya Pradesh, which has been brought from Namibia.



- Cheetah was declared extinct from India in 1952.
- Cheetahs are being introduced in India under Project Cheetah, which is world's first inter-continental large wild carnivore translocation project.

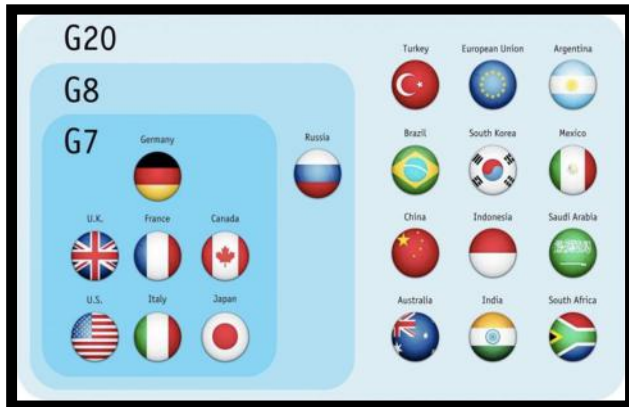
- Out of the eight Cheetahs, there are 5 female and 3 male Cheetahs.
- Kuno National Park is part of the Khathiar-Gir dry deciduous forests ecoregion.
- The last cheetah in India died in 1947 in Korea district in present day Chhattisgarh, which was earlier part of Madhya Pradesh, and the species was declared extinct from India in 1952. According to reports, the cheetah has lost 90 percent of its global habitat in the last 100 years.
- The 'African Cheetah Introduction Project in India' was conceived in 2009, with a plan to introduce the big cat by November last year in Kuno National Park, but it suffered a setback due to the COVID-19 pandemic.
- The cheetahs boarded a customised Boeing 747-400 aircraft from Namibia's capital Windhoek and arrive in Gwalior after completing an overnight journey lasting 10 hours and traversing 8,000 kilometres.
- The felines were then shifted from Gwalior to Kuno National Park (KNP) in an Indian Air Force (IAF) Chinook heavy-lift helicopter.



# INTERNATIONAL NEWS

## G-20 SUMMIT 2022-

- Recently, the 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.

## Outcomes of the Summit-

- Condemning Russian Aggression
- Focus on Global Economy
- Food Security
- Climate Change
- Digital Transformation
- Health

## Challenges before the G-20 Member Countries-

- Impact of Russia's Invasion of Ukraine
- Impact of Rising Inflation
- Slowdown of Major Economies
- Rising Geopolitical Rifts

## RECENTLY, CHINA HOSTED A MEETING OF THE SHANGHAI COOPERATION ORGANISATION (SCO) HEADS OF GOVERNMENT-

- The SCO Heads of Government meet is held annually to focus on the trade and economic agenda of the organisation and approves the SCO's annual budget.
- India has taken over as Chairperson of the SCO for 2023, and will host leaders of all SCO countries at a summit in Delhi expected in mid-2023.

- Earlier, the SCO summit 2022 was held recently in Samarkand, Uzbekistan.
- The heads of delegations of the SCO member states exchanged views on key issues of global and regional development, discussed priority steps to increase trade, economic, cultural, and humanitarian cooperation within the SCO.
- India stated that its total trade with SCO Members is only USD 141 billion, which has potential to increase manifold.
- The bulk of India's trade with SCO countries is with China, which crossed USD 100 billion in 2022, while trade with Russia is less than USD 20 billion.
- Trade with Central Asian countries is less than USD 2 billion, and with Pakistan it is about USD 500 million.



- While taking aim at China's BRI (Belt and Road Initiative), which passes through parts of Pakistan occupied Kashmir (PoK), India said that Connectivity projects should respect the sovereignty and territorial integrity of Member States and respect international law.

## AT SCO MEET, S.JAISHANKAR TARGETS BRI-

- The 21st Meeting of SCO Council of Heads of Government (CHG) was held on 01 November 2022 in the virtual format.

- The SCO CHG meeting held annually focuses on the trade and economic agenda of the Organization and approves its annual budget.
- Connectivity projects in the SCO region should focus on the interests of Central Asian states and respect the sovereignty and territorial integrity of countries.
- India said better connectivity will unlock the economic potential of the SCO region.
- In this context, Iran's Chabahar port and the International North-South Transport Corridor (INSTC) could become enablers. India has developed a terminal at Chabahar port and there are plans to integrate the strategic port with INSTC.
- India did not support China's Belt and Road Initiative (BRI)
- India was the only SCO member state that did not reaffirm support for China's Belt and Road Initiative (BRI) in a joint communique issued after the meeting.
- Other countries reaffirmed their support for China's BRI and to work jointly to implement the project.

**RECENTLY, THIRD 'NO MONEY FOR TERROR' (NMFT) MINISTERIAL CONFERENCE ON COUNTER-TERRORISM FINANCING WAS HELD IN NEW DELHI, INDIA-**

- The Prime Minister of India has strongly asked for avoiding any ambiguity in dealing with terrorism and also warned against nations that use terrorism as a tool of foreign policy.
- The "No Money for Terror" conference was started in 2018, as an initiative of the French government, to specifically focus on cooperation between countries to choke terror funding.
- In 2019, the conference was held in Australia.
- It was to be held in India in 2020 but was postponed due to the Covid-19 pandemic.
- It offered a unique platform for participating nations and organisations to deliberate on the



effectiveness of the current international regime on Counter Terrorism Financing and the steps required to address emerging challenges.

- It was attended by delegates from 72 countries and 15 international organisations.

**During the Conference, deliberations were held in four sessions with focus on:**

- A. Global Trends in Terrorism and Terrorist Financing.
  - B. Use of Formal and Informal Channels of Funds for Terrorism.
  - C. Emerging Technologies and Terrorist Financing.
  - D. International Co-operation to Address Challenges in Combating Terrorist Financing.
- India urged the international community to take cognisance of threats emerging from regime change in Afghanistan, as the last one had led to 9/11 attacks.
  - The regime changes and the growing influence of Al Qaeda & Islamic State of Iraq and Syria (ISIS) have emerged as a significant challenge to regional security.
  - In January 2009, in the wake of the 26/11 terrorist attack, the National Investigation Agency was established to deal with terrorist crimes.
  - In India, the Unlawful Activities (Prevention) Amendment Act is the primary anti-terrorism law.
  - To gather information related to security, the National Intelligence Grid (NATGRID) has been established.
  - An operational hub has been created for the National Security Guard to ensure a rapid response to terrorist attacks.

**RECENTLY, UKRAINE'S CAPITAL REGION WAS STRUCK BY IRANIAN-MADE KAMIKAZE DRONES-**

- These kamikaze drones are not new, and have also been supplied by the US to Ukraine in its ongoing war with Russia.
- These are small unmanned aircraft that are packed with explosives that can be flown directly at a tank or a group of troops that are destroyed when it hits the target and explodes.
- They are called Switchblade because their bladelike wings spring out on launch. The drones have the capability of going past traditional

defences to strike its targets and also cost a fraction of what the larger counterparts do.

- These small lethal drones are difficult to detect on radar, and they can even be programmed to hit targets without human intervention, based on facial recognition.
- Although the Kamikaze might be the most advanced form of this genre of drones, Russia, China, Israel, Iran and Turkey all have some version of it.



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### **INDIA-GCC FREE TRADE AGREEMENT (FTA)-**

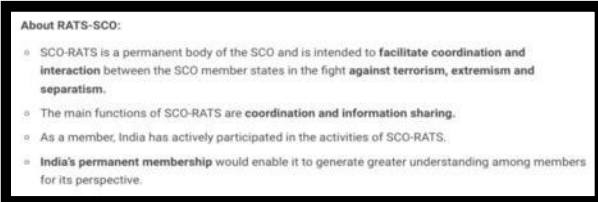
- India and the Gulf Cooperation Council (GCC) member countries are expected to start negotiations for a free trade agreement next month to boost economic ties between the two regions.
- India has already implemented a free trade pact with the UAE in May this year. Terms and Conditions for this one are also being finalised.
- Gulf Cooperation Council (GCC) is a union of six countries in the Gulf region — Saudi Arabia, UAE, Qatar, Kuwait, Oman and Bahrain.
- It was established by an agreement concluded in 1981 among Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the UAE in view of their special relations, geographic proximity, similar political systems based on Islamic beliefs, joint destiny and common objectives.
- The Secretariat is located in Riyadh, Saudi Arabia. It is a political, economic, social, and regional organisation according to its charter.

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**INDIA HOSTS SCO JOINT ANTI-TERROR DRILL TO ENHANCE OPERATIONAL CAPABILITIES-**

- The National Security Guard (NSG) is hosting the Multinational Joint Anti-Terror Exercise (JATE) under the Shanghai Cooperation Organization (SCO) Regional Anti-Terrorist Structure (RATS) at NSG Manesar Garrison.
- Stage 1 of the exercise was conducted from 27th July to 1st August 2022 by the National Terrorist Forces of SCO Members Countries in their respective territories.
- The Exercise aims to exchange expertise, and best practices, and build synergies between counter Terrorism Forces of the SCO RATS member countries.
- The second phase of the exercise will be conducted from 8th October 2022 to 13th October 2022.



- The Stage-2 Exercise will be conducted at Manesar Garrison, in which eight representatives from the National Counter Terrorism Forces of the Republic of Kazakhstan, Kyrgyz Republic, the Republic of Uzbekistan, the Russian Federation, and NSG of the Republic of India are participating.

**NORD STREAM PIPELINE-**



- Recently, leaks were found in the pipelines comprising the Nord Stream pipelines (Nord Stream 1 and Nord Stream 2) located near Denmark and Sweden.
- The leaks happened just before the ceremonial launch of the Baltic Pipe carrying gas from Norway to Poland, which is an effort by Poland to decrease its dependence on Russia for energy.
- Nord Stream 1 is a 1,224 km underwater gas pipeline running from Vyborg in northwest Russia to Lubmin in northeastern Germany via the Baltic Sea. It was completed in 2011.
- Nord Stream 2 which runs from Ust-Luga in Leningrad to Lubmin was completed in September 2021 and has the capacity to handle 55 billion cubic meters of gas per year once it becomes operational.
- The twin pipelines together can transport a combined total of 110 billion cubic metres (bcm) of gas a year to Europe for at least 50 years.
- The Nord Stream crosses the Exclusive Economic Zones (EEZs) of several countries including Russia, Finland, Sweden, Denmark and Germany, and the territorial waters of Russia, Denmark, and Germany.
- In Germany, the pipeline connects to the OPAL (Baltic Sea Pipeline) and NEL (North European Pipeline) which further connects to the European grid.
- Russia had already decreased the supply of gas to Europe after the European Union imposed sanctions on Moscow for invading Ukraine.
- The Nord Stream 2, despite being completed, could not become operational after Germany pulled out of the project after Russia invaded Ukraine.
- The stream was supposed to double Russia's energy export to Europe to 110 billion cubic meters.
- The short supply of the gas pipeline resulted in a sudden hike in energy prices in Europe. With the shutting down of the Nord Stream pipeline, Europe faces a tough time ahead with winter approaching.

**INDIA-MADE SYRUPS AND DEATHS IN GAMBIA-**

- Recently, the World Health Organisation (WHO) issued an alert about four Indian-manufactured cough syrups, which are said to be linked to acute kidney injury in children and 66 deaths in the small West African nation of The Gambia.
- The WHO analysis of samples of each of these products had confirmed the presence of “unacceptable amounts of diethylene glycol and ethylene glycol as contaminants”. These ingredients are not allowed in food or drugs, as they can cause abdominal pain, vomiting, diarrhoea, headache, severe renal injury and neurological toxicity.
- The company said these were not sold in India and are only for export markets already approved by the DCGI.
- The Drugs and Cosmetics Act, 1940 and Rules 1945 have entrusted various responsibilities to central and state regulators for regulation of drugs and cosmetics. It provides the regulatory guidelines for issuing licenses to manufacture Ayurvedic, Siddha, Unani medicines.
- Central Drugs Standard Control Organisation (CDSCO) Prescribes standards and measures for ensuring the safety, efficacy and quality of drugs, cosmetics, diagnostics and devices in the country.
- CDSCO regulates export of drugs in India, any manufacturer with the certification from CDSCO can export drugs outside India.
- Drugs Controller General of India is the head of department of the CDSCO of the Government of India responsible for approval of licences of specified categories of drugs such as blood and blood products, IV fluids, vaccines and sera in India.



- DCGI also sets standards for manufacturing, sales, import, and distribution of drugs in India.

**RECENTLY, RUSSIA HOSTED THE 7TH EASTERN ECONOMIC FORUM (EEF) AT VLADIVOSTOK-**

- The forum is a platform for entrepreneurs to expand their businesses into Russia’s Far East (RFE).
- The EEF was established in 2015 to encourage foreign investments in the RFE.
- The EEF displays the economic potential, suitable business conditions and investment opportunities in the region.
- Agreements signed at the EEF increased from 217 in 2017 to 380 agreements in 2021, worth 3.6 trillion roubles.



- The agreements focus on infrastructure, transportation projects, mineral excavations, construction, industry and agriculture.
- China, South Korea, Japan and India are the Key Players in the region, where China is the biggest investor.
- China who sees potential in promoting the Chinese Belt and Road Initiative (BRI) and the Polar Sea Route in the RFE.
- China’s investments in the region account for 90% of the total investments.
- Russia has strategically developed the region with the aim of connecting Russia to the Asian trading routes.
- With the fast modernisation of cities like Vladivostok, Khabarovsk, Ulan-Ude, Chita and more, Russia aims to attract more investments in the region.
- To survive the economic crisis and the sanctions with the help of China and other Asian powers.



**RECENTLY, INDIA CONVEYED ITS CONCERN OVER THE RECENT U.S. APPROVAL OF A \$450-MILLION SUSTENANCE PACKAGE FOR PAKISTAN'S F-16 FIGHTER FLEET-**

- Pakistan first received the F-16 aircraft package from the Ronald Reagan administration in the 1980s despite heavy objection from the Government of India which cautioned that the aircraft would be used against Indian targets.
- Indian objection was based on the findings that Pakistan would arm the F-16s with nuclear weapons that it had procured in a clandestine manner.
- The supply of F-16 multi role aircraft continued throughout the post-9/11 era till the Biden administration and the latest package shows the consistent nature of partnership between US and Pakistan.
- The US assistance will improve the precision-ability of the F-16 aircraft and allow Pakistan to access the latest air attack software from the United States.

**RECENTLY, UKRAINE HAS LAUNCHED A LIGHTNING COUNTER-OFFENSIVE IN THE COUNTRY'S NORTHEAST THAT SAW SURPRISING TERRITORIAL GAINS-**



- Recently, Ukraine has launched a lightning counter-offensive in the country's northeast that saw surprising territorial gains.
- Its forces have pushed back Russian soldiers from most of Kharkiv Oblast, retaking thousands of square kilometres of territory.

- This is the first time that Ukrainian troops have pushed back the Russians through combat since the Russia Ukraine conflict began.
- After capturing Lysychansk in July 2022 and taking the whole of Luhansk province coming under its control, Russia's battlefield combat came to a halt. Russia was controlling almost 25% of Ukraine at this time.
- The halt of Russian forces opened a window opportunity for Ukraine to move ahead with its counter-offensive plans.
- Advanced mid-range rocket systems such as High Mobility Artillery Rocket Systems (HIMARS). Military assistance worth more than USD 14.5 billion helped Ukraine in the gains.
- U.S. intelligence agencies also provided information to Ukraine on the weak links of the Russian defence.
- Russia was being faced with sanctions which made it difficult to make sure their supply was intact and they had to turn to Iran and North Korea.

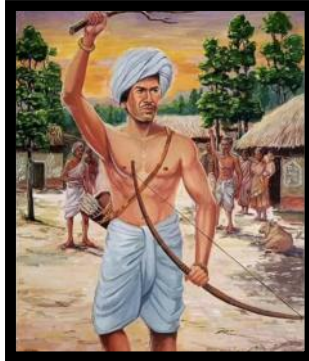
**SCO SUMMIT 2022: PRIME MINISTER MODI TO ATTEND SUMMIT IN UZBEKISTAN ON SEPT 15-16-**

- Prime Minister Narendra Modi will attend Shanghai Cooperation Organization (SCO) Summit in Uzbekistan on September 15-16, 2022.
- The leaders are expected to review the grouping's activities over the last two decades and discuss the prospectus of multilateral cooperation at the summit.
- The prime minister is also expected to hold a few bilateral meetings on the sidelines of the SCO summit 2022.
- Prime minister Narendra Modi will be visiting Samarkand at the invitation of the president of Uzbekistan Shavkat Mirziyoyev. The upcoming SCO summit will be the 22nd Meeting of the Council of Heads of State of the Shanghai Cooperation Organisation.

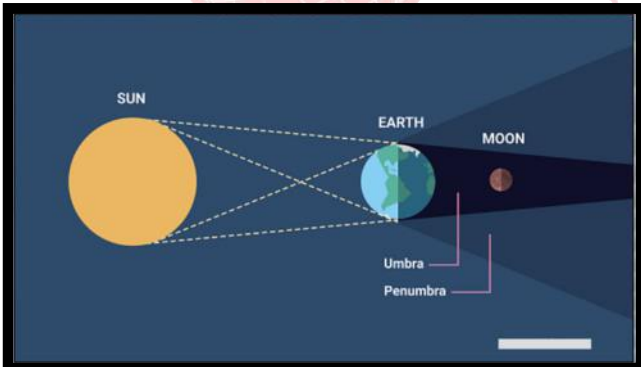
# IMPORTANT DATES AND EVENTS

## JANJATIYA GAURAV DIVAS-

- Recently, the President of India on the occasion of the Janjatiya Gaurav Divas (15th November 2022) paid tribute to the freedom fighter Bhagwan Birsa Munda on his birth anniversary.
- The Janjatiya Gaurav Divas is celebrated every year to recognize the efforts of the tribals in the preservation of cultural heritage and promotion of Indian values of national pride, valour, and hospitality.
- Tribals held several tribal movements across different regions of India against the British colonial rule. These tribal communities include Tamars, Santhals, Khasis, Bhils, Mizos, and Kols to name a few.



## RECENTLY, A TOTAL LUNAR ECLIPSE (TLE) OCCURRED ON 8TH NOVEMBER, 2022-



- Earlier Indian witnessed a Partial Solar Eclipse in October 2022.
- Lunar eclipse takes place when the Moon moves into the Earth's shadow. The Earth has to be directly between the Sun and the Moon, and a lunar eclipse can only take place during a full Moon.
- First, the Moon moves into the penumbra – the part of the Earth's shadow where not all of the light from the Sun is blocked out. Part of

the Moon's disc will look dimmer than a regular full Moon.

- And then the Moon moves into the Earth's umbra, where direct light from the Sun is totally blocked out by the Earth. This means the only light reflecting off the Moon's disc has already been refracted, or bent, by the Earth's atmosphere.

### Total Lunar Eclipse-

- A Total Lunar Eclipse happens when the earth is positioned between the sun and the moon and casts a shadow on the latter.

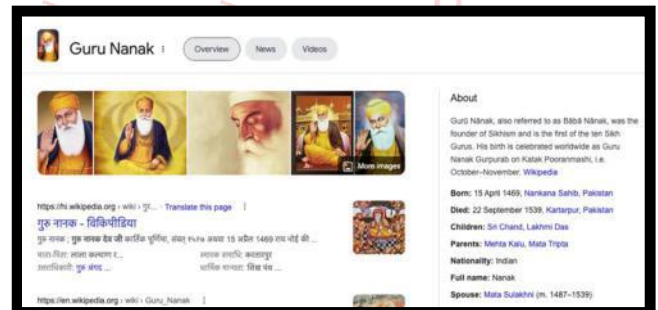
### Partial lunar eclipse-

- An imperfect alignment of Sun, Earth and Moon results in the Moon passing through only part of Earth's umbra.

### Penumbral eclipse-

- The Moon travels through Earth's penumbra, or the faint outer part of its shadow. The Moon dims so slightly that it can be difficult to notice.

## RECENTLY, THE 553RD BIRTH ANNIVERSARY OF GURU NANAK DEV WAS CELEBRATED-



- In 1459 at Talwandi Rai Bhoi village near Lahore, which was later renamed as Nankana Sahib. He was the first of the 10 Sikh gurus and the founder of Sikhism.
- Initiated inter-faith dialogue way back in the 16th century and had conversations with most of the religious denominations of his times. Wrote compositions which were included in the Adi Granth, compiled by Guru Arjan (1563-1606), the fifth Sikh guru.

- This came to be known as Guru Granth Sahib after the additions made by the 10th Sikh guru – Guru Gobind Singh (1666-1708).
- Advocated the 'Nirguna' (devotion to and worship of formless divine) form of bhakti. Set up rules for congregational worship (Sangat) involving collective recitation.
- Gave the basic mantra of 'Ek Onkar' to his followers and insisted on treating all human beings equally, without discriminating on the basis of caste, creed and gender.

**7 INDIAN STATES & 2 UT'S CELEBRATED THEIR FORMATION DAY ON NOVEMBER 1ST-**

- On November 1st, Seven of the 28 Indian states and two Union Territories observed their formation day.
- The states of Andhra Pradesh, Chhattisgarh, Haryana, Karnataka, Kerala, Madhya Pradesh and Punjab besides the Union Territories of Lakshadweep and Puducherry were formed on this day, though in different years. Besides 28 states, India has eight Union Territories.
- While Andhra Pradesh, Kerala, Karnataka and Madhya Pradesh came into being in 1956, Punjab and Haryana were carved out as separate states in 1966 while Chhattisgarh was granted statehood in 2002.
- It was the first time in 1956 that several states were formed on linguistic grounds under the State Reorganisation Act. All these states and the Union Territory of Puducherry celebrate their formation days on November.



**PRIME MINISTER OF INDIA PAID TRIBUTES TO INDIA'S FIRST EDUCATION MINISTER**

**MAULANA ABUL KALAM AZAD ON HIS 134<sup>TH</sup> BIRTH ANNIVERSARY-**

- 11th November is observed as National Education Day every year since 2008 to commemorate his birth anniversary.
- Maulana Abul Kalam Azad, originally named Muhiyuddin Ahmad, was born in 1888 in Mecca, Saudi-Arabia.
- Azad was a brilliant debater, as indicated by his name - "Abul Kalam" which literally means "Lord of Dialogues".
- He donned many hats of being a journalist, freedom fighter, politician, and educationist.
- He was a proponent of Hindu Muslim unity, opposed to Partition.
- In 1912, he started a weekly journal in Urdu called Al-Hilal which played an important role in forging Hindu-Muslim unity after the bad blood created between the two communities in the aftermath of Morley-Minto reforms (1909).
- Azad supported the Non-Cooperation Movement (1920-22) started by Gandhiji and entered the Indian National Congress in 1920.
- In 1923, he was elected as the president of Indian National Congress. At an age of 35, he became the youngest person to serve as the President of the Indian National Congress.
- Maulana Azad was arrested in 1930 for violation of the salt laws as part of Gandhiji's Salt Satyagraha. He was put in Meerut jail for a year and a half.
- He again became the president of Congress in 1940 and remained in the post till 1946.
- In 1947, he became the first education minister of free India and remained at this post till his death



in 1958. In his tenure, he did tremendous work for the upliftment of the country.

- The first IIT, IISc, School of Planning and Architecture and the University Grants Commission were established under his tenure as the education minister.

**INDIA CELEBRATES 134TH BIRTH ANNIVERSARY OF CV RAMAN-**



- CV Raman was born on 7th November 1888, in Trichinopoly, Tamil Nadu, and died on 21st November 1970, in Bangalore.
- CV Raman was one of India's greatest scientists. Sir Chandrasekhara Venkata Raman was a physicist who made discoveries that were broader than modern science and were called the Raman Effect, the phenomenon of change of wavelength of light when a beam is scattered in a medium.
- In 1917, he joined the University of Calcutta as a professor of Physics. Raman initially worked as a student in the field of optics and acoustics. Raman continued his research at the Indian Association for the Cultivation of Science (IACS) in Calcutta while he worked as a professor at the university. He later became an honorary scholar at the association.
- Raman was fond of Indian classical music and was keenly interested in the acoustics of stringed instruments.
- He even constructed a mechanical violin. One of Raman's discoveries is related to the frequency response of the violin and its quality. The frequency response curve is known as the 'Raman curve'.

- At the age of 42, Raman was awarded the Nobel Prize in Physics in 1930 "for his work on the scattering of light and the discovery of the effect named after him".

**WORLD TOILET DAY-**



- Each year World Toilet Day is observed on the 19th November to raise awareness about the importance of sustainable sanitation to keep people healthy.
- The theme for 2022: "Making the invisible visible"
- World toilet day is observed annually since 2013.
- Aim is about taking action to tackle the global sanitation crisis and achieve Sustainable Development Goal (SDG) 6: sanitation and water for all by 2030.
- This year, the Ministry of Jal Shakti, under the Swachh Bharat Mission Grameen (SBM-G) is organising 'Swachhta Run' across rural India.
- SBM-G is recognised as the world's largest behavior change program.
- India has already achieved SDG Target 6.2 pertaining to access to safe sanitation, when the entire country achieved Open Defecation Free State (ODF) status in 2019; it is persistent in its efforts to now achieve ODF+ status.
- Swachh Bharat Mission Grameen (SBM-G) was launched in 2014 by the Ministry of Jal Shakti to accelerate the efforts to achieve universal sanitation coverage and to put focus on sanitation.
- Top Performing States- The top five performing states are Telangana, Tamil Nadu, Odisha, Uttar Pradesh and Himachal Pradesh where maximum

number of villages have been declared as ODF Plus.

**NATIONAL UNITY DAY 2022-**

- On National Unity Day 2022, the Union Home Minister of India remembered Sardar Vallabhbhai Patel on his 147th birth anniversary saying that the latter realised the dream of a strong and united India with his farsightedness.



- National Unity Day is celebrated every year on 31st October to commemorate the birth anniversary of Sardar Vallabhbhai Patel. It is also known as Rashtriya Ekta Diwas. The reason behind the celebration of this day is to make people aware of the ideas of staying together and uplifting society.
- It was celebrated for the first time in 2014.
- Several events are organised on this day like 'Run For Unity' - a nationwide marathon to increase awareness about the contribution of Sardar Patel to national integrity, National Unity pledge, etc.
- In 2018, the Government of India unveiled the 'Statue of Unity' in Gujarat to mark the 143rd birth anniversary of Sardar Patel.
- The Statue of Unity is the tallest statue in the world. At 182 meters, it is 23 meters taller than China's Spring Temple Buddha statue and almost double the height of the Statue of Liberty (93 meters tall) in the US.
- In January 2020, it was added to the 'Eight Wonders' of the Shanghai Cooperation Organization (SCO).
- Sardar Vallabhbhai Patel was born on 31st October 1875 in Nadiad, Gujarat. He was the first Home Minister and Deputy Prime Minister of India.

- He is recognized as the real unifier of India for his colossal contribution to integrate and make India a united (Ek Bharat) and an independent nation.
- This ideology is still reflected in the Atmanirbhar Bharat initiative which seeks to make India Self-Reliant. He is also remembered as the 'Patron saint of India's civil servants' as he established the modern all-India services system.

**DR. APJ ABDUL KALAM BIRTH ANNIVERSARY-**

Name	Avul Pakir Jainuladbeen Abdul Kalam
Born	15 <sup>th</sup> October 1931
Birth Place	Rameswaram, Tamil Nadu
Political Party	IND
Father's Name	Jainuladbeen Marakayar
Schooling	Schwartz Higher Secondary School
Higher Studies	Saint Joseph's College in Tiruchirapalli
Profession	Aerospace Scientist, Author
Political Career	11 <sup>th</sup> President of India
Awards	Bharat Ratna, Padma Bhushan, Padma Vibhushan, etc.
Died	27 <sup>th</sup> July 2015
Resting Place	Dr. APJ Abdul Kalam Desiya Ninaivagam, Pei Karumbu, Rameswaram, Tamil Nadu

- Avul Pakir Jainuladbeen Abdul Kalam born on 15th October 1931 was an Indian aerospace scientist and the 11th president of India.
- He served as the President of India from 2002 to 2007. He was known as the Missile Man of India for his works and development of ballistic missiles and launch vehicle technology.
- He has spent more than four decades serving as a scientist and science administrator at Defence Research and Development Organization (DRDO) and Indian Space Research Organization (ISRO). He was constantly involved in the civil space program of India and military missile development. He was also the recipient of several prestigious awards which includes Bharat Ratna.

**INTERNATIONAL GIRL CHILD DAY-**

- Every year, International Girl Child Day is observed on 11th October 2022.
- First time in history, the Beijing Declaration and Platform for Action in 1995, proposed an action plan to advance the rights of girls. In 2011, the United Nations General Assembly

adopted Resolution 66/170 to declare 11<sup>th</sup> October as the International Day of the Girl Child.

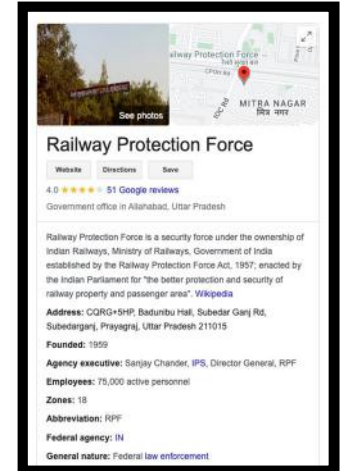
- Theme for 2022- “Our time is now—our rights, our future”
- The day is observed to recognise girls' rights and the unique challenges girls face around the world.
- The International Day of the Girl Child focuses attention on the need to address the challenges girls face and to promote girls' empowerment and the fulfilment of their human rights.
- According to the recently released report “Accidental Deaths & Suicides in India Report 2021” by National Crime Records Bureau (NCRB) Crime against children surpassed the pre-pandemic levels after declining in 2020 due to Covid-related restriction.
- In 2021, 1.49 lakh such cases were recorded, higher than 1.48 lakh in 2019.
- The data published by the NCRB is specifically grim for the eastern states of India- Sikkim has the highest rate of sexual offences against children followed by Kerala, Meghalaya, Haryana and Mizoram.
- West Bengal and Odisha are among the top five states (along with Maharashtra, MP and UP) which account for 47.1% of the total crimes committed against children across the country.
- India has one of the highest rates of female foeticide in the world. The Census of 2011 has recorded the lowest ever sex ratio of 914 in the age group 0-6 years with 3 million missing girls; from 78.8 million in 2001 to 75.8 million in 2011.
- Each year, at least 1.5 million girls under 18 get married in India. Nearly 16% of adolescent girls aged 15-19 are currently married.
- A study by the International Centre for Research on Women has found that girls out of school are 3.4 times more likely to be married or have their marriage already fixed than girls who are still in school.

#### Related Initiatives-

- Beti Bachao Beti Padhao
- Sukanya Samridhi Yojana
- CBSE Udaan Scheme
- National Scheme of Incentive to Girls for Secondary Education (NSIGSE)

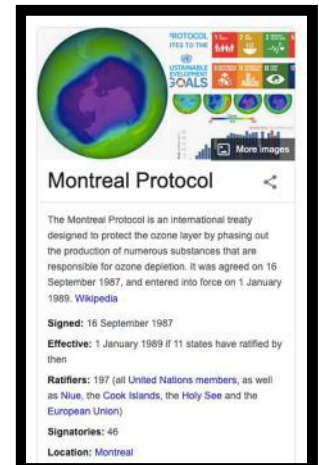
### THE RAILWAY PROTECTION FORCE (RPF) CELEBRATED ITS 38TH RAISING DAY ON 20TH SEPTEMBER 2022-

- RPF was constituted by an Act of Parliament in 1957 for providing security to Railway property.
- Subsequently, the force was empowered to enquire, arrest and prosecute the offenders involved in unlawful possession of railway property in 1966.
- Over the years, it was felt that the force needed to be given the status of "An Armed Force of the Union" and finally the status was bestowed upon the force on 20th September 1985 by amending the RPF Act by the Parliament.
- Therefore, 20th September is celebrated every year as the Raising Day of RPF by members of the force and their families.



### INDIA OBSERVED 28TH WORLD OZONE DAY-

- Every year, 16th September is observed as the International Day for the Preservation of the Ozone layer (World Ozone Day) to commemorate the signing of the Montreal Protocol.
- The theme of World Ozone Day 2022 is “Montreal Protocol@35: global cooperation protecting life on earth”.
- In India Government promoted collaboration with eight Indian Institutes of Technology (Bombay, Roorkee, Hyderabad, Kanpur, Guwahati, Banaras, Madras and Delhi) to promote research and



development of chemicals with low global warming potential, including blends. These can be used as alternatives to substances controlled under the Montreal Protocol.

- It will also help promote the Make in India initiative of the Government.
- The Indian Cooling Action Plan (ICAP) was launched in March 2019 by the Ministry of Environment, Forests and Climate Change.
- The ICAP provides a 20-year perspective and outlines actions needed to provide access to sustainable cooling.

**The plan seeks to-**

- Reduce cooling demand across sectors by 20% to 25% by 2037-38
- Reduce refrigerant demand by 25% to 30% by 2037-38
- Reduce cooling energy requirements by 25% to 40% by 2037-38
- Recognise “cooling and related areas” as a thrust area of research under National Science and Technology Programme
- Training and certification of 100,000 servicing sector technicians by 2022-23, synergizing with Skill India Mission.

**NATIONAL ENGINEERS DAY: 15TH SEPTEMBER-**

Sir Mokshagundam Vishveshwaraya, KCIE FASc, often referred by his initials, MV, was the first Indian civil engineer, statesman and the 19th Diwan of Mysore, serving from 1912 to 1918. [Wikipedia](#)

**Born:** 15 September 1860, Muddenahalli

**Died:** 14 April 1962, Bengaluru

**Education:** College of Engineering (1883), Bangalore University (1881), University Of Mumbai, United Mission

**Awards:** Bharat Ratna

**Parents:** Venkatalakshamma, Mokshagundam Srinivasa Shastry

**Nationality:** Indian

- India observes National Engineer’s Day on September 15 every year to recognise the contribution of engineers in the development of the nation.

- This day commemorates the birth anniversary of Sir Moksha Gundam Visvesvaraya, who is considered one of the greatest engineers of India.
- MV was the Chief Engineer of Krishna Raja Sagar dam in the north-west suburb of Mysuru city.
- Along with India, Sri Lanka and Tanzania also celebrate Engineers Day on September 15, 2022.

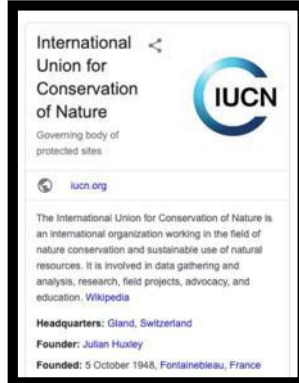
**HOME MINISTRY AWARDED 1082 POLICE MEDALS IN 2022-**



- The Union ministry of home affairs (MHA) has awarded 1,082 police personnel from CAPFs and state forces with various categories of service medals, including for gallant action on the eve of Independence Day.
- The decorations include 347 police medals for gallantry (PMG), 87 President’s police medals for distinguished service and 648 police medals for meritorious service.
- Out of the 347 gallantry awards, 204 personnel are being awarded for their gallant action in Jammu and Kashmir, 80 for displaying bravery in Left Wing Extremism or Naxal violence-affected areas and 14 personnel for showing bravery in North-East Region.
- The maximum gallantry medals at 109 have been received by the Central Reserve Police Force (CRPF) followed by 108 to the J&K Police, 19 to the Border Security Force (BSF) and six each to the Indo-Tibetan Border Police (ITBP) and Sashastra Seema Bal (SSB).
- Among the state police forces, 42 gallantry medals have been given to Maharashtra, 15 to Chhattisgarh among other forces and Central Armed Police Forces (CAPFs).

**THE WORLD ELEPHANT DAY IS CELEBRATED EVERY YEAR ON 12TH OF AUGUST, WITH THE AIM TO ACKNOWLEDGE ELEPHANTS' SIGNIFICANCE IN OUR ECOSYSTEM-**

- It emphasizes on raising the awareness of the threats that elephants face in their daily lives. Whether poaching, mistreatment in captivity, or habitat loss, every single factor plays a role in animal abuse.
- The elephant population has reduced by 50% over the past 75 years.
- The current population estimates indicate that there are about 50,000 - 60,000 Asian elephants in the world. More than 60% of the population is held in India.
- The campaign World Elephant Day was initiated in 2012 to bring awareness to the disturbing situations of African and Asian elephants. The objective of this campaign is to create a sustainable environment where animals are not exploited and taken care of.
- International Union for Conservation of Nature (IUCN) Red List of threatened species-
  - African Forest Elephant- Critically Endangered
  - African Savanna Elephant- Endangered
  - Asian Elephant- Endangered
- India has the largest number of wild Asian Elephants, estimated at 29,964 according to 2017 census by Project Elephant, i.e., about 60% of the species' global population.
- Project Elephant was launched in 1991-92 as a Centrally Sponsored Scheme of the Ministry of Environment and Forests.
- Estimation of wild elephant population in the year 2007, 2012 and 2017. Karnataka has the highest number of elephants followed by Assam and Kerala.



freedom from nearly two centuries of British colonial rule.

- Prime Minister Narendra Modi is leading the celebrations from Red Fort in New Delhi and is addressing the nation from Red Fort in New Delhi.
- This is his ninth address as the prime minister. To celebrate the 75 years of Independence the Government of India has started an initiative called "Azadi Ka Amrit Mahotsav".



- On March 12, 2021, Prime Minister Narendra Modi has launched the "Azadi Ka Amrit Mahotsav" to celebrate and commemorate 75 years of independence that started a 75-week countdown to our anniversary of independence. This means that India will celebrate its 76th Independence Day on August 15, 2022, and mark the end of its 75 years of freedom.
- The Englishmen entered Surat and Gujarat in 1619 for trading purposes. After the victory of the English East India Company at the Battle of Plassey in 1757, the Britishers made their control over India.
- The British Government dominated over the people of India for almost 200 years starting from 1757. Legendary freedom fighters and leaders like Bhagat Singh, Chandrashekhar Azad, Netaji Subhas Chandra Bose, Sardar Vallabhbhai Patel, Mahatma Gandhi and others sacrificed everything to see India as a free nation.
- The Indian Independence movement began during World War I and was led by Mohandas Karamchand Gandhi. On August 15, 1947, India got its freedom, ending an almost 200-year British rule. India's first prime minister Jawaharlal Nehru raised the Indian national flag above the Lahori Gate of Red Fort in Delhi on August 15, 1947. It is a tradition that has since been followed

**NATION CELEBRATES 76TH INDEPENDENCE DAY ON 15TH AUGUST 2022-**

- This year India is celebrating 76th Independence Day on 15th August 2022 to mark the country's



by the incumbent Prime Minister, followed by an address to the country.

**ON 8TH AUG 2022, INDIA COMPLETED 80 YEARS OF QUIT INDIA MOVEMENT ALSO KNOWN AS AUGUST KRANTI-**



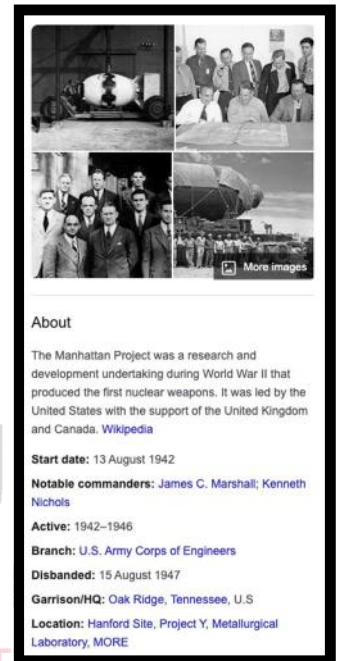
- On 8th August 1942, Mahatma Gandhi called to end British rule and launched the Quit India Movement at the session of the All-India Congress Committee in Mumbai.
- Gandhiji gave the call "Do or Die" in his speech delivered at the Gowalia Tank Maidan, now popularly known as August Kranti Maidan.
- Aruna Asaf Ali popularly known as the 'Grand Old Lady' of the Independence Movement is known for hoisting the Indian flag at the Gowalia Tank Maidan in Mumbai during the Quit India Movement.
- The slogan 'Quit India' was coined by Yusuf Meherally, a socialist and trade unionist who also served as Mayor of Mumbai. Meherally had also coined the slogan "Simon Go Back".
- The demand was to end the British rule in India with immediate effect to get the cooperation of Indians in World War-II against fascism.
- There was a demand to form a provisional government after the withdrawal of the Britishers.
- Underground activities were taken by leaders that included Ram Manohar Lohia, J.P. Narayan, Aruna Asaf Ali, Biju Patnaik, Sucheta Kriplani, etc which later emerged as prominent leaders.
- Women took active participation in the movement. Female leaders like Usha Mehta helped set up an

underground radio station which led to the awakening about the movement.

- A greater sense of unity and brotherhood emerged due to the Quit India Movement. Many students dropped out of schools and colleges, people gave up their jobs and withdrew money from the banks.

**HIROSHIMA DAY (ANTI-NUCLEAR DAY/ NAGASAKI DAY): 06 AUGUST-**

- Hiroshima Day takes place every year on August 6 to commemorate the day in August 1945 when an atomic bomb was dropped on the Japanese city of Hiroshima on August 6 by United States, followed a few days later by another drop on the city of Nagasaki on August 9.
- Although these bombings effectively ended World War II, the two cities were terribly destroyed and casualties were estimated at around 200,000, mostly civilians.
- This was the first time in the history of warfare when a nuclear bomb was used against a nation.
- The Day is observed to advocate, pray and work for a ban on all nuclear weapons and an end to war and violence through anti-war and anti-nuclear discussions and demonstrations around the world.
- 2022 marks the 77th anniversary of the world's first atomic bombing.



# SPORTS NEWS

## VICE PRESIDENT JAGDEEP DHANKHAR ATTENDS FIFA WORLD CUP INAUGURATION IN QATAR-

- Vice President Jagdeep Dhankhar has joined the Emir of Qatar Sheikh Tamim bin Hamad Al Thani and other dignitaries in the inauguration of FIFA World Cup in Qatar.



- Dhankhar is in Doha for a two-day visit to represent India at the inauguration of FIFA's showpiece event.
- Besides attending the inaugural ceremony of the Football World Cup, the Vice President will also interact with members of the Indian community during the visit.
- The 60,000-capacity Al Bayt Stadium in Al Khor will host the opening ceremony on 20 November 2022 just before the first match between host Qatar and Ecuador.

## INRECENTLY, (BCCI) ANNOUNCED A "PAY EQUITY POLICY", SAYING THAT ITS CENTRALLY-CONTRACTED MEN AND WOMEN PLAYERS WOULD GET THE SAME MATCH FEES-

- This is the first step towards tackling discrimination. Pay equity policy is being implemented for contracted women cricketers.

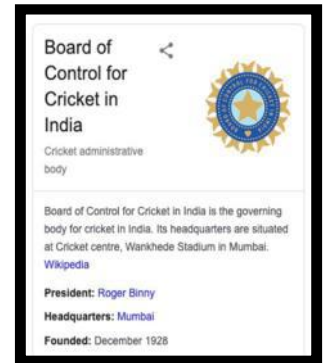
### Both men and women cricketers will be paid-

- Rs 15 lakh for Tests
- Rs 6 lakh for one-day internationals
- Rs 3 lakh for Twenty20 internationals

- Gender pay gap refers to the difference in earnings between women and men in the paid employment and the labour market.
- It is calculated by considering several parameters applied to the total number of employed members of both genders.

### Reasons for Pay Gaps in India-

- Poor access to the education system and work experience:
- A large segment of the well qualified women want to join the workforce because of household responsibilities or social status
- Drop in employment
- Social stigma
- The Supreme Court recognised the right to equal pay for equal work to be a constitutional goal under Articles 14, 16, and 39 (d) of the Constitution of India.
- Article 39(d) of the Constitution of India for instance seeks to achieve social justice through the principle of equal pay for equal work.



## "DAHI-HANDI" RECOGNISED AS AN OFFICIAL SPORT OF MAHARASHTRA-

- Chief Minister Eknath Shinde announces that 'Dahi-Handi' will be recognized as an official sport in Maharashtra. The state is set to organize a 'Pro- Dahi Handi' completion.
- The Maharashtra Government also announces that the Govindas will get a job under the sports category and if any Govinda loses his life, insurance of Rs 10 lakh will be given, also if they end up being partially



handicapped insurance of Rs 5 lakh will be given by the Government of Maharashtra.

- The decision was taken as many cities of Maharashtra celebrate and enjoy 'Dahi-Handi' as an adventurous sport. 'Dahi-Handi' is a ritual in which devotees of Lord Krishna recreate the 'Maakhan Chori' or butter stealing act. It is one of the mischievous stories of Krishna's childhood. It is also known as 'Gopalakala' and it is observed on the next day of Janmashtami.

**2022 BRICS GAMES TO BE HELD ONLINE IN SEPTEMBER 2022-**

- The 2022 BRICS Games is scheduled to be held from September 01 to 30 but on online platform.
- This means that the athletes from Brazil, Russia, India, China and South Africa (BRICS) will compete online.
- The 2022 BRICS Games will feature only three competitive events, breakdancing, chess and Wushu (Chinese martial arts).
- The online BRICS Games can enhance mutual understanding and people-to-people exchanges among participating countries in an innovative and safe way, through the power of sports.
- The Game is being organised by China, as the host of the 14th BRICS Summit held in June 2022.



**UZBEKISTAN WINS GOLD IN OPEN SECTION & UKRAINE IN WOMEN'S SECTION OF 44TH CHESS OLYMPIAD, INDIA WINS BRONZE IN BOTH-**

- The team Uzbekistan has won the gold medal in the Open section of the 44th Chess Olympiad which concluded on August 09, 2022.

- Team Armenia won silver while the India-2 team settled for bronze in Open Section.
- In the women's section, Ukraine won the gold medal. Team Georgia won the silver, while India-1 team won the bronze medal.
- The 44th Chess Olympiad was organised by FIDE in Chennai, India from July 28 to August 09, 2022. India hosted the Chess Olympiad for the first time. It consisted of open and women's tournaments.
- The total number of participants was 1,737, including 937 in the Open and 800 in the Women's event.
- Overall 188 teams were registered from 186 nations in the Open section and 162 from 160 nations in the Women's section.
- The main venue of the Chess Olympiad was the convention centre at the Four Points by Sheraton. The opening and closing ceremonies were held at the Jawaharlal Nehru Stadium.

**INDIAN TEAM WON GOLD IN LAWN BOWL AT COMMONWEALTH GAMES 2022-**

- India's lawn bowls women's fours team won the gold medal at the Commonwealth Games 2022.
- This was India's 1st first medal in the lawn bowls event and the team, made of Lovely Choubey, skipper Rupa Rani Tirkey, Pinki, and Nayanmoni Saikia, won the title itself after beating 2018 silver medallists South Africa. Team India won against South Africa with a 17-10 victory.
- In the final day game, India began strong, but South Africa delivered a brilliant fightback as both the teams were on 10 points after end 12.
- India has restored the advantage and now has 15 points compared to South Africa's 10 after the end of 15. This was the Indian team's maiden appearance in the women's fours format of the tournament finals. India defeated New Zealand in the semi-finals 16-13.

# AWARDS & RECOGNITIONS

RECENTLY, SRI LANKAN WRITER SHEHAN KARUNATILAKA WON THE BOOKER PRIZE 2022 FOR HIS NOVEL "THE SEVEN MOONS OF MAALI ALMEIDA",-



- Recently, Sri Lankan writer Shehan Karunatilaka won the Booker Prize 2022 for his novel "The Seven Moons of Maali Almeida", about a dead war photographer on a mission in the afterlife.
- The Booker Prize is the world's leading literary award for a single work of fiction.
- Founded in the UK in 1969, it was initially awarded to Commonwealth writers and now spans the globe, and it is open to anyone regardless of origin.
- Each year, the Booker Prize is awarded to what is, in the opinion of our judges, the best sustained work of fiction written in English and published in the UK and Ireland.
- The winning book is a work that not only speaks to our current times, but also one that will endure and join the pantheon of great literature.

## NOBEL PRIZE IN ECONOMIC SCIENCES 2022-

- The Royal Swedish Academy of Sciences has decided to award the 2022 Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel to Ben S. Bernanke, Douglas W. Diamond and Philip H. Dybvig "for research on banks and financial crises."
- The 2021 Nobel Prize in Economic Sciences was awarded in one half to Canadian-born David Card (labor economics) and the other half jointly to Israeli-American Joshua D Angrist and Dutch-

American Guido W Imbens (analysis of causal relationships).

- Other 2022 Nobel Prizes for Literature, Chemistry, Physics, Medicine and Peace have already been announced.
- Unlike the other prizes, the economics award wasn't established in Alfred Nobel's will of 1895 but by the Swedish central bank in his memory. The first winner was selected in 1969.
- Ben Bernanke analysed the Great Depression of the 1930s, the worst economic crisis in modern history.
- Through statistical analysis, Bernanke demonstrated how failing banks played a decisive role in the global depression of the 1930s. It also helped in understanding the importance of well-functioning bank regulation.
- Bernanke was the head of the US central bank, the Federal Reserve, when the 2008 crisis hit, and was able to "put knowledge from research into policy".
- Both Diamond and Dybvig worked together to develop theoretical models explaining why banks exist, how their role in society makes them vulnerable to rumors about their impending collapse, and how society can lessen this vulnerability. These insights form the foundation of modern bank regulation.

## NOBEL PEACE PRIZE 2022-



- Recently, the 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.
- With the awardees being from Belarus, Ukraine, and Russia, an implicit message has been sent about the ongoing conflict between Russia and Ukraine.
- In 2021, Nobel Peace Prize was awarded to journalists Maria Ressa of the Philippines and Dmitry Muratov of Russia for their efforts to safeguard freedom of expression, which is a precondition for democracy and lasting peace.
- Other 2022 Nobel Prizes for Literature, Chemistry, Physics and Medicine have already been announced.

#### **BELARUS'S ALES BIALIATSKI-**

- Ales Bialiatski was one of the initiators of the democracy movement in Belarus in the mid-1980s."
- Over time, Viasna evolved into a "broad-based human rights organisation that documented and protested against the authorities 'use of torture against political prisoners".
- He is the fourth person to get the Nobel Peace Prize in Jail.
- Russian Human Rights Organisation, Memorial-
- The organisation was established in 1987, "by human rights activists in the former Soviet Union who wanted to ensure that the victims of the communist regime's oppression would never be forgotten."

#### **UKRAINIAN HUMAN RIGHTS ORGANISATION, CENTER FOR CIVIL LIBERTIES-**

- The Center for Civil Liberties was founded in Kyiv in 2007 "for the purpose of advancing human rights and democracy in Ukraine".
- After Russia's invasion of Ukraine in February 2022, the Center for Civil Liberties has engaged in efforts to identify and document Russian "war crimes" against the Ukrainian civilian population.

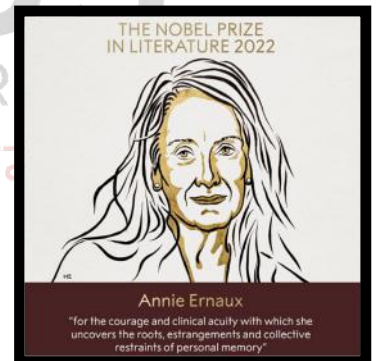
#### **PRANAV ANAND BECOMES 76TH CHESS GRANDMASTER OF INDIA-**

- Bengaluru, Pranav Anand (15) has become the 76th Grandmaster of India in the ongoing World Youth Chess Championship in Mamaia, Romania.
- He has crossed the 2,500 Elo mark in the ongoing event in Romania. He has already met the other requirements that are necessary for a GM title.
- Eligibility to become GM: A player need to secure three GM norms and cross the live rating of 2,500 Elo points.
- He had scored the third and final GM norm at the 55th Biel Chess in Switzerland.



#### **NOBEL PRIZE IN LITERATURE 2022-**

- The 2022 Nobel Prize in Literature has been awarded to French author "Annie Ernaux" for "the courage and clinical acuity with which she uncovers the roots, estrangements and collective restraints of personal memory".
- In 2021, the award was given to novelist Abdulrazak Gurnah "for his uncompromising and compassionate penetration of the effects of colonialism and the fate of the refugee in the gulf between cultures and continents".
- The Nobel Prizes in Physics, Chemistry and Medicine for 2022 have already been awarded.
- Annie was born in 1940 and brought up in the small town of Yvetot in Normandy (France).
- She went on to study at the universities of Rouen and then Bordeaux from where she qualified as a schoolteacher and gained a higher degree in modern literature.



- Her exemplary literary career started with the publication of her first book, Cleaned Out, in 1974.
- Her other major work includes “A Women’s Story”, “Happening”, “A Girl’s Story”, “Getting Lost”.
- Her books talk about the body and sexuality, intimate relationships, social inequality and the experience of changing class through education, time and memory, and the overarching question of how to write these life experiences.
- Her books have explored how shame is built into the female consciousness, and how women censor and judge themselves even in personal spaces such as a diary.

**LIC IS TOP-RANKED INDIAN FIRM ON FORTUNE GLOBAL 500 LIST; US RETAILER WALMART TOPS GLOBALLY-**

- The Fortune Global 500 list for 2022 was released by FORTUNE on August 03, 2022 to rank the world’s largest corporations by revenue for fiscal 2021.

RANK	NAME	REVENUE (\$ MIL)	REVENUE GROWTH (%)	PROFIT (\$ MIL)	PROFIT MARGIN (%)	ASSETS (\$ MIL)	EMPLOYEES	CHANGE IN RANK	YEARS ON GLOBAL 500 LIST
1	Walmart	\$572,754	2.4%	\$13,873	1.2%	\$344,860	2,300,000	-	26
2	Amazon	\$469,822	31.7%	\$33,364	56.4%	\$420,549	1,600,000	1	14
3	State Grid	\$460,616.9	19.1%	\$12,018	27.6%	\$735,428.9	871,145	-1	22
4	China National Petroleum	\$411,692.9	45%	\$9,637.5	10.6%	\$660,007.6	1,090,345	-	22
5	Sinopec Group	\$401,313.5	41.4%	\$6,316.1	3.4%	\$380,674.7	542,286	-	24
6	Saudi Aramco	\$400,399.1	74.3%	\$105,389.1	113.8%	\$576,133.5	68,493	6	4
7	Apple	\$365,817	33.3%	\$94,680	64.9%	\$351,002	154,000	-1	30
8	Volkswagen	\$295,618.8	16.5%	\$19,186.6	8.0%	\$601,028.4	672,789	2	28
9	China State Construction Engineering	\$293,712.4	25.2%	\$4,443.8	24.2%	\$378,351.8	348,327	4	11
10	CVS Health	\$292,111	8.7%	\$7,910	10.2%	\$322,999	258,000	-3	27

RANK	NAME	REVENUE (\$ MIL)	REVENUE GROWTH (%)	PROFIT (\$ MIL)	PROFIT MARGIN (%)	ASSETS (\$ MIL)	EMPLOYEES	CHANGE IN RANK	YEARS ON GLOBAL 500 LIST
98	Life Insurance Corp. of India	\$97,266.7	2.8%	\$55.8	38.2%	\$560,681.5	105,730	-	1
104	Reliance Industries	\$93,892	49.4%	\$8,150.7	23.1%	\$197,654.6	342,862	51	19
147	Indian Oil	\$79,542.4	57.3%	\$3,370.4	15.6%	\$54,120	32,938	70	28
180	Oil & Natural Gas	\$65,961.5	41.6%	\$6,112.1	179.2%	\$77,161.7	38,232	93	16
236	State Bank of India	\$4,843.2	3.2%	\$4,749.6	57.3%	\$706,580.1	244,350	-31	17
295	Bharat Petroleum	\$46,867.3	49.3%	\$1,568.4	-29%	\$24,716.1	9,183	99	19
310	Tata Motors	\$37,787.2	11.1%	\$-1,536.2	-	\$43,575.4	73,600	-13	13
435	Tata Steel	\$22,861.1	55.2%	\$5,381.4	434.2%	\$37,621.5	72,501	-	8
637	Rajesh Exports	\$32,649.5	-6.2%	\$135.4	18.9%	\$1,152.1	181	-89	7

- Walmart has acquired the top spot for ninth consecutive year, and overall 17th time since 1995.
- From India, the recently-listed Life Insurance Corporation (LIC) has made to the list for the first

time and LIC is also the top ranked firm among Indian corporates.

- LIC is ranked at 98th position, with revenue of USD 97.26 billion and a profit of USD 553.8 million.
- Overall nine Indian companies has been featured on the list. This comprise of five state-owned, and four from private sector.

**INDIAN WOMEN SAVITRI JINDAL REPLACES CHINA’S YANG HUIYAN TO BECOME ASIA’S RICHEST WOMAN-**

- Savitri Jindal, the Chairperson Emeritus of OP Jindal Group, has surpassed China’s Yang Huiyan to become Asia’s richest woman, as per the real-time Bloomberg Billionaires Index.
- The 72-year-old Savitri Jindal who also holds the position of the richest woman in India has a total fortune of \$11.3 billion.



- Jindal’s net worth has fluctuated wildly in recent years. It fell to \$3.2 billion in April 2020 at the start of the Covid-19 pandemic, then to \$15.6 billion in April 2022 due to a rise in commodity prices following Russia’s invasion of Ukraine.
- The fortune of Yang Huiyan, owner of China’s largest real estate developer ‘Country Garden Holdings’, dropped by more than half in 2022, from \$ 24 billion to \$11 billion. She had been Asia’s richest woman for the past five years.
- Jindal, 72, is India’s richest woman and the 10th-richest person in the country. She became the chairwoman of the Jindal Group shortly after her husband died in a helicopter crash in 2005.
- Savitri also boasts of a career in politics. In 2009, she was re-elected and was appointed as the cabinet minister in the Haryana government.

**BORIS JOHNSON GIVES CHURCHILL LEADERSHIP AWARD TO UKRAINE'S ZELENSKY-**

- British Prime Minister, Boris Johnson has presented Ukrainian President Volodymyr Zelensky with the Sir Winston Churchill Leadership Award, drawing comparisons between the two leaders in times of crisis.
- Zelensky accepted the award by video link during a ceremony at Johnson's London office that was attended by members of the Churchill family, Ukrainian Ambassador Vadym Prystaiko and Ukrainians who have received training from British soldiers.
- The Ukrainian leader received a standing ovation in the British Parliament in March when he invoked one of Churchill's most famous speeches and vowed to fight Russian troops in the air, sea and on the streets.
- The Churchill leadership award was first presented in 2006. Past recipients include Prince Charles, former British Prime Ministers Margaret Thatcher and John Major, and former US Secretary of State Madeleine Albright.



**PM NARENDRA MODI UNVEILS INDIA'S FIRST PASSENGER DRONE "VARUNA"-**



- Prime Minister Narendra Modi has unveiled Varuna, India's first passenger drone. PM Modi is seen watching the demonstration of the drone. Prime Minister Narendra Modi asserted that the current government has ensured last-mile delivery of services with the help of technology, including drones.
- The Prime Minister was there to address the Naval Innovation and Indigenisation Organisation (NIIO) seminar 'Swavlamban' which took place at Dr Ambedkar International Centre in New Delhi.
- The makers of this indigenous pilot-less 'Varuna' drone startup Sagar Defence Engineering demonstrated the drone. This 'Varuna' drone has been designed and developed by a startup and has the capacity to carry one person inside.
- Varuna, India's first drone that can carry a human payload, has a range of 25 km. The drone can carry a 130 kg payload and has 25-33 minutes of flight time.

## DEFENCE NEWS

### DRDO SUCCESSFULLY CONDUCTS FLIGHT-TEST OF PHASE-II AD-1 MISSILE-



- DRDO has conducted a successful maiden flight-test of Phase-II Ballistic Missile Defence interceptor AD-1 missile from APJ Abdul Kalam Island, Odisha.
- This flight-test was carried out with the participation of all BMD weapon system elements.
- AD-1 is a long-range interceptor missile.
- It is designed for both low exo-atmospheric and endo-atmospheric interception of long-range ballistic missiles as well as aircraft.
- It is propelled by a two-stage solid motor.

### C-295 TRANSPORT AIRCRAFT MANUFACTURING FACILITY-

- Recently, the Prime Minister of India laid the foundation stone for the C-295 transport aircraft manufacturing facility in Vadodara, Gujarat.
- Set up by Airbus Defence and Space and Tata Advanced Systems Limited (TASL).



- This is the first time a private sector company would be manufacturing a full aircraft in the country. This is a huge step forward for India in the global aircraft manufacturing domain.
- The C295 was originally produced by a Spanish aircraft manufacturer named Construcciones Aeronauticas SA.
- This company is now part of Airbus and the aircraft's manufacturing takes place at Airbus's plant in Spain.
- The C-295MW is a transport aircraft of 5-10 tonne capacity.
- Request For Proposal (RFP) was issued to global firms in May 2013 and the sole bid by Airbus and TASL was approved by the Defence Acquisition Council in May 2015.
- In September 2021, India signed a Rs 21,935 crore deal with Airbus Defence and Space to procure 56 C295 aircraft to replace the IAF's ageing Avro-748 planes, which entered service in the early 1960s.
- Of the 56 aircraft contracted, 16 will come in fly-away condition from Spain between September 2023 and August 2025.
- The remaining 40 will be manufactured here to be delivered between September 2026 and 2031 at the rate of eight aircraft per year.
- The C-295 is also a potential replacement for the AN-32 aircraft, the workhorse of the IAF with over 100 of them in service. The AN-32s will be in service upto 2032 and beyond.

### GARUDA VII-

- Indian Air Force (IAF) and French Air and Space Force (FASF) are participating in 'Garuda VII' at Air Force Station Jodhpur. It is being hosted by India for the fourth time so far.
- Garuda VII is the seventh edition of the bilateral air exercise between India and France that is taking place after a gap of two years.
- The first, third and fifth editions were conducted in India in 2003, 2006 and 2014 at Air Force Stations Gwalior, Kalaikunda and Jodhpur, respectively.



- In this exercise, FASF will participate with four Rafale fighter aircraft, one A-330 Multi Role Tanker Transport (MRTT) aircraft and a contingent of 220 personnel.
- The IAF is participating with Su-30 MKI, Rafale, Light Combat Aircraft (LCA) Tejas and Jaguar fighter aircraft, as well as the Light Combat Helicopter (LCH) and Mi-17 helicopters.
- The IAF contingent will also include Combat Enabling Assets like Flight Refueling Aircraft, Airborne Warning & Control System (AWACS) and Airborne Early Warning and Control (AEW&C).

**What are the Other Defence Exercises-**

- Varuna- Naval exercise
- Desert Knight-21- Air exercise
- Shakti- Army exercise

**THE 12TH EDITION OF DEFEXPO 2022 IS BEING HELD IN GANDHINAGAR, GUJARAT-**

- The 11th edition of DefExpo was held at Lucknow (Uttar Pradesh) in 2020.
- DefExpo is a flagship biennial event of the Ministry of Defence, showcasing the land, naval, air as well as homeland security systems.



- It is being held in a first ever four-venue format which promises to engage the public and inspire them to join the Aerospace and Defence manufacturing sector; for 'Aatmanirbharta' in Defence.
- The aim is to showcase the might of the domestic defence industry which is now powering 'Make in India, Make for the World' resolve of the Government and the nation at large.

- It is the first-ever edition exclusively for Indian companies. Theme: Path to Pride.
- It will host the 2nd edition of the India-Africa Defence Dialogue (IADD), with invites extended to 53 African countries.
- A separate Indian Ocean Region plus (IOR+) conclave with participation of approximately 40 countries will see India pitching its military hardware to various countries.
- It will also mark the celebration of one year of the formation of the seven new defence companies, carved out of the erstwhile Ordnance Factories.

**WHAT ARE THE DEFENCE SECTOR REFORMS UNDER ATMANIRBHAR BHARAT ABHIYAN-**

- Revision of FDI Limit: The FDI limit in defence manufacturing under automatic route is raised from 49% to 74%.
- Reduction in Defence Imports: The government will notify a list of weapons/platforms banned for imports and thus such items can only be purchased from the domestic market.
- Corporatisation of the Ordnance Factory Board: It will include a public listing of some units, ensuring a more efficient interface of the manufacturer with the designer and end-user.

**RECENTLY, THE PRIME MINISTER HAS LAUNCHED 'MISSION DEFSPACE' AT THE ONGOING DEFEXPO-**



- He also released the fourth Defence Indigenisation List which bars import of 101 items after certain timelines.
- He also unveiled the HTT-40 (Hindustan Turbo Trainer-40) indigenous trainer aircraft designed

and developed by Hindustan Aeronautics Limited (HAL) at the India Pavilion during the Expo.

- Mission DefSpace is an ambitious effort to develop innovative solutions for the three Services (Indian airforce, Navy and Army) in the space domain through the Indian industry and start-ups.
- Startups, innovators and the private sector will be invited to find solutions for the problems that will include both offensive and defensive capabilities.
- It aims to develop a range of military applications for space warfare and to enable the private industries to offer solutions to the armed forces for future offensive and defensive requirements.
- Indigenisation is the capability of developing and producing any defence equipment within the country for the dual purpose of achieving self-reliance and reducing the burden of imports.
- Defence Research Development Organisation (DRDO), Defence Public Sector Undertakings (DPSUs) and private organisations are playing a critical role in indigenisation of defence industries.
- India is among the world's largest arms importers, and the armed forces are expected to spend about USD 130 billion on defence purchases over the next five years.
- 4th Indigenisation list lays special focus on equipments/ stems, which are being developed and likely to translate into firm orders in the next five to 10 years.

#### **INDIAN AIR FORCE: WEAPON SYSTEMS BRANCH APPROVED FOR FIRST TIME-**

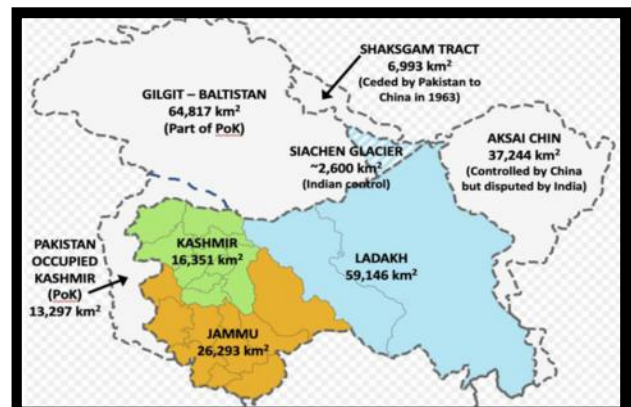
- On the occasion of the 90th anniversary of the Indian Air Force (IAF), the Centre has approved the creation of a weapon system branch for IAF officers. This is the first time since independence that a new operational branch has been created.
- This will essentially be for manning of four specialised streams of Surface to Surface missiles, Surface to Air Missiles, Remotely Piloted Aircraft and Weapon System Operators in twin and multi-crew aircraft.
- The creation of this branch would entail the unification of all weapon system operators under one entity dedicated to the operational

employment of all ground-based and specialist airborne weapon systems.

#### **The Indian Air Force (IAF) celebrated 90th Air Force Day on 8th October-**

- The primary event of the day was observed at Chandigarh Air Force Station and consists of a parade and flyover.
- LCH "Prachanda, Light Combat Aircraft (LCA) Tejas, Sukhoi, Mig-29, Jaguar, Rafale, IL-76, C-130J, and Hawk have taken part in the fly-past.
- Among helicopters, Advanced Light Helicopter Dhruv, Chinook, Apache and Mi-17 will be part of the aerial display.
- The Indian Air Force was established in 1932 during World War II to support the Royal Air Force of the United Kingdom in its war against Japan.
- To stop the Japanese army's progress into India, the IAF was utilised to target Japanese bases in Burma.
- In 1945, King George VI bestowed the prefix "Royal" in recognition of the IAF's accomplishments. After India became a republic in 1950, this honorary title was abolished.
- After the independence of the nation, it evolved into the Indian Air Force in 1950.
- President of India is the Supreme Commander of the Armed Forces, The fourth-largest air force in the world is the Indian Air Force.
- Motto of India Air Force- Touch the sky with Glory. It was taken from the eleventh chapter of the Bhagavad Gita.

#### **INDIAN ARMY INSTALLS SATELLITE-BASED INTERNET AT SIACHEN- WORLD'S LARGEST BATTLEFIELD-**



- The Indian Army activated satellite broadband-based internet service on the Siachen Glacier, the world's highest battlefield on September 18, 2022. The feat was installed by the Indian Army's XIV Corps or Fire and Fury Corps 'Siachen Signallers.
- The fire and fury cops looked over the military deployment along with Kargil-Leh and protects the frontiers with China and Pakistan, and guards the Siachen Glacier.
- The fire and fury cops tweeted "Satellite-based Internet service was activated on the Siachen Glacier at 19,061 feet, the World's Highest Battlefield, by the Siachen Signallers,".
- Bharat Broadband Network Limited provides net connectivity to the Army at Siachen. It is also responsible for the implementation of the BharatNet Project.
- The BBLN plans to deliver satellite-based internet to around 7000-gram panchayats and other remote areas where fiber-based internet is difficult.

**INS SATPURA AND P8I MARITIME PATROL AIRCRAFT HAVE ARRIVED IN DARWIN IN AUSTRALIA TO PARTICIPATE IN A MULTINATIONAL NAVAL EXERCISE, KAKADU, BEING HOSTED BY THE AUSTRALIAN NAVY-**



- Exercise Kakadu is a joint-enabled, biennial exercise hosted by the Royal Australian Navy and supported by the Royal Australian Air Force.
- Kakadu is the Navy's premier maritime exercise, developing interoperability between nations in the maritime and air domains, and

providing training opportunities for maritime security and surveillance. It started in 1993.

- It's a two-week-long exercise, both in harbour and sea, involving ships and maritime aircraft from 14 navies. Around 19 vessels, 34 aircraft and more than 3000 personnel from 25 countries are expected.
- **Theme:** Partnership, Leadership, Friendship.
- The exercise provides an opportunity for regional partners to undertake multinational maritime activities ranging from constabulary operations to high-end maritime warfare in a combined environment.

**Other military exercises with Australia-**

- Malabar
- Exercise Pitch Black 22
- Bilateral exercise - Ausindex.

**DEFENCE MINISTER HANDED OVER TWO NEW WEAPONS - THE NIPUN MINES, THE LANDING CRAFT ASSAULT (LCA) AND THE F-INSAS SYSTEM - TO THE ARMY-**



- F-INSAS stands for Future Infantry Soldier as A System, a programme for infantry modernisation

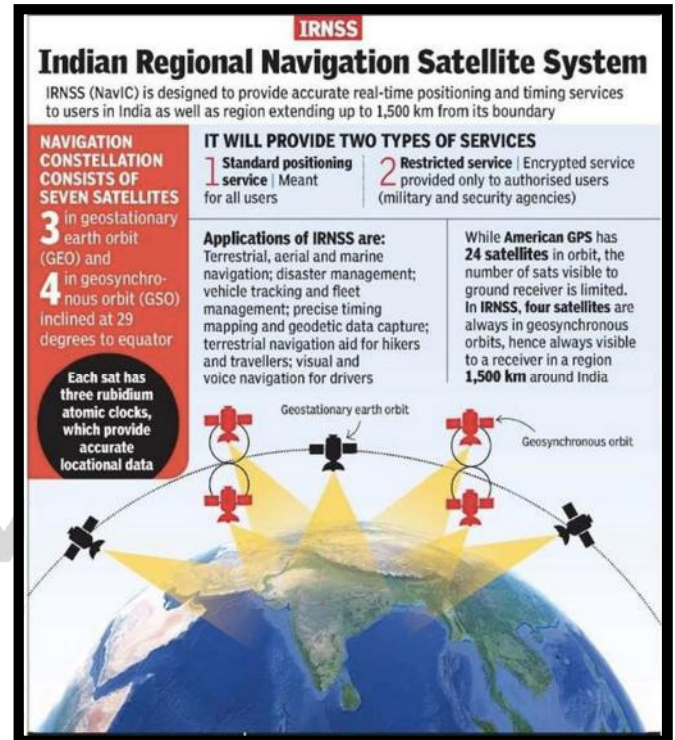
aimed at increasing the operational capability of the soldier.

- As part of the project, soldiers are being equipped with modern systems that are lightweight, all-weather-all-terrain, cost-effective and low maintenance.
- The full-gear of the F-INSAS system includes an AK-203 assault rifle, a multi-mode hand grenade, which can be used in defensive and offensive modes.
- Conceived in the 2000s, F-INSAS is one among many soldier modernisation programmes across the world.
- The US has Land Warrior, while the UK has FIST (Future Integrated Soldier Technology).
- According to estimates, over 20 armies around the world are following such programmes.
- Nipun mines are indigenously designed and developed anti-personnel mines, termed by the DRDO as 'soft target blast munition'.
- These mines are meant to act as the first line of defence against infiltrators and enemy infantry.
- They have been developed with the efforts of Armament Research and Development Establishment, a Pune-based DRDO facility, and Indian industry.
- The Landing Craft Assault (LCA) is meant to serve as a replacement for the boats with limited capabilities currently in use in the Pangong Tso lake.
- The LCA, which has been indigenously developed by Goa-based Aquarius ShipYard Limited, is said to have better launch, speed and capacity to operate across water obstacles in eastern Ladakh.

#### INDIAN ARMY CONDUCTS PAN-INDIA DRILL 'SKYLIGHT' TO TEST OPERATIONAL READINESS OF ITS MULTI-BAND DEDICATED SATELLITE-

- The Indian Army conducted a pan-India satellite communication exercise named 'Ex Skylight', in the last week of July.

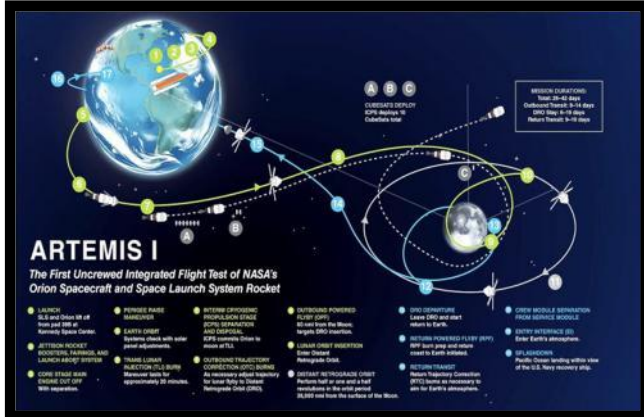
- The main objective of this exercise was to test the operational readiness and robustness of its hi-tech satellite communication systems, in the event of an attack by an adversary.
- The Indian Army is preparing to have its own multi-band dedicated satellite, with added security features by 2025.



- The dedicated GSAT-7B satellite of Army is a first of its kind indigenous multi-band satellite, designed with advanced security features. It will support tactical communication requirements for troops deployed on ground, remotely piloted aircraft, air defence weapons and other mission critical and fire support platforms.
- ISRO and various agencies responsible for space and ground segments also participated in the exercise.
- The IAF and Navy already have their own GSAT-7 series satellites.

# SCIENCE & TECHNOLOGY

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION (NASA) HAS SUCCESSFULLY LAUNCHED ITS UNMANNED MOON MISSION ARTEMIS I ON 16TH NOVEMBER 2022-**



- After multiple delays caused by technological failures and natural disasters spread across two months, the Space Launch System (SLS) rocket has been lifted off from the Kennedy Space Centre in Cape Canaveral, Florida.
- Artemis I is an uncrewed mission of NASA. Named after the sister of Apollo in Greek mythology, it is NASA's successor to the Apollo lunar missions from fifty years ago.
- It will test the agency's Space Launch System (SLS) rocket and Orion crew capsule.
- The SLS is the largest new vertical launch system NASA has created since the Saturn V rockets used in the 1960s and 1970s.
- Artemis I is the first step into that new space age of achieving the promise of transporting humans to new worlds, of landing and living on other planets, or maybe meeting aliens.

## Artemis II-

- It will take off in 2024.
- Artemis II will have a crew aboard Orion and will be a test mission to confirm that all of the spacecraft's systems will operate as designed when it has humans on board.
- But the Artemis II launch will be similar to that of Artemis I. A crew of four astronauts will be aboard Orion as it and ICPS orbit the Earth twice before moving to the direction of the Moon.

## Artemis III-

- It is scheduled for 2025, and is expected to ferry astronauts to the moon for the first time since the Apollo missions.

**VIKRAM-S ROCKET LAUNCHED BY ISRO, INDIA'S FIRST PRIVATELY DEVELOPED ROCKET-**

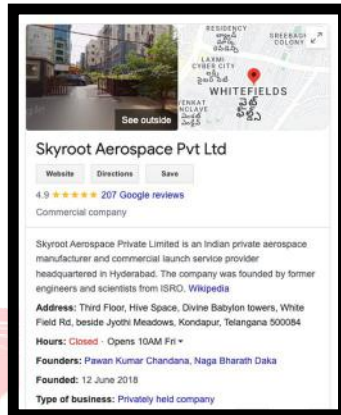


- Vikram-S Rocket, India's first privately developed rocket launched from the Indian Space Research Organization (ISRO) at the Sriharikota launchpad. The launch of Vikram-S Rocket by ISRO is a historic moment.
- The Vikram-S Rocket is developed by Hyderabad-based start-up Skyroot Aerospace Private Limited, and it is a 6-meter tall and hits a peak altitude of 89.5 kilometers.
- After five minutes of launch, the Vikram-S Rocket splashed into the Bay of Bengal. The mission was titled Prarambh.
- The Vikram-S Rocket is a single-stage solid fuelled, sub-orbital rocket developed over two years by incorporating advanced technologies that include carbon composite structures and 3D printer components.
- The Vikram-S Rocket is equipped with a gross lift-off mass of 545kg, and a payload mass of 80kg. Vikram-S carried three customer payloads which will map the measurement and validation of certain flight parameters and payload integration processes.

- The Skyroot firm was launched in June 2018 by two engineers Pawan Kumar Chandana and Naga Bharath Daka. The firm aims to open space for all, he is pushing the boundaries of today's techno. It is working towards a future where space becomes a part of our lives and claims that such a transition will transform humankind like never before.

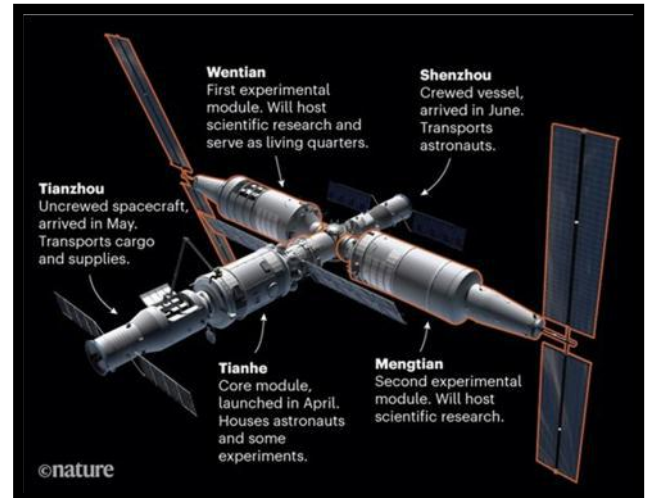
### INDIA'S FIRST PRIVATE LAUNCH VEHICLE-

- Space technology startup Skyroot Aerospace is set to make history by sending India's first privately developed rocket Vikram-S into space between 12th and 16th November, 2022 under the Prarambh Mission.
- Skyroot Aerospace is an Indian startup in the aerospace business. The Vikram-S rocket is a single-stage sub-orbital launch vehicle which would carry three customer payloads.
- Sub-orbital flight are those vehicles which are travelling slower than the orbital velocity – meaning it is fast enough to reach outer space but not fast enough to stay in an orbit around the Earth.
- Skyroot has been working on three different Vikram rocket versions. The Vikram-I can launch with 480 kilograms of payload, whereas the Vikram-II is designed to do so with 595 kilos and Vikram-III has a 500 km Low Inclination Orbit launch capability with 815 kg.
- The Prarambh mission is aimed at carrying three payloads into space, including a 2.5-kilogram payload that has been developed by students from several countries.
- The Prarambh mission and the Vikram-S rocket were developed by the Hyderabad-based startup with extensive support from Indian Space Research Organisation (ISRO) and IN-SPaCE



(Indian National Space Promotion and Authorisation Centre).

### CHINESE SPACE STATION-



- China's third and final module called Mengtian docked with its permanent space station called Tiangong to further a more than decade-long effort to maintain a constant crewed presence in orbit, as its competition with the U.S. grows increasingly fierce.
- 3 astronauts arrived for a six-month stay on board, during which they will complete the station's assembly, conduct space walks and carry out additional experiments.
- Tiangong is currently populated by a crew of two male and one female astronauts.
- In all, the station will have about 110 cubic meters (3,880 cubic feet) of pressurized interior space, including the 32 cubic meters (1,130 cubic feet).
- China's crewed space program is officially three decades old this year, with the Mengtian launch being its 25th mission. But it truly got underway in 2003, when China became only the third country after the U.S. and Russia to put a human into space using its own resources.
- The permanent Chinese station will weigh about 66 tons — a fraction of the size of the International Space Station, which launched its first module in 1998 and weighs around 465 tons.
- With a lifespan of 10 to 15 years, Tiangong could one day find itself the only space station still

running, if the International Space Station adheres to its 30-year operating plan.

**RISAT-2-**

- Recently, the Indian Space Research Organisation's (ISRO) RISAT (Radar Imaging Satellite)-2 satellite has made an uncontrolled re-entry into the Earth's atmosphere at the predicted impact point in the Indian Ocean near Jakarta.
- RISAT-2 is India's first "eye in the sky" which keep surveillance on the country's borders as part of anti-infiltration and anti-terrorist operations.
- The principal sensor of Risat-2, considered a 'spy' satellite, was an X-band synthetic-aperture radar from Israel Aerospace Industries.
- Risat-2 was built more quickly following the 2008 Mumbai terror attacks due to delay with the indigenously developed C-band for Risat-1 satellite. The satellite, which was India's first dedicated reconnaissance satellite, possessed day-night as well as all-weather monitoring capability.
- It was also used to track hostile ships at sea that were deemed a military threat.
- Risat-2, weighing about 300 kg was launched on April 20, 2009, by the PSLV-C12 launch vehicle.
- Risat-2 provided beneficial payload data for over 13 years.
- Since its injection, Risat-2's radar payload services were provided for various space applications.
- Risat-2 is a clear example of ISRO's capability to carry out spacecraft orbital operations in an efficient and optimal way.
- As Risat-2 re-entered within 13.5 years, it complied with all necessary international



mitigation guidelines for space debris, showing the space agency's commitment towards the long-term sustainability of outer space.

**NARCO TEST-**

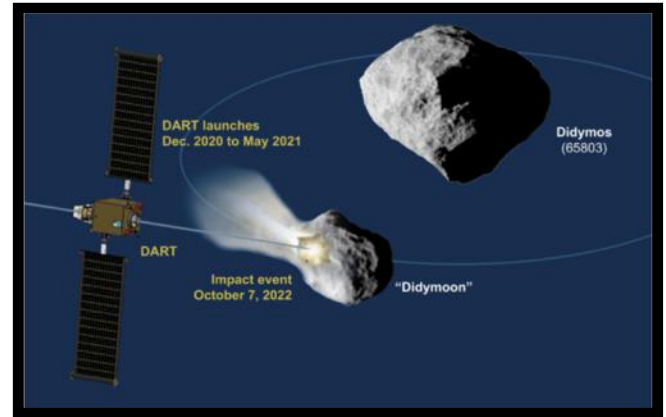
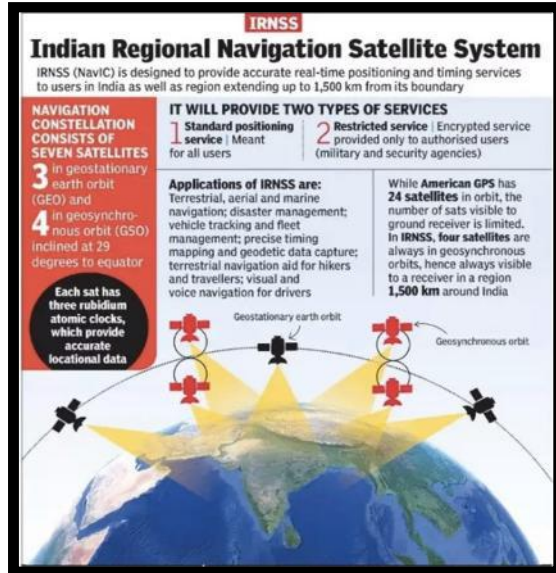
- It has recently come to spotlight after a Delhi Court ordered a Narco Test for Aaftab Amin Poonawala in the bone-chilling Shradha Walkar killing case.
- The Court took into consideration international norms on human rights, the right to a fair trial, and the right against self-incrimination under Article 20(3) of the Constitution.
- In a narco or narco-analysis test: a drug called sodium pentothal is injected into the body of the accused, which transports them to a hypnotic or sedated state, in which their imagination is neutralised.
- In this hypnotic state, the accused is understood as being incapable of lying, and is expected to divulge information that is true.
- Sodium pentothal or sodium thiopental is a fast-acting, short duration anesthetic, which is used in larger doses to sedate patients during surgery.



**INDIAN PLANS TO EXPAND ITS REGIONAL SATELLITE NAVIGATION SYSTEM NAVIC (NAVIGATION IN INDIAN CONSTELLATION), TO INCREASE ITS USE IN THE CIVILIAN SECTOR AND SHIPS-**

- NavIC or the Indian Regional Navigation Satellite System (IRNSS) is designed with a constellation of 7 satellites and a network of ground stations operating 24x7.
- There are a total of eight satellites however only seven remain active. Three satellites in geostationary orbit and four satellites in geosynchronous orbit.
- The constellations' first satellite (IRNSS-1A) was launched on 1st July 2013 and the eighth satellite IRNSS-1I was launched in April 2018.

- With the seventh launch of the constellation's satellite (IRNSS-1G), IRNSS was renamed NavIC by India's Prime Minister in 2016.
- It was recognised by the International Maritime Organization (IMO) as a part of the World-Wide Radio Navigation System (WWRNS) for operation in the Indian Ocean Region in 2020.



#### Potential Uses-

- Terrestrial, aerial and marine navigation;
- Disaster management;
- Vehicle tracking and fleet management (especially for mining and transportation sector);
- Integration with mobile phones;
- Precise timing (as for ATMs and power grids);
- Mapping and geodetic data capture.

#### NASA'S DOUBLE ASTEROID REDIRECTION TEST DART MISSION-

- NASA's DART gives hope that science can ward off extraterrestrial threats. For the very first time, NASA scientists have succeeded in slightly altering the trajectory of an asteroid by using a spacecraft to slam into it.
- DART (Double Asteroid Redirection Test) was aimed at a 160-metre-wide asteroid Dimorphos, which was orbiting a larger asteroid Didymos, both of which were circling the Sun, 11.2 million kilometres from the earth.
- Since neither body would have come closer than about 6.4 million km of the earth in their lifetime, they did not pose any threat.

- However, DART was a test mission to see if this technique, known as kinetic impactor, would give the necessary 'nudge' to an asteroid and alter its course by a desired amount.
- After studying the two bodies for nearly 10 days, NASA announced that the course of the smaller asteroid has indeed been altered a little: initially, the orbit of Dimorphos around Didymos took 11 hours and 55 minutes. After the impact, a 32-minute alteration in its orbital period has taken place — it is now 11 hours and 23 minutes only.
- The reason for this test is to learn how to use the kinetic impactor technique to 'nudge' earth-bound asteroids out of the way, years before impact. This is not a last-minute effort.
- Since all asteroids are not similar, more tests have to be done to perfect this technique.

#### 2ND WORLD GEOSPATIAL INFORMATION CONGRESS-

- Recently, 2nd United Nations World Geospatial Information Congress was inaugurated in Hyderabad under the theme 'Geo-Enabling the Global Village: No one should be left behind'.
- India's geospatial economy is expected to cross Rs. 63,100 crores by 2025 at a growth rate of 12.8%.
- The first United Nations World Geospatial Information Congress was held in Deqing, Zhejiang Province, China in 2018.
- The United Nations Committee of Experts on Global Geospatial Information Management (UN-GGIM) organizes the United Nations World Geospatial Information Congress (UNWGIC) every four years.



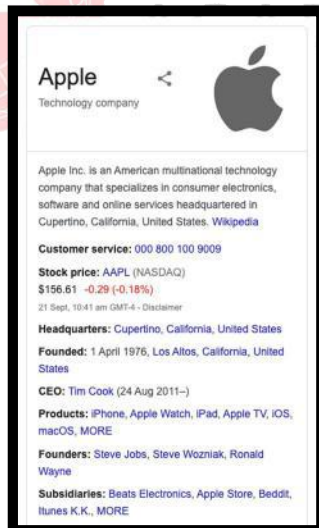
- The objectives are enhancing international collaboration among the Member States and relevant stakeholders in Geospatial information management and capacities.
- Geospatial technology is a term used to describe the range of modern tools contributing to the geographic mapping and analysis of the Earth and human societies.
- The term 'geospatial' refers to a collection of technologies that help to collect, analyse, store, manage, distribute, integrate, and present geographic information.

**Broadly, it consists of the following technologies-**

- Remote Sensing
- GIS (Geographic Information System)
- GNSS (Global Navigation Satellite System)
- Survey
- 3D modelling

**APPLE INC., AN AMERICAN MULTINATIONAL TECHNOLOGY COMPANY, HAS COME UP WITHOUT A PHYSICAL SIM SLOT OR AN ESIM IN ORDER TO ACCESS MOBILE NETWORKS-**

- eSIMs were first established in 2012. It is an embedded SIM, which is permanently embedded in the same hardware of a regular sim card chip.
- Just like a traditional SIM card, an eSIM also consists of some components, which are part of a phone's internal organs. They also function the same way, acting as a unique identifier for telecom operators and other consumers to reach your exact smartphone when they make a call or send a text.
- However, being attached to the motherboard also allows re-programming, letting users switch operators without having to replace any physical SIM cards.



- An eSIM provides security to sim theft, as there is no physical element to pull out and use in another device. Attackers cannot use your phone after being robbed to breach your social media or bank accounts.
- It also saves some space on the inside of the phone to be used elsewhere.
- eSIM phones cannot be used in a country where the telecom operators simply don't support the technology yet.
- This isn't an issue if your phone supports both eSIM and traditional SIMs, but is a problem on devices like the US-version iPhone 14, which will solely rely on eSIM alone.
- An eSIM may save one's initial trip to the telecom operator's store to get a SIM card, but one has to rely on the operator while switching one's phone.
- Operators may charge extra for eSIM plans or for switching phones, in the future.

**HEALTHCARE SECTOR IN INDIA WILL GROW TO USD 50 BILLION BY 2025-**

- Science and Technology Minister Dr Jitendra Singh has said that Healthcare sector in India is expected to reach a size of 50 billion dollar by 2025.
- Addressing the 14th CII Global MedTech Summit in New Delhi, Dr Singh said, over the past two years healthcare has become more focused on innovation and technology.
- He said, 80 per cent of healthcare systems are aiming to increase their investment in digital healthcare tools in coming five years. The Minister added that India aims to achieve 10 to 12 per cent of the global market share of the medical devices sector.

**PM MODI TO DEDICATE 2G ETHANOL PLANT IN PANIPAT TO NATION-**

- Prime Minister Narendra Modi dedicated to the nation via video conferencing a second generation (2G) ethanol plant built at an estimated cost of Rs 900 crore in Haryana's Panipat.
- The dedication of the plant is part of a long series of steps taken by the government over the years to boost the production and usage of biofuels in the country.

- Based on state-of-the-art indigenous technology, the project will turn a new chapter in India's waste-to-wealth endeavours by utilising about two lakh tonnes of rice straw (parali) annually to generate around three crore litres of ethanol annually.

**What are 1G and 2G biofuel plants?**

1G bioethanol plants utilise sugarcane juice and molasses, byproducts in the production of sugar, as raw material, while 2G plants utilise surplus biomass and agricultural waste to produce bioethanol. Currently, domestic production of bioethanol is not sufficient to meet the demand for bio-ethanol for blending with petrol at Indian Oil Marketing Companies (OMCs). Sugar mills, which are the key domestic suppliers of bio-ethanol to OMCs, were only able to supply 1.9 billion litres of bio-ethanol to OMCs equating to 57.6 per cent of the total demand of 3.3 billion litres.

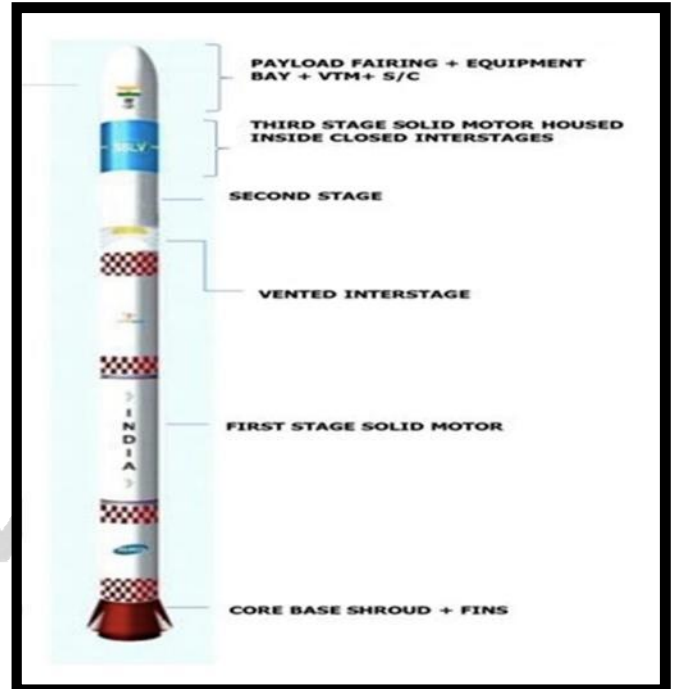
- The project will provide direct employment to people involved in the plant operation and indirect employment will be generated in the supply chain for rice straw cutting, handling, storage, etc.
- Through the reduction in the burning of rice straw, the project will contribute to a reduction of greenhouse gases equivalent to about 3 lakh tonnes of carbon dioxide equivalent emissions per annum, which can be understood as equivalent to replacing nearly 63,000 cars annually on the country's roads.

**THE MAIDEN FLIGHT OF ISRO'S NEWLY DEVELOPED SMALL SATELLITE LAUNCH VEHICLE (SSLV) SUFFERED A SETBACK-**

- The maiden flight of ISRO's newly developed Small Satellite Launch Vehicle (SSLV) suffered a setback, with "data loss" at the terminal stage, after three stages had "performed and separated" as planned.
- The satellites ended up being placed in an elliptical orbit, and are "no longer usable".
- While the three-solid fuel-based propulsion stages worked normally, the satellites were injected into a wrong orbit, due to failure of logic to identify a sensor failure.
- The new rocket was carrying an Indian Earth Observation Satellite, EOS-02, weighing 145 kg

and AzaadiSat, made by 750 schoolgirls to celebrate 75 years of Independence under SpaceKidz India, weighing 8 kg.

- SSLV is a rocket that is designed to orbit satellites weighing less than 500kg in Low Earth Orbit and 300 kg to Sun Synchronous Orbit (SSO).



- It is a 3 stage Launch Vehicle configured with three Solid Propulsion Stages and liquid propulsion-based Velocity Trimming Module (VTM) as a terminal stage.
- SSLV is the smallest vehicle at 110-ton mass at ISRO.
- It will take only 72 hours to integrate, unlike the 70 days taken now for a launch vehicle. Only six people will be required to do the job, instead of 60 people.
- The other features include: flexibility in accommodating multiple satellites, Launch on demand feasibility, minimal launch infrastructure requirements, etc.

# ECONOMY AND FINANCE

## INDIA-GCC FREE TRADE AGREEMENT (FTA)-

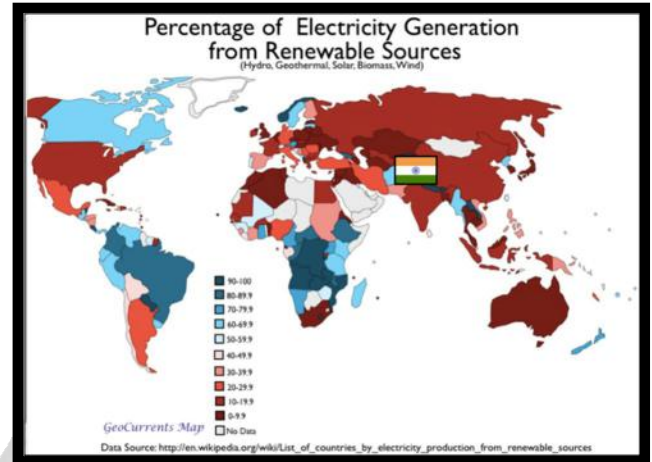


- India and the Gulf Cooperation Council (GCC) member countries are expected to start negotiations for a free trade agreement next month to boost economic ties between the two regions.
- India has already implemented a free trade pact with the UAE in May this year. Terms and Conditions for this one are also being finalised.
- Gulf Cooperation Council (GCC) is a union of six countries in the Gulf region — Saudi Arabia, UAE, Qatar, Kuwait, Oman and Bahrain.
- It was established by an agreement concluded in 1981 among Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the UAE in view of their special relations, geographic proximity, similar political systems based on Islamic beliefs, joint destiny and common objectives.
- The Secretariat is located in Riyadh, Saudi Arabia. It is a political, economic, social, and regional organisation according to its charter.

## \$4.2 BILLION FUEL COSTS SAVED BY INDIA WITH SOLAR POWER-

- India has saved around \$4.2 billion in fuel costs through solar power generation in the first half of 2022. Along with this, India has saved about 19.4 million tonnes of coal.

- The Centre for Research on Energy and Clean Air, and the Institute for Energy Economics and Financial Analysis found that the top 10 economies with solar capacity are now within Asia. The five countries include India, China, South Korea, Vietnam, and Japan.



- From January to June 2022, Asian countries including India, China, Japan, South Korea, Vietnam, Philippines, and Thailand avoided 9 percent of total fossil fuel costs.
- In India, solar generation avoided \$4.2 billion in fuel costs in the first half of the year.
- India also avoided the need for 19.4 million tonnes of coal which would have further stressed an already strained domestic supply.
- China has saved over \$34 billion as solar met 5 percent of the total electricity demand and avoided around \$21 billion in additional coal and gas imports during the first half of 2022.
- Japan has the second highest impact with over \$5.6 billion avoided in fuel costs.
- In South Korea, solar power generated 5 percent of the country's electricity avoiding potential fossil fuel use costing \$1.5 billion.

## LIQUIDITY ADJUSTMENT FACILITY-

- The Reserve Bank of India (RBI) injected Rs 72,860.7 crore of liquidity into the banking system in October 2022, the highest since April 2019 after liquidity condition tightened on higher demand for credit during the festival season.

- It is the central bank's intervention in the foreign exchange market to curb volatility in the rupee.
- Liquidity in the banking system refers to readily available cash that banks need to meet short-term business and financial needs.
- On a given day, if the banking system is a net borrower from the RBI under Liquidity Adjustment Facility (LAF), the system liquidity is said to be in deficit. If the banking system is a net lender to the RBI, the liquidity is said to be in surplus.
- A LAF is a monetary policy tool used in India by the RBI through which it injects or absorbs liquidity into or from the banking system.
- It was introduced as a part of the outcome of the Narasimham Committee on Banking Sector Reforms of 1998.
- LAF has two components - repo (repurchase agreement) and reverse repo. When banks need liquidity to meet its daily requirement, they borrow from RBI through repo. The rate at which they borrow fund is called the repo rate. When banks are flush with fund, they park with RBI through the reverse repo mechanism at reverse repo rate.
- It can manage inflation in the economy by increasing and reducing the money supply.
- Various banks use eligible securities as collateral through a repo agreement and use the funds to alleviate their short-term requirements, thus remaining stable.
- Monetary policy refers to the policy of the central bank with regard to the use of monetary instruments under its control to achieve the goals specified in the Act.
- The primary objective of the RBI's monetary policy is to maintain price stability while keeping in mind the objective of growth.
- The amended RBI Act, 1934 also provides for the inflation target (4% +/-2%) to be set by the Government of India, in consultation with the Reserve Bank, once in every five years.

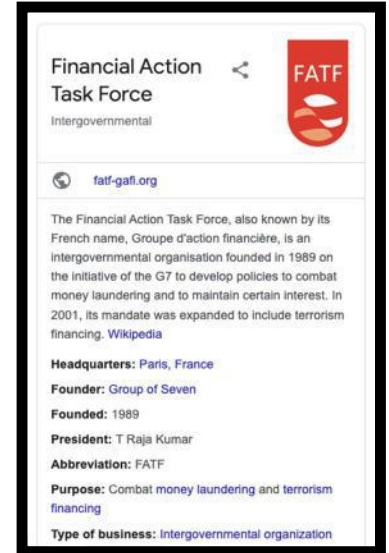
**Tools under the Monetary Policy-**

- Cash Reserve Ratio (CRR).
- Statutory Liquidity Ratio (SLR).
- Bank Rate.

- Standing Deposit Facility (SDF).
- Marginal Standing Facility (MSF).

**PAKISTAN REMOVED FROM FATF GREY LIST-**

- Recently, the Financial Action Task Force (FATF), the international watchdog on terror financing and money laundering, has removed Pakistan from the list of countries under "increased monitoring" (Grey List).
- India's other neighbour on the grey list, Myanmar, was moved to the "black list" due to actions by the military leadership after the 2021 coup.
- FATF is the global money laundering and terrorist financing watchdog. It also aims to counter the financing of proliferation of weapons of mass destruction.
- It was set up in 1989 out of a G-7 meeting of developed nations in Paris.
- Its Secretariat is located at the Organisation for Economic Cooperation and Development (OECD) headquarters in Paris.
- As of today, it is a 39-member body with 37 countries and two regional organisations: the European Commission, and the Gulf Cooperation Council.
- Indonesia is the only observer country of FATF.
- India joined with 'observer' status in 2006 and became a full member of FATF in 2010.
- India is also a member of its regional partners, the Asia Pacific Group (APG) and the Eurasian Group (EAG).
- The FATF Plenary (decision-making body of the FATF) meets tri-annually - in February, June and October, to take stock of "Mutual Evaluation Reports" (MERs) of the countries it reviews.



- If a country appears to have major deficiencies in its AML/CFT regime, it is put on a list of “jurisdictions under increased monitoring” - “grey list” and if it fails to address FATF concerns, it is put on a “high-risk jurisdictions” list - “black list”.
- The Grey List includes countries that are considered safe haven for supporting terror funding and money laundering. It serves as a warning that the country may enter the blacklist.
- The Black List includes Non-Cooperative Countries or Territories (NCCTs) that support terror funding and money laundering activities. As of now, Iran, North Korea and Myanmar are the three black listed countries.
- The enlisted countries are subjected to increased financial structures, thus making it difficult for them to procure loans from the financial institutions affiliated to FATF (as observers) such as the IMF, World Bank etc.

**INDIAN CURRENCY DESIGN MECHANISM-**

- Recently, the head of a political party asked the central government to put pictures of Goddess Lakshmi and Lord Ganesh on currency notes in order to bring “prosperity” to the country.
- The Reserve Bank of India (RBI) and the Central Government decide the changes in the design and form of bank notes and coins.
- Any change in design of a currency note has to be approved by the RBI’s Central Board and the central government.
- Changes in the design of coins are the prerogative of the central government.
- Section 22 of The Reserve Bank of India Act, 1934, gives RBI the “sole right” to issue banknotes in India.
- The central bank internally works out a design, which is put before the RBI’s Central Board.
- Section 25 states that “the design, form, and material of bank notes shall be such as may

be approved by the Central Government after consideration of the recommendations made by the RBI’s Central Board”.

- The RBI’s Department of Currency Management, currently headed by Deputy Governor, has the responsibility of administering the core function of currency management.
- If the design of a currency note has to change, the Department works on the design and submits it to RBI, which recommends it to the central government. The government gives the final approval.
- The Coinage Act, 2011 gives the central government the power to design and mint coins in various denominations.
- The role of the RBI is limited to the distribution of coins that are supplied by the central government.
- Coins are minted in four mints owned by the Government of India in Mumbai, Hyderabad, Kolkata and Noida.

**Types of Notes Issued so far-**

- Ashoka Pillar Banknotes
- Mahatma Gandhi (MG) Series, 1996
- Mahatma Gandhi Series, 2005
- Mahatma Gandhi (New) Series, 2016

**ACCORDING TO THE RESERVE BANK OF INDIA (RBI), INDIA’S FOREX RESERVES HAVE FALLEN BY USD 110 BILLION IN THE LAST 13 MONTHS-**

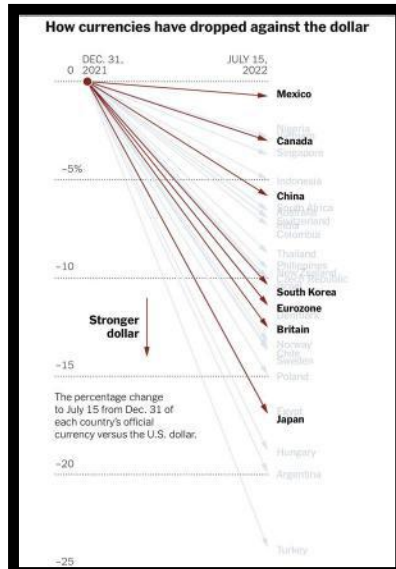
- Forex reserves are assets held on reserve by a central bank in foreign currencies, which can include bonds, treasury bills and other government securities. Most foreign exchange reserves are held in US dollars.

**Components-**

- Foreign Currency Assets
- Gold reserves
- Special Drawing Rights
- Reserve position with the International Monetary Fund (IMF).

**Significance of Forex Reserves-**

- Supporting and maintaining confidence in the policies for monetary and exchange rate management.
- Provides the capacity to intervene in support of the national or union currency.
- India's forex reserves have fallen by USD 110 billion since September 2021 where it stood at a record high of USD 642.45 billion.
- It needs to be noted that Indian rupee is a freely floating currency, and its exchange rate is market determined. The RBI does not have any fixed exchange rate.
- Despite this drastic decline, India has been faring much better than several reserve currencies, EMEs (emerging market economies) and its Asian peers.
- The central bank has been selling dollars from the forex reserves to support the rupee amid pressures caused majorly by global developments.
- The intervention is needed to curb the free fall of the rupee and reduce volatility in the market.

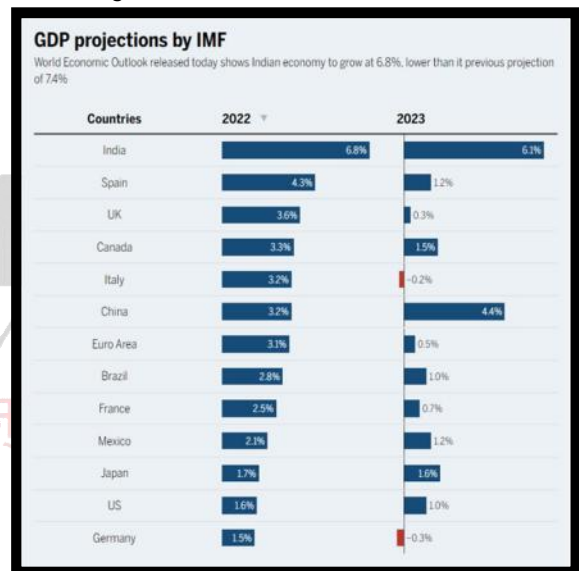


**RECENTLY, THE INTERNATIONAL MONETARY FUND (IMF) RELEASED THE LATEST EDITION OF WORLD ECONOMIC OUTLOOK 2022-**

- IMF cut its forecast for India's Gross Domestic Product (GDP) growth in 2022 to 6.8%, from 7.4% for India in the fiscal year that started in April 2022.
- For 2023, India has been projected to grow at 6.1%.
- Global growth is forecast to slow from 6% in 2021 to 3.2% in 2022 and 2.7% in 2023. This is the weakest growth profile since 2001, except for the

global financial crisis and the acute phase of the Covid-19 pandemic.

- The global growth is expected to slow further in 2023. The worst is yet to come and, for many people 2023 will feel like a recession.
- A slowdown in the Euro area is expected to deepen in 2023, and growth in China is projected to hit its lowest rate in decades apart from during the initial coronavirus outbreak.
- Global inflation is forecast to rise from 4.7% in 2021 to 8.8% in 2022 but to decline to 6.5% in 2023 and to 4.1% by 2024.
- The slowdown in global economic activity is broad-based and sharper-than-expected, with inflation higher than seen in decades.



- The economic outlook depends on a successful calibration of monetary and fiscal policies, the course of the war in Ukraine, and growth prospects in China.

**RECENTLY, THE (ADB) AND THE GOVERNMENT OF INDIA SIGNED A USD 96.3-MILLION LOAN AGREEMENT TO PROVIDE SAFE DRINKING WATER AND IMPROVE WATER SUPPLY AND SANITATION SERVICES IN HP-**

- The project is aligned with the objectives of the Government of India's Jal Jeevan Mission which aims to provide piped water to all rural households by 2024.

- It will upgrade water supply infrastructure and strengthen institutional capacity to ensure safe, sustainable, and inclusive rural water supply and sanitation services.
- Although more than 90% of the state's rural population has access to drinking water, the water supply infrastructure needs revamping, for efficient and improved service quality.
- A pilot fecal sludge management and sanitation programme will also be implemented in Sirmaur District, benefiting 250,000 residents.
- The project will strengthen the capacity of the Jal Shakti Vibhag of the Government of Himachal Pradesh and gram panchayat (local government) village water and sanitation committees.
- It will support the state government's water tariff policy reforms and introduce an asset management system at the state-level and district asset management plans.
- Key project stakeholders and community-based organisations will be trained on water management, including livelihood skills training for women's self-help groups.

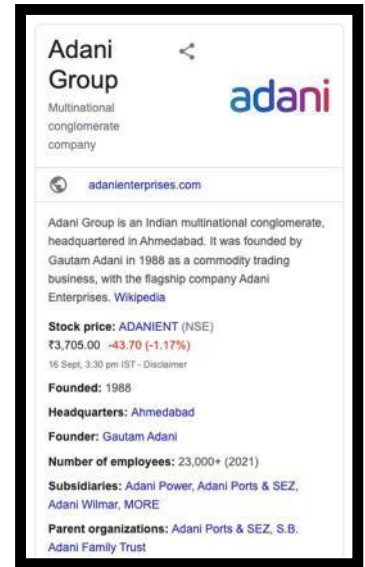
**INDIAN BILLIONAIRE GAUTAM ADANI BECOMES WORLD'S SECOND RICHEST MAN, OVERTAKING JEFF BEZOS-**

- According to the Forbes real-time Billionaires list, Adani Group's Chairperson and Indian



billionaire Gautam Adani surpassed Amazon's Jeff Bezos to become the world's second richest person.

- Adani's net worth is approximated to be around \$155.7 billion up by \$5.5 billion, according to Forbes real-time Billionaires list. Tesla's Elon Musk, remains the world's richest man with a \$273.5 billion net worth, as per Forbes' real-time data.



- France's Bernard Assault is third on the list with his family's net worth totaling around \$155.2 billion.
- Gautam Adani's real-time net worth reflected the stock market surge as the Adani group stocks of Adani Enterprises, Adani Port and Adani Transmission hit their record highs on the BSE.
- In 2022, the Adani Group chairman added more than \$70 billion to his fortune.
- The Ahmedabad-based infrastructure group is the largest coal trader in India and also owns India's largest closely held thermal coal producer. The conglomerate Adani reported revenue of \$5.3 billion in the year to March 31, 2021.
- Gautam Adani presently is a 75% stake owner in Adani Enterprises, Adani Power, and Adani Transmissions, according to March 2022 stock exchange filings. He also owns 37% of Adani Total Gas, Special Economic Zone and 65% of Adani Ports & and 61% of Adani Green Energy.

# REPORTS & INDICES

## SUGAMYA BHARAT ABHIYAN-

- The Sugamya Bharat Abhiyan (Accessible India Campaign) is going to complete 7 years in December 2022.
- The aim of the Campaign is to make a barrier-free and conducive environment for Divyangjans (Persons with Disabilities - PwDs) all over the country.
- It was launched by the Prime Minister of India on International Day of Persons with Disabilities on 3rd December 2015.
- AIC is the nationwide flagship campaign of the Department of Empowerment of Persons with Disabilities (DEPwD), Ministry of Social Justice and Empowerment.
- Persons with Disabilities (Equal Opportunities, Protection of Rights and Full Participation) Act, 1995 categorically provided for non-discrimination in transport and in the built environment.
- It needs to be noted that the Rights of Persons with Disabilities Act, 2016 replaced the PwD Act, 1995 to comply with United Nations Convention on the Rights of Persons with Disabilities (UNCRPD).
- UNCRPD, to which India is a signatory, under Article 9 casts obligations on the Governments for ensuring to PwDs accessibility to-
  - A. Information
  - B. Transportation
  - C. Physical Environment
  - D. Communication Technology
  - E. Accessibility to Services as well as emergency services.

## EDIBLE OIL SECTOR IN INDIA-

- India is one of the largest producers of oilseeds in the world.
- Oil sector occupies an important position in the agricultural economy.
- It accounts for the estimated production of 36.56 mt of nine cultivated oilseeds during the year 2020-21 as per the data released by the Ministry of Agriculture.

- India is the world's second-largest consumer and number one importer of vegetable oil.
- The present rate of edible oil consumption in India surpasses the domestic production rate. Hence, the country has to rely on imports to meet the gap between demand and supply.
- At present, India meets nearly 55% to 60% of its edible oil demand through imports. Therefore, India needs to be independent in oil production to meet the domestic consumption demand.
- Palm oil (Crude + Refined) constitutes roughly around 62% of the total edible oils imported and are imported mainly from Indonesia and Malaysia, while Soyabean oil (22%) is imported from Argentina and Brazil and Sunflower oil (15%) is imported mainly from Ukraine and Russia.
- In India, groundnut, mustard, rapeseed, sesame, safflower, linseed, niger seed and castor are the major traditionally cultivated oilseeds.
- Soyabean and sunflower have also assumed importance in recent years. Coconut is most important amongst the plantation crops.
- Among the non-conventional oils, rice bran oil and cottonseed oil are the most important.
- The government of India launched National Mission on Edible Oils-Oil Palm as a centrally-sponsored scheme, being implemented jointly by the central and state governments with a special focus in the northeast region and the Andaman and Nicobar Islands.

## INDIA HAS CHEAPEST MANUFACTURING COST GLOBALLY: REPORT-

- According to recent data, published by US News and World Report, India has bagged the 31st position, out of 85 nations in the overall Best Countries ranking.
- In the overall Best Countries ranking, Switzerland has topped the chart, followed by Germany, Canada, US and Sweden.
- India has been ranked as the nation with the cheapest manufacturing cost ahead of China and Vietnam.





- India is also featured at the 37th spot in the 'Open for Business' category

### GLOBAL HUNGER INDEX 2022-

- Except the war-torn Afghanistan, India has performed worse than all the countries in the South Asian region in the Global Hunger Index 2022. It has ranked 107 out of 121 countries.
- India ranked 101 out of 116 countries in the Global Hunger Index (GHI) 2021.



- The Global Hunger Index (GHI) is a tool for comprehensively measuring and tracking hunger at global, regional, and national levels.
- GHI scores are based on the values of four component indicators-**
- Undernourishment
  - Child stunting
  - Child wasting
  - Child mortality
- The GHI score is calculated on a 100-point scale reflecting the severity of hunger - zero is the best

score (implies no hunger) and 100 is the worst. The GHI is prepared by European NGOs of Concern Worldwide and Welthungerhilfe.

- The GHI is an annual report and each set of GHI scores uses data from a 5-year period. The 2022 GHI scores are calculated using data from 2017 through 2021.
- Globally, the progress against hunger has largely stagnated in recent years, with a global score of 18.2 in 2022 as compared to 19.1 in 2014, there is only a slight improvement. However, the 2022 GHI score is still considered "moderate".
- The plausible causes for the stagnation in this progress are overlapping crises such as conflicts among countries, climate change, the economic fallout of the Covid-19 pandemic as well as the Russia-Ukraine war, which has increased global food, fuel, and fertiliser prices and is expected to "worsen hunger in 2023 and beyond".
- As per the index, there are 44 countries that currently have "serious" or "alarming" hunger levels and "without a major shift, neither the world as a whole nor approximately 46 countries are projected to achieve even low hunger as measured by the GHI by 2030.
- Belarus, Bosnia & Herzegovina, Chile, China and Croatia are the top five countries in GHI 2022.
- Chad, Democratic Republic of Congo, Madagascar, Central African Republic and Yemen are the countries ranked at the bottom of the index.
- Among the South Asian countries, India (107) is ranked below Sri Lanka (64), Nepal (81), Bangladesh (84), and Pakistan (99). India has a score of 29.1 which places it under serious' category.

### IISC BANGALORE RETAINS ITS SPOT IN THE 2023 THE RANKING-

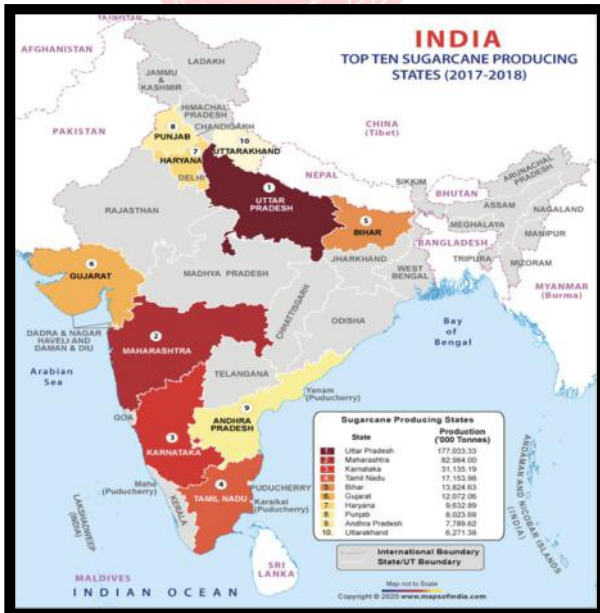
- The IISc has topped the 2023 Times Higher Education (THE) rankings among Indian institute.
- IISc Bengaluru is the only Indian university in the top 300 list.
- India has become the 6th most represented country in the list, with featuring 75 institutes in THE's 2023 ranking.

University Name	Country / Region	2023 Rank	2022 Rank	Change
University of Oxford	UK	1	1	0
Harvard University	US	2	=2	0
University of Cambridge	UK	=3	=5	+2
Stanford University	US	=3	4	+1
Massachusetts Institute of Technology	US	5	=5	0
California Institute of Technology	US	6	=2	-4
Princeton University	US	7	7	0
University of California, Berkeley	US	8	8	0
Yale University	US	9	9	0
Imperial College London	UK	10	12	+2

- Other Indian Institute: IIT Ropar (501-600), IIT Indore (601-800), IIT Gandhinagar ((801-1000)
- The University of Oxford is topped the ranking in the world (seventh consecutive year).

**INDIA BECOMES THE WORLD'S LARGEST PRODUCER OF SUGAR-**

- Recently, India has emerged as the world's largest producer and consumer of sugar and the world's 2nd largest exporter, due to the record production of more than 5000 Lakh Metric Tons (LMT) of sugarcane.



**Reasons for Good Production of Sugar-**

A. Impressive Sugar Season (Sep-Oct)- All records of sugarcane production, sugar production, sugar exports, cane procured,

cane dues paid and ethanol production was made during the season.

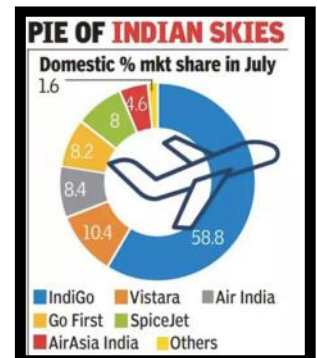
B. High exports- The exports were the highest at about 109.8 LMT without any financial assistance and earned foreign currency of about Rs. 40,000 crores.

C. Indian Government Policy Initiatives- Timely government initiatives in the last 5 years have taken them out of financial distress in 2018-19 to the stage of self-sufficiency in 2021-22.

- Sugar industry is an important agro-based industry that impacts the rural livelihood of about 50 million sugarcane farmers and around 5 lakh workers directly employed in sugar mills.
- The sugar industry is the second largest agro-based industry in India after cotton.
- Sugar industry is broadly distributed over two major areas of production- Uttar Pradesh, Bihar, Haryana and Punjab in the north and Maharashtra, Karnataka, Tamil Nadu and Andhra Pradesh in the south.
- South India has a tropical climate which is suitable for higher sucrose content giving a higher yield per unit area as compared to north India.

**VISTARA EMERGES SECOND LARGEST DOMESTIC AIRLINE BY MARKET SHARE-**

- Full-service Vistara emerged as the second biggest airline by domestic market share last month with a 10.4% pie of the sky, distantly second to the market leader IndiGo at 58.8%.
- The airline is Tata Sons' joint venture with Singapore Airlines. The number three, four and five positions saw airlines separated by just decimal points — Air India (8.4%), GoFirst (8.2%) and SpiceJet (8%).
- India's airlines carried 9.7 million passengers on domestic routes in July, almost double from a year earlier but lower than the 10.5 million passengers ferried in June 2022.



- Vistara, which had a 7.5% market in January and around 9% in the subsequent months, climbed to 10.4% in July. Go First carried 8.2% of the domestic passengers last month, while SpiceJet flew 8%. SpiceJet and Go First have been forced to cut capacity, which helped Vistara overtake them in market share.
- After several technical snags in SpiceJet's flights, the regulator ordered it to cut 50% of its approved capacity for the summer. GoAir grounded more than a fifth of its fleet, or over a dozen planes, due to engine supply problems.
- The combined market share for the three Tata Group airlines: Air India, Vistara and AirAsia India for July was 23.4%. IndiGo's share was 2.5 times higher at 58.8%.

**GOA, FIRST STATE IN INDIA TO RECEIVE "HAR GHAR JAL" CERTIFICATION-**

- The people of all the villages in Goa and Dadra & Nagar Haveli and Daman & Diu (D&NH and D&D) declared their village to be a "Har Ghar Jal" through a resolution passed by the Gram Sabha, certifying that all households in the villages have access to safe drinking water through taps and ensuring that "No One is Left Out."
- The Government of India's flagship programme, Jal Jeevan Mission, was unveiled on August 15, 2019, from the Red Fort's ramparts by its forward-thinking Prime Minister.



- By 2024, the goal hopes to provide every rural family in the nation with a reliable in Jal Jeevan Mission, long-term supply of potable tap water in

an appropriate amount and of the required quality.

- The initiative is carried out by the Indian government in collaboration with the States and UTs.

**HENLEY PASSPORT INDEX 2022: INDIA RANKS 87TH-**

**World's most powerful passports 2022: Top 10 countries**

- Japan
- Singapore
- South Korea
- Germany
- Spain
- Finland
- Italy
- Luxemburg
- Austria
- Denmark

- The Henley Passport Index has recently released the list of the World's Most Powerful Passports for the year 2022.
- Three Asian nations Japan, Singapore and South Korea bagged the top three positions on the list, reversing pre-pandemic rankings that were dominated by European nations.
- India's neighbouring country Pakistan reportedly has the fourth worst passport in the world, according to Henley Index.
- The Japanese passport provides hassle-free entry to 193 countries, while Singapore and South Korea both provide entry to 192 countries.
- Among other countries from Asia, India, along with Mauritius and Tajikistan, has been ranked 87th, with its passport providing access to 67 countries.
- China ties with Bolivia for the 69th spot, with each of their passports allowing access to 80 destinations.
- As for Bangladesh, it occupies the 104th position – five spots higher than Pakistan. Pakistan has the fourth worst passport in the world after Afghanistan, Iraq and Syria.
- Henley Passport Index has ranked all the world's 199 passports according to the number of

destinations their holders can access without a prior visa.

- The ranking is based on data from the International Air Transport Association, which maintains the world's largest database of travel information, and it is enhanced by extensive, ongoing research by the Henley & Partners Research Department.

#### GLOBAL GENDER GAP INDEX 2022-

- Recently, the World Economic Forum (WEF) ranked India at 135 out of 146 countries in its Global Gender Gap (GGG) Index for 2022.

#### INDIA'S REPORT CARD

Index/sub-index	2022 (146 countries)		2021 (156 countries)	
	Rank	Score	Rank	Score
Global Gender Gap Index	135	0.629	140	0.625
Political empowerment	48	0.267	51	0.276
Economic participation & opportunity	143	0.350	151	0.326
Educational attainment	107	0.961	114	0.962
Health and survival	146	0.937	155	0.937

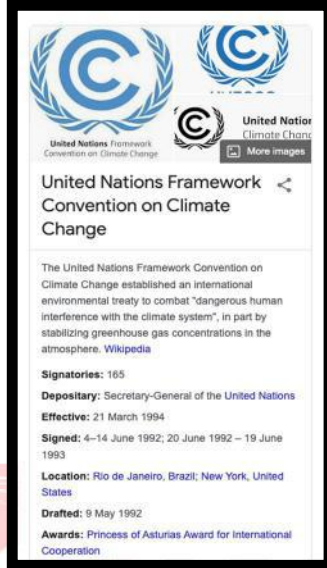
- India's overall score has improved from 0.625 (in 2021) to 0.629, which is its seventh-highest score in the last 16 years.
- In 2021, India was ranked 140 out of 156 countries.

- The gender gap is the difference between women and men as reflected in social, political, intellectual, cultural, or economic attainments or attitudes.
- Political Empowerment (Percentage of Women in Parliament and in Ministerial Positions), India ranks the highest (48th out of 146).
- Iceland is ranked 1 with a score of 0.874 and Bangladesh is ranked 9 with a score of 0.546.
- Economic Participation and Opportunity (Percentage of women in labour force, Wage Equality for similar work, earned income), India ranks a lowly 143 out of the 146 countries in contention even though its score has improved over 2021 from 0.326 to 0.350.
- Educational Attainment (Literacy Rate and the Enrolment rates in Primary, Secondary and Tertiary education), India ranks 107th out of 146, and its score has marginally worsened since last year.
- Health and Survival (Sex ratio at birth and Healthy Life Expectancy), India is ranked the last (146) among all the countries.

# ENVIRONMENT

## THE ANNUAL UNITED NATIONS CLIMATE CHANGE CONFERENCE (COP27), WILL SOON BEGIN IN THE EGYPTIAN RESORT TOWN OF SHARM EL-SHAIKH-

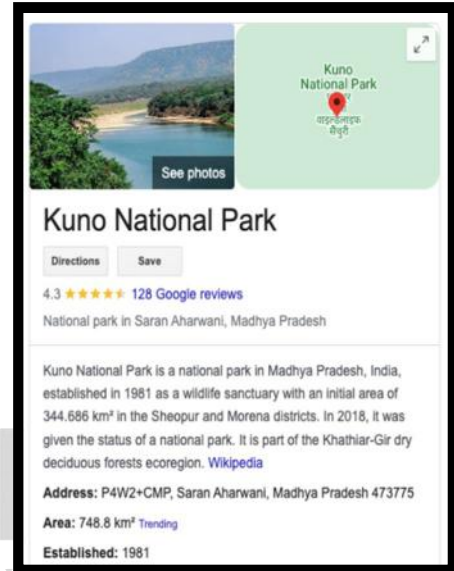
- These annual conferences have been the main driver of the global fight against climate change.
- However, the response so far has not been commensurate to the enormity of the challenge. Conference of Parties (COP) is the supreme decision-making body of the UNFCCC.
- The agreement seeks to limit global warming to well below 2°C, preferably to 1.5°C, compared to pre-industry levels.
- As a bloc, the European Union has done relatively better on climate goals, with the United Kingdom, which is struggling with an economic downturn right now, halving its emissions from 1990 levels, UN data shows.
- The United States, the world's leading emitter till it was overtaken by China in the mid 2000s, has been a major laggard, cutting its emissions by only about 7 percent from 1990 levels.
- China's emissions have risen by almost four times, and India's by about three times, during this period.



## INDIA HOME TO CHEETAHS AFTER 70 YEARS-

- Eight African cheetahs are moved from Namibia into their new habitat at the Kuno National Park in Madhya Pradesh, September 17, on Prime Minister Narendra Modi's birthday.

- The PM release the five female and three male cheetahs into the Park's quarantine enclosures on Friday as part of his efforts to revitalise and diversify the country's wildlife and habitat, his office has said.



- The last cheetah in India died in 1947 in Korea district in present day Chhattisgarh, which was earlier part of Madhya Pradesh, and the species was declared extinct from India in 1952. According to reports, the cheetah has lost 90 percent of its global habitat in the last 100 years.
- The 'African Cheetah Introduction Project in India' was conceived in 2009, with a plan to introduce the big cat by November last year in Kuno National Park, but it suffered a setback due to the COVID-19 pandemic.
- The cheetahs boarded a customised Boeing 747-400 aircraft from Namibia's capital Windhoek and arrive in Gwalior after completing an overnight journey lasting 10 hours and traversing 8,000 kilometres.
- The felines were then shifted from Gwalior to Kuno National Park (KNP) in an Indian Air Force (IAF) Chinook heavy-lift helicopter.

## IMPORTANT MCQ FOR COMPETITIVE EXAMS

- |  |  |   |
|--|--|---|
| 1. Which of these symbol is used as the logo of the "World Wide Fund for Nature (WWF) ?<br>a) Tiger<br>b) Panda<br>c) Lion<br>d) Cheetah   | a) 4th<br>b) 6th<br>c) 7th<br>d) 8th   | a) Dollar<br>b) Euro<br>c) Real<br>d) Franc   |
| 2. What is the capital of Bosnia And Herzegovina ?<br>a) Caracas<br>b) Manama<br>c) Sarajevo<br>d) Bujumbura   | 7. The Artemis 1 mission belongs to which of the following space agency ?<br>a) ISRO<br>b) JAXA<br>c) ESA<br>d) NASA   | 13. Which of the following organization issue the rules of global trade ?<br>a) IMF<br>b) World Trade Organization<br>c) Foreign Trade<br>d) G-20   |
| 3. Who has become the first player from India to get elected in the Athletes' Commission of the International Table Tennis Federation (ITTF) ?<br>a) Manika Batra<br>b) Nikhat Zareen<br>c) Sreeja Akula<br>d) Sharath Kamal | 8. Which country is the second largest producer of steel in the world ?<br>a) India<br>b) China<br>c) Russia<br>d) United States                               | 14. How many Public Sector Banks were nationalized on 19-07-1969<br>a) 14<br>b) 15<br>c) 16<br>d) None of these   |
| 4. Recently, the Uttarakhand Government decided to shift the Uttarakhand High Court from Nainital to which of the following places ?<br>a) Dehradun<br>b) Rishikesh<br>c) Almora<br>d) Haldwani                              | Q9. _____ was unveiled as the mascot for the 2024 Paris Olympics.<br>a) Sebastian<br>b) Bucky Badger<br>c) Phrygian cap<br>d) Aubie The Tiger                  | 15. Which is the longest National Highway in India ?<br>a) NH 66<br>b) NH 27<br>c) NH 52<br>d) NH 44  |
| 5. Who has appointed as the new Governor of West Bengal by President Droupadi Murmu ?<br>a) Jagdish Mukhi<br>b) R. N. Ravi<br>c) Anandiben Patel<br>d) Dr CV Ananda Bose   | 10. Which of the following group has launched a plan named 'Global Shield' at the 27th UN Climate Change Conference ?<br>a) G20<br>b) G7<br>c) QUAD<br>d) NATO | 16. In which state is the Sinhagad Fort located ?<br>a) Himachal Pradesh<br>b) Rajasthan<br>c) Maharashtra<br>d) Gujarat  |
| 6. What is the rank of India in Climate Change Performance Index (CCPI) 2023 ?   | 11. Which is the highest river dam in India ?<br>a) Hirakud Dam<br>b) Bhakra dam<br>c) Sardar Sarovar Dam<br>d) Tehri Dam                                      | 17. First ASEAN-India Start-Up Festival has been inaugurated in which country to mark the 30th anniversary of ASEAN and India's relationship ?<br>a) Brunei<br>b) Cambodia<br>c) Indonesia<br>d) Laos |
|  | 12. Which of the following is the currency used in Brazil ?  |   |

18. Which of the following country has won FIFA U-17 Women's World Cup 2022 ?  
a) Spain  
b) Colombia  
c) India  
d) Nigeria
19. Lula da Silva has defeated the incumbent president of which of the following countries to become a new president ?  
a) Brazil  
b) Chile  
c) Peru  
d) Argentina
20. According to a report released by UNHCR in October 2022, which country hosted the largest refugee population in the world ?  
a) Colombia  
b) USA  
c) Germany  
d) Turkey
21. According to the WHO's Global TB Report 2022, how many TB cases notified in India in 2021 ?  
a) 11.4 lakh  
b) 21.4 lakh  
c) 31.4 lakh  
d) 41.4 lakh
22. World Vegan Day is celebrated every year on \_\_\_\_\_ to encourage people to follow the vegan lifestyle and spread awareness about veganism.  
a) November 2  
b) November 3  
c) November 5  
d) November 1
23. \_\_\_\_\_ also known as the "Steel Man of India", passed away aged 86 at Tata Main Hospital in Jamshedpur.  
a) Freddie Mercury  
b) B.P. Wadia  
c) Homai Vyarawalla  
d) Jamshed J Irani
24. Which state government will set up Cyber Intelligence Unit in the state to curb cyber and financial crime ?  
a) Uttar Pradesh  
b) Gujarat  
c) Madhya Pradesh  
d) Maharashtra
25. In which year did the Indian Premier League (IPL) start ?  
a) 2002  
b) 2008  
c) 2004  
d) 2010
26. The Great Indian Desert is also known as the ..... desert.  
a) Kalahari  
b) Gobi  
c) Sahara  
d) Thar
27. Dalal Street is  
a) in Kolkata - famous for jute market  
b) in Mumbai - famous for stock exchange market  
c) in Delhi -famous for Kabari (Waste goods) market  
d) in Bangalore - famous for race course
28. Who was the Finance Minister when 14 Banks were nationalised on 19th July, 1969  
a) Mrs. Indira Gandhi  
b) Morarji Desai  
c) C. Subramaniam  
d) Pranab Mukherjee
29. Sandakphu is the highest peak in the state of \_\_\_\_\_.  
a) Meghalaya  
b) Ladakh  
c) West Bengal  
d) Assam
30. The Bank formed by BRICS countries is known as \_\_\_\_\_.  
a) Inter-American Development Bank (IDB)  
b) European Investment Bank (EIB)  
c) Asian Development Bank (ADB)  
d) New Development Bank (NDB)
31. Which Union Ministry conducted the 'Mother Tongue Survey of India (MTSI)' ?  
a) Ministry of Education  
b) Ministry of Home Affairs  
c) Ministry of Culture  
d) Ministry of External Affairs
32. What was introduced in the 103rd Constitutional Amendment, which was seen in the news recently ?  
a) Constitutional status to the National Commission for Backward Classes (NCBC)  
b) Constitutional status to the National Commission for Women (NCW)  
c) 10 percent quota for Economically weaker sections (EWS)  
d) Goods and Services Tax
33. Which country is the host of the 27th Conference of the Parties (COP) to the UNFCCC ?  
a) UAE  
b) Egypt  
c) Australia  
d) Brazil
34. Which part of India has been announced as India's largest

- pilgrimage center through "net zero carbon emission" ?  
a) Rameshwaram  
b) Puri  
c) Kedarnath  
d) Mathura-Vrindavan
35. The Two Finger Test is conducted in which case ?  
a) Rape case  
b) Acid attack Case  
c) Blind test  
d) Distance test
36. In which state Congress has launched its Bharat Jodo Yatra?  
a) Assam  
b) Manipur  
c) Meghalaya  
d) Mizoram
37. Every year, 7 November is celebrated as National Cancer Awareness Day 2022 on the birth anniversary of \_\_\_\_.  
a) Galileo Galilei  
b) Albert Einstein  
c) Louis Pasteur  
d) Marie Curie
38. Recently in November 2022, Adani New Industries Limited built India's tallest wind turbine in\_\_\_\_, as part of its renewable energy growth goals.  
a) Pune, Maharashtra  
b) Mumbai, Maharashtra  
c) Bengaluru, Karnataka  
d) Mundra, Gujarat
39. Pinaka is a  
a) a multi barrel rocket launcher developed by DRDO  
b) a rocket launcher developed by France  
c) a missile developed by DRDO  
d) a missile imported from Russia
40. The instrument used to measure blood pressure ?  
a) Sphygmomanometer  
b) Manometer  
c) Thermometer  
d) Stethoscope
41. When RBI raises the Cash reserve Ratio rate what action are the banks required to take?  
a) They have to deposit additional money with RBI as reserve money  
b) Banks are required to increase their lending to the priority sector  
c) Banks also increase their lending and deposit rates  
d) All the above
42. Which one of the following does not qualify as priority sector lending by commercial banks ?  
a) Software exports  
b) Small business loans  
c) Education loans  
d) Small industries loan
43. In which part of India is the "Vizag Port" located ?  
a) Karnataka  
b) Tamil Nadu  
c) Andhra Pradesh  
d) West Bengal
44. The "Employees Provident Fund Organisation" (EPFO), the statutory body under the Government of India's Ministry of Labour and Employment is headquartered at \_\_\_\_ .  
a) Mumbai  
b) Hyderabad  
c) Chennai  
d) New Delhi
45. Which country has signed 4 MoUs with India in areas of culture, wildlife, and health recently ?  
a) Mangolia  
b) Ghana  
c) Cambodia  
d) Namibia
46. Prime Minister Narendra Modi has unveiled a 108-feet tall bronze statue of Sri Nadaprabhu Kempegowda in which city ?  
a) Bengaluru  
b) Chennai  
c) Guwahati  
d) Mysure
47. Who has been re-elected as Chairman of the International Cricket Council (ICC) ?  
a) Imran Khwaja  
b) Greg Barclay  
c) Wasim Khan  
d) Geoff Allardice
48. England won the T20 World Cup 2022 trophy by defeating \_\_\_\_ by 5 wickets at the Melbourne Cricket Ground (MCG) Australia.  
a) South Africa  
b) Australia  
c) New Zealand  
d) Pakistan
49. India celebrates Children's Day on November 14 to commemorate the birth anniversary of the first Prime Minister of India Pandit Jawaharlal Nehru. This year marks the \_\_\_\_ birth anniversary .  
a) 133rd  
b) 134th  
c) 135th  
d) 136th



50. Who among the following has named the T20WC Men's Player of the Tournament ?  
a) Virat Kohli  
b) Sam Curran  
c) Jos Buttler  
d) Shaheen Afridi
51. United Nation's Day of Eight Billion is celebrated on which day ?  
a) 15 November 2021  
b) 15 November 2022  
c) 15 November 2023  
d) 15 November 2024
52. November 15 is celebrated as Janjatiya Gaurav Diwas or Tribal Pride Day to honour tribal freedom fighter, \_\_\_\_\_.  
a) Rani Gaidhinliu  
b) Birsa Munda  
c) Tilka Majhi  
d) Tirot Singh
53. Which of the following Rivers has no Bridges built over it ?  
a) Nile  
b) Congo river  
c) Amazon river  
d) Yellow river
54. Second largest continent of the world ?  
a) Asia  
b) Australia  
c) Africa  
d) Europe
55. Union Bank of India marked its 104th foundation day on 11 November 2022. Union Bank of India is the \_\_\_\_\_ largest public sector bank in India.  
a) Third  
b) Fourth  
c) Fifth  
d) Sixth
56. Which of the following is incorrect with regard to the banks and their headquarters?  
a) Allahbad Bank Kolkata  
b) Andhra Bank-Hyderabad  
c) Bank of India-Mumbai  
d) None
57. Grida is a dance form of which Indian state ?  
a) Madhya Pradesh  
b) Jammu & Kashmir  
c) Punjab  
d) Rajasthan
58. In which state is the "Clouded Leopard National Park" located?  
a) Odisha  
b) Himachal Pradesh  
c) Sikkim  
d) Tripura
59. Who has represented India at the inauguration of the FIFA World Cup 2022 in Qatar ?  
a) Narendra Modi  
b) Rajnath Singh  
c) Droupadi Murmu  
d) Jagdeep Dhankhar
60. Who has been appointed as Election Commissioner of India recently ?  
a) Abhishek Singhvi  
b) Aryama Sundaram  
c) Arun Goel  
d) Mukul Rohatgi
61. World Children's Day is observed every year on which day ?  
a) 19 November  
b) 20 November  
c) 21 November  
d) 17 November
62. What is the name of official mascot of the Qatar World Cup 2022 ?  
a) Striker  
b) Zakumi  
c) Fuleco  
d) La'eeb
63. Who was conferred the Gandhi Mandela Award 2022 by Himachal Pradesh governor Rajendra Vishwanath Arlekar?  
a) Sheikh Mujibur Rahman  
b) Dalai Lama  
c) Qaboos bin Said Al Said  
d) ISRO
64. Daljeet Kaur passed away recently at age of 69. She was \_\_\_\_\_.  
a) Writer  
b) Politician  
c) Film Director  
d) Actor
65. 53rd International Film Festival of India (IFFI), Telugu superstar \_\_\_\_\_ was honoured with the Indian Film Personality of the Year 2022 award.  
a) N.T. Rama Rao Jr.  
b) Pawan Kalyan  
c) Mahesh Babu  
d) Chiranjeevi
66. What is the name of the football to be used during the world cup 2022 ?  
a) Telstar 18  
b) Brazuca  
c) Telstar Mechta  
d) Al Rihla
67. Which of the following autonomous body locates in Delhi Nirvachan Sadan ?  
a) UPSC  
b) CBI  
c) Election Commission of India

- d) AIIMS
68. Of the following, the town which does not come within the National Capital Region is?  
a) Panipat  
b) Rohtak  
c) Mathura  
d) Khurja
69. On 2-10-1975, which types of banks were established  
a) Public Sector Banks  
b) Private Sector Banks  
c) Regional Rural Banks  
d) None of these
70. LIC was established in which year:  
a) 1956  
b) 1965  
c) 1977  
d) None of these
71. The "Nilgiri Mountain Railway", enlisted as a UNESCO heritage site is located in \_\_\_\_\_.  
a) Karnataka  
b) Assam  
c) Kerala  
d) Tamil Nadu
72. Which of these day is observed on May 31 ?  
a) World Intellectual Property Day  
b) World No-Tobacco Day  
c) World Museum Day  
d) International Olympic Day
73. Gujarat was declared as a 'Har Ghar Jal' state, earlier, which of the following Union Territories had become the first 'Har Ghar Jal' certified Union Territory (UT) in the country ?  
a) Puducherry  
b) Delhi  
c) Dadra & Nagar Haveli and Daman & Diu  
d) Andaman and Nicobar Islands
74. As of October 2022, how many beaches in India has been awarded the Blue Flag Certification ?  
a) 12  
b) 15  
c) 10  
d) 8
75. Indira Gandhi International Airport in Delhi is the 10th busiest airport in the world. Which of the following airport topped the list ?  
a) Tokyo International Airport  
b) Hartsfield-Jackson Atlanta International Airport  
c) Dubai International Airport  
d) London Heathrow Airport
76. Elon Musk completes acquisition of Twitter in how much amount ?  
a) \$40 billion  
b) \$41 billion  
c) \$42 billion  
d) \$44 billion
77. The Defence ministry organised the 'Shaurya Diwas' celebrations in Srinagar, Jammu & Kashmir (J&K) on \_\_\_\_\_.  
a) October 23  
b) October 24  
c) October 25  
d) October 27
78. The government of India will set-up branches of the National Investigation Agency (NIA) in all the states by \_\_\_\_ to deal with terrorism cases.  
a) 2025  
b) 2024  
c) 2023  
d) 2022
79. Which of the following company tie-up with Airbus to manufacture C-295 transport aircraft for IAF in Gujarat ?  
a) TATA  
b) Reliance  
c) HCL  
d) Infosys
80. Bestu Varas or the \_\_\_\_\_ New Year is celebrated a day after Diwali on the Pratipada Tithi in the month of Kartik.  
a) Marathi  
b) Gujarati  
c) Punjabi  
d) Manipuri
81. The G-7 is a group consisting of?  
a) the heads of the states of US, UK, France, Germany, Italy, Canada and Japan  
b) the heads of the states of US, UK, France, Germany, Russia, Italy and Japan  
c) the finance ministers of US, UK, France, Germany, Italy, Canada and Japan  
d) the heads of the states of US, UK, France, Germany, Russia, Canada and Japan
82. Sagarmatha friendship is between which two countries ?  
a) Pakistan & China  
b) Nepal & India  
c) India & China  
d) China & Nepal
83. The term "Balance of Trade" means-  
a) A point where the values of imports and exports are equal

- b) The term is used with reference to bilateral trade agreements with the countries of CIS Block  
c) The difference between the cost of the imports and exports of a country  
d) The difference between the total of transactions with foreign countries in trade, services and capital
84. "Bulls and Bears" are terms used in  
a) bullion markets  
b) vegetable markets  
c) stock exchange  
d) commodity markets
85. In which state is the "Numaligarh Refinery" located ?  
a) West Bengal  
b) Assam  
c) Uttar Pradesh  
d) Haryana
86. "Stok Kangri" is the highest mountain peak of which part of India ?  
a) Meghalaya  
b) Uttarakhand  
c) Ladakh  
d) Himachal Pradesh
87. The Asian Football Confederation (AFC) has announced that the Asian Cup football tournament 2023 will be held in which of the following country ?  
a) France  
b) Saudi Arabia  
c) UAE  
d) Qatar
88. Who has won the Men's Ballon d'Or (Golden Ball Award) 2022?  
a) Lionel Messi  
b) Karim Benzema  
c) Cristiano Ronaldo  
d) Xavi
89. IT services major Infosys president Ravi Kumar S has resigned from his post. Where is the headquarters of Infosys?  
a) Bengaluru  
b) New Delhi  
c) Chennai  
d) Ahmedabad
90. Serbian scientists have named a new species of beetle after the tennis player \_\_\_\_\_.  
a) Rafael Nadal  
b) Roger Federer  
c) Novak Djokovic  
d) Pete Sampras
91. Union Home and Cooperation Minister Amit Shah has launched an MBBS course in Hindi for the first time in the country in which of the following city ?  
a) New Delhi  
b) Bhopal  
c) Bhubaneswar  
d) Ahmedabad
92. India will host which edition of the General Assembly of the International Criminal Police Organization (INTERPOL) in New Delhi ?  
a) 50th  
b) 60th  
c) 75th  
d) 90th
93. Who has released a book titled 'Pandemic Disruptions and Odisha's Lessons in Governance' ?  
a) Droupadi Murmu  
b) Jagdeep Dhankhar  
c) Naveen Patnaik  
d) Ganeshi Lal
94. \_\_\_\_\_ is marked as Global Handwashing Day, with the aim of increasing awareness and understanding about the importance of handwashing.  
a) 16 October  
b) 17 October  
c) 18 October  
d) 15 October
95. The members of NAFTA are  
a) USA, Canada and Mexico  
b) USA, Canada and India  
c) USA, Canada and Japan  
d) USA, UK and India
96. In December 2018, Havelock Island was renamed as \_\_\_\_\_.  
a) Swaheed Dweep  
b) Swaraj Dweep  
c) Netaji Subhash Bose Island  
d) Veer Savarkar Island
97. Regulatory Authority for Regional Rural Bank is of  
a) Sponsor Bank  
b) State Government  
c) RBI and NABARD  
d) None of These
98. Treasury bills are sold in India by  
a) Reserve Bank of India  
b) State Governments  
c) Commercial Banks  
d) SEBI
99. What is the capital of Somalia ?  
a) Niamey  
b) Belgrade  
c) Mogadishu  
d) Bujumbura
100. In which Indian state is the "Damdama Lake" located ?  
a) Haryana

- b) West Bengal  
c) Uttar Pradesh  
d) Jharkhand
101. The Indian government has invited which country's President as the chief guest for the Republic day parade 2023 ?  
a) USA  
b) Israel  
c) Egypt  
d) Russia
102. Who has become the first male player to score in 5 World Cups?  
a) Cristiano Ronaldo  
b) Lionel Messi  
c) Karim Benzema  
d) Sergio Ramos
103. Vikram Gokhale passed away recently at the age of 77. He was what ?  
a) Writer  
b) Politician  
c) Actor  
d) Social Worker
104. National Milk Day is celebrated on \_\_\_\_\_ every year to signify the importance and benefits of milk.  
a) 24th November

- b) 25th November  
c) 26th November  
d) 27th November
105. The National Cadet Corps (NCC) celebrated its \_\_\_\_\_ anniversary of its Raising Day on November 27th, 2022.  
a) 71st  
b) 72nd  
c) 73rd  
d) 74th
106. India has sent a team to which country to assess potential lithium deposits ?  
a) Australia  
b) Brazil  
c) Argentina  
d) Egypt
107. Which year is declared as the 'International Year of Millets (IYM)' ?  
a) 2021  
b) 2022  
c) 2023  
d) 2025
108. Who has been named as the national ambassador for TB Mukt Bharat Campaign ?  
a) Virat Kohli  
b) Deepika Padukone  
c) Deepa Malik

- d) PV Sindhu
109. Which of the following is Not a Greenhouse Gas ?  
a) Oxygen  
b) Methane  
c) Nitrous Oxide  
d) Carbondioxide
110. Which forests are called "Lungs of the Earth" ?  
a) Tongass  
b) Congo  
c) Nile  
d) Amazon
111. BIS stands for  
a) Bank Information Settlements  
b) Bank for International Standardization  
c) Bank for International Settlements  
d) None of The Above
112. Currency Swaps are  
a) common currency transactions involving borrowing and lending  
b) currency loans from an outer country  
c) back to back loan  
d) none of the above

**ANSWER KEY**

1-b	2-c	3-d	4-d	5-d	6-d	7-d	8-a	9-c	10-b	11-d	12-c	13-b	14-a	15-d
16-c	17-c	18-a	19-a	20-d	21-b	22-d	23-d	24-d	25-b	26-d	27-b	28-b	29-c	30-d
31-b	32-c	33-b	34-d	35-a	36-a	37-d	38-d	39-a	40-a	41-a	42-a	43-c	44-d	45-c
46-a	47-b	48-d	49-a	50-b	51-b	52-b	53-c	54-c	55-c	56-d	57-a	58-d	59-d	60-c
61-b	62-d	63-b	64-d	65-d	66-d	67-c	68-c	69-c	70-a	71-d	72-b	73-c	74-a	75-b
76-d	77-d	78-b	79-a	80-b	81-c	82-d	83-c	84-c	85-b	86-c	87-d	88-b	89-a	90-c
91-b	92-d	93-c	94-b	95-a	96-b	97-c	98-a	99-c	100-a	101-c	102-a	103-c	104-c	105-d
106-c	107-c	108-c	109-a	110-d	111-c	112-d								