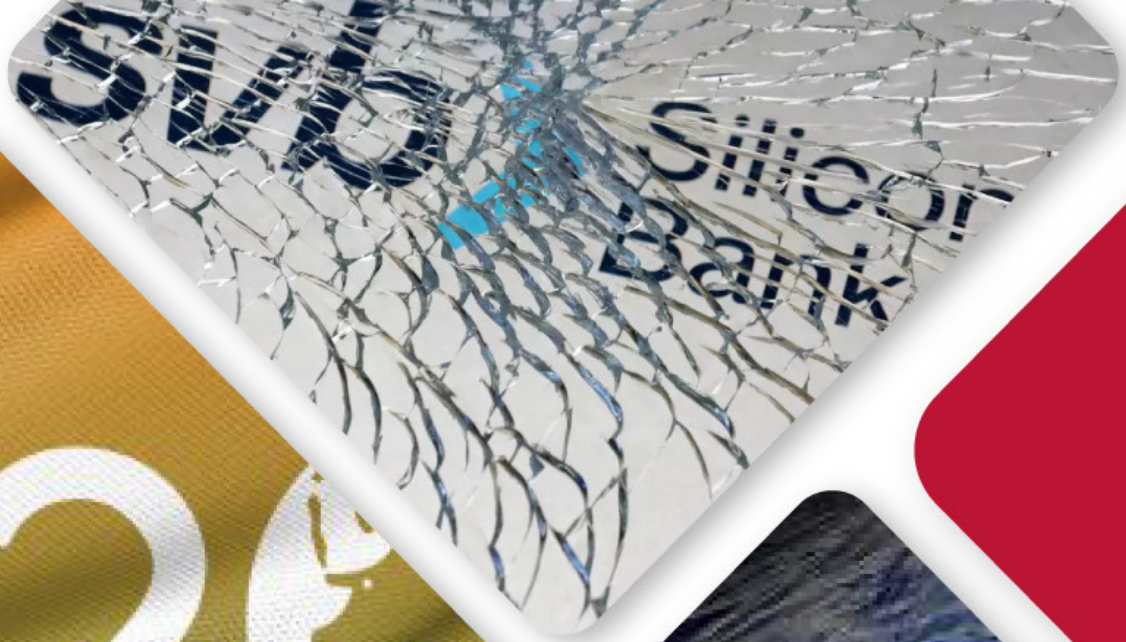

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SAJIBU NONGMA PANBA

CONTEXT: *Manipur celebrated 'Sajibu Nongma Panba*

BACKGROUND: The followers of the Sanamahism religion in Manipur celebrate 'Sajibu Nongma Panba' as their Lunar New Year, a traditional festival observed mostly on the first day of the lunar month of Sajibu. This festival, also known as Meetei Cheiraoba or Sajibu Cheiraoba, is a significant occasion for the Meitei people, one of the largest ethnic groups residing in Manipur.

CHETRI CHAND – THE SINDHI NEW YEAR

CONTEXT: *The Sindhi community celebrated the festival of Cheti Chand*

BACKGROUND :The Sindhi community holds the festival of Cheti Chand in high esteem, as it commemorates the birth of Jhulelal (also known as Uderolal), who is revered as their patron saint. The festival is of great significance to Sindhis because it is believed that on this day, Jhulelal, who is said to have been brought to life by Varun Dev, appeared to rescue the Sindhi people from the oppressive rule of a leader who sought to destroy their culture and Hinduism. The day is also considered to be propitious for offering prayers and expressing gratitude to the God of Water.

In the Sindhi tradition, the month of Chaitra is known as "Chet" and each new month in their Panchang begins with the New Moon, which is called "Chand." Therefore, the festival is celebrated with great enthusiasm and is named Cheti Chand.

GUDHI PADWA – THE MARATHI NEW YEAR

CONTEXT: *Gudi Padwa was celebrated across Maharshtra and Goa*

BACKGROUND : Gudi Padwa is an eagerly awaited festival in Maharashtra and Goa, where it is celebrated as the Marathi New Year. It is the first day of the year according to the traditional calendar of Maharashtra, and it is observed with great fervor by both Maharashtrians and Konkanis. The term "Gudi Padwa" is derived from two words: "Gudi," which means flag, and "Padwa," "Padava," or "Padavo," which comes from the Sanskrit word "pratipada," meaning the first day of the Lunar fortnight.

CHAITRA NAVRATRI – THE NINE-DAY FESTIVAL

CONTEXT: *Navaratri festivities were conducted across the country*

BACKGROUND : Chaitra Navratri, also known as Vasanta Navratri, is a nine-day festival that commences on the first day of the first month (Chaitra) of the Hindu Luni-Solar calendar, falling in either March or April. The ninth day of the Navratri festivities coincides with Ram Navami, the birthday of Lord Ram. During Chaitra Navratri, each of the nine days is dedicated to the worship of one of the nine avatars of Goddess Shakti: Shailaputri, Brahmacharini, Chandraghanta, Kushmanda, Skandamata, Katyayani, Kalaratri, Mahagauri, and Siddhidatri. Additionally, each day is associated with a specific color, which holds significant meaning.

LAKKHI MELA

CONTEXT: *The Karauli district of Rajasthan celebrated the Lakhi mela*

BACKGROUND : The Karauli district of Rajasthan is renowned for its lively culture and festivities, and among them is the Lakkhi Mela, which is also referred to as Kaila Devi Chaitra Mela. This festival is marked with tremendous fervor and devotion by individuals from diverse communities, who gather to offer their reverence to Goddess Kaila Devi.

MATUA MAHA MELA

CONTEXT: *The All India Matua Mahasangha is organized a mela in honor of Sri Sri Harichand Thakur, the founder of the Matua sect, to celebrate his 212th birth anniversary.*

BACKGROUND: This event, which was held at Sridham Thakurnagar in North 24 Parganas of West Bengal, was attended by approximately 45 lakh people as they seek blessings from the sect founder. Sri Sri Harichand Thakur was born into a peasant family of Thakur community in Orakandi, Gopalganj District of Bengal presidency (currently located in Bangladesh) around 1811. He devoted his life to bringing salvation to the oppressed and worked among the untouchable people of Bengal Presidency.

In 1860, Sri Sri Harichand Thakur began a social and religious movement in Orakandi that eventually led to the formation of the Matua Dharma, also known as the Matua sect, a Vaishnavite Hinduism sect. This sect was adopted by members of the Namasudra community, who were considered untouchables at the time. The Matua sect opposed caste oppression and focused on education and social upliftment for Dalits. Over time, the sect also attracted adherents from other marginalized caste communities such as the Malis, Telis, and Chamars.After Sri Sri Harichand Thakur's passing, his son Guruchand Thakur took the lead of the Matua Mahasangha and established

several schools to educate the Dalit community. Under his leadership, the Matua sect achieved doctrinal cohesion and major organizational push, becoming associated with the Namasudra social protest movement started in 1872. Today, a significant amount of Dalit literature mixing religious and secular themes has emerged around Thakur's legacy and the Matua Mahasangha. The Matua sect continues to be a leading community working towards the upliftment of Bengali Dalits residing in India and Bangladesh

YAOSHANG FESTIVAL

CONTEXT: *Manipur celebrated Yaoshang festival*

BACKGROUND: The Yaoshang festival is Manipur's equivalent of Holi and is celebrated annually on the full moon of Lamta, which falls in February-March of the Meitei lunar calendar. The festival commences shortly after sunset, followed by Yaosang Mei thaba, also known as Burning of the Straw Hut. As part of the festivities, children visit their neighbors to request monetary donations, known as nakatheng. The Meitei people traditionally perform thabal chongba, a dance in which boys and girls gather in an open area and dance in a circle.

HOLA MOHALLA

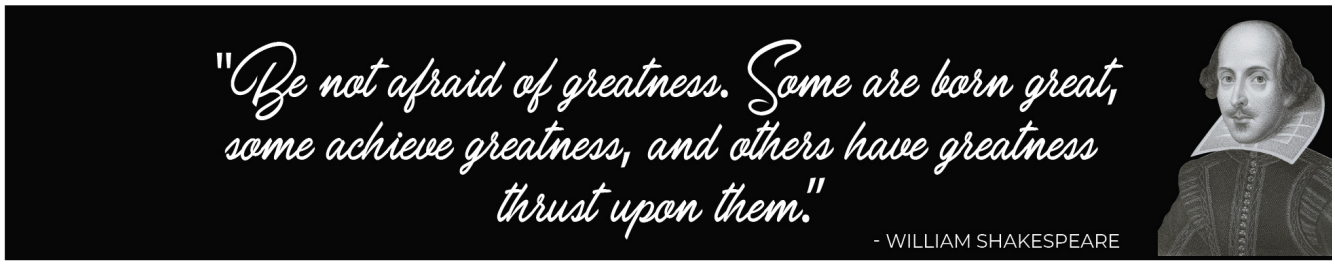
CONTEXT: *The Sikh celebrated Hola Mohalla*

BACKGROUND: Holla Mohalla is a Sikh celebration that takes place in the month of Phalguna, a day after Holi. This annual festival, which is held at Anandpur Sahib in Punjab, was instituted by the tenth Sikh Guru, Gobind Singh, as a gathering of Sikhs for military exercises and simulated battles on the day after Holi. The festival serves as a reminder of bravery and defense preparedness, which were important principles to the Tenth Guru, who was then engaged in a conflict with the Mughal empire. The three-day festival includes mock battles, music, and poetry competitions. The Nihang Singhs, members of the Sikh army established by Guru Govind Singh, continue the martial tradition by performing simulated battles and exhibiting their skills in swordsmanship and horse riding.

MUSTATILS

CONTEXT: *Newly found rock buildings in northwest of Saudi Arabia believed to be among earliest stone monuments in history*

BACKGROUND: Monumental stone structures known as Mustatils, meaning "rectangles" in Arabic, typically consist of rectangular courtyards enclosed by two or more long walls, connected to two thick-walled ends. These structures are believed to have been constructed over 7,000 years ago during the Neolithic Era and are among the world's oldest known ritual sites. The largest discovered Mustatil, made up of 12,000 tons of stone, is over 1,500 feet in length. The presence of sheep, gazelle, ibex, and domesticated cattle bones surrounding stone representations of gods known as betyls suggest that the structures were utilized as sites for animal sacrifices in rituals. In addition to their significance as early ritual sites, this discovery also provides the earliest evidence of animal domestication in the region.



KEELADI MUSEUM

CONTEXT: : *A museum adorned with over 15,000 unique artefacts, unearthed between the 4th and 8th phases of excavations by the Tamil Nadu State Department of Archaeology since 2018, has been opened by the Chief Minister of Tamil Nadu, M.K. Stalin.*

BACKGROUND: The excavations have highlighted the existence of an urban civilization in Tamil Nadu since the Sangam Age, which is contemporaneous to the urban life recorded in the Gangetic plains. The Keeladi excavations have also pushed the Sangam Age back to the 6th century BCE, as opposed to the earlier estimation of between the 3rd century BCE and 3rd century CE. According to the report submitted recently to the Archaeological Survey of India by K. Amarnath Ramakrishna, the Superintending Archaeologist who led the first two phases of the excavations, the Sangam Age has now been further pushed back to 800 BCE.

'DHARA: AN ODE TO INDIAN KNOWLEDGE SYSTEMS' INITIATIVE

CONTEXT: *The Ministry of Culture announced Dhara: An ode to Indian Knowledge System, a series of programs powered by lecture demonstrations, celebrating and showcasing India's contribution and achievements across diverse fields under Azadi ka Amrit Mahotsav programme. The first event under this series was dedicated to 'India's Contribution to Mathematics Through Ages'.*

BACKGROUND: Ancient Indian Mathematics

The history of mathematics in India was rich, long, and esteemed. Indian mathematicians contributed to the representation of numbers, recursive relations, solutions to indeterminate equations, and techniques for handling infinite and infinitesimal numbers. The Sulbasutras, which date back to approximately 800 BCE, utilized the Pythagorean theorem and approximations to surds. Pingala's Chandassastra, written in the 3rd century BCE, established foundations for combinatorial techniques. By the time of Aryabhata in approximately 499 CE, Indian mathematicians were familiar with many of the concepts currently taught in schools, such as algorithms for extracting square and cube roots based on the decimal place-value system.

Aryabhata presented the finite-difference form of the differential equation of the sine function and a method for solving linear indeterminate equations. Brahmagupta, around 628 CE, was the first to fully discuss arithmetic operations with zero and introduced the 'bhavana' law of composition for solving quadratic indeterminate equations. Trigonometry also saw significant developments.

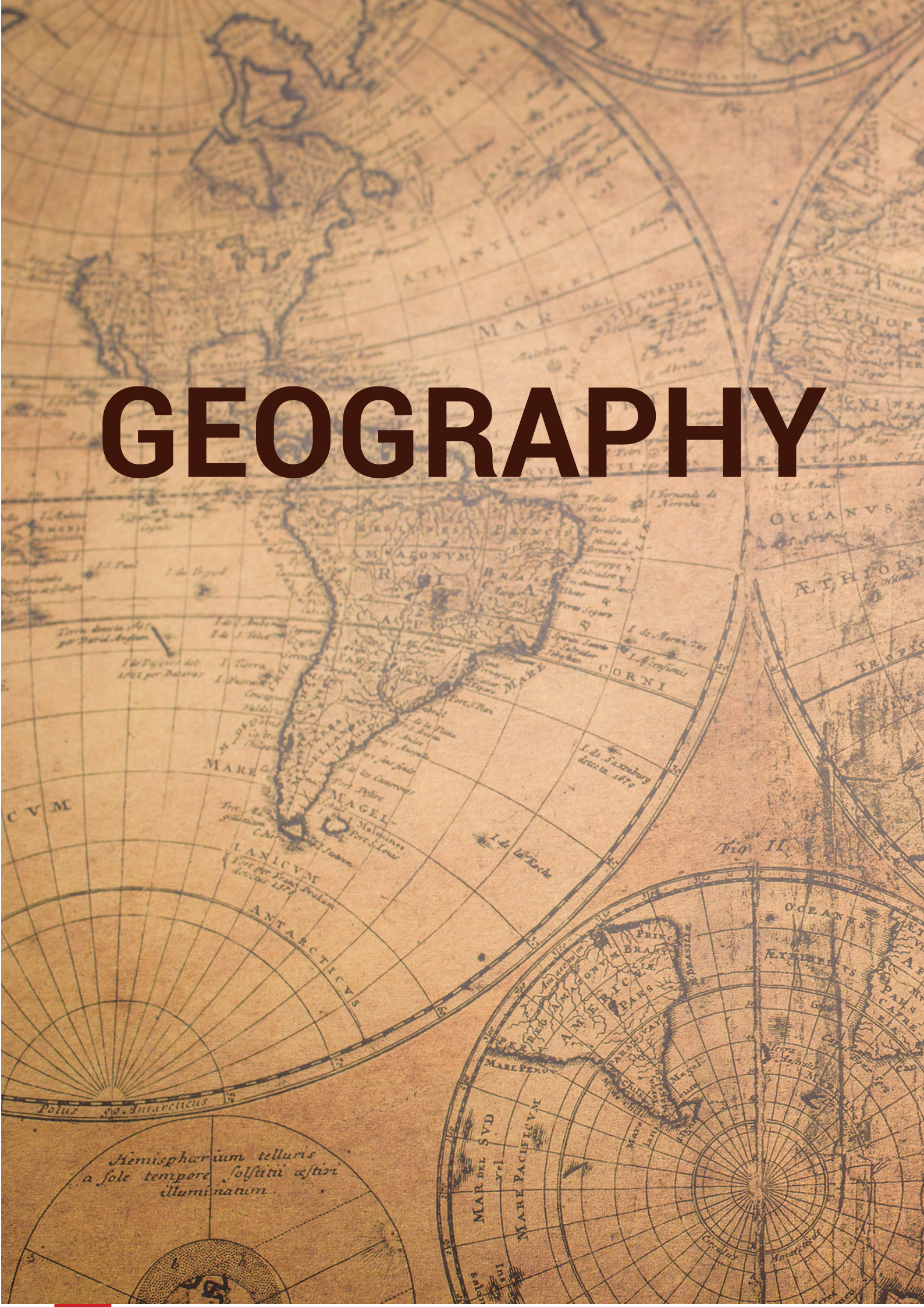
Madhava, from the Kerala School of astronomy and mathematics (c. 1340–1420), discovered the infinite series for pi (π) and other trigonometric functions, including several fast converging approximations for π/4. The school also introduced non-geocentric planetary models, which were later hailed as the hallmarks of modern science in Europe.

TUNEL WIELKI CAVE

CONTEXT: *Stone tools dating back between 450,000 and 550,000 years have been identified as some of the oldest ever discovered in the region after being found in a cave in Poland 50 years ago.*

BACKGROUND : The tools were found in the Tunel Wielki cave in Małopolska and their age may help scientists gain a better understanding of the humans who created them, as well as their migration and habitation in Central Europe during prehistoric times. Archaeologists excavated the Tunel Wielki cave in the 1960s, and returned to the site in 2016 where they discovered layers of material dating back to the Holocone (around 11,700 years ago) and the Middle Paleolithic, stretching as far back as 40,000 years ago.

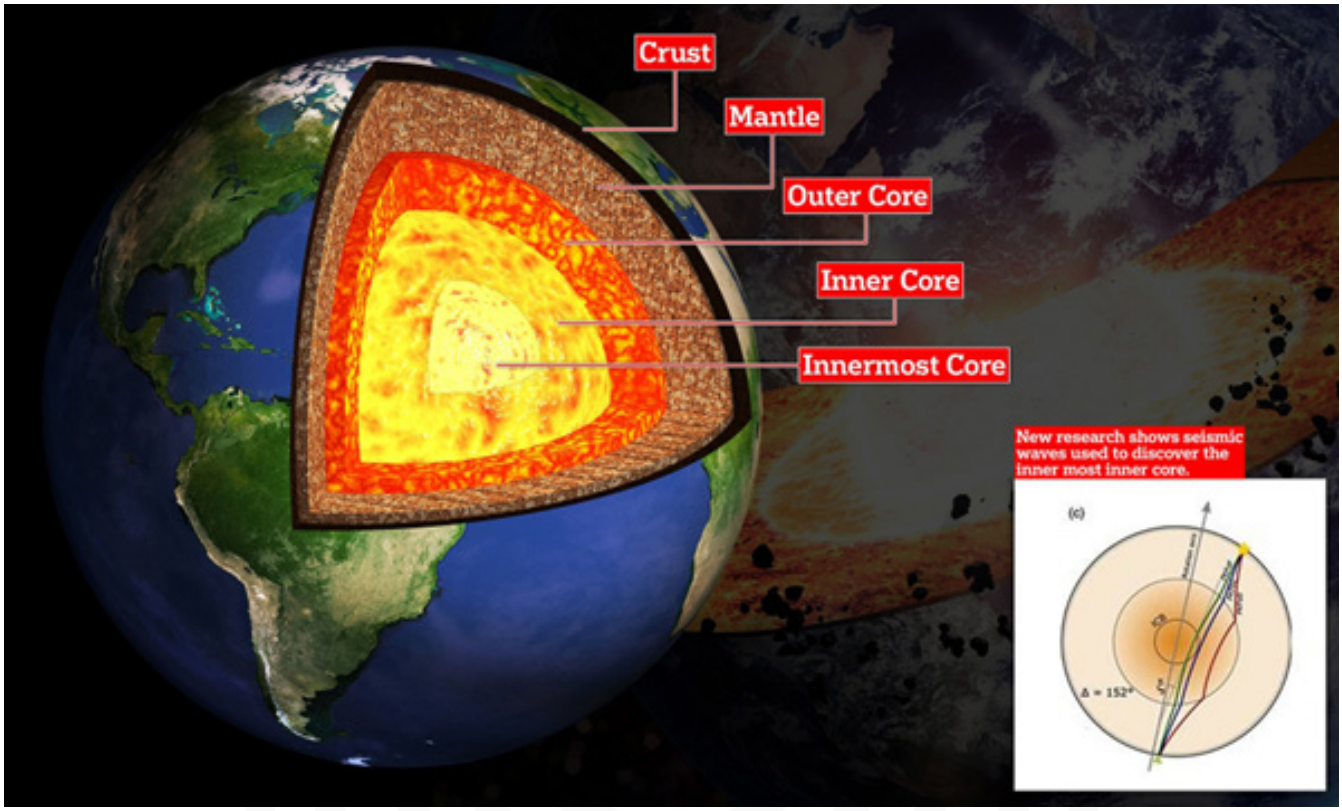
GEOGRAPHY


Hemisphærium telluris
a sole tempore solstitii æstivi
illuminatum

- SCIENTISTS DISCOVER FIFTH INNER CORE LAYER OF THE EARTH
- SINIYAH ISLAND AND THE DISCOVERY OF THE OLDEST PEARL TOWN
- ASTEROID RYUGU AND THE THEORY OF PANSPERMIA
- SPRING EQUINOX 2023
- TERMINATOR ZONES
- WHAT IS EAST AFRICAN RIFT?
- WHAT IS AN ATMOSPHERIC RIVER?
- WHAT IS WORM MOON?

SCIENTISTS DISCOVER FIFTH INNER CORE LAYER OF THE EARTH

CONTEXT: *According to the Australian National University researchers, seismic waves' velocities were measured to determine their penetration and passage through the Earth's inner core, which indicates the existence of a specific layer within the planet called the innermost inner core.*



BACKGROUND: The Australian National University researchers have discovered a new layer beneath the Earth's inner core, which they refer to as the innermost inner core. This layer is a solid "metallic ball" located in the center of the inner core. Prior to this discovery, the Earth's structure was thought to consist of four layers - the crust, mantle, outer core, and inner core. To identify the new layer, the team analyzed seismic waves' travel times for different earthquakes and observed a variation in their speed. They found that the crystalline structure of the innermost region of the inner core differs from its outer layer, suggesting a potential significant change in its crystal structure due to a global event during the Earth's evolutionary timeline.

The Earth's inner core, first discovered in 1936 by Danish seismologist Inge Lehmann, constitutes less than 1 percent of the planet's volume and is located approximately 4,000 miles beneath the surface. Direct measurements of the inner core are challenging due to its distance and small size, prompting scientists to study shock waves generated by earthquakes instead. When seismic waves from a large earthquake occur, they can bounce back and forth across the planet like a ping-pong ball, providing valuable information about the Earth's internal structure. Seismic waves travel at varying speeds through the planet's layers, depending on factors such as density, temperature, and composition. By using seismometers worldwide, scientists can detect and analyze these oscillations, much like a radiologist examining a patient's internal organs, to gain insight into the Earth's inner workings.

Like the other parts of the core, the newly discovered layer is composed of an iron-nickel alloy. However, it possesses a unique crystal structure, which causes seismic waves from earthquakes to travel at varying speeds compared to the surrounding core.

SINIYAH ISLAND AND THE DISCOVERY OF THE OLDEST PEARL TOWN

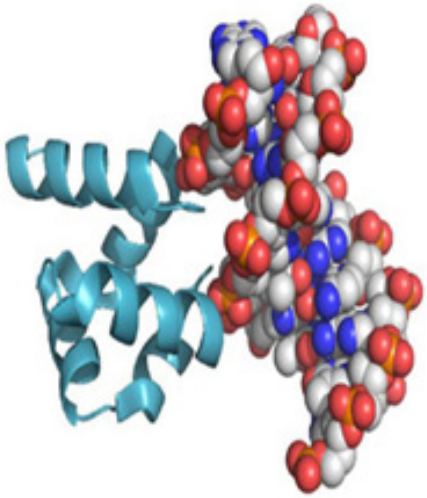
CONTEXT: *Archaeologists announced the discovery of the most ancient pearling settlement in the Persian Gulf, situated on an island near one of the northern emirates of the United Arab Emirates.*

BACKGROUND: Siniyah Island, located approximately 50 kilometers from Dubai in the Umm al-Quwain emirate of the UAE, is where the oldest pearling town in the Persian Gulf has been discovered, as revealed by the recent findings of archaeologists. The town, which dates back to the late sixth century and the pre-Islamic era of the region, was inhabited by a large population, as evidenced by the numerous artefacts discovered on the island. This marks the first instance of a physical town being found across Gulf nations, despite the existence of older pearling centers mentioned in historical texts.

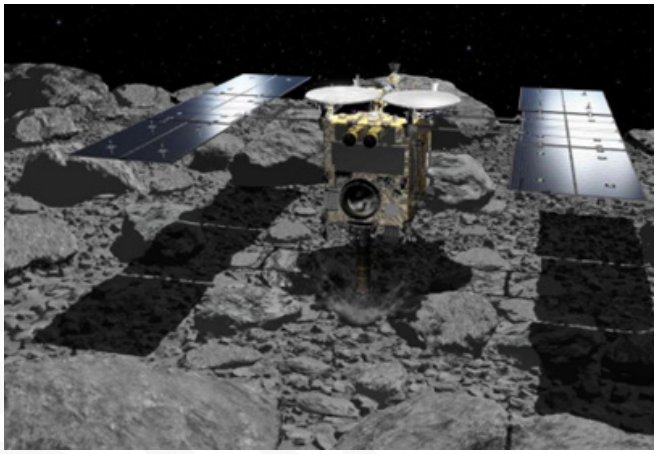
The excavation of the ancient pearl town has uncovered a range of houses built using beach rock and lime mortar, varying in size from sprawling homes with large courtyards to cramped quarters, which suggests the prevalence of social stratification in the region. Loose pearls and diving weights were also found in the homes, indicating the use of free divers to quickly reach the seabed.

ASTEROID RYUGU AND THE THEORY OF PANSPERMIA

CONTEXT: *Archaeologists announced the discovery of the most ancient pearling settlement in the Persian Gulf, situated on an island near one of the northern emirates of the United Arab Emirates.*



BACKGROUND: In the 5th century BCE, the Greek philosopher Anaxagoras proposed the hypothesis of panspermia, suggesting that life did not originate on Earth but instead came from space. Panspermia advocates reject the notion that the emergence of life was tied to a singular event that occurred on Earth between 4 and 3.8 billion years ago. Instead, they propose that life was brought to our planet by extraterrestrial sources.



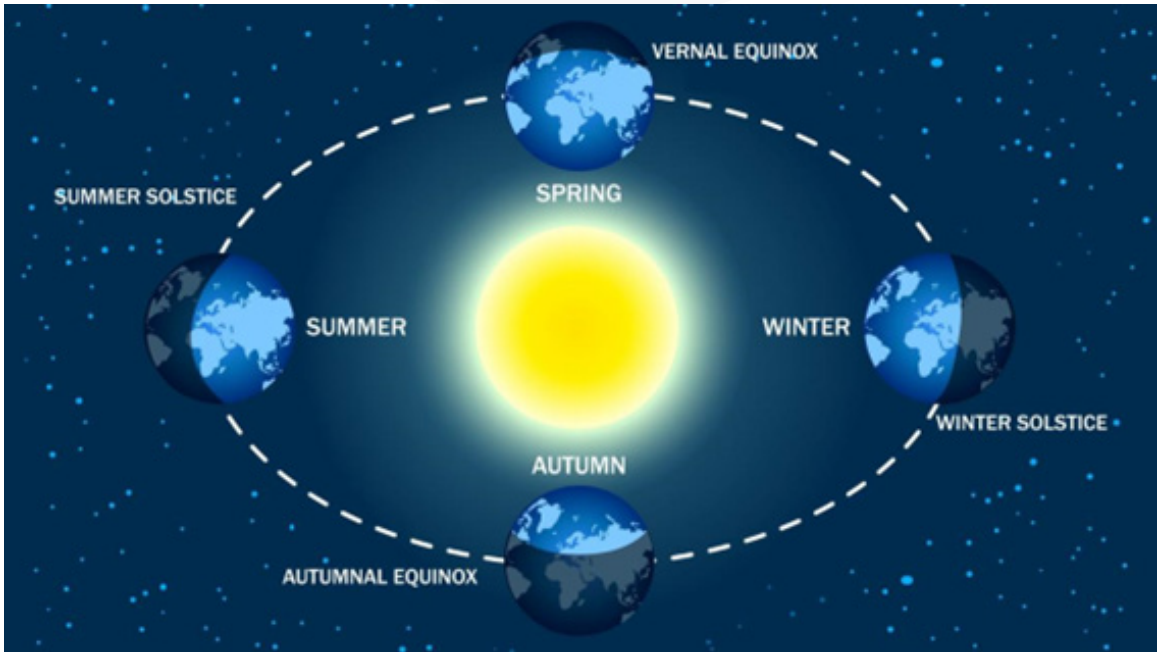
Recent headlines report that the sample collected from Ryugu contained 20 different amino acids, which are essential building blocks of life found in living organisms. RNA molecules, which are complex chains of amino acids, use other amino acid chains known as proteins as tools, and the combination and linkage of these molecules are believed to be crucial to the emergence of life from non-living chemistry.

Panspermia, the idea that life exists throughout the universe and may have been brought to Earth by extraterrestrial sources, can be explained by the presence of amino acids on an asteroid, even in the absence of life. It is possible that proto-Earth brought these molecules with it, or they arrived during the meteorite bombardment that occurred approximately 4 billion years ago. Furthermore, amino acids and molecular protein chains may have been present in the gas nebula that preceded the formation of our Sun and Solar System.

SPRING EQUINOX 2023

CONTEXT:*During the March equinox, the sun crosses above the Earth's equator, traveling from the southern to the northern hemisphere.*

BACKGROUND: The equinoxes and solstices are a result of Earth's axial tilt and its continuous orbit. Throughout the year, the subsolar point - the point on Earth's surface directly beneath the Sun - slowly moves along a north-south axis. Starting at its southernmost point during the December solstice, it moves northward until it crosses the equator on the day of the March equinox, marking the start of spring in the Northern Hemisphere and fall in the Southern Hemisphere. The subsolar point reaches its northernmost point during the June solstice when the Northern Hemisphere is tilted towards the Sun, and the subsolar point is north of the equator. As the Earth travels to the opposite side of its orbit, the Southern Hemisphere receives more sunlight, and the subsolar point moves south. During the equinoxes in March and September, the Earth's axis is perpendicular to the Sun's rays, resulting in equal day and night length worldwide. This is why it's called an "equinox," meaning "equal night" in Latin.

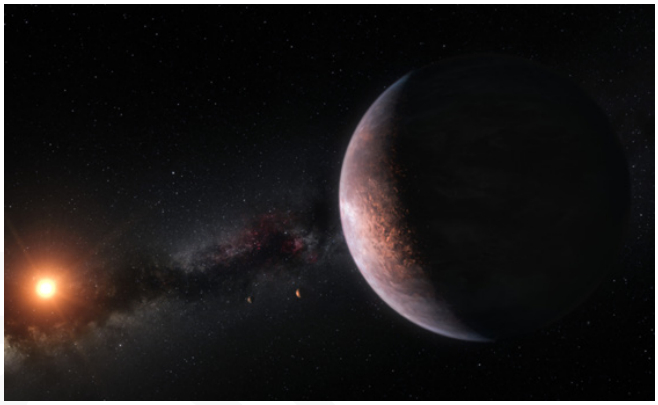


TERMINATOR ZONES

CONTEXT:*According to new research in The Astrophysical Journal, the terminator could be a good spot for hosting extra-terrestrial life.*

BACKGROUND: Some planets exhibit a permanent day side and night side, which is similar to the moon always facing the same side towards Earth despite its rotations and revolutions. The boundary separating the illuminated and dark hemispheres of such planets is known as the "terminator," with the "terminator zone" existing in the region that lies in between too hot and too cold.

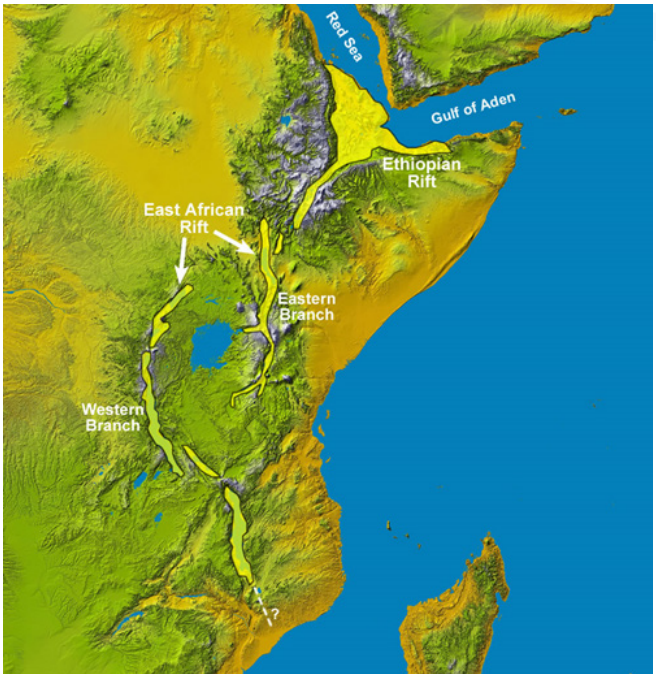
While the terminator moves across the Earth's surface during the day, it remains fixed in place on "tidally locked" planets, where one side perpetually faces their star. The terminator zone on such planets is in a state of perpetual twilight. The findings of some researchers suggest that the terminator zone may be capable of supporting liquid water due to the temperature being just right.



WHAT IS EAST AFRICAN RIFT?

CONTEXT: *In 2020, scientists made a prediction that Africa's gradual separation into two distinct parts would lead to the creation of a new ocean. The media has recently reported on this study.*

The splitting of the continent is linked to the East African Rift, which is a 56-kilometer-long crack that emerged in the Ethiopian desert in 2005 and has resulted in the formation of a new sea, as per the findings of a peer-reviewed study published in Geophysical Research Letters.



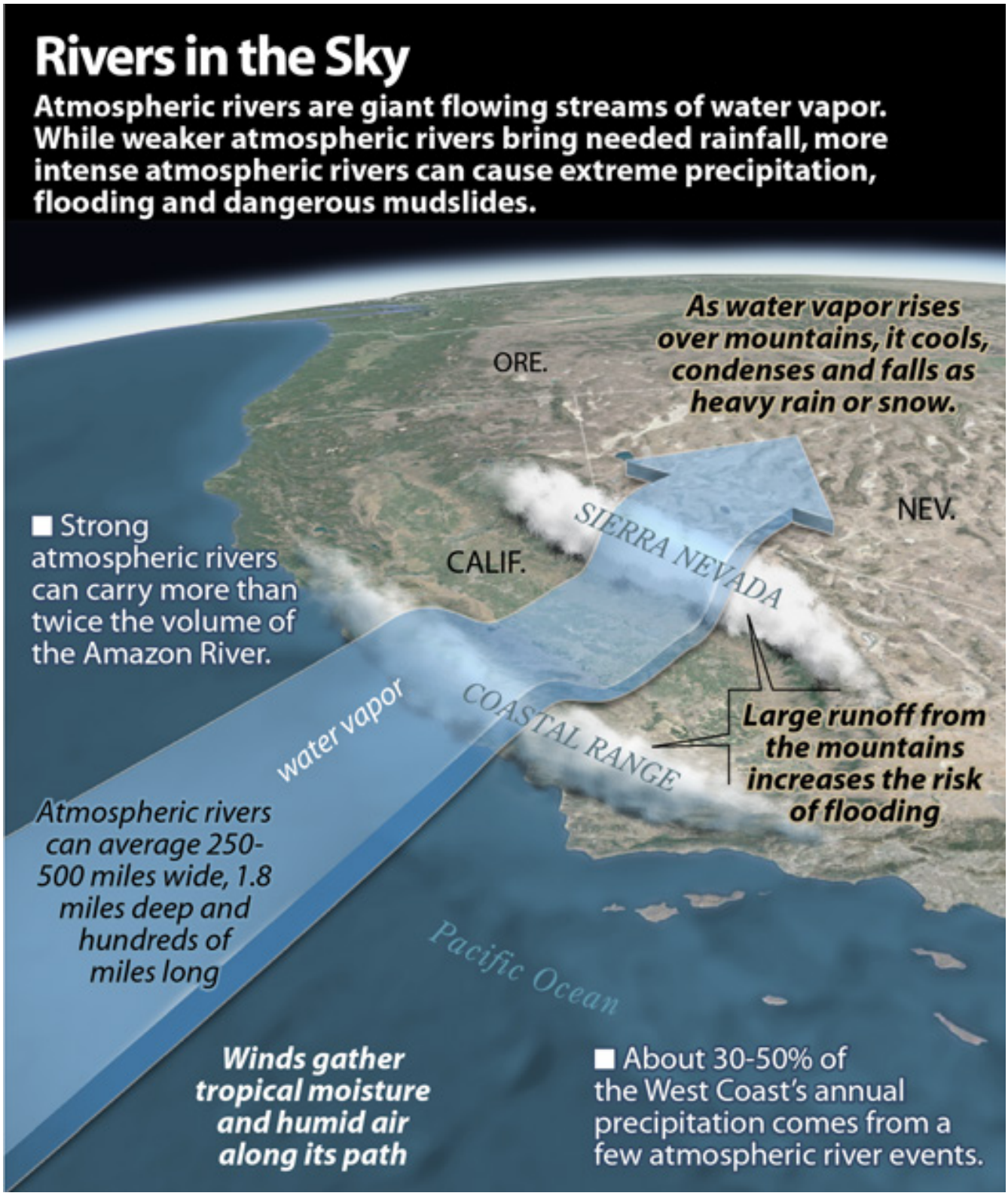
BACKGROUND

The Earth's lithosphere, which includes the crust and upper mantle, is not a static structure but rather a collection of several tectonic plates that move relative to each other at different velocities.

These tectonic forces can not only shift the plates, but also induce ruptures that create rifts and possibly establish new plate boundaries. Rifting is a geological phenomenon where a solitary tectonic plate breaks up into two or more plates divided by divergent plate boundaries.

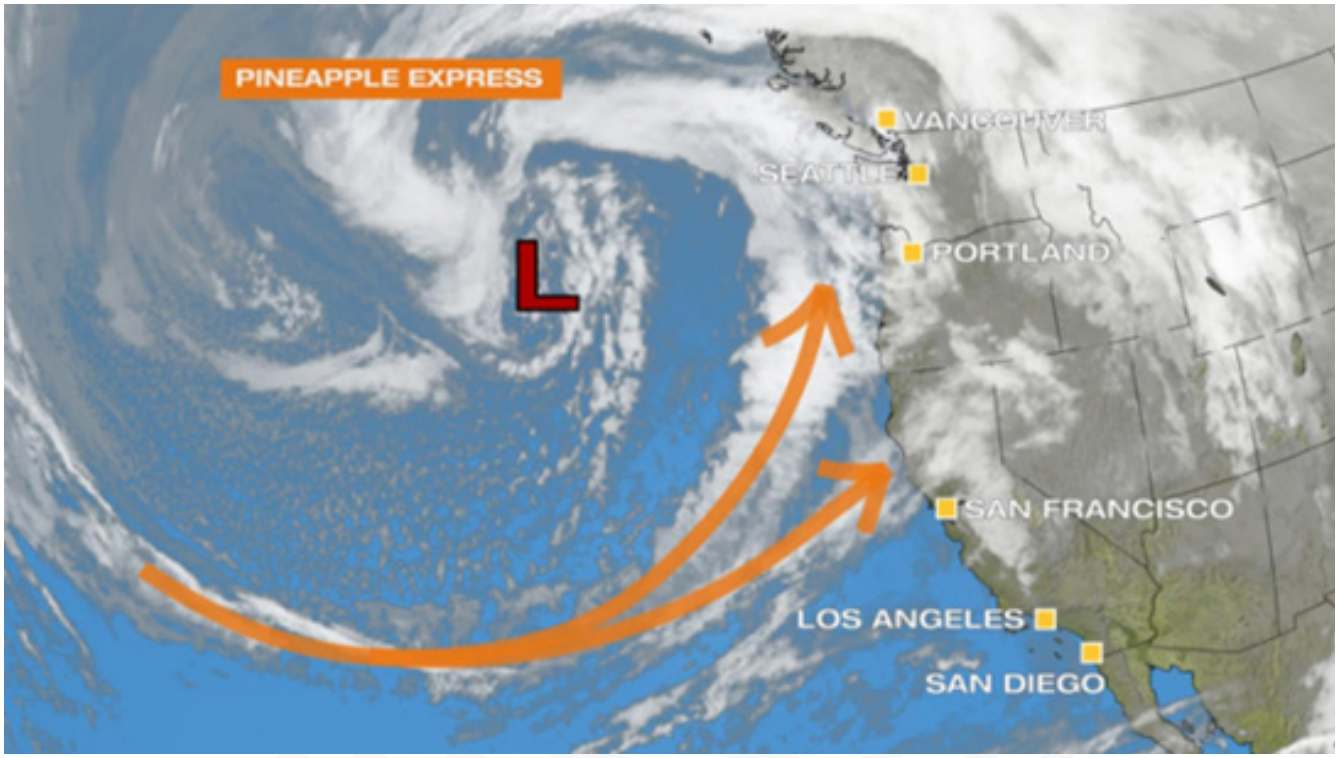
WHAT IS AN ATMOSPHERIC RIVER?

CONTEXT: *California suffered from the state's twelfth atmospheric river storm after being repeatedly hit by a seemingly unceasing series of destructive storms.*



BACKGROUND: Atmospheric rivers are similar to rivers in the sky, being long and narrow regions in the atmosphere responsible for transporting most of the water vapor outside of the tropics. These columns of vapor travel with weather patterns, carrying an amount of water vapor that is roughly equivalent to the average flow of water at the Mississippi River delta.

When these atmospheric rivers reach land, they often release their water vapor in the form of rain or snow. Although atmospheric rivers come in various shapes and sizes, the ones containing the largest amounts of water vapor and strongest winds can result in severe rainfall and floods, especially when they stall over watersheds susceptible to flooding. These events have the potential to cause travel disruption, mudslides, and catastrophic damage to life and property.



A famous example is the “Pineapple Express,” a powerful atmospheric river that can transport moisture from the tropics near Hawaii to the U.S. West Coast. While not all atmospheric rivers lead to harm, most are mild systems that deliver much-needed rain or snow essential for the water supply. Atmospheric rivers play a critical role in the global water cycle and are closely connected to both water supply and flood hazards. Usually, they are 250 to 375 miles wide and can extend over a thousand miles long.

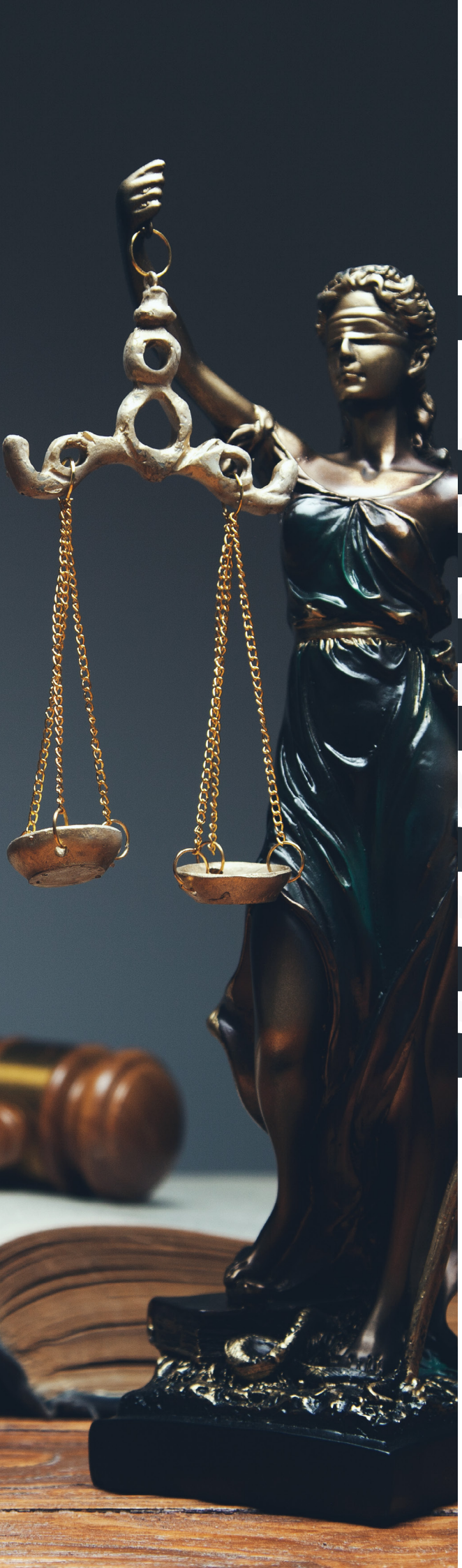
WHAT IS WORM MOON?

CONTEXT: *: The Worm Moon, also recognized as the final full moon of the winter season, was visible on both the evenings of March 6 and March 7.*

BACKGROUND: The Old Farmer’s Almanac states that Captain Jonathan Carver visited the Naudowessie (Dakota) and other Native American tribes in the 1760s. During his travels, he discovered that the term “worm moon” referred to a type of “worm” (beetle larvae) that starts to emerge from the thawing bark of trees and other winter hideouts as the snowy season draws to a close.

The March full moon is known by various names, some of which are derived from the reappearance of specific animals, including the crow comes back moon or simply crow moon (Northern Ojibwe), eagle moon, and goose moon (Algonquin, Cree). Other names are linked to various natural phenomena, such as the crust moon, which corresponds to snow cover becoming crusted when it falls during the day and freezes at night. The sore eyes moon (Dakota, Lakota, Assiniboine) signifies the bright sunlight reflecting off melting snow in late winter, while the sugar moon (Ojibwe) marks the time of year when the sap of sugar maple trees starts to flow. The wind strong moon (Pueblo) alludes to the blustery days that occur at this period of the year.

POLITY AND GOVERNANCE



- CENTRAL GOVT TO CONSULT WITH STATES REGARDING PUNCHI PANEL RECOMMENDATION 5 YEARS AFTER THE COMMITTEE SUBMITTED ITS REPORT.
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CENTRAL GOVT TO CONSULT WITH STATES REGARDING PUNCHI PANEL RECOMMENDATION 5 YEARS AFTER THE COMMITTEE SUBMITTED ITS REPORT.

CONETXT: *Union Ministry of Home Affairs (MHA) has decided to start the process of seeking the comments of the states regarding the Punchi panel report.*

BACKGROUND: Govt. Of India had constituted a committee in 2007 under Former Chief justice of India Madan Mohan Punchi to study the centre state relations. Last committee to authentically comment upon centre state relations was the Sarkaria commission which had submitted its report in 1988. Justice Punchi commission had submitted its report to then Home minister Shri P Chidambaram in march 2010. The commission had submitted its report in 7 volumes and 4 sub volumes.

Interstate council had conducted deliberations on the Punchi panel report in 2017 and in 2018

Major Recommendations of the Justice Punchi Commision

GOVERNOR: The commission had suggested the following suggestion with regard to the post of Governor.

The Governor to be nominated after consulting with state Chief minister

Governor to be some one from outside the state and not involved in the regional politics

It had suggested for establishing a committee for selecting the Governors.

To repeal the doctrine of the pleasure of the President

To provide for a guaranteed tenure for the Governor of the state with a fair chance to object to his removal

To provide for the impeachment of the governor by the state legislature

It supported the right of the governor to sanction the prosecution of ministers against the state government's advice.

The Commission also recommended the stopping of the convention of appointing governors as chancellors of universities.

CHIEF MINISTER: In case of appointment of state chief ministers, the Commission recommended that:

There should be clear guidelines on the chief ministers' appointment so that the discretionary powers of the governor are limited in this regard.

A pre-poll alliance to be regarded as one political party.

Order of precedence informing state government:

The group/alliance with the largest pre-poll alliance with the highest number.

The single largest party with support from others.

The post-poll alliance with a few parties joining the government.

The post-poll alliance with a few parties joining the government and remaining including independents giving outside support.

ARTICLES 355 & 356 :

The Commission sought to localize the emergency provisions under Articles 355 and 356. It sought to protect the interests of the States by trying to curb their misuse by the Centre. It said that the centre should try to bring only the specific troubled area under its jurisdiction and that too for a brief period, not more than three months.

FINANCE COMMISSION

Efficient inclusion of States in the formulation of final terms of the contract

Review of current cesses and surcharges to reduce contribution to gross tax income

Turn Finance Commission Division into a full-fledged department

COMMUNAL VIOLENCE BILL

The Commission recommended the amendment of the Communal Violence Bill. It said that the central forces be allowed to deploy forces in the state without the state's consent for a short period in case of communal violence. This is because the issue of state consent should not be an obstacle in the speedy alleviation of the communal tension. But such deployment should not exceed a week's time and post-facto consent is to be sought from the state.

PRESIDENT'S POCKET VETO

There should be a provision by which the President's decision to use his Pocket veto power is communicated to the State within six months.

TREATY-MAKING POWER OF UNION

There should be a regulation in the treaty-making power of the union executive with respect to treaties that are concerned with matters in the state list. The Commission recommended that the states be involved more in such treaties.

PRESIDENT'S POCKET VETO

There should be a provision by which the president's decision to use his pocket veto power is communicated to the state within six months.

Although some of the ideas of the commission have been put into practice, such as having the governor coming from outside the state, there is a need for further deliberations and give concrete form for these recommendations as per current needs. Beginning the consultations with the state is a correct step on this direction.

Key words

Sarkaria commission

Interstate council

Zonal Council

Pocket veto

FCRA LICENCE OF THINK TANK CPR SUSPENDED: WHAT IS FCRA, WHY IT MATTERS

CONETXT: *The Union Govt. had suspended the Foreign Contribution Regulation Act (FCRA) Licence of Centre for Policy Research (CPR). This came after the income tax department had conducted surveys on the premises of many offices.*

BACKGROUND: The FCRA was enacted during the Emergency in 1976 amid apprehensions that foreign powers were interfering in India's affairs by pumping money into the country through independent organisations. These concerns were expressed in Parliament as early as in 1969. The law sought to regulate foreign donations to individuals and associations so that they functioned "in a manner consistent with the values of a sovereign democratic republic". An amended FCRA was enacted under the UPA government in 2010 to "consolidate the law" on utilisation of foreign funds, and "to prohibit" their use for "any activities detrimental to national interest". The law was amended again by the current government in 2020, giving the government tighter control and scrutiny over the receipt and utilisation of foreign funds by NGOs.

Requirements Under the FCRA

The FCRA requires every person or NGO seeking to receive foreign donations to be Registered under the Act

To open a bank account for the receipt of foreign funds in the State Bank of India, Delhi.

To utilise those funds only for the purpose for which they have been received and as stipulated in the Act.

Eligibility criteria for the registration

These registrations are granted to individuals or associations that have definite cultural, economic, educational, religious, and social programmes.

The applicant should not be fictitious or benami; and should not have been prosecuted or convicted for indulging in activities aimed at conversion through inducement or force, either directly or indirectly, from one religious' faith to another.

Once granted, FCRA registration is valid for five years. NGOs are expected to apply for renewal within six months of the date of expiry of registration.

Registration can be cancelled if an inquiry finds a false statement in the application

Once the registration of an NGO is cancelled, it is not eligible for re-registration for three years.

The ministry also has the power to suspend an NGO's registration for 180 days pending inquiry and can freeze its funds.

All orders of the government can be challenged in the High Court.

The Act prohibits the receipt of foreign funds by candidates for elections, journalists or newspaper and media broadcast companies, judges and government servants, members of the legislature and political parties or their office-bearers, and organizations of a political nature.

CONCLUSION: NGO 's is part of governance of the present day. They need to be properly regulated so as to perform from within the laws permitting their operation. The operation of the law should be transparent and just manner.

LEGISLATOR FACING DISQUALIFICATION CAN'T ATTEND THE FLOOR TEST: CJI

CONETXT: *Chief Justice of India had opined that allowing an M.P or MLA who is facing the disqualification under the anti-defection law to participate in a floor test caused by his own doings will defeat the very purpose of the 10Th schedule of the Constitution.Chairman, Vedhik IAS Academy,*

BACK GROUND: the Supreme Court was hearing a dispute between present Maharashtra Chief Minister and the Former Chief Minister. The rebellion by the incumbent Chief minister had led to the fall of the then Government. The Disqualification proceedings against the current incumbent and his faction is still pending before the Maharashtra Assembly.

ABOUT ANTI DEFECTION LAW

It was introduced through the 52nd Amendment Act of the 1985 by inserting the 10th schedule of the India Constitution.

It lays down the ground of disqualification on the grounds of defection.

The presiding officer of the concerned house has the authority to disqualify a member on the basis of proven grounds of disqualification.

The law was introduced to prevent the legislators from changing their political affiliations during their tenure in office.

In this context the chief justice had observed that permitting a legislator whose action caused the split in the party and who is liable to be disqualified for defection , to attend the trust vote would amount to "legitimizing a constitutional sin."

CONCLUSION: The very purpose of anti-defection law was to put an end to turn coat legislators changing their political affiliations at their own sweet whims and fancies. It has provided sufficient stability to governments while allowing for the freedom of action by legislators.

SC LOWERS CRITERION FOR CONSUMER COURTS

CONTEXT: *Sc exercising its power under Article 142 has reduced the qualification to be eligible for appointment as President, and member of state consumer commission and district forums. The aim is to attract younger talent to preside over the consumer courts and provide better protection of the interests of the consumers especially in digital age.*

Background: consumer courts are special purpose courts that deals with consumer complaints, disputes and grievances. It enforces Consumer protection Act 2019 which had replaced the erstwhile Consumer Protection Act 1986)

CPA, 2019 promulgates a three-tier mechanism for the redressal of consumer disputes. It also has provision for Central Consumer protection Authority to protect rights of the consumers and penalties for misleading advertisements

Changes made by the Supreme Court:

Reduced mandatory professional experience for appointment (at state consumer commission and district forums):

President (From presently 20 years to 10 years)

Member (from presently 15 years to 10 years)

Introduced written exams and viva voce to check candidates' performance.

Consumer Protection Rules, 2020 govern the appointment of the President and members to State and District Consumer Disputes Redressal Commissions.

About Article 142:

Article 142 of the Indian Constitution empowers the Supreme Court's verdicts and rulings to be enforced. It stipulates that in the performance of its jurisdiction, the top court may issue any verdict or order necessary to provide "complete justice" in just about any case before it.

CONCLUSION: The Supreme Court has endeavored to strengthen the consumer disputes mechanism and has tried to inculcate fresh blood into the system by lowering the age limit of entry .

SUMMONING THE SESSIONS OF A LEGISLATIVE ASSEMBLY AND THE POWERS OF THE GOVERNOR

CONTEXT: *The Govt. of Punjab had approached the Supreme Court for Directions to Governor to summon Budget session.*

Back Ground: The Governor citing Article 167 of the Constitution which relates to the duties of the Chief Minister in furnishing the information to the Governor had informed his council Ministers that he needed Legal advice to summon the budget session of the Punjab State Legislative Assembly. Therefore the Govt. of Punjab had approached the Supreme Court requesting its intervention in the matter.

Constitutional Provisions regarding Summoning of the Legislature

Article 174 mandates that a governor shall summon the house at the time and place as he or she thinks fit. Further Article 174(2)(a) provides that a Governor may from "time to time" prorogue the house and 174(2)(b) allows her or him too dissolve the legislative assembly.

Article 163(1)of the Constitution says that "there shall be a council of ministers with the Chief Minister at the head to aid and advise the Governor in the exercise of his functions, except in so far as he is by or under this Constitution required to exercise his functions or any of them in his discretion."

A joint reading of the above two provisions leaves the Governor with minimal discretion in summoning the house. Although it is the Governor's prerogative to summon the house, according to the Article 163, the Governor is required to act on the "aid and advice" of the Cabinet. Therefore , when the Governor summons the House under Article 174, it is not of his or her own free will, but on the aid and advice of the Cabinet.

Can the Governor refuse the aid and advice of the Cabinet?

There are very few instances where in the Governor can summon the legislature despite the refusal of the Chief Minister who heads the Cabinet.

When the Chief Minister seems to have lost his majority in the house, and the members of the Legislative Assembly propose a motion of No Confidence against the Chief Minister, then the Governor can on his or her discretion decide on the summoning of the House.

All the actions of the Governor when using the discretionary powers can be challenged in the court. The court has observed that the power to summon the House as a "function" of the Governor and not a "power" he enjoys.

The Nabam Rabia and Banan Felix Vs Deputy Speaker (2016) judgement of the Supreme court has made the following two points very clear

Governor has no discretion in matter of summoning the house If the Chief Minister enjoys majority in the house and therefore is bound to act on the advice of the cabinet.

In case the governor has reason to believe that the Chief Minister has lost his majority, the governor can use his discretion in fixing the date for summoning the assembly to ascertain the support of the Chief Minister in the Legislature.

CONCLUSION: Supreme Court observed that the Governor has a right to seek information from the Chief Minister In terms of Article 167(B) on matters relating to the administration of affairs of the state and proposals for legislation. Once such information is sought, not furnishing the information would be a dereliction of Constitutional duty imposed on the Chief minister in terms of Article 167(B). But the dereliction of the Chief minister to do so would not be a justification for the governor not to comply with Constitutional Obligation to summon the house for its budget session in terms of the advice tendered by the Council of Ministers.

SUPREME COURT ENDS THE MONOPOLY OF THE GOVERNMENT IN SELECTING THE ELECTION COMMISSIONERS OF INDIA

CONTEXT : The Supreme Court, in a landmark decision, decreed that the selection of Chief Election Commissioner and Election Commissioners be done by a three-member committee comprising the Prime Minister, the Leader of the Opposition in the Lok Sabha and the Chief Justice of India. This has brought in a significant change in the process of appointing election commissioners.

BACKGROUND: A public interest litigation was filed in 2015 challenging the constitutional validity of the Central Government appointing Election Commissioners of India.

In 2018, a two-judge bench of the Supreme Court referred the case to a larger bench as it required a closer examination of Article 324 of the Indian Constitution.

The Court had examined the process of removal of the election commissioners and that of the chief election commissioner and also regarding the funding of the election commission.

Constitutional Position regarding Appointment and Tenure of Commissioners:

The Constitution does not lay down a specific legislative process for the appointment of the Chief Election Commissioner and Election Commissioners.

The President makes the appointment on the advice of the Union Council of Ministers headed by the Prime Minister.

They have tenure of six years, or up to the age of 65 years, whichever is earlier.

They enjoy the same status and receive salary and perks as available to Judges of the Supreme Court of India.

The CEC can be removed from office except in the same manner and on the same grounds as a judge of the Supreme Court.

The Constitution has not debarred the retiring Election Commissioners from any further appointment by the Government.

Composition of Election Commission:

Since the inception and till 15th October 1989, the EC functioned as a single member body consisting of the CEC.

On 16th October 1989, the President appointed two more commissioners to cope with the increased work of the EC, on account of lowering of the voting age from 21 to 18 years.

In case of difference of opinion amongst the CEC and/or two other election commissioners, the matter is decided by the Commission by majority.

Decision of Supreme Court

The Supreme Court, in a landmark decision, ruled that the selection of Chief Election Commissioner and Election Commissioners be done by a three-member committee. This committee will comprise of:

Prime Minister

Leader of the Opposition in Lok Sabha/Leader of the Single Largest Opposition Party

Chief Justice of India

Currently, appointments of CEC and ECs are done by the President on the aid and advice of the Union Cabinet headed by the Prime Minister.

How has the Court arrived at the verdict

The court had examined the various debates of the Constituent Assembly and also the interpretation of similar provisions in the Constitution of India. The Supreme Court observed that “subject to the provisions of any law made in that behalf by Parliament” mentioned in the indicates that Parliament was intended to step in and provide norms governing the appointment of the CEC and ECs.

SC stated that a reading of the debates of the Constituent Assembly (CA) on the appointment of ECI makes clear that all the members were of the clear view that elections must be conducted by an independent Commission. The deliberate addition of the words “subject to the provisions of any law made in that behalf by Parliament” further indicates that CA envisaged parliament making norms to govern appointment to ECI. While ordinarily, the court cannot encroach on a purely legislative power, but in the context of the Constitution and inertia of the Legislature and the vacuum created by it make it necessary for the court to intervene.

On the question whether the process of removal should be same for CEC and the ECs, SC stated that it cannot be same as CEC has special position and article 324 becomes inoperable without CEC.

SC left the question of funding the EC, Permanent secretariat and need for expenditure to be charged on Consolidated Fund of India for the government to decide.

Government had argued that, in absence of such a law by the Parliament, the President has the Constitutional power and had requested the Supreme Court to exhibit Judicial Restraint.

Why did the Supreme Court Pass such an Order and its Implications:

A five-judge Constitution Bench of the Supreme Court was hearing a bunch of petitions seeking a selection process similar to what is followed in the case of the Director, Central Bureau of Investigation (CBI).

The Director of CBI is selected by a committee which consists of the Prime Minister, Leader of the Single Largest Opposition Party and the Chief Justice of India.

The Court has unanimously disapproved of the present system of the Centre appointing members of the poll watchdog.

Pointing to Article 324(2) of the Constitution, the Court has called upon Parliament to make a law regarding the criteria for selection, conditions for service and tenure of the CEC and ECs.

According to Article 324(2) of the Constitution, the CEC and ECs shall be appointed by the President, with the aid and advice of the Council of Ministers, till Parliament enacts a law fixing the criteria for selection, conditions of service and tenure.

The judgment has brought the appointment process on par with that of the CBI Director.

A CEC (like SC judges) can be removed from office only by way of a parliamentary process. However, no such protection of tenure is available to the ECs (removed by the President if CEC recommends).

A person weak-kneed before the powerful (executive) cannot be appointed as an EC.

Justifying its decision, the bench said there is a legislative vacuum as Parliament, in the last seven decades, did not frame a law as envisaged in the Constitution.

The Supreme Court Judgement has for now brought an end to the decades-old practice of the CEC and ECs being appointed on the advice of the Council of Ministers.

Fierce independence, neutrality and honesty envisaged in the institution require an end to government monopoly and "exclusive control" over appointments.

CONCLUSION: The judgment recognises the fine distinction between conventional democracy (majority alone matters) and constitutional democracy (Constitution matters). The judgment revives the era of judicial activism, ensuring a more independent Election Commission.

The SC ruling is subjected to any suitable law made by the Parliament goes a long way ion making the Election Commission a more transparent and independent body.

WHIP AS A TOOL OF LEGISLATIVE PRACTICE IN STATE ASSEMBLY OR PARLIAMENT

CONTEXT: A five-judge Bench led by the Chief Justice of India is hearing petitions filed in the wake of last year's political crisis in Maharashtra – raising the importance of whip.

BACKGROUND: In parliamentary parlance, a whip is a written order that party members be present for an important vote, or that they vote only in a particular way. It can also refer to a designated official authorised by a party to issue a whip.

Members of a House are bound by the 'whip', issued by the concerned political party of which they are members to.

In parliamentary parlance, a whip may refer to both a written order to members of a party in the House to abide by a certain direction, and to a designated official of the party who is authorised to issue such a direction. The term is derived from the old British practice of "whipping in" lawmakers to follow the party line.

A whip may require that party members be present in the House for an important vote, or that they vote only in a particular way. In India, all parties can issue whips to their members. Parties appoint a senior member from among their House contingents to issue whips – this member is called a chief whip, and he/ she is assisted by additional whips.

How serious are whips issued by parties?

The importance of a whip can be inferred from the number of times an order is underlined.

A one-line whip underlined once, is usually issued to inform party members of a vote, and allows them to abstain in case they decide not to follow the party line.

A two-line whip directs them to be present during the vote.

A three-line whip is the strongest, employed on important occasions such as the second reading of a Bill or a no-confidence motion, and places an obligation on members to toe the party line.

What can happen if a whip is defied?

United Kingdom – an MP can lose membership of the party for defying the whip, but can keep her/ his House seat as an Independent.

US – the party whip's role is to gauge how many legislators are in support of a Bill and how many are opposed to it – and the extent possible, persuade them to vote according to the party line on the issue.

India – rebelling against a three-line whip can put a lawmaker's membership in the House at risk. The anti-defection law allows the Speaker/ Chairperson to disqualify such a member; the only exception is when there is merger of the party.

CONCLUSION: Thus whips are parliamentary of legislative tools to regulate the behavior M.Ps or M.L.As so as to make them compliant with the instructions of the Political party.

WHY MIGRANT WORKERS' ISSUES RECUR: THE ABSENCE OF DATA AND COORDINATION BETWEEN STATES

CONTEXT: *Rumours of migrant workers being assaulted in Tamil Nadu have triggered concern among manufacturers in the state.*

BACKGROUND: Article 19(1)(e) of the Constitution, guarantees all Indian citizens the right to reside and settle in any part of the territory of India, subject to reasonable restrictions in the interest of the general public or protection of any scheduled tribe.

Problems faced by Migrant workers In India

They Lack of social security and health benefits which they can avail of

Lack of portability of state-provided benefits. They can't claim the benefits in the state they presently employed.

Lack of access to affordable housing

Lack of data makes it difficult to track labourers during times of crisis

Inadequate coordination among states on a formal exchange of information

The nativist agenda of political parties in the states. For example, many state governments have reserved a certain percentage of employment for locals. This reduces the employment avenues for migrant workers.

The legal Mechanism available for the welfare of Migrant workers

The main legal structure is mandates by the Inter-State Migrant workmen Act 1979. It requires the establishments which employ migrant workers be required to be registered with destination states.

Contractors will also have to obtain a licence from the concerned authority of the home as well as host states.

However, this Act has not been fully implemented in practice.

This Act has been subsumed into the four labour codes notified by the Centre:

The Code on Wages, 2019;

The Industrial Relations Code, 2020;

The Code on Social Security, 2020; and

The Occupational Safety, Health and Working Conditions Code, 2020.

These have not been implemented yet.

Best practices adopted by some Indian states:

In 2012, Odisha and Andhra Pradesh (AP) signed an MoU to track labourers migrating from Odisha to work in brick kilns in the-united AP.

Kerala has set up facilitation centres (maintain data) for migrant workers whom the state refers to as "guest workers".

Jharkhand has started the Safe and Responsible Migration Initiative (SRMI) in 2021 to generate data and then map the labourers who move out to several states for work.

The first Jharkhand Migrant Survey (JMS) was recently conducted across 24 districts of the state.

Road map to better welfare of the labour

To put the four labour codes into effect as soon as possible, the central and state governments must collaborate.

The welfare measures for the community should include –

The supply of pulses and edible oil at concessional rates under the PDS,

Supplementing what is being given under the 'One Nation One Ration Card'

An exclusive wing can be formed to address the issues and problems migrants face.

Instituting a fresh and comprehensive study of migrant workers and helping in their integration with the local community.

INTERNATIONAL RELATIONS

- G20 MEETING SHOWS A DEEPENING CRISIS IN MULTILATERALISM
- INDIA AND ITALY ELEVATE TIES TO STRATEGIC PARTNERSHIP
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G20 MEETING SHOWS A DEEPENING CRISIS IN MULTILATERALISM

CONTEXT: *The G-20 Foreign Ministers' meeting in Delhi was unable to agree to a joint communique, over differences between Russia and the West on the war in Ukraine.*

BACKGROUND: India has assumed the presidency of the G20 nations for a year/s term. The war in Ukraine has deeply fissured the relationship between Russia and many other G-20 nations.

Issues that needed to be addressed at the recent meeting:

The war in Ukraine: The G20 members accept that security issues can have a big impact on the world economy but that the G20 is not the platform to address such issues.

The UNSC and UNGA resolution condemn Russia's actions against Ukraine and call for its unconditional and total withdrawal from Ukrainian territory.

Upholding international law that safeguards peace and stability: This includes defending the principles enshrined in the Charter of the UN and adhering to international humanitarian law.

The principal reason for the diplomatic failure in Delhi:

The decision by Russia to walk away from the Bali consensus (calling it a "thing of the past") and China's decision to support it. Russia also feels that the meetings are about the economy, growth, development and other global challenges.

Implications: Underlines the deepening great power conflict and worsening crisis of multilateralism.

Other agreements at the meeting: A number of issues of interest to India and the developing world include –

Food and energy security,

Cooperation to counter-terrorism, climate change, global health and disaster management.

India's twin ambitions as G20 President:

To continue the campaign to reform multilateralism and

To get the world to take greater cognisance of the challenges faced by the "Global South".

Way ahead for India as G20 President:

It is clear that India cannot rely on the language of the Bali Summit.

The need to chalk out fresh language on Ukraine – an innovative formula that considers Russian concerns as well as the western desire to condemn Russia's conduct.

India can leverage Quadrilateral Security Dialogue (Quad), whose foreign ministers are going to meet soon after the G20 foreign ministers' meeting.

CONCLUSION: As host, India is in the centre stage' balancing the G7 camp on one side and the Russia-China combine on the other, to ensure that a new ground of cooperation can be found.

INDIA AND ITALY ELEVATE TIES TO STRATEGIC PARTNERSHIP

CONTEXT: Italian Prime Minister Giorgia Meloni is on a visit to India.

In recent years, India Italy relations have been vexed by the Enrica Lexi case where Indian fishermen were killed by two Italian marines.

BACKGROUND: India and Italy had established diplomatic relations in 1947 and presently bilateral relationship has been elevated to the level of a strategic partnership. In 2022 the bilateral trade between the two nations had touched $15 billion and Italy is among the top 5 trading partners in European Union.

India Italy trade initiatives

The balance of trade has been in India's favour since the early eighties.

India invited Italy to partner in 'Make in India' and 'Aatmanirbhar Bharat Abhiyan' with a focus on the areas of renewable energy, green hydrogen, IT, telecom, and space among others.

Establishment of a 'Startup Bridge' between India and Italy (2023)

India-Italy Strategic Partnership on Energy Transition announced in 2021

Italian car manufacturer Fiat has been operating in India since 1997

Indian IT company Tata Consultancy Services (TCS) has a large presence in Italy, with over 2,500 employees in the country.

Strategic areas of cooperation

In addition to defence, both countries have identified space, cyber and sea as specific strategic areas for cooperation and said work would now begin to identify specific proposals for cooperation. Another area was Humanitarian Assistance and Disaster Relief (HADR).

Italy, Japan and India have started a trilateral initiative to foster and consolidate a strategic relationship between these three nations in the Indo Pacific area.

INDIA & AUSTRALIA AGREE TO BOLSTER COMPREHENSIVE STRATEGIC PARTNERSHIP

CONTEXT: Prime Minister Narendra Modi and Australian Prime Minister Anthony Albanese held a delegation level bilateral talks in New Delhi as part of the first India – Australia bilateral delegation level summit meeting held at Delhi on march 10th 2023. Both countries shared their commitment towards further deepening of Comprehensive strategic partnership.

BACKGROUND: The bilateral trade with both nations had touched 31billion in 2022 and Australia has been one of the regular participants of the Malabar series military exercise. Both nations had signed the Mutual Logistics Support Agreement for enhanced military interoperability. Australia and India share a common concern about emerging security environment in the Indo Pacific and is part of QUAD, The common wealth, Indian Ocean RIM Association (IORA) and have participated in EAST ASIA Summits. Both nations support rules based international order against China.

OUTCOMES OF DELHI SUMMIT

Building on this shared perceptions both nations have agreed at the Delhi summit to further strengthen the security cooperation and identified I as an important pillar of Comprehensive strategic partnership. Prime minister Narendra Modiji is expected to travel Australia for QUAD leaders' summit in May this year.

Both leaders also discussed about developing credible global supply chains and has identified renewable energy as a key priority area for cooperation. Both nations have agreed to work together in the field of clean Hydrogen and solar.

Prime Minister Modi had raised the matter of attack against Indian temples in Australia and MR Albanese assured the safety and well being of the Indian Community in Australia a priority for the Australian nation.

Both nations agreed for an early conclusion of comprehensive economic cooperation Agreement at the earliest. Last year, both the nations had signed a free trade agreement named the Economic cooperation and Trade agreement.

CONCLUSION: Both India and Australia have many areas of shared common vision about the future of the Indo Pacific region. Bilateral trade is on the upswing for both nations and their membership in QUAD is a testimony of the same.

INDIA IN THE EMERGING NEW WORLD ORDER

CONTEXT: India should follow a path of multi-engagement and not multi-alignment.

BACKGROUND:India has consistently resisted international pressure to criticise Russia and its actions on its account of aggression in Ukraine. Also, it has resorted to import oil from Russia despite pressure on it to shunt Russian oil.

The global order in international relations:

After the end of the 2nd World War: A bipolar world, led by the U.S. and the Soviet Union, emerged and the world had nations joining either camp. But even during those times, India had steadfastly resisted refused to be aligned with the two. It had emerged as the leader of the nonaligned nations.

Following the disintegration of the Soviet Union (1991): Unipolarity replaced bipolarity, with the U.S. being its centre. With the disintegration of Soviet Union, India improved its Bilateral relations United states while maintaining its traditional friendship with Russia, the successor state of the erstwhile Soviet Union.

But recently there has begun discussions about whether American era of Unipolarity has begun to give way for a multipolar world.

Emerging signals or Signs of the new world order:

China's rapid rise has been one of the major transformative processes which is posing challenges to the present world order led by the United States of America. It has rapidly expanded its economy and had emerged as the factory to the entire world. Along with its rise as an economic power house, it has also begun to flex it military muscle and has not shied away from demonstrating its intent to use the same. Its effort to alter the status quo in the South China sea, building up of artificial island in the region and in effect treating the entire littoral of the sea as its own territorial waters is nothing short of positioning itself as the challenger to the present world order with United States of America as the Dominant power with the US Navy led by it Air craft Carrier fleet as its most visible instrument of that Power.

Russia's has pursued a relatively aggressive foreign policy of extending its influence in the erstwhile Soviet Republics, by installing regimes favourable to it. It has also resorted to change of regimes in its neighbourhood by physical annexation if need be eg, Georgia (2008), Crimea (2014)– the invasion of Ukraine (2022), etc challenges the post-Cold War security equilibrium in Europe.

The U.S.A S.'s ability to shape geopolitical outcomes is on the decline (as reflected by its withdrawal from Afghanistan). This results in the transition of the world from a unipolar one to that of a multipolar entity. But at the same time its ability to keep Russia from defeating Ukraine is also a testimony of its inherent and continued ability to exert its power far beyond its geography.

Impact of this transition from uni to multipolarity:

The net impact of all these above narrated events is leaving the world in flux. While many governments (including India, Russia and China), welcome multipolarity, the U.S. remains the world's most powerful military power.

India in the emerging world order

China is emerging as the clear and present competitor to India in Asia and the world at large. Its attempts at unilaterally changing geography as witnessed in Tsang po lake or Doklam area is the latest of its attempt to alter national boundaries by the tactics sometimes referred to as Salami slicing. China has developed a strategic partnership with Pakistan and

is raising its influence in other South Asian and Indian Ocean countries. So, on all fronts (including challenges to India's maritime influence), India faces the challenge of China's rise.

The present disparity in Asia along with opportunities on offer by partnering the United States, the sole world power provided India with a unique chance to come out of global apartheid of technology denial regimes. Toady we are a responsible partner of various global technology sharing partnerships like Wassenaar agreement, MTCR etc. QUAD alliance of India, USA, Australia and Japan is a new found area of interaction and cooperation in Asia and Indo Pacific for establishing rule-based world order.

At the same time India has moved ahead with keeping its traditional friendship with its strategic partner Russia. It has refrained from publicly criticising Russian action and has withstood the call to boycott the Russian oil. It is also an important Partner of organisation like BRICS, SCO etc which seeks to promote multilateralism.

It has tried to engage with other global nations of Africa, Europe Asia and South America in an attempt to face the challenge of the rising China and seek its own place in the Global Order.

CONCLUSION: Thus, India has retained its traditional strategic Autonomy along with its partnership in the various multilateral global trade and strategic partnerships. In doing so it is creating new pillars of multilateralism which can act as its bulwarks in meeting the challenges of the new world order.

INDIAN DIASPORA: THE ROOTS OF GLOBAL SUCCESS

CONTEXT: In times when it is difficult for an immigrant to succeed, we notice the remarkable presence of Indians in the leadership of global organizations: IBM, Google, Microsoft, and now the World Bank. Rishi Sunak becoming the Prime Minister of Britain

Reasons behind this:

Education: Indians place a strong emphasis on education, and many Indian leaders have received top-notch education from prestigious institutions around the world

Diversity: This diversity has helped Indian leaders develop a broad perspective and a deep understanding of global issues.

Work Ethic

Networking: Indians have a strong network both within and outside the country,

Multilingual: Many Indians are multilingual, which has helped them communicate effectively with people from different countries and cultures.

Implications of its people having top leadership positions in global organizations for India:

Increased Global Influence

Increased global visibility to Indians.

Reduce asymmetric information and thus improve global engagement with India.

Improved Reputation

Economic Benefits

Access to Information

Capacity Building

National Pride

NEW DELHI AND BERLIN HAS DECIDED TO ENHANCE COOPERATION IN INNOVATION AND TECHNOLOGY SECTORS

CONTEXT: German Chancellor Olaf Scholz had been in New Delhi for a bilateral meeting with Indian Prime Minister Narendra Modi in New Delhi.

BACK GROUND: The two-day official visit of the German chancellor was intended to boost the bilateral relationship with India and Germany especially in the field of clean energy, trade and emerging technologies.

Germany is a very important nation in Europe and in the world with a huge economy. India and Germany have had a 'Strategic Partnership' since May 2000.

This has been further strengthened with the launch of Intergovernmental Consultations (IGC) in 2011 at the level of Heads of Government. IGC is a whole-of-government framework under which Ministers from both countries hold discussions in their respective areas of responsibility and report on the outcome of discussions to the Prime Minister and Chancellor. This is the first stand-alone visit of German Chancellor to India since the launch of the IGC.

Presently Germany is in the process of reassessing it relations with world in the backdrop of Russian Invasion of Ukraine. Traditionally for Germany, its relation with China and their trade interactions had taken priority over its relation with India. But this is undergoing a shift with China's aggressive assertion of its territorial claims and the consequent European rethink on its relation with it. In this context it is pertinent to note that Germany is India's largest economic partner in Europe. This has opened new opportunities for India.

Defence Sector: Germany in the context of the Russian invasion on Ukraine has decided to increase its defense spending to 2 % of its GDP. It is also in the rethink of its defence export policy. This opens up avenue for further Indo German Cooperation. Co- development and transfer of military hardware was discussed in the meeting. There were discussions of

building of six submarines for India. First ever India France Germany trilateral military training exercise is to be scheduled for 2024.

India and Germany also co operate on various multilateral platforms. Both nations are actively pursuing common agenda of the reformation of UN Security Council.

Key outcomes of the bilateral meeting between PM Modi and Chancellor Olaf Scholz

India-Germany agreed on a vision statement to Enhance Cooperation in Innovation & Technology

Under the framework of the Inter-Governmental Agreement on 'Cooperation in Scientific Research and Technological Development', India and Germany have had a long history of cooperation in science and technology, research and innovation. This agreement was signed in May 1974.

Green and Sustainable Development Partnership (GSDP)

The leaders discussed progress on GSDP - an umbrella partnership that provides political guidance and steer to robust ties in climate action and SDGs. Under this, Germany will also place €10 billion in new and additional commitments under their development cooperation portfolio in India.

Cooperation in Green Hydrogen

The Indo-German Green Hydrogen Task Force was constituted in September 2022 and an Action Plan is close to finalization.

Triangular Development Cooperation

India and Germany agreed to work on development projects in third countries. The four projects, announced in May 2022, are now in different stages of implementation:

Cameroon: Potato Seed Production through Rooted Apical Cuttings (RAC) Technology.

Malawi: Agri Business Incubator Models for Women in Agriculture & Food Systems

Ghana: Developing Bamboo-Based Enterprises for Sustainable Livelihood and Income Generation

Peru: Development of a geospatial portal prototype for planning, monitoring, and evaluation of the Ministry of Development and Social Inclusion of Peru (MIDIS) interventions and social programs.

Other agreements

Both sides concluded agreements on "Digital Transformation, FinTech, IT, Telecom and Supply chains' diversification".

The issue of Khalistani separatism and extremism also figured during discussions. India has earlier pointed to the presence of pro-Khalistan groups and elements in Germany. New Delhi is concerned at the recent turn of events in Punjab as well.

CONCLUSION: Germany is on the look out for renewed engagement with Asia especially in the context of changing world dynamics with Russian aggression over Ukraine and China's assertion in territorial claims. India can choose to use this as an opportunity to further enhance its already strong bilateral relationship with Germany to revive the India-EU free trade talks i.e Bilateral Trade and Investment Agreement (BTIA). Further both nations can use this as an opportunity to strengthen their partnership to reform the Un Security Council.

SRI LANKAN ECONOMIC RECOVERY: THE SIGNIFICANCE OF INDIAN SUPPORT

CONTEXT: Sri Lanka had declared that the country has secured a 2.9 billion bail out package from the IMF

BACKGROUND: Sri Lanka has been reeling from the covid crisis, economic mismanagement, mounting debts, soaring inflation, GDP/ Exports collapse resulting in collapse of Sri Lankan Currency.

SIGNIFICANCE OF IMF BAILOUT FOR SRILANKA:

It brings important creditworthiness to the entire system and boost the confidence in the economic recovery of the troubled country. It also signals that a lot of other agencies like world bank, AIIB and ADB have agreed to fund the recovery of Sri Lankan economy. All this in combination would enable the debt to become sustainable along with access to capital market. this will lead to economy becoming stabilized.

INDIA'S SUPPORT and COORDINATION WITH SRI LANKA

India had lent an unconditional support to Sri Lanka, the combined worth of which totals over $4 Billion. This includes shipment of grains, fuel, essentials, medicines. India had extended credit lines and debt payment relief. India's support at IMF was critical in Sri Lanka securing a bailout package from IMF. It had also rallied behind Sri Lanka at G20 and BIMSTEC.

Sri Lanka has acknowledged India's support and the same has been communicated at the high official levels. Sri Lanka is also looking for further investment from India in IT, Pharmaceuticals, the energy and education sector.

CONLUSION: Both Sri Lanka and India are neighbors with long shared history. A strong and prosperous Sri Lanka sharing India's security concerns is the best hedge India can aspire to in the Indian Ocean region.


INTERNAL
SECURITY

AMENDMENTS TO PMLA RULES

BAIL PROVISIONS UNDER PMLA

AMENDMENTS TO PMLA RULES

CONTEXT: *The Union Finance Ministry has amended the Prevention of Money Laundering Act (PMLA) and rules in line with the recommendations of the FATF – the global money laundering and terrorist financing watchdog.*

BACKGROUND: The post pandemic-era witnessed an upsurge in advertisements soliciting investment in virtual assets. The estimated number of Indian 'crypto owners' is 10.07 Cr., more than threefold than the 2nd-ranked country United States. The Enforcement Directorate (ED) was investigating several cases related to crypto currency frauds wherein crypto exchanges were involved in money laundering.

SIGNIFICANCE: The amendments to Prevention to Money Laundering Act rules incorporated more disclosures for Non-Governmental Organisations (NGOs) by reporting entities like financial institutions (FIs), banking companies, or intermediaries. Besides, the amendment to the PMLA rule seeks to define "Politically Exposed Persons" (PEPs).

FEATURES OF THE AMENDMENTS:

DEFINES PEPs: The amendment is in relation to foreign PEPs and not domestic ones. The "Politically Exposed Persons" (PEPs) are individuals who have been entrusted with prominent public functions by a foreign country, including the

Heads of State/Governments,

Senior politicians,

Senior government/judicial/military officers,

Senior executives of state-owned corporations and

Important political party official

The amendment harmonise rules in line with norms of the Financial Action Task Force (FATF). The amendment is expected to tackle illicit financial flows that fuel crime and terrorism.

DEFINES 'BENEFICIAL OWNERS': The 'beneficial owner' are individuals with the entitlement of more than 25% of shares or capital or profit of the company, which has now been reduced to 10%. The amendment lowered the threshold for identifying beneficial owners by reporting entities, where the client is acting on behalf of its beneficial owner. The amendment is in line with the Companies Act (2013) and Income-tax Act (1961) and bring more indirect participants within the reporting net.

DEFINES NON-PROFIT ORGANISATIONS (NPOs): The Non-Profit Organisation (NPO) includes any entity or organisation, constituted for religious or charitable purposes under the Income Tax Act, 1961. The amendments require Reporting entities to register details of the client as NPOs on the DARPAN portal of NITI Aayog.

DUE DILIGENCE DOCUMENTATION REQUIREMENTS: The amendments to the PMLA rules has now been extended to include the submission of details such as names of persons holding senior management positions, names of partners, etc. Until now limited to obtaining the basic KYCs of clients such as registration certificates, PAN copies, etc.

CRYPTOCURRENCIES: Virtual digital assets (VDA) trade has been brought under PMLA. New rules mandate crypto exchanges and intermediaries dealing in virtual assets to maintain the KYCs of their clients and report suspicious transactions to financial intelligence units. The amendment to the PMLA rules will prevent the misuse of crypto, and NFTs through money laundering and other illegal activities.

CONCLUSION: The decision to mandatorily bring all trade in virtual digital assets under the PMLA now lays the onus of ascertaining the place of origin of all activities in such assets upon individuals and businesses.

BAIL PROVISIONS UNDER PMLA

CONTEXT: The Supreme Court of India has noted down the draconian preconditions for bail in Prevention of Money Laundering Act, 2019.

BAIL: The CrPC does not define the word bail but only categorise offences under the Indian Penal Code as 'bailable' and 'non-bailable'. The CrPC empowers magistrates to grant bail for bailable offences as a matter of right, which involve release on furnishing a bail bond, without or without security. In the case of non-bailable offences, a magistrate would determine if the accused is fit to be released on bail.

ISSUES UNDER THE PMLA:

ONUS ON ACCUSED: Puts responsibility upon the detainee to prove innocence of the money laundering offences brought by the Enforcement Directorate (ED) to persuade the court to grant bail.

GROUNDS FOR ARREST: Lacks clarity in definition regarding qualifying grounds for arrest and how detailed such grounds need to be.

CONFESSIONAL STATEMENT: Make confessional statement to be admissible evidence, such evidence can be presented to the judge at a bail hearing as well.

ISSUES: VIJAY MADANLAL CHOUDHARY v. UNION OF INDIA

CRIME OF MONEY LAUNDERING UNDER SERIOUS OFFENCES: The court overturned its decision in Nikesh Tarachand Shah v. Union of India (2017) that had directed treating the offence of 'money laundering' as less heinous and therefore differently a crime from 'terrorism' under the Terrorist and Disruptive Activities (Prevention) Act (TADA).

MONEY LAUNDERING COVERS OTHER OFFENCES: The court ignored the fact that under the PMLA, money laundering also covers monies associated with offences relating to infringement of copyrights and trademarks, arts and antiquities, securities, information technology, companies, and air and water pollution.

ENFORCEMENT CASE INFORMATION REPORT (ECIR): The court also declared that the ED does not need to share the Enforcement Case Information Report (ECIR) with the accused. The same notion of secrecy is not applicable to equivalent documents (FIRs) for agencies like the police and the Central Bureau of Investigation.

APPENDIX:

NIA v. Zahoor Watali, 2019: The court only has to consider the merit of validity of prima facie case against the accused for considering bail under UAPA.

Puttaswamy Case, 2017: The Supreme Court upheld the right to privacy, it overruled the decision in ADM Jabalpur v. Shivkant Shukla (1976).

ADM Jabalpur : Landmark and controversial case in which a 5 bench judge (including P N Bhagawati) ruled that "a person's right to not be unlawfully detained (i.e. habeas corpus) can be suspended". The recent decision of SC (in Vijay Madanlal Choudhary v. Union of India) upheld the constitutionality of the Prevention of Money Laundering Act (PMLA), is an injustice to the dictum of "bail and not jail".


ECONOMICS
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- FLAGSHIP PROGRAMMES FOR FISHERIES SECTOR
- NANO DI-AMMONIA PHOSPHATE
- BENEFITS OF NANO FERTILISERS
- PMLA APPELLATE AUTHORITY
- SAMARTH SCHEME
- ONE NATION, ONE CHALLAN INITIATIVE
- SMART-PDS
- SWAMIH INVESTMENT FUND
- SWAYATT
- 'K-SHAPED' ECONOMIC RECOVERY
- SAFE HARBOUR' CLAUSE IN IT LAW
- BREAKING BARRIERS, BUILDING INCLUSION
- FAILURE OF SILICON VALLEY BANK

FLAGSHIP PROGRAMMES FOR FISHERIES SECTOR

CONTEXT: *The Union Ministry of Fisheries, Animal Husbandry and Dairying launched three national flagship programmes.*

BACKGROUND: India is the **SECOND MAJOR PRODUCER** of fish through aquaculture in the world. India, the **FOURTH LARGEST EXPORTER** of fish in the world contributes 7.7 % to global fish production. Fisheries sector **DIRECTLY EMPLOYS 1.6 Cr.** and **INDIRECTLY EMPLOYS 3.2 Cr.** along the value chain. day and night length worldwide. This is why it's called an "equinox," meaning "equal night" in Latin.

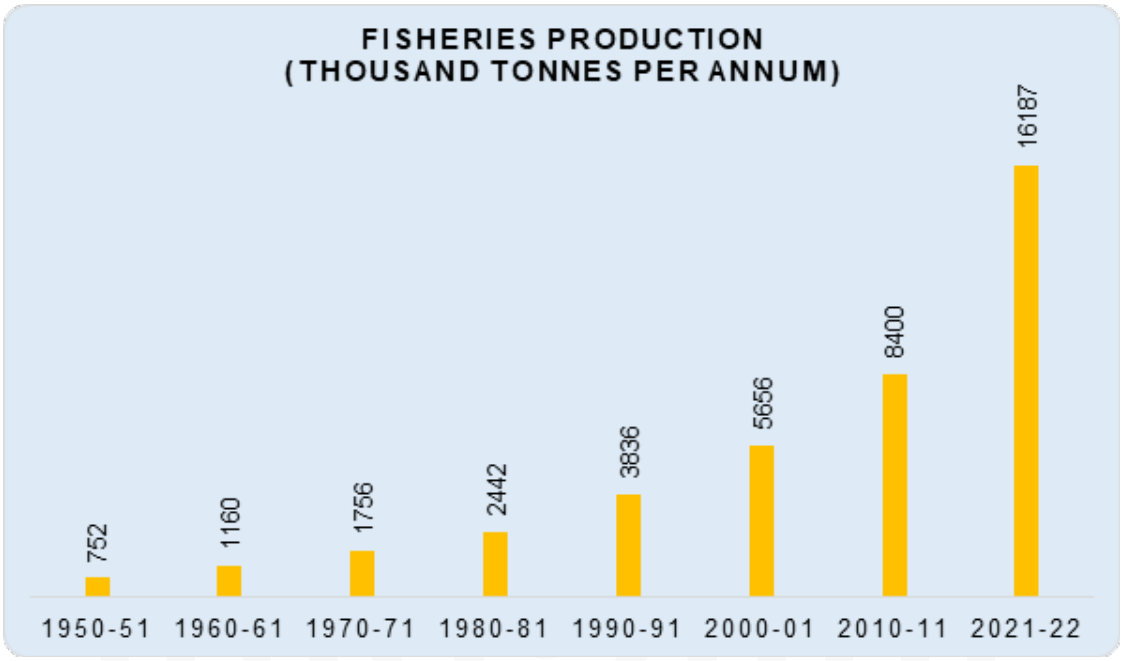


FIGURE: Bar chart representation of the domestic fisheries production (Thousand tonnes per annum).

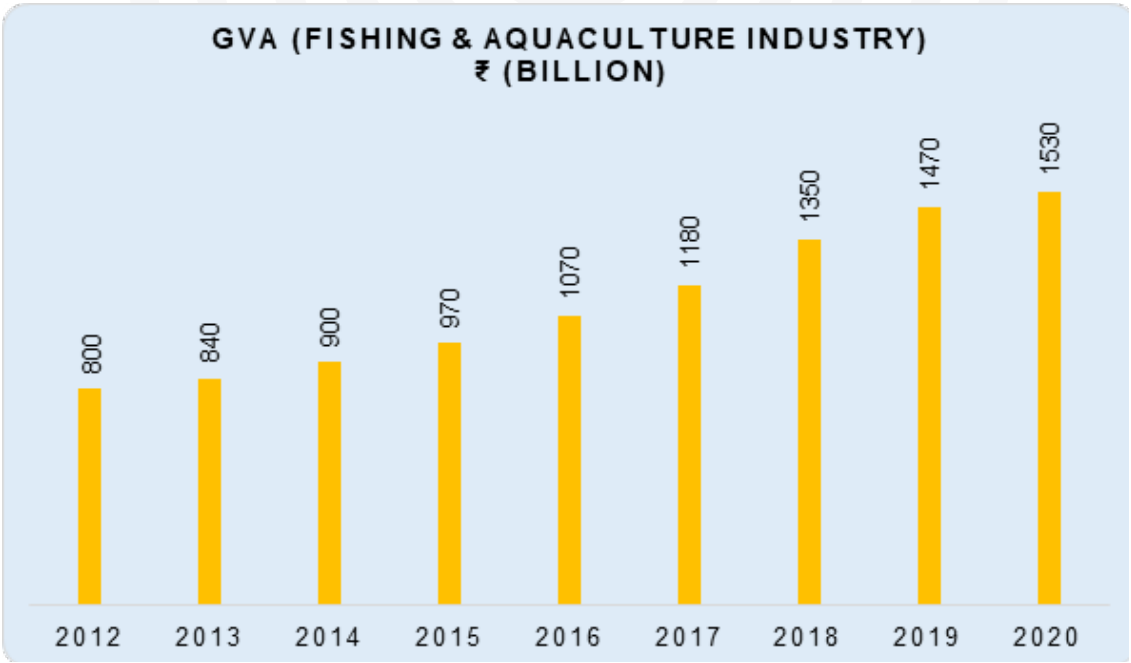
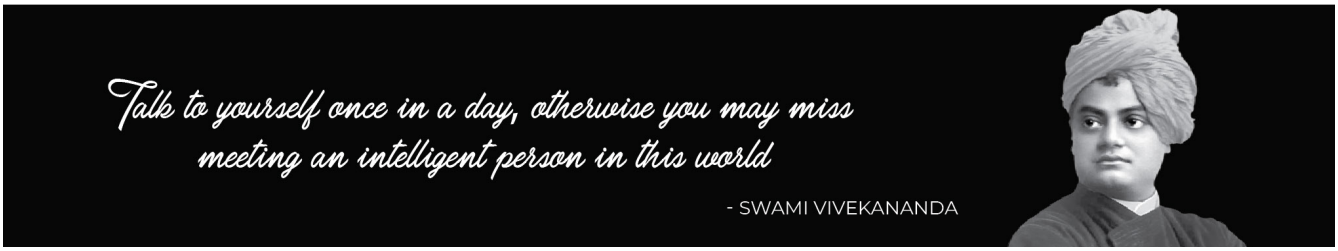


FIGURE: Bar chart representation of the Gross value added from the fishing and aquaculture industry in India from financial year 2012 to 2020(in billion Indian rupees)



GENETIC IMPROVEMENT PROGRAMME

~ **BACKGROUND**: Currently, shrimp farming predominantly depends on one exotic specific pathogen free stock species of Pacific White Shrimp (Penaeus vannamei).

~ **FEATURES**: The Union Ministry of Fisheries, Animal Husbandry and Dairying will establish a National Genetic Improvement Facility to diversify and promote cultivation of indigenous shrimp species - Indian White Shrimp (Penaeus Indicus) under the PM Matsya Sampada Yojana (PMMSY).

NATIONAL SURVEILLANCE PROGRAMME ON AQUATIC ANIMAL DISEASES (NSPAAD)

~ **BACKGROUND**: India is one of the largest fish-producing countries. The aquatic disease annually costs over 7000 Cr in losses to the domestic fisheries industry. An early detection and management of the spread of diseases are considered crucial for controlling the diseases.

PRADHAN MANTRI MATSYA SAMPADA YOJANA

The Centre launched the Pradhan Mantri Matsya Sampada Yojana for a period of 5 years from FY 2020-21 to FY 2024-25 with a total estimated investment of 20,050 Cr. The components of the Pradhan Mantri Matsya Sampada Yojana include

~ **ENHANCEMENT OF PRODUCTION AND PRODUCTIVITY:** Address critical gaps to ensure expansion, intensification, diversification and productive utilization of land and water to increase the fish production and productivity.

~ **INFRASTRUCTURE AND POST-HARVEST MANAGEMENT:** Modernising and strengthening of value chain - post-harvest infrastructure and management to enhance quality.

~ **FISHERIES MANAGEMENT AND REGULATORY FRAMEWORK:** Establish a robust fisheries management framework for traceability and welfare of fishermen.

AIMS AND OBJECTIVES

~ Harness potential of fisheries sector in a sustainable, responsible, inclusive and equitable manner

~ Doubling fishers and fish farmers' incomes and generation of employment

~ Enhancing contribution to Agriculture GVA and exports

~ Social, physical and economic security for fishers and fish farmers

~ **FEATURES**: The Union Ministry of Fisheries, Animal Husbandry and Dairying will develop National Information System on Aquatic Diseases at the pan-India level under the Central Sector scheme. The Centre would strengthen the farmer-based disease surveillance system to ensure proper investigation and scientific assistance to farmers upon reporting of diseases.

SHRIMP CROP INSURANCE

~ **BACKGROUND**: Banks and insurance institutions are cautious about providing credit to shrimp farming - labelled as a risky venture. India achieved a decadal growth rate of about 430 % growth in shrimp production.

~ **FEATURES**: The Shrimp Crop Insurance Scheme would compensate shrimp farmers for an 80 % loss of input cost in the event of a total loss of shrimp crop (if the loss is more than 70%, it is called total crop loss)

BENEFICIARIES
Fishers
Fish farmers
Fish workers and Fish vendors
Fisheries Development corporations
SHGs/JLGs in fisheries sector
Fisheries cooperatives
Fisheries Federations
Entrepreneurs and private firms
Fish FFPOs / Cs
SCs/STs/Women/Differently abled

CONCLUSION: Fisheries and aquaculture are an important source of food, nutrition, employment and income in India. Fish being an affordable and rich source of animal protein, is one of the healthiest options to mitigate hunger and malnutrition. The sector has immense potential to double the fishers and fish farmers' incomes as envisioned by government and usher in economic prosperity.

NANO DI-AMMONIA PHOSPHATE

CONTEXT: The Union Ministry of Agriculture and Farmer's Welfare has allowed Indian Farmers Fertiliser Cooperative (IFFCO) Limited and Coromandel International to start production of nano-Di-Ammonia Phosphate (n-DAP) for 3 years.

BACKGROUND: In June 2022, Prime Minister Narendra Modi recently inaugurated India's first liquid nano urea plant of IFFCO Limited located at Kalol, Gujarat. The Indian Farmers Fertiliser Cooperative Limited (IFFCO) is a multi-state cooperative society, wholly owned by the Cooperative Societies of India established in 1967 with its Headquarters located at New Delhi engaged in the business of manufacturing and marketing fertilizers. The nano-Di-Ammonia Phosphate (n-DAP) was recently notified in the Fertilizer Control Order to pave way for a commercial release for farmers. The Fertilizer Control Order (FCO) lays down quality, specification, licensing and other requirements for fertilizers in India issued under the Essential Commodities Act 1955 and administered by the Union Ministry of Agriculture. The Centre is expected to launch nano-potash, nano-zinc and nano-copper fertilizers in future. Nano fertilisers are nano-particles (particles with size between 1 nm – 100 nm), containing macro and micro-nutrients that are delivered to crops in a controlled manner.

"Urea in the form of a nanoparticles that can be applied using sprays"

- LIQUID NANO UREA

BENEFITS OF NANO FERTILISERS

~ REDUCE FARM INPUT COSTS: Half a litre of the nano-urea that cost 240 can effectively replace at least ONE bag of urea, costing between 3,500 and 4,000 in international market. Farmers can significantly reduce farm input costs adopting nano-fertilisers.

~ PRECISION FARMING: Fertilizers in nano form allow stomata, pores found on the epidermis of leaves to absorb fertilisers with efficiencies as high as 85-90 % compared to an efficiency of about 25 % of conventional urea.

~ PUBLIC FINANCE: India is heavily dependent on imports of the nitrogenous-based urea fertilizer and phosphate based fertilisers. The shift to domestically produced nano-fertilisers from imported conventional fertilisers can save valuable forex reserves and reduce subsidy bills on imported fertilisers.

~ SHELF-LIFE: Liquid nano urea has a shelf-life of 1 year, allowing farmers to store without worrying about "caking" when it comes in contact with moisture.

~ ECOLOGICAL BENEFITS: The unbalanced and indiscriminate use of conventional urea are washed away ending up in nearby water bodies leading to algae boom. Nano-based fertilisers with its improved properties can significantly mitigate the ecological benefits.

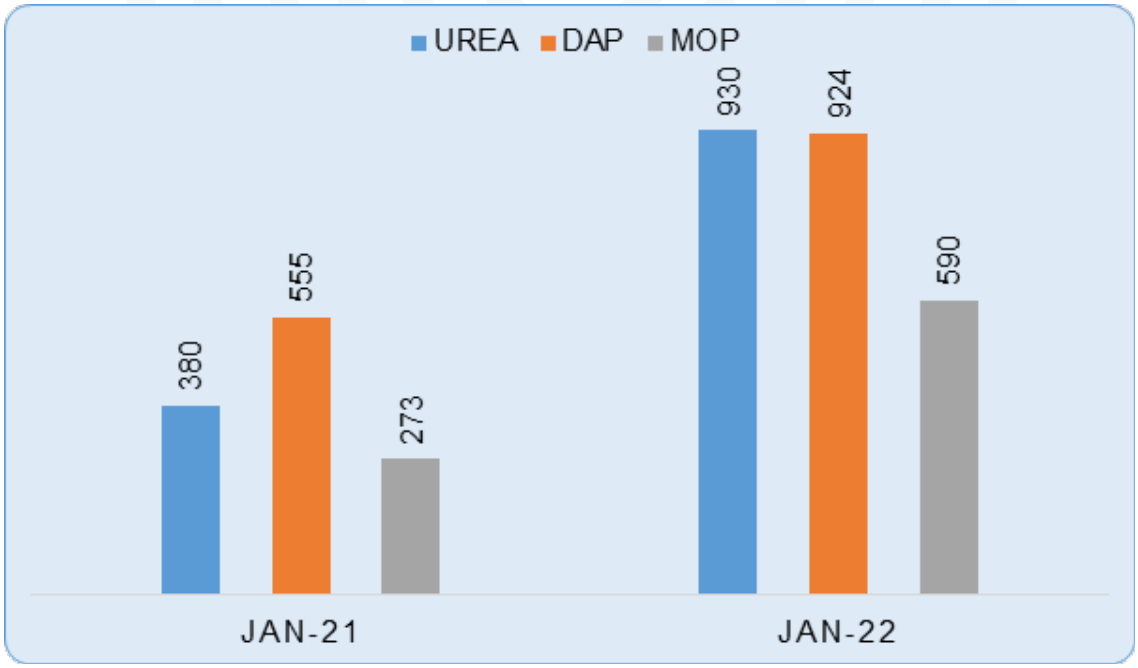
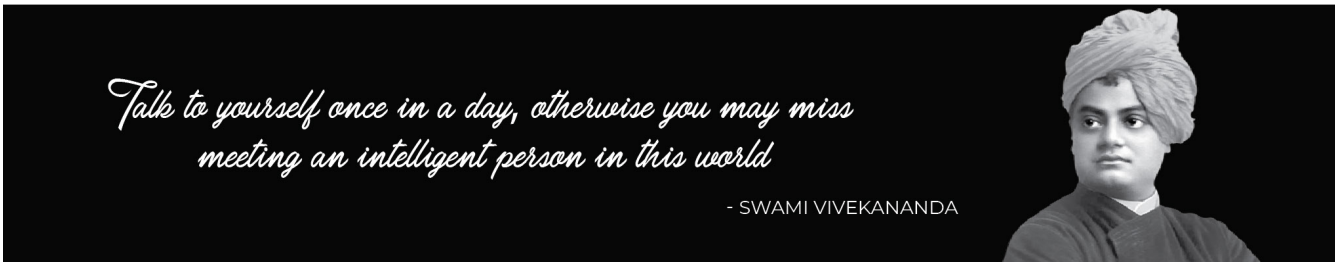


FIGURE: Bar chart representation of average landed cost of import (US $ tonne) YoY change. Source: Union Ministry for Fertilizers and Chemicals Budgetary Estimates (BE)



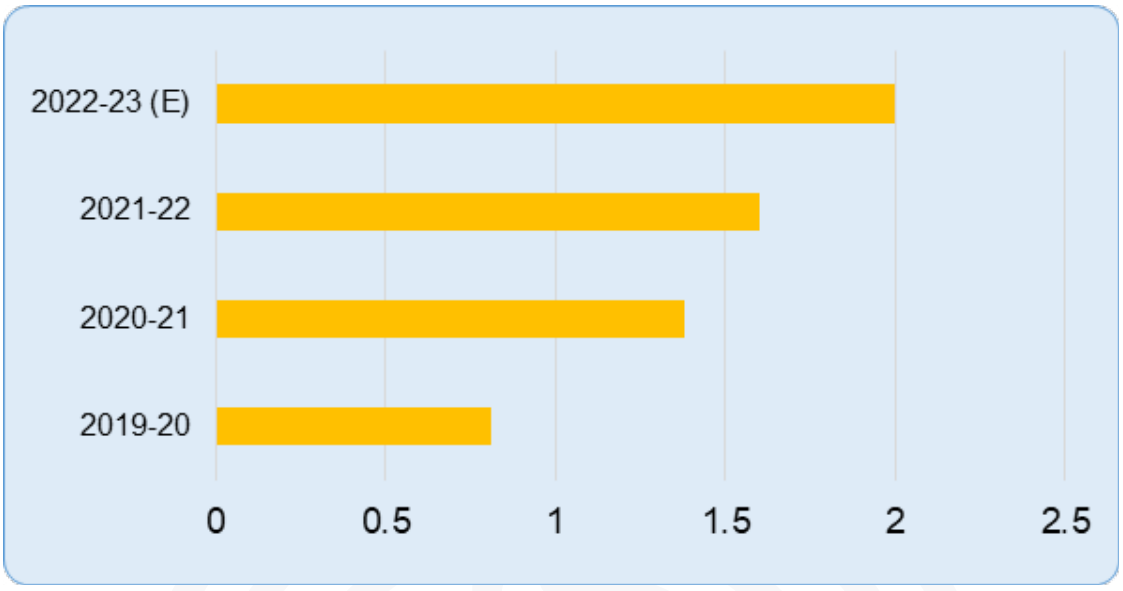
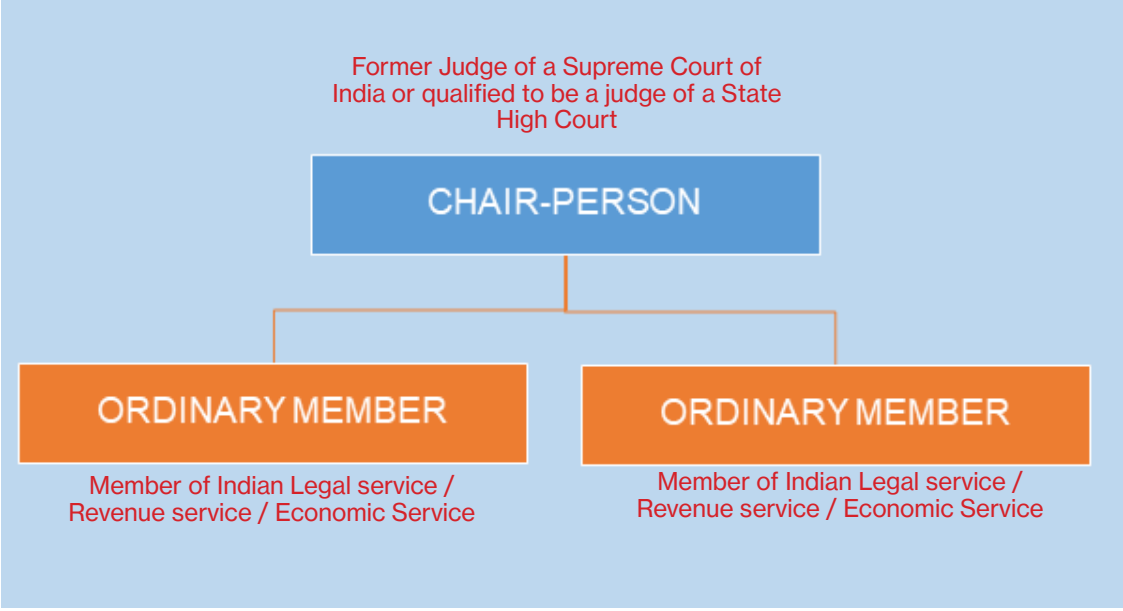


FIGURE: Bar chart representation of fertiliser subsidies (trillion INR) Source: Union Ministry for Fertilizers and Chemicals. Budgetary Estimates (BE)

CONCLUSION: Nanoparticles soil contamination from continued utilisation of nanoparticles. This may lead to health Hazards from nano-size particles at higher concentrations. Nanoparticles soil contamination from continued utilisation of nanoparticles. This may lead to health Hazards from nano-size particles at higher concentrations. Nanoparticles soil contamination from continued utilisation of nanoparticles. This may lead to health Hazards from nano-size particles at higher concentrations.

PMLA APPELLATE AUTHORITY

CONTEXT: *The Delhi High Court directed the Centre to take swift action in appointing a chairperson and other members of the appellate authority provided under the Prevention of Money Laundering Act (PMLA)*



Fixed tenure of 5 years or till the age of 65 years, whichever is earlier

PREVENTION OF MONEY LAUNDERING ACT

BACKGROUND: The Prevention of Money Laundering Act was enacted in 2002 in response to India's global commitment under the Vienna Commitment to combat money laundering.

MANDATE:

Curb money laundering and to provide for seizure of property derived from money-laundering.

OBJECTIVES OF PMLA:

Prevent and control money laundering.

Confiscate and seize the property obtained from the laundered money.

Deal with any other issue connected with money laundering in India.

ADJUDICATORY AUTHORITY

Constituted under Section 6 (1) of PMLA, 2002 to exercise jurisdiction, powers and authority conferred by or under PMLA, 2002.

Enjoy powers of a civil court under Sec. 5 of PMLA to confirm the order for provisional attachment or seizure of property for 150 days after due Police investigation.

APPELLATE TRIBUNAL

Constituted under Section 25 of PMLA, 2002 to exercise jurisdiction, powers and authority conferred by or under PMLA, 2002.

Enjoy powers to hear appeals against the orders of the Adjudicating Authority and the authorities under the PMLA, 2022.

SUPREME COURT

SCHEDULED OFFENCES

Transnational crime under IPC

NDPS Act, 1985

Explosive Substances Act, 1908

Unlawful Activities (Prevention) Act, 1967

Antiquities and Arts Treasures Act, 1972

SEBI Act, 1992

Customs Act, 1962

Bonded Labour System (Abolition) Act, 1976

Counterfeiting currency notes

Contravention related to manufactured drugs and preparations

PML (Amendment) Act, 2011

Funds shall be presumed to be involved in the offence, unless proven otherwise in the proceedings relating to money

ADJUDICATORY AUTHORITY

Chairperson and 2 other Members

- one each from the fields of 'Law', 'Administration' and 'Finance or accountancy'.

Functions within the Department of Revenue, Union M/o Finance

APPELLATE TRIBUNAL

Chairperson and 2 other Members

Section 28(4) of the PMLA - "the Chairperson or a Member holding a post as such in any other Tribunal, established under any law for the time being in force, in addition to his being the Chairperson or a member of that Tribunal, may be appointed as the Chairperson or a Member, as the case may be, of the Appellate

SUPREME COURT

PML (Amendment) Act, 2011

"expanded the scope of crime to include the non-disclosure of assets and income and use of proceeds of crime as crimes"

"Illegitimate income and assets include the proceeds of crimes in scheduled offences as Black Money"

"Shifted the burden of proof to the accused to prove the legitimacy of income and assets"

SUPREME COURT

APPELLATE TRIBUNAL

ADJUDICATORY AUTHORITY

PML (Amendment) Act, 2011

Provide for appeal against the orders of the Appellate Tribunal directly to the Supreme Court within 60 days from the communication of the decision or order of the Appellate Tribunal.

Provide for provisional attachment and confiscation of property of any person (for a period not exceeding 180 days) believed to be involved in the offence of money laundering practices.

PML (Amendment) Act, 2011

Provide for the transfer of cases of the Scheduled offences pending in a court (which had taken cognizance of the offence) to the Special Court for trial. In addition, on receiving such cases, the Special Court shall proceed to deal with it from the stage at which it was committed.

SAMARTH SCHEME

CONTEXT: *The Union Ministry of Textiles launched the Scheme for Capacity Building in Textiles Sector (SAMARTH), a flagship Scheme for Capacity Building in the Textiles Sector (SCBTS) in 2017.*

SAMARTH SCHEME

TYPE: Demand-driven and placement-oriented umbrella skilling programme offering 184 courses aligned with National Skill Qualification Framework (NSQF).

NODAL MINISTRY: Union Ministry of Textiles.

NODAL OFFICE: The office of the Development Commissioner - Handicrafts under the component 'Skill Development in Handicrafts Sector' of National Handicrafts Development Programme (NHDP).

IMPLEMENTING AGENCIES:

~ Textile Industry / Industry Associations

~ State Government Agencies

~ Sectorial Organizations - Union Ministry of Textiles.

OBJECTIVE: Create jobs and provide skilling opportunities to marginalised sections

~ **SKILLING**: Skill 3.47 lakh beneficiaries aligned with National Skill Qualification Framework (NSQF).

~ **PLACEMENT**: Mandatory placement of 70 % in entry-level and 90% for up skilling programmes.

FEATURES
Aadhaar Enabled Biometric Attendance System
Training of Trainers (ToT)
CCTV recording
Dedicated call centre with a helpline
Mobile app
Web-based Management Information System
Online monitoring
End-to-end digital solution

IMPLEMENTATION PERIOD: April 2017 - March 2024

CONCLUSION:1.50 lakh persons were imparted skills under the Scheme. More than 85% beneficiaries are women, majority are from marginalized sections of society. The scheme aims at employment linkage through textile Industry collaboration. Indeed, more than 70% of beneficiaries trained in organized sector courses have been provided placement.

ONE NATION, ONE CHALLAN INITIATIVE

CONTEXT: *The Gujarat government is in the process of setting up virtual traffic courts in the state under the One Nation, One Challan initiative.*

AIM: To bring all agencies related to traffic violations, such as traffic police and Regional Transport Office, on one platform for seamless collection of challans and data transfer.

PROCESS: The system involves detecting traffic violations through the CCTV network and generating e-challans with relevant penalty amounts that are sent to the mobile number linked with the vehicle. Virtual traffic courts will be automatically notified if the challan amount is not paid within 90 days.

USAGE: Such e-governance examples can be used in Governance papers to show the use of technology, and collaboration between various departments and provide a speedy justice system.

PAST INITIATIVES:

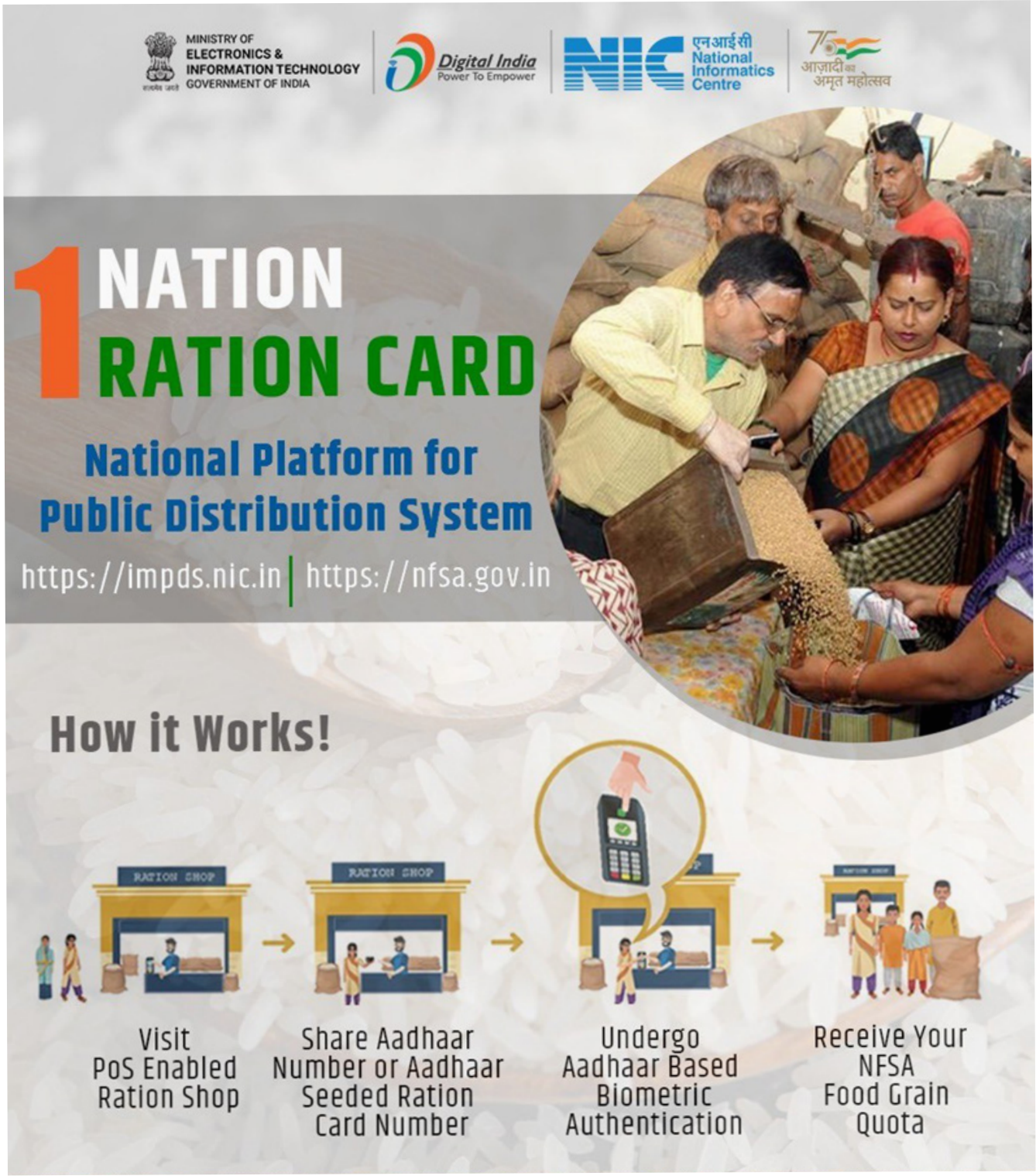
ONE NATION-ONE GRID-ONE FREQUENCY: PowerGrid Corporation Limited celebrated the anniversary of the achievement of "One Nation One Grid", as a part of Azadi Ka Amrit Mahotsav. Power Grid transmits around 50% of the total power generated in India.

ONE NATION-ONE FERTILISER SCHEME: Also, known as Pradhan Mantri Bhartiya Jan Urvarak Pariyojana, the scheme ensure affordable quality fertiliser of Bharat brand to the farmers. The scheme ensures fertilisers of uniform quality branding the urea sold in the country under 'Bharat' brand name in the entire country.

ONE NATION-ONE FERTILISER SCHEME: The Union Ministry of Labour and Employment is working on a mechanism to process accident insurance claims by unorganised workers registered on the e-Shram portal. One Nation One Ration Card (ONORC) is a scheme that will nationalise a beneficiary's ration card by a process called Aadhaar Seeding. Aadhaar Number with her/ his ration card. Aadhaar seeding ensures that the beneficiary can pick up her or his entitled food grain from any fair price shop in the country. So, if the family migrants from one part of the country to another, their claim to food security remains assured.

SMART-PDS

CONTEXT: The Union Ministry of Consumer Affairs, Food and Public Distribution directed all States / UTs to make efforts to implement Scheme for Modernization and Reforms through Technology in Public Distribution System (SMART-PDS).



SMART-PDS: Leverage technology to reduce human intervention and promote automation in the PDS supply chain to ensure timely and targeted delivery of food grains to beneficiaries. The system involves real-time tracking of food grains from the procurement stage to the distribution stage, enabling authorities to monitor and address any issues or bottlenecks in the supply chain.

SWAMIH INVESTMENT FUND

CONTEXT: *The Special Window for Affordable and Mid-Income Housing (SWAMIH) Investment Fund has sanctioned approvals for 130 projects worth over 12,000 Cr.*

BACKGROUND: The Special Window for Affordable and Mid-Income Housing (SWAMIH) Investment Fund I was launched in 2019. The Fund is sponsored by the Union Ministry of Finance, GoI and managed by SBICAP Ventures Ltd., a State Bank Group company.

SIGNIFICANCE: The SWAMIH Investment Fund I was founded as a Social Impact Fund specifically for completing stressed and stalled residential projects. The Fund considered the lender of last resort for distressed projects has already completed 20,557 homes and aims to complete over 81,000 homes in the next three years across 30 Tier I and II cities. The Fund considers first-time developers, established developers with troubled projects, developers with a poor track record of stalled projects, customer complaints and NPA accounts, and even projects where there are litigation issues. The presence of Fund in a project often acts as a catalyst for better collections and sales primarily in projects that were delayed for years.

PRADHAN MANTRI AWAS YOJANA-URBAN (PMAY-U)

NODAL MINISTRY: Union Ministry of Housing and Urban Affairs (MoH&UA)

LAUNCHED: June 25, 2015.

MANDATE: 'Housing for All by 2022'

OBJECTIVE: Address urban housing shortage among Economically weaker sections (EWSs), Lower Income Group (LIG) and Middle Income Group (including the slum dwellers).

~ IMPACT: Promotes women empowerment by providing the ownership of houses with basic civic infrastructure like water, sanitation, sewerage, road, electricity etc. in the name of female members or in joint name

COVERAGE:

~ Statutory Towns

~ Notified Planning Areas

~ Development Authorities

~ Special Area Development Authorities

~ Industrial Development Authorities

~ State Urban Planning and Development Authority

PREFERENCE GIVEN TO:

~ Differently abled persons

~ Senior citizens

~ Scheduled Castes

~ Scheduled Tribes

~ Other Backward Castes

~ Minorities

~ Single women

~ Transgender and other weaker & vulnerable sections of the society

PILLARS OF THE PRADHAN MANTRI AWAS YOJANA-URBAN (PMAY-U)

"IN-SITU" SLUM REDVELOPMENT: Redevelopment of "DENOTIFIED" slums, "in-situ" with private participation for providing houses to all eligible slum dwellers with a concept "Land as a resource". Slum Rehabilitation Grant of 1 lakh per house, would be admissible for all houses built for eligible slum dwellers in all such projects built over slums, whether on Central Government land/State Government land/ULB land, Private Land.

AFFORDABLE HOUSING THROUGH CREDIT LINKED SUBSIDY: Economically Weaker section (EWS), Low Income Group (LIG) and Middle Income Group (MIG) households are eligible for housing loans with interest-subvention from Banks, Housing Finance Companies and other such institutions for new construction and enhancement to existing dwellings as incremental housing. Preference will be given to households belonging to marginalised communities.

AFFORDABLE HOUSING PARTNERSHIP: The Government of India provide a Central Assistance of 1.5 Lakh per EWS house in project, where at least 35% of the houses in the project are for EWS category. The State Governments and Municipalities extending other concessions such as their State share, land at affordable cost, stamp duty exemption etc.

SUBSIDY FOR BENEFICIARY-LED INDIVIDUAL HOUSE CONSTRUCTION: Financial assistance of 1.5 lakh to individual eligible families belonging to EWS categories to either construct new houses or enhance existing houses on their own to cover the beneficiaries, excluded from any other component of the mission.

SWAYATT

CONTEXT: *The Government e-Marketplace (GeM) commemorates the success of Start-ups, Women and Youth Advantage Through e-Transactions (SWAYATT).*

BACKGROUND: The Start-ups, Women and Youth Advantage Through e-Transactions (SWAYATT) was first launched in February 2019. The Union Ministry of Commerce and Industries launched Government e-Marketplace (GeM) as a Section 8 company in 2016 to serve as a one-stop National Public Procurement Portal to facilitate online procurement of common use goods and services required by various Central and State Government Departments/ Organizations/Public Sector Undertakings (PSUs). It is mandatory for government agencies to procure from the portal, goods and services available on GeM. The portal also provides the tools of e-bidding and reverse e-auction to facilitate government users achieve the best value for their money.

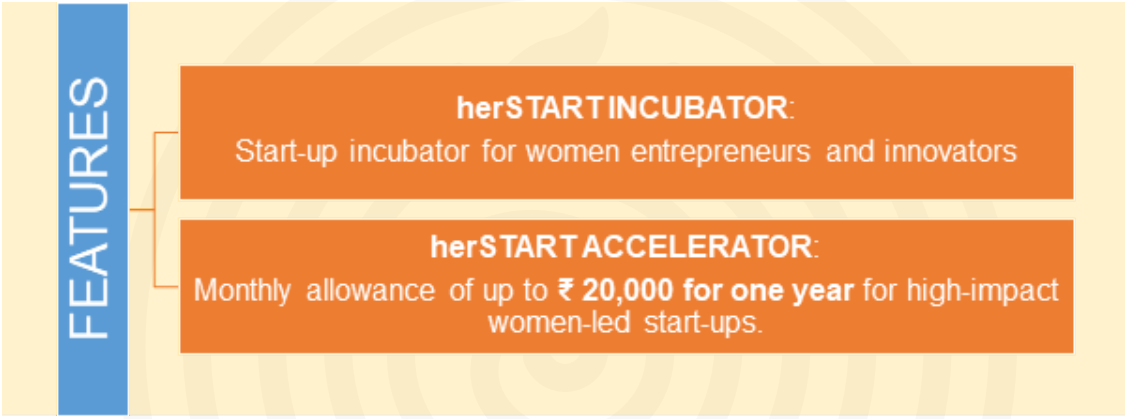
OBJECTIVE:

~ Promote the inclusiveness of various categories of sellers and service providers on the Government e-Marketplace (GeM) portal

~ Facilitate training and registrations of women and youth manufacturers and sellers and encourages participation of the MSME sector and start-ups in public procurement.

'herSTART'

Platform launched by the Government to encourage and promote women entrepreneurs.



'K-SHAPED' ECONOMIC RECOVERY

CONTEXT: *V Anantha Nageswaran, Chief Economic Advisor (CEA) dismissed the India's economic recovery during the post-Covid phase as 'K-shaped' with both rural and urban economies were recovering but at different paces. India's urban and rural areas have seen different growth rates with urban recovery proceeding at a faster pace than rural recovery in the post Covid 19 pandemic.*

DIFFERENT TYPES OF ECONOMIC RECOVERIES

V-SHAPED RECOVERY: Economic phase characterised by a sharp decline in economic activities followed by a sharp rise back to the previous peak resembling a "V" shape. During a V-shaped recovery, the productivity of the economy bounces back almost immediately to its pre-recession level supported by appropriate fiscal and monetary policies. The productivity of US economy declined rapidly with fall in demand with the end of World War II. The industrial activities rebounded sharply to meet the demand for war reconstruction in the continental Europe under the Marshall Plan.

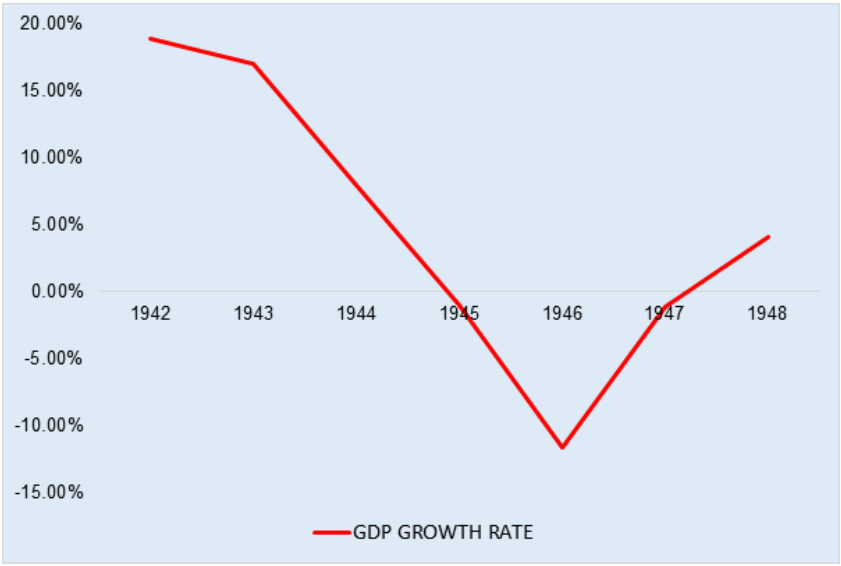


FIGURE: Line chart representation of GDP growth rates of the US economy during the V-shaped economic recovery.

U-SHAPED RECOVERY: Popularly known as the "Nike Swoosh" recovery, the economy undergoes a prolonged stagnation following a gradually climb to its earlier peak. The prolonged phase of recession would result in job losses and the depletion of reserves. The most notable U-shaped recessions in U.S. history was the 1973-75 recession. The US economy began to shrink in early 1973 and continued to decline or show only slight growth over the next two years, with the GDP dipping 3 % at its deepest point before finally recovering in 1975. The financing the Vietnam War and the Great Society welfare state expansion under President Johnson, Keynesian deficit spending policies under President Nixon after him, and the resulting delinking between the U.S. Dollar and gold.

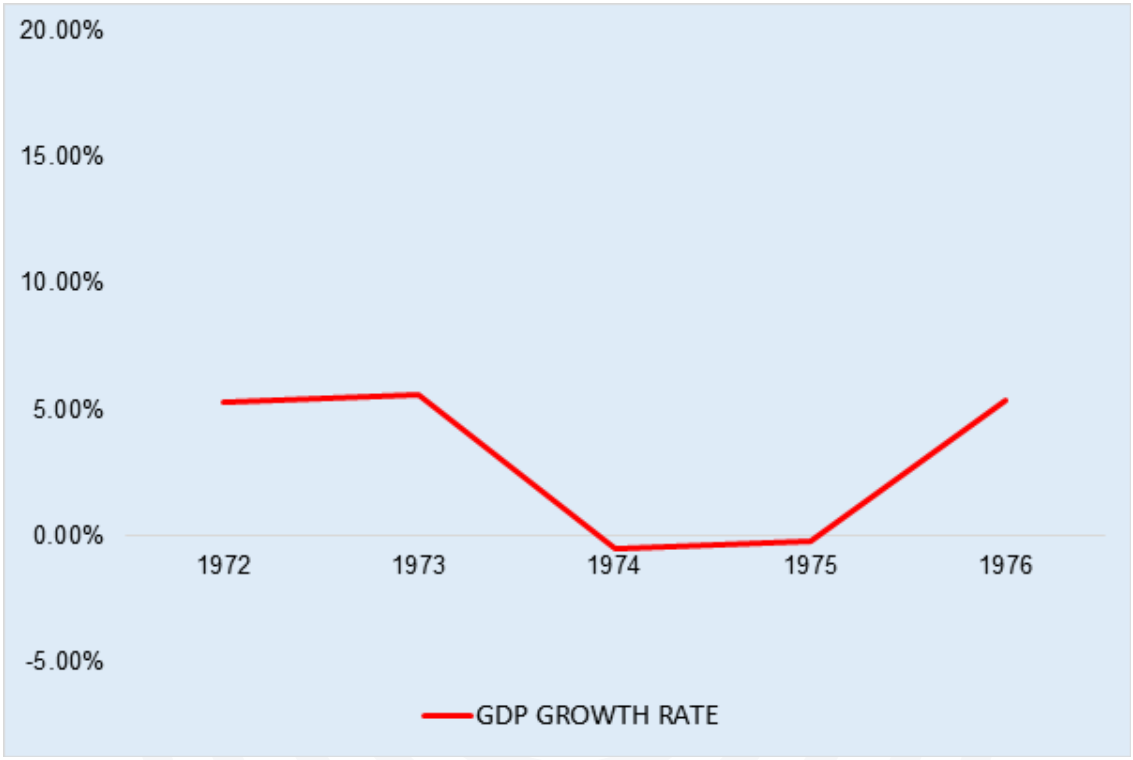


FIGURE: Line chart representation of GDP growth rates of the US economy during the U-shaped economic recovery.

W-SHAPED RECOVERY: Also known as a double-dip recession, it is effectively two recessions in one. A W-shaped recovery occurs when the economy briefly recovers after a prolonged decline in economic activities only to decline after a brief economic recovery. The prolonged decline in economic activities have destroyed the confidence of the investors. The economy enter a second recession after a brief recovery due to the nature of global events or a result of fiscal and monetary measures. The U.S. experienced a W-shaped recovery in the early 1980s. From January to July 1980 the country's economy experienced the initial recession, then entered recovery for almost a full year before dropping into a second recession in 1981 to 1982.

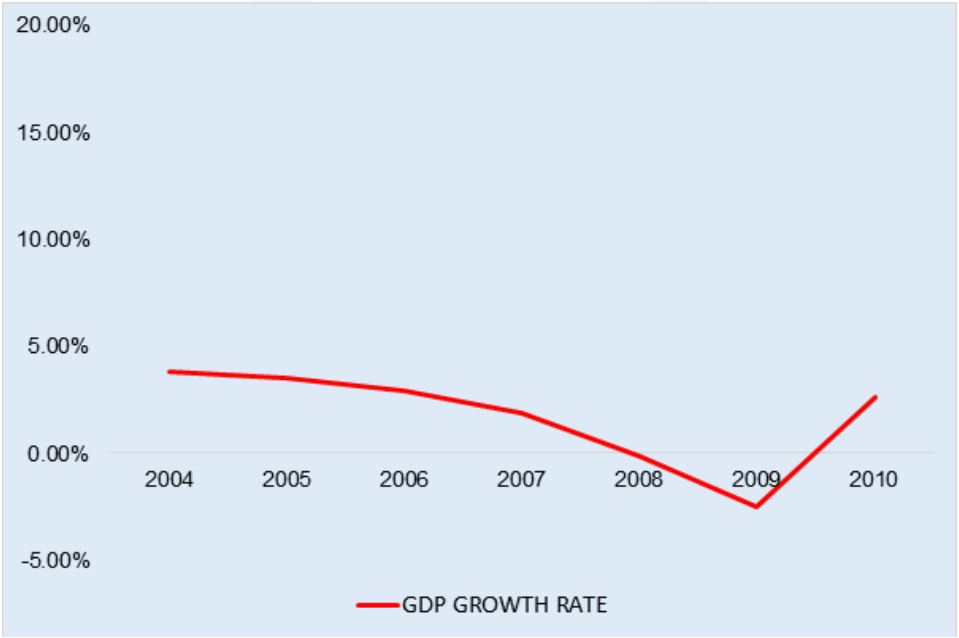


FIGURE: Line chart representation of GDP growth rates of the US economy during the L-shaped economic recovery.

K-SHAPED ECONOMIC RECOVERY: The K-shaped recovery is characterised by differential growth rates of economic recovery. In this scenario, one sector of the economy has a recovery that is more V-shaped or U-shaped, while another either continue to decline or recovers considerably more slowly, as in the case of the L-shaped recovery.

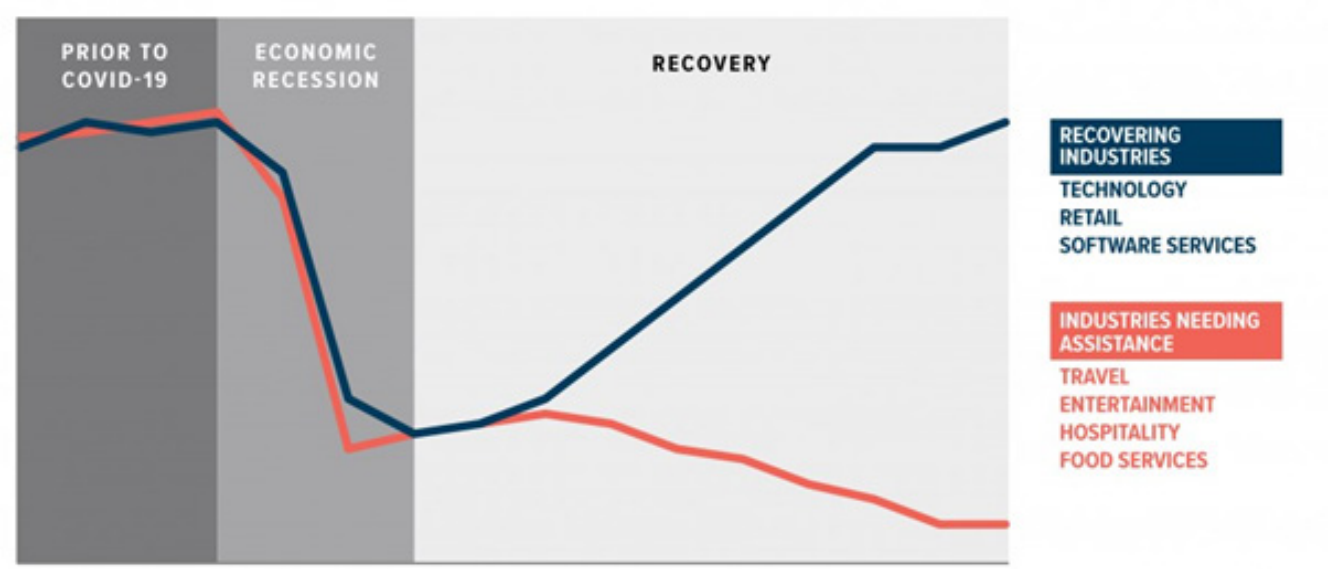


FIGURE: Line chart representation of GDP growth rates of the US economy during the K-shaped economic recovery.

SAFE HARBOUR' CLAUSE IN IT LAW

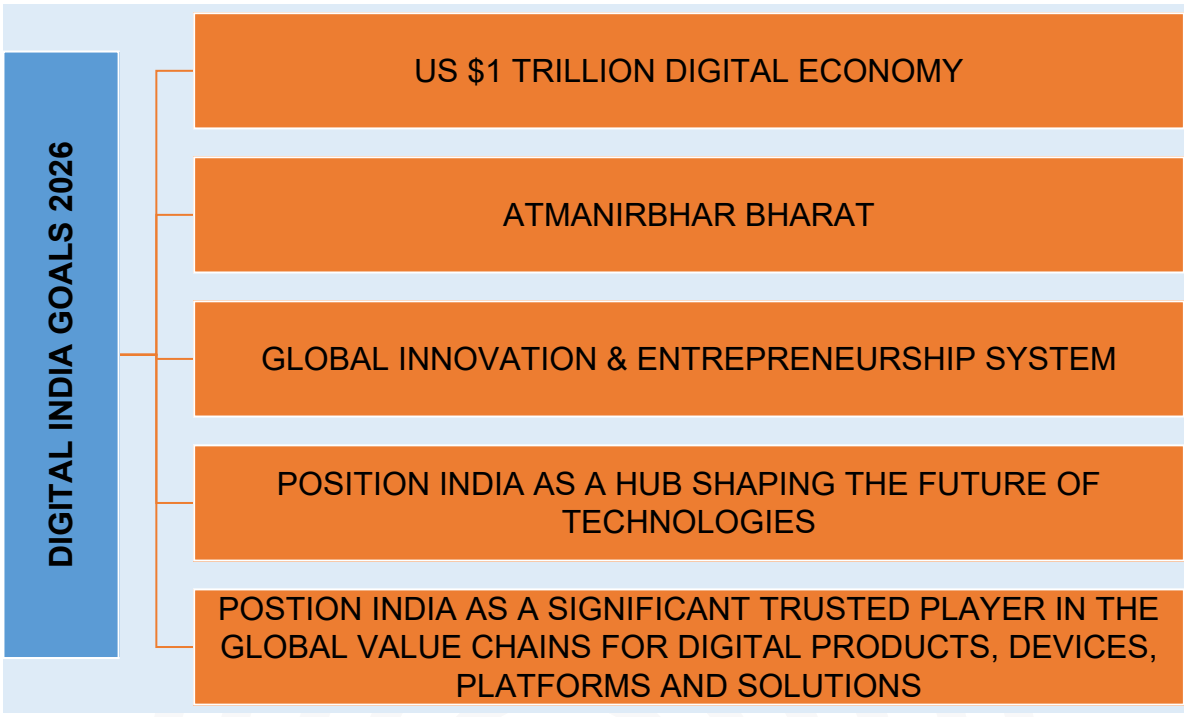
CONTEXT: The Union Ministry of Electronics and Information Technology (MEITy) is reconsidering a key aspect of cyberspace – 'Safe Harbour', which is the principle that allows social media platforms to avoid liability for posts made by users.

BACKGROUND: The United States in the Digital Millennium Copyright Act (DMCA), 1998 introduced 'Safe Harbour' clause as a legal provision to shield Internet Service Providers (ISPs) and other online intermediaries from liability for the content posted by users on their platforms. The Union government formally outlined the Digital India Bill, 2023 significantly overhauling the Information Technology Act, 2000. Section 79 of the IT Act, 2000 provides for the clause of 'safe harbour' that allows online intermediaries to provide platforms for user-generated content without the fear of being held liable for any illegal activity that may occur on their platforms. The IT (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021 has retained the 'Safe harbour clause.

SIGNIFICANCE: The Safe Harbour clause provides legal immunity for online intermediaries abiding by certain due diligence requirements, against content posted by users on their platforms. The clause is a crucial tenet for ensuring free speech on the Internet since platforms only have to act on speech that is deemed illegal. The Safe Harbour clause has facilitated the growth of social media, online marketplaces, and other online services that rely on user-generated content.

DIGITAL INDIA BILL, 2023

BACKGROUND: The Information Technology Act, 2000 enacted during the advent of internet age in India has well served the growth of the nascent IT ecosystem in 2000. The Information Technology Act, 2000 has proved grossly inadequate with the growth and proliferation of modern internet-based services such as e-commerce, social media platforms. The internet, devices and information technology have empowered citizens. The growth has created challenges in the form of user harm; ambiguity in user rights; security; women & child safety; organised information wars, radicalisation and circulation of hate speech; misinformation and fake news; unfair trade practices, etc.



EVOLUTION OF DOMESTIC CYBER SPACE:

~ Growth of domestic internet population from 55 lakhs in 2000 to 85 Cr. Indians to emerge as the world's largest digitally connected democracy.

~ Growth and expansion of multiple intermediaries of diverse nature in e-Commerce, digital media, social media, Artificial Intelligence (AI), OTT, gaming etc.

~ Emerged as a space for good allowing citizens to interact to a space for criminalities and illegalities.

~ Emergence of traditional forms of user harms - Cybercrime, Cyber-security, Hacking to new complex forms of user harms - Catfishing, Doxxing, Cyber stalking, Cyber trolling, Gaslighting, Phishing, etc.

~ Evolved as a source of information and news to a space of proliferation of hate speech, disinformation and fake news.

PRIORITIES OF CYBER SPACE:

Ensure open, safe and trusted and accountable domestic cyber space.

Manage the complexities of internet and rapid expansion of the types of intermediaries.

Promote innovation in the cyber space.

Create a framework for accelerating digitalization of Government and to strengthen democracy and governance (G2C)

Protect citizens' rights

Address emerging technologies and risks

Being Future-proof and Future-ready

CORE OBJECTIVES:

Ensure an open and safe Internet in the country to ensure users' rights and reduce risks for them online.

Accelerate the growth of technology innovation.

Regulate a range of crimes in the online space.

OBJECTIVES:

Evolve rules that can be updated, and address the philosophy of Digital India.

~ OPEN INTERNET: An open internet is characterised by choice, competition, online diversity, fair market access, ease of doing business for start-ups and ease of compliance for start-ups.

~ ADJUDICATORY MECHANISM: Specialised and dedicated adjudicatory mechanism to deal with online civil and criminal offences - revenge porn, cyber-flashing, dark web, women and children, defamation, cyber-bullying, Doxxing, salami slicing, etc.

~ ONLINE SAFETY AND TRUST:

~ ACCOUNTABILITY AND QUALITY OF SERVICE:

~ NEW TECHNOLOGIES:

~ EASILY ACCESSIBLE:

~ DELIVER TIMELY REMEDIES TO CITIZENS:

~ RESOLVE CYBER DISPUTES:

~ DEVELOP A UNIFIED CYBER JURISPRUDENCE:

~ ENFORCE THE RULE OF LAW ONLINE:

BREAKING BARRIERS, BUILDING INCLUSION

CONTEXT: *According to the latest Findex Report – 2021 by the World Bank, around one-third of adults still lack access to formal financial services.*

"individuals and businesses have access to useful and affordable financial products and services that meet their needs – transactions, payments, savings, credit, and insurance – delivered in a responsible and sustainable way."

FINANCIAL INCLUSION

BACKGROUND: The G20 Global Partnership for Financial Inclusion working group met under the grouping's Global Partnership for Financial Inclusion (GPFI) initiative. The G20 Financial Inclusion Action Plan (FIAP) aims to prevent future economic crises by encouraging conditions that promote its objectives of financial inclusion and stability. Four major drivers have been highlighted in the new G20 FIAP to lay the groundwork for further progress toward financial inclusion – THE acceptance of the 2030 Agenda for sustainable development as a worldwide framework for sustainable development, rapid development and penetration of digital breakthroughs, greater emphasis on underprivileged populations and mainstreaming financial inclusion.

SIGNIFICANCE: Financial inclusion has been identified as an enabler for 7 of the 17 Sustainable Development Goals. The G20 committed to advancing financial inclusion worldwide and reaffirmed its commitment to implement the G20 High-Level Principles for Digital Financial Inclusion. The World Bank Group considers financial inclusion a key enabler to reduce extreme poverty and boost shared prosperity. Financial inclusion has been linked to up to 14 % growth in the gross domestic product in developing economies.

CHALLENGES IN ACHIEVING FINANCIAL INCLUSION:

1.Lack of access to basic infrastructure

2.Low financial literacy

3.Limited trust in formal financial institutions

4.Insufficient regulatory framework

5.High transaction costs

6.Lack of diversity in financial services

FINANCIAL INCLUSION SCHEMES IN INDIA

~ PRADHAN MANTRI JAN DHAN YOJANA (PMJDY): Financial inclusion program launched by the Centre in August 2014 to ensure universal access to basic financial services – credit, debit, remittance and other miscellaneous financial services. As of August 2021, over 43.55 Cr. bank accounts have been opened under PMJDY, with a total deposit balance of over 1.45 lakh Cr.

~ ATAL PENSION YOJANA (APY): Pension scheme launched by the Centre in May 2015 and administered by the Pension Fund Regulatory and Development Authority (PFRDA) to provide a minimum guaranteed monthly pension between 1,000 - 5,000, depending on the contribution amount and the age of entry to Indian citizens employed in the unorganized sector. As of August 2021, over 3.94 Cr. subscribers have enrolled in the APY scheme with a total asset under management (AUM) of over 30,700 Cr.

~ PRADHAN MANTRI VAYA VANDANA YOJANA (PMVVY): Government-run pension scheme for senior citizens launched in May 2017 administered by the Life Insurance Corporation of India (LIC) that provide an assured return of 7.40% per annum on purchase of policies subject to a minimum of 1.5 lakh and maximum of 15 lakh. The purchase price of the scheme will be refunded to the nominee/legal heir of the subscriber in case of the unfortunate demise of the subscriber during the policy term of 10 years. The scheme also provides loan facility up to 75 % of the purchase price after completion of three policy years to meet any unforeseen expenses. As of August 2021, the scheme has enrolled over 3.08 lakh subscribers with a total corpus of over 10,000 Cr.

~ STAND UP INDIA SCHEME: Interest-subvention scheme to provide financial assistance and other support to promote entrepreneurship among women and SC/ST (Scheduled Castes/Scheduled Tribes) communities. The Scheduled Commercial Banks would provide non-collateral loans with government providing credit guarantee coverage for up to 75% of the loan amount ranging from 10 lakh - 1 Cr. for starting a new enterprise in the manufacturing, services, or trading sectors, besides support in the form of skill development, mentorship, and marketing assistance to the beneficiaries. The scheme also encourages the setting up of new enterprises in rural and semi-urban areas, which can create employment opportunities and contribute to the overall development of the region.

~ PRADHAN MANTRI MUDRA YOJANA (PMMY): Interest-subvention scheme launched in 2015 to provide financial assistance and other support to Micro and Small Enterprises (MSEs) in the country. Banks, Non-Banking Financial Companies (NBFCs), and Micro Finance Institutions (MFIs) provide collateral-free affordable loans under three categories - Shishu (up to 50,000), Kishore (- 5 lakh), and Tarun (5 lakh - 10 lakh) with a repayment period of up to 5 years. The scheme also provides support in the form of handholding and assistance in the preparation of project reports to the beneficiaries. As of March 2021, over 31 cr. loans amounting to over 16 lakh cr. have been disbursed under the scheme.

~ PRADHAN MANTRI SURAKSHA BIMA YOJANA (PMSBY): Accident insurance scheme launched by the Centre in 2015 to provide accidental death and disability coverage to individuals at a very affordable premium. All eligible individuals between the ages of 18 and 70 years can avail of accidental death and disability coverage of 2 lakh for a one-year period paying an annual premium of only 12. The scheme covers death and disability due to accidents, including road accidents, rail accidents, drowning, and other accidents. The PMSBY scheme is aimed at providing financial security to individuals and their families in case of an unfortunate accident. As of March 2021, over 25 Cr. individuals have enrolled in the PMSBY scheme.

~ SUKANYA SAMRIDDHI YOJANA: Government-backed savings scheme launched in 2015 as a part of the 'Beti Bachao, Beti Padhao' campaign to encourage parents to save for the education and marriage expenses of their girl child. Parents or legal guardians of a girl child can open a savings account in her name before she attains the age of 10 years and can be operated until the girl child attains the age of 21 years. The minimum deposit amount for the scheme is 250, and the maximum deposit amount is 1.5 lakh per financial year. The scheme offers an attractive interest rate, which is revised periodically by the government. As of April 2021, the interest rate for the scheme is 7.6% per annum. The deposits made under the scheme are eligible for tax benefits under Section 80C of the Income Tax Act. The maturity amount, which includes the principal amount and the interest earned, is payable to the girl child on attaining the age of 21 years. The account can also be closed prematurely in case of a medical emergency or on the death of the girl child.

~ VARISHTHA PENSION BIMA YOJANA (VPBY): Pension scheme launched by the Centre in 2017 to provide financial security to senior citizens during their retirement years. Senior citizens above the age of 60 years can purchase a pension plan investing a minimum amount of 1.5 lakh and maximum amount of 15 lakh that guarantee a minimum monthly pension of 1,000 to 10,000, depending on the amount invested by the policyholder paid out on a monthly, quarterly, half-yearly, or yearly basis, as chosen by the policyholder paying a lump sum amount. The scheme also offers a death benefit to the nominee in case of the death of the policyholder during the policy term.

FAILURE OF SILICON VALLEY BANK

CONTEXT: *The California-based Silicon Valley Bank (SVB) faced a bank run on its deposits, which led to its collapse and seizure, the largest failure of a financial institution since the global financial crisis of 2008.*

TIMELINE:

2020 - 2022: The California-based Silicon Valley Bank (SVB) mobilised large deposits ~ US $ 189 bn. in 2021, later peaked to US $ 198 bn during the FUNDING BOOM, 2021. The SVB's balance sheet for 2022-end showed US $ 91.3 bn. of securities with investment in bonds issued in a low-interest rate scenario. The policy rate hikes by the US Federal Reserves under the DEAR MONEY POLICY drove down the value of the bonds holdings issued at lower rates. The FUNDING WINTER in the post Covid-pandemic led to the stagnation in investment activities of Venture Capital Firms (VCFs) among start-ups, amid rising interest rates. Deposits made by start-ups started declining with STAGNATION IN DEPOSITS, forcing the bank to sell securities at a loss to cover up as funding's depleted.

MARCH 8: Silicon Valley Bank announces it would book a $1.8 billion loss after selling some of its investments to cover increasing withdrawals. The bank says client cash burn has remained elevated, and increased further in February, leaving its deposits at the end of that month lower than it expected. It says it plans to raise $2.25 billion by selling a mix of common and preferred stock. Moody's downgrades SVB Financial a few hours later.

MARCH 9: SVB Financial's stock crashes when the market opens. Shares of the four biggest U.S. banks slide amid fears other banks could be forced to take losses to raise cash. The declines wipe out a combined $52 billion in the market value of JPMorgan Chase, Bank of America, Wells Fargo and Citigroup. As the panic spreads through texts and social media, venture-capital firms begin pulling their money out of Silicon Valley Bank and urge their portfolio companies to do the same. By the time Silicon Valley Bank closes for business that day, depositors have attempted to withdraw $42 billion.

MARCH 10: Shares of SVB are halted Friday morning after a premarket selloff. Federal regulators announced taking control of the Silicon Valley Bank, the second-biggest bank failure in U.S. history, after Washington Mutual's collapse during the height of the 2008 financial crisis. The FDIC says customers' insured deposits would be available Monday. It doesn't say when uninsured depositors will get their money back.

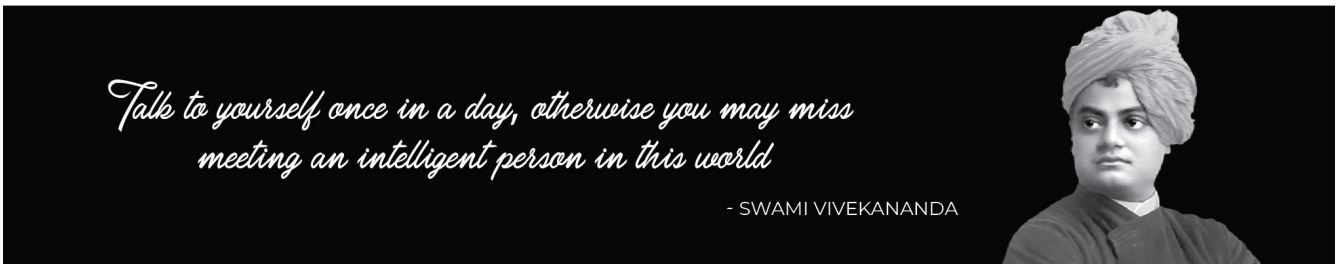
MARCH 11-12: Tech start-ups scramble to line up funding sources for payroll and other day-to-day operations with their deposits locked up in the failed bank. Federal regulators unveiled emergency measures to stem the fallout from the failure of Silicon Valley Bank.

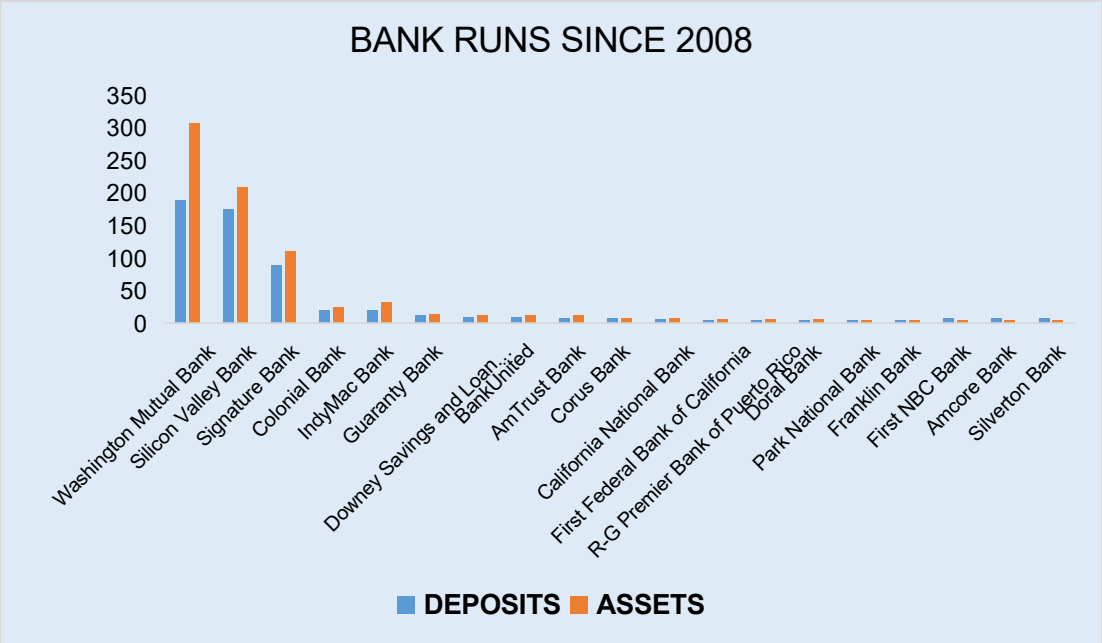
MARCH 14: The Wall Street Journal reported the investigation of the Justice Department and Securities and Exchange Commission into the collapse of Silicon Valley Bank. The Federal Reserve, meanwhile, is rethinking a number of its rules related to midsize banks.

MARCH 17: Silicon Valley Bank's parent company files for chapter 11 bankruptcy protection.

MARCH 19: UBS agrees to take over rival Credit Suisse for more than $3 billion in a deal engineered by Swiss regulators. The megamerger represents a new global dimension in the banking turmoil set off by Silicon Valley Bank's collapse.

MARCH 27: The Federal Deposit Insurance Corp. announced the acquisition of assets of the bulk of Silicon Valley Bank by the First Citizens Banc.




BANK RUNS SINCE 2008
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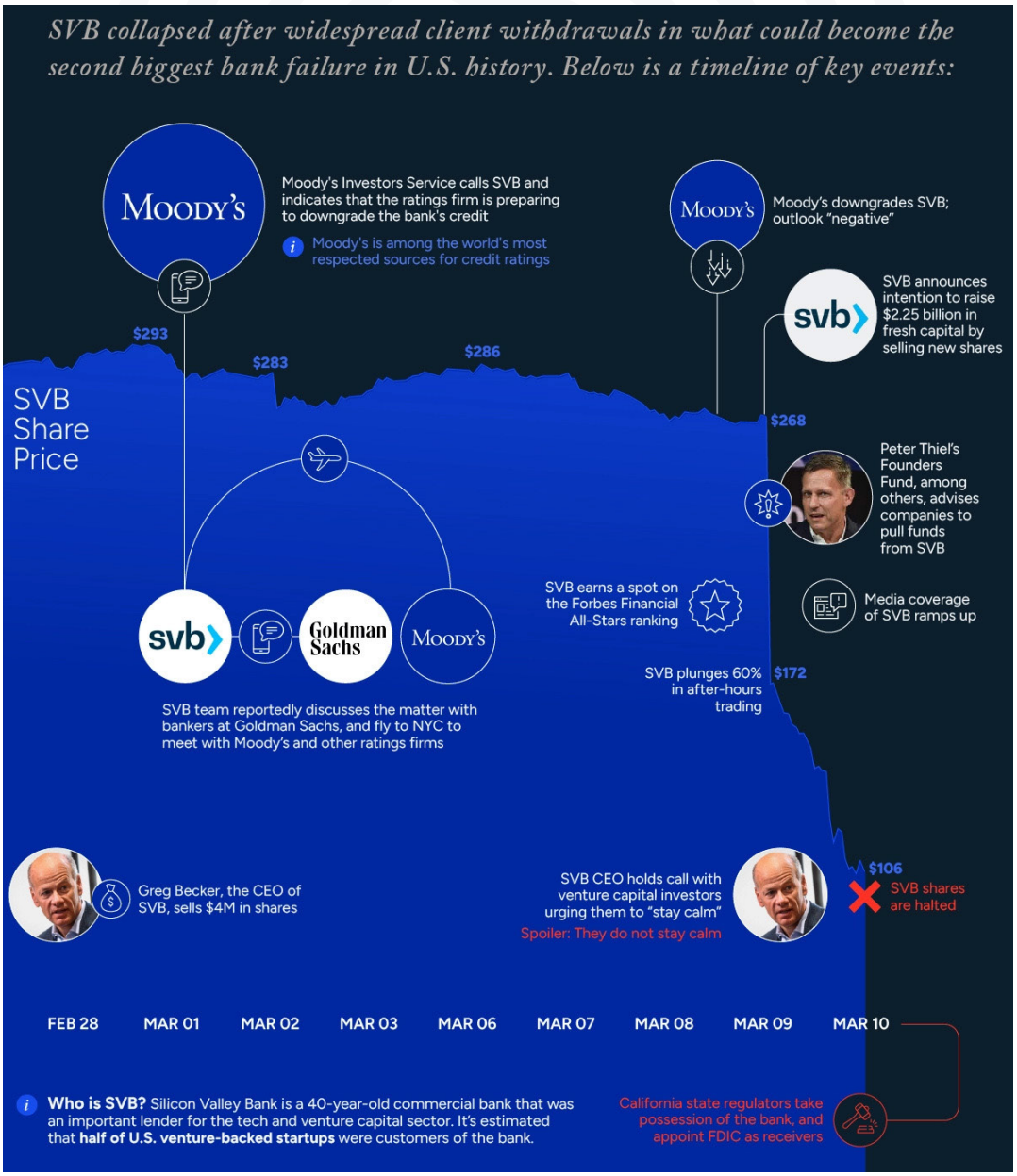
300
250
200
150
100
50
0
Washington Mutual Bank
Silicon Valley Bank
Signature Bank
Colonial Bank
IndyMac Bank
Guaranty Bank
Downey Savings and Loan
BankUnited
AmTrust Bank
Corus Bank
California National Bank
First Federal Bank of California
R-G Premier Bank of Puerto Rico
Doral Bank
Park National Bank
Franklin Bank
First NBC Bank
Amcore Bank
Silverton Bank
DEPOSITS
ASSETS


SVB collapsed after widespread client withdrawals in what could become the second biggest bank failure in U.S. history. Below is a timeline of key events:
Moody's Investors Service calls SVB and indicates that the ratings firm is preparing to downgrade the bank's credit
Moody's is among the world's most respected sources for credit ratings
Moody's downgrades SVB; outlook "negative"
SVB announces intention to raise $2.25 billion in fresh capital by selling new shares
$293
$283
$286
$268
SVB Share Price
Peter Thiel's Founders Fund, among others, advises companies to pull funds from SVB
SVB earns a spot on the Forbes Financial All-Stars ranking
Media coverage of SVB ramps up
SVB plunges 60% in after-hours trading
$172
SVB team reportedly discusses the matter with bankers at Goldman Sachs, and fly to NYC to meet with Moody's and other ratings firms
Greg Becker, the CEO of SVB, sells $4M in shares
SVB CEO holds call with venture capital investors urging them to "stay calm"
Spoiler: They do not stay calm
$106
SVB shares are halted
FEB 28
MAR 01
MAR 02
MAR 03
MAR 06
MAR 07
MAR 08
MAR 09
MAR 10
Who is SVB? Silicon Valley Bank is a 40-year-old commercial bank that was an important lender for the tech and venture capital sector. It's estimated that half of U.S. venture-backed startups were customers of the bank.
California state regulators take possession of the bank, and appoint FDIC as receivers

ECOLOGY

FOG ALERT SYSTEM WITH US-NCAR

GOLDEN ALGAE

WORLD WILDLIFE DAY 2023

CO2 EMISSIONS IN 2022

METHANE GLOBAL TRACKER REPORT

GARCINIA PEDUNCULATA

GLOBAL ALLIANCE FOR BIG CATS

INDIA'S ENERGY TRANSITION

INDIA'S POWER PRODUCTION

FOG ALERT SYSTEM WITH US-NCAR

CONTEXT: *: Bihar cabinet approves $50,000 for developing fog alert system with US-NCAR*

BACKGROUND: The Bihar cabinet on approved USD 50,000 for developing an early warning system for dense fog and cold wave conditions in collaboration with the US National Center for Atmospheric Research (US-NCAR). The cabinet approved USD 50,000for technical support of the works that will be jointly carried out by the state government and US-NCAR. A Memorandum of Understanding (MoU) will soon be signed between the state government and NCAR, said an official statement.white mangrove are a few of the most prevalent mangrove species.

FOG ALERT SYSTEM: A fog alert system is a safety system that helps to prevent accidents caused by low visibility due to foggy conditions. It typically consists of sensors placed along the roadway that detect the presence of fog and trigger warning devices such as flashing lights, audible alarms, or variable message signs (VMS) to alert drivers and pedestrians.

The system may also use weather data to predict foggy conditions and activate warnings in advance. The goal of a fog alert system is to provide early warning of dangerous conditions to allow drivers and pedestrians to take appropriate precautions, such as reducing speed or finding an alternate route. These systems are especially important in areas with high levels of traffic or in locations where fog is a common occurrence.

The primary advantage of a fog alert system is increased safety on roads and sidewalks. The system alerts drivers and pedestrians of low visibility conditions, allowing them to take appropriate precautions and avoid accidents. Fog alert systems can provide early warning of dangerous conditions before drivers and pedestrians enter the fog. This allows them to adjust their driving or walking behaviors accordingly.

A fog alert system can potentially be a game changer in Bihar, especially during the winter months when foggy conditions can severely impact transportation and cause accidents. Bihar is a densely populated state with high levels of traffic on its roads, which makes it particularly vulnerable to the dangers of low visibility conditions.

Keywords: Air pollution, Fog alert system

GOLDEN ALGAE

CONTEXT: *A rare glut of 'golden algae' is the most likely culprit behind mass fish deaths in the River Oder, tests have found.*

BACKGROUND:Authorities on both sides of the river in Poland and Germany have been mystified by the ecological catastrophe which has caused tonnes of fish, birds and molluscs to die since late July. But researchers at Germany's Liebniz Institute of Freshwater Ecological and Inland Fisheries (IGB) now believe they have got to the bottom of the crisis, after finding 'Prymnesium parvum' in all recent samples from the Oder.

GOLDEN ALGAE: Golden algae are a type of algae that belong to the class Chrysophyceae. They are characterized by their golden-yellow color, which comes from the presence of carotenoid pigments in their cells. Golden algae are found in freshwater and marine environments, and can exist as unicellular or multicellular organisms.

Some species of golden algae are known to produce toxins that can have harmful effects on aquatic life, including fish and other organisms that rely on these environments for survival. These toxins can cause fish kills, and can also impact the health of other organisms in the food chain.

Despite their potential negative effects, golden algae also play important ecological roles in aquatic environments. They are a source of food for many organisms, including zooplankton and other algae. Additionally, they can help regulate nutrient cycles in aquatic ecosystems by consuming excess nutrients, such as nitrogen and phosphorus that can contribute to algal blooms and other environmental problems.

Keywords: Algal Blooms, Toxic effect of Algae

WORLD WILDLIFE DAY 2023

CONTEXT: *March 3 marks the 50th anniversary of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) in 1973.*

BACKGROUND: March 3 is known as World Wildlife Day (WWD), marked annually to draw attention to issues of conservation of flora and fauna. The WWD site states, "This year, the theme is 'Partnerships for Wildlife Conservation'. It will allow us to celebrate all conservation efforts, from intergovernmental to local scale."

HIGHLIGHTS: In 2013, the United Nations General Assembly (UNGA) proclaimed March 3 as the UN World Wildlife Day to celebrate and raise awareness of protecting the world's wild animals and plants. This was as the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) was signed in 1973 on this day. March 3 marks the 50th anniversary of CITES' establishment. CITES is considered a landmark agreement on conservation that focuses on ensuring the sustainability of endangered species.

CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES OF WILD FAUNA AND FLORA

It is an international treaty that aims to ensure that international trade in wild animals and plants does not threaten their survival. CITES was adopted in 1973 and currently has 183 member countries. Under CITES, species are listed in three different appendices based on the level of protection they require.

Appendix I includes species that are threatened with extinction and trade in them is generally prohibited.

Appendix II includes species that are not necessarily threatened with extinction but may become so if trade is not regulated.

Appendix III includes species that are protected in at least one country and that country has asked for help in regulating their trade.

CITES also includes provisions for monitoring trade in protected species, enforcing the regulations, and promoting sustainable use of wild species. It has been successful in reducing the trade in certain endangered species, such as elephant ivory and rhino horn, and has played a significant role in conservation efforts around the world.

CITES is significant because it helps to regulate international trade in endangered species, which helps to ensure their survival and prevent overexploitation.

Keyword: International Trade on wildlife, CITES agreement

CO2 EMISSIONS IN 2022

CONTEXT: *International Energy Agency released CO2 Emissions in 2022 report*

ABOUT REPORT: CO2 Emissions in 2022 provides a complete picture of energy-related greenhouse gas emissions in 2022. The report finds that global growth in emissions was not as high as some had originally feared amid the disruptions caused by the global energy crisis. This latest release brings together the IEA's latest analysis, combining the Agency's estimates of CO2 emissions from all energy sources and industrial processes, as well as providing information on energy-related methane and nitrous oxide emissions.

HIGHLIGHTS OF THE REPORT: Global energy-related CO2 emissions grew by 0.9% or 321 Mt in 2022, reaching a new high of over 36.8 Gt. Following two years of exceptional oscillations in energy use and emissions, caused in part by the Covid-19 pandemic, last year's growth was much slower than 2021's rebound of more than 6%.

In a year marked by energy price shocks, rising inflation, and disruptions to traditional fuel trade flows, global growth in emissions was lower than feared, despite gas-to-coal switching in many countries.

Specific challenges in 2022 contributed to the growth in emissions. Of the 321 Mt CO2 increase, 60 Mt CO2 can be attributed to cooling and heating demand in extreme weather and another 55 Mt CO2 to nuclear power plants being offline.

The biggest sectoral increase in emissions in 2022 came from electricity and heat generation, whose emissions were up by 1.8% or 261 Mt. In particular, global emissions from coal-fired electricity and heat generation grew by 224 Mt or 2.1%, led by emerging economies in Asia.

A strong expansion of renewables limited the rebound in coal power emissions. Renewables met 90% of last year's global growth in electricity generation. Solar PV and wind generation each increased by around 275 TWh, a new annual record.

Emissions from Asia's emerging market and developing economies, excluding China, grew more than those from any other region in 2022, increasing by 4.2% or 206 Mt CO2. Over half of the region's increase in emissions came from coal-fired power generation.

Keyword: International Energy Agency

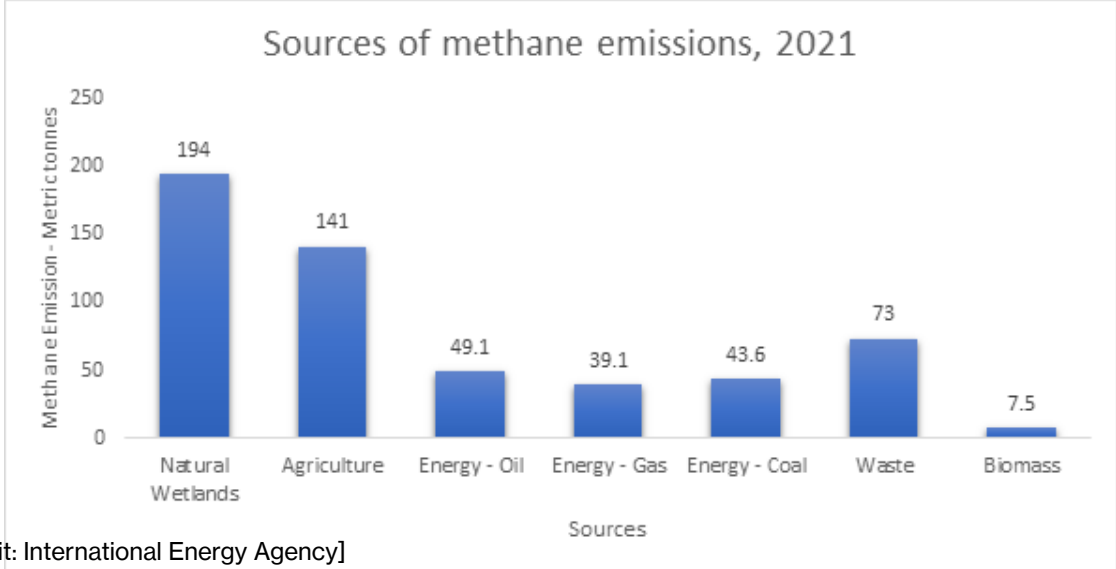
METHANE GLOBAL TRACKER REPORT

CONTEXT: *According to the International Energy Agency's (IEA) annual Methane Global Tracker report, fossil fuel companies emitted 120 million metric tonnes of methane into the atmosphere in 2022.*

BACKGROUND: According to the International Energy Agency's (IEA) annual Methane Global Tracker report, fossil fuel companies emitted 120 million metric tonnes of methane into the atmosphere in 2022, only slightly below the record highs seen in 2019. It added that these companies have done almost nothing to curb the emissions despite their pledges to find and fix leaking infrastructure.

HIGHLIGHTS OF REPORT: The report said 75 per cent of methane emissions from the energy sector can be reduced with the help of cheap and readily available technology. The implementation of such measures would cost less than three per cent of the net income received by the oil and gas industry in 2022, but fossil fuel companies failed to take any substantial action regarding the issue.The energy sector accounts for around 40 per cent of the total average methane emissions from human activity, as oil and natural gas companies are known to release methane into the atmosphere when natural gas is flared or vented. The greenhouse gas is also released through leaks from valves and other equipment during the drilling, extraction and transportation process.

METHANE AND CLIMATE CHANGE: Methane is a potent greenhouse gas that contributes significantly to climate change. It is the second most abundant greenhouse gas in the atmosphere after carbon dioxide, and it has a global warming potential that is 28 times higher than carbon dioxide over a 100-year time frame. Methane is emitted from both natural and human activities, including agriculture, landfills, oil and gas production, and coal mining.The increase in methane emissions over the past few decades is a major concern for climate scientists and policymakers. Studies have shown that human activities are responsible for around 60% of global methane emissions, and these emissions are projected to increase in the coming years due to expanding agricultural and fossil fuel production.



[Data Credit: International Energy Agency]

MITIGATION MEASURES:

Reducing fossil fuel use: Methane is emitted during the production, transport, and combustion of fossil fuels. Reducing our reliance on fossil fuels and transitioning to cleaner forms of energy such as wind, solar, and hydropower can significantly reduce methane emissions.

IMPROVING AGRICULTURAL PRACTICES: Methane is emitted during livestock digestion and manure decomposition. Improving livestock diets, reducing herd sizes, and capturing and utilizing manure can reduce methane emissions from the agricultural sector.

REDUCING LANDFILL WASTE: Methane is emitted during the decomposition of organic waste in landfills. Implementing recycling and composting programs and capturing and utilizing landfill gas can reduce methane emissions from this sector.

IMPROVING OIL AND GAS PRODUCTION: Methane is emitted during oil and gas extraction and transportation. Improving leak detection and repair, using more efficient equipment, and capturing and utilizing methane can reduce emissions from this sector.

Investing in research and development: Continued research and development into new technologies and practices can help identify additional mitigation measures and improve the effectiveness of existing measures.

Reducing methane emissions is significant because methane is a potent greenhouse gas that contributes significantly to climate change. By reducing methane emissions, we can help limit global warming, reduce the impacts of climate change, and improve air and water quality, while also promoting sustainable development and economic growth.

Keyword: Methane Emission, Global Warming

GARCINIA PEDUNCULATA

CONTEXT: *Medicinal plant commonly called Borthekera in Assamese found to have cardio protective potential*

HIGHLIGHTS: Garcinia pedunculata, a medicinal plant commonly called 'Borthekera' in the Assamese language, traditionally forbidden for raw consumption, has been found to protect from heart diseases. Administration of the dried pulp of the ripe fruit of the medicinal plant reduced cardiac hypertrophy indicators and oxidative stress and heart inflammation brought on by ISO.

The sun-dried slices of the ripe fruit are used for culinary and medicinal purposes and are known to have therapeutic properties like anti-inflammatory, anthelmintic, antibacterial, antifungal, antidiabetic, hypolipidemic, nephroprotective, and even neuroprotective activity. With scientific interventions seeking proof of these claims, multiple studies have been reported that G. pedunculata is a rich source of antioxidants. However, the cardio protective potential has yet to be explored earlier.

GLOBAL ALLIANCE FOR BIG CATS

CONTEXT: *India to launch global alliance for big cats, invest $100 million*

HIGHLIGHTS: India has proposed to launch a mega global alliance under its leadership to protect big cats and assured support over five years with guaranteed funding of $100 million, according to records. The proposed International Big Cat Alliance (IBCA) will work towards the protection and conservation of the seven major big cats – tiger, lion, leopard, snow leopard, puma, jaguar and cheetah. Membership to the alliance will be open to 97 "range" countries, which contain the natural habitat of these big cats, as well as other interested nations, international Organisations, etc.

The IBCA's governance structure will comprise a General Assembly consisting of all member countries, a council of at least seven but not more than 15 member countries elected by the General Assembly for a term of 5 years, and a Secretariat. Upon the recommendation of the Council, the General Assembly will appoint the IBCA Secretary General for a specific term.

CONCEPT OF BIG CATS: Big cats refer to a group of large predatory felids that are typically found in the wild in various regions around the world. The term "big cats" usually includes the following species:

Lions

Tigers

Leopards

Jaguars

Snow leopards

Clouded leopards

Cheetahs

These cats are called "big" because they are larger than their smaller cousins such as domestic cats and bobcats. Big cats are generally solitary hunters and are at the top of the food chain in their respective ecosystems.

Unfortunately, many of these big cat species are threatened or endangered due to habitat loss, poaching, and other human activities. Conservation efforts are underway to protect these magnificent animals and their habitats.

Significance of Big Cats in an ecosystem

CONTROL OF PREY POPULATIONS: Big cats are apex predators, which means they are at the top of the food chain in their ecosystem. By preying on herbivores, they help regulate and control their populations. This, in turn, can prevent overgrazing and habitat destruction.

MAINTAINING BIODIVERSITY: Big cats play a key role in maintaining biodiversity within their ecosystems. By controlling the population of their prey, they help prevent any one species from becoming dominant and crowding out other species. This can help maintain a healthy and diverse ecosystem.

INDICATORS OF ECOSYSTEM HEALTH: Big cats are often considered to be indicator species because they require large areas of intact habitat to survive. Therefore, the presence or absence of big cats in an ecosystem can provide valuable information about the overall health of that ecosystem.

CULTURAL AND SPIRITUAL SIGNIFICANCE: Big cats have played important roles in the cultures and traditions of many societies throughout history. For example, lions have been depicted in art and literature for thousands of years, and have been important symbols in many cultures. Additionally, big cats are often revered as powerful and spiritual beings in many indigenous religions.

ECOTOURISM: Big cats are popular attractions for ecotourism, which can bring economic benefits to local communities and provide a financial incentive for conservation efforts. By preserving habitats and protecting big cats, ecotourism can help support local economies and provide a sustainable source of income.

In conclusion, big cats are vital components of their ecosystems, playing a crucial role in regulating prey populations, maintaining biodiversity, and indicating overall ecosystem health. They also hold cultural and spiritual significance and can provide economic benefits through ecotourism.

Keywords: Ecosystem Conservation, Keystone Species

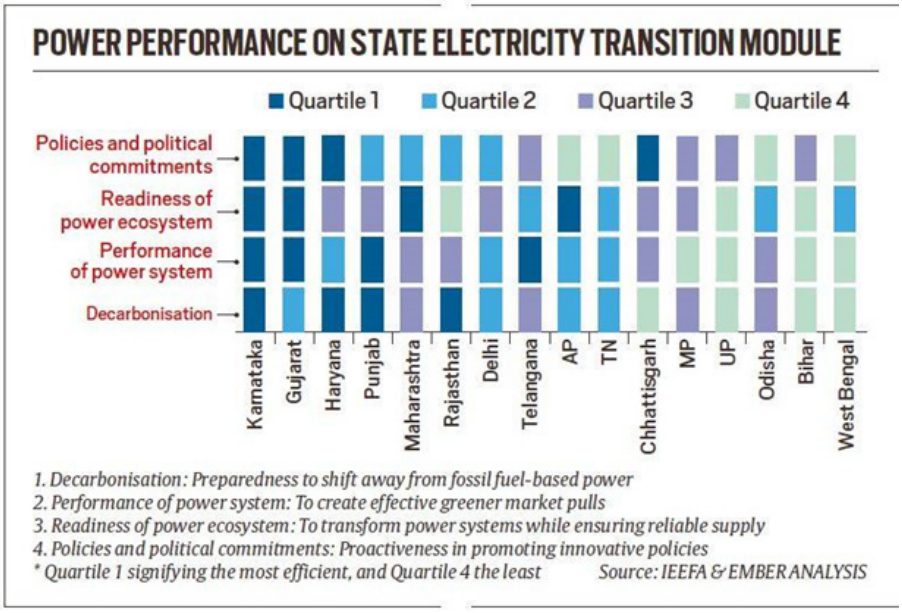
INDIA'S ENERGY TRANSITION

CONTEXT: *Report: Karnataka, Gujarat making most progress in shift to clean power*

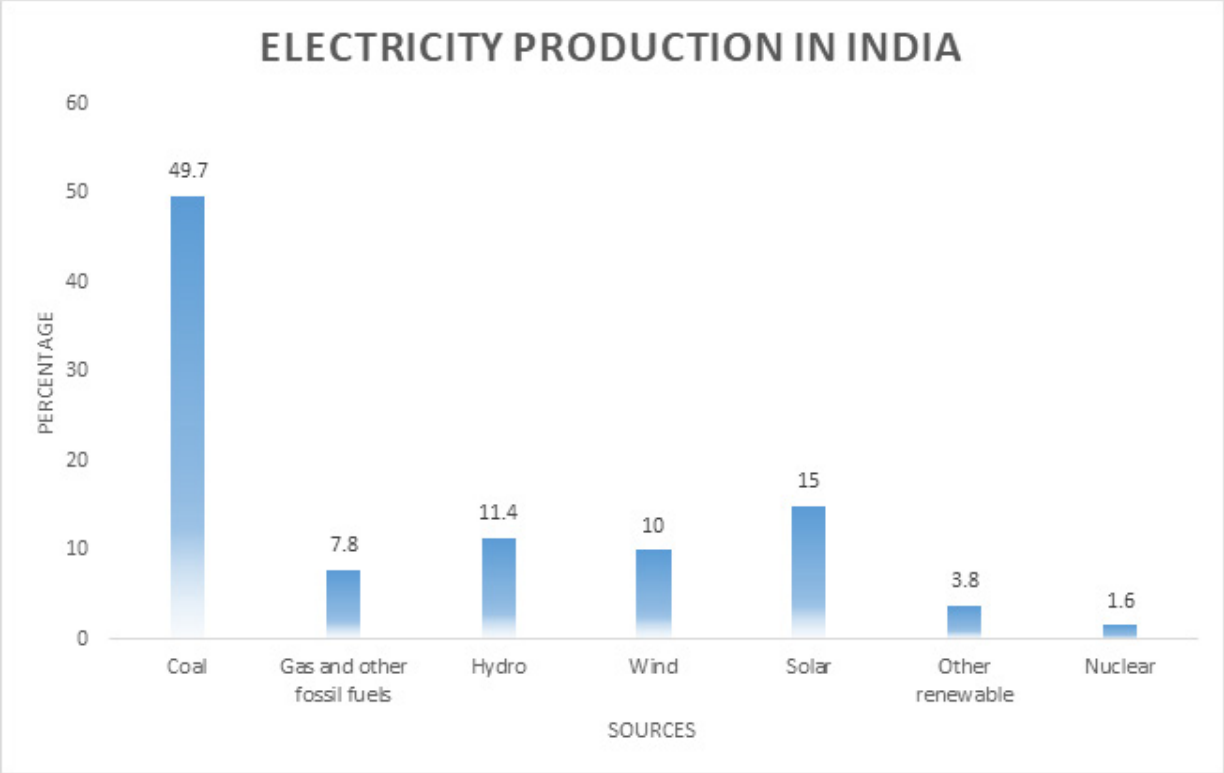
BACKGROUND: Karnataka and Gujarat are among the major states making the most progress in transition to clean electricity, according to a new report on India's energy transition, prepared by the Institute for Energy Economics and Financial Analysis (IEEFA) along with EMBER. The report – 'Indian States' Energy Transition' – released on Monday has analyzed 16 states, which together account for 90% of India's annual power requirement.

HIGHLIGHTS: Karnataka is the only state among the 16 analyzed that scored well across all four dimensions of clean electricity transition identified in this study. It also has conducive policies and political commitments for a smoother transition. Gujarat was a little behind Karnataka in terms of decarbonizing its electricity sector. Haryana and Punjab have shown promising preparations and implementations for electricity transition.

As of September 2022, the report noted, Punjab turned about a quarter of its renewable energy potential into installed capacity (1.8GW), and targets to install solar PV (Photovoltaic) projects with a total capacity of 300 MW. Haryana has the lowest installed capacity of older, more polluting coal power plants. As of the study period, it only had about 210 MW coal power capacity older than 25 years, which is much lower than the numbers in other states.



INDIA'S POWER PRODUCTION



Why India need to shift towards clean Energy Source?

Reducing pollution: India has some of the most polluted cities in the world, and much of this pollution is caused by the burning of fossil fuels. Shifting to clean energy sources such as solar and wind power can significantly reduce air pollution and improve public health.

Mitigating climate change: India is one of the world's largest emitters of greenhouse gases, which contribute to climate change. Shifting to clean energy sources can help reduce these emissions and mitigate the impacts of climate change.

Energy security: India relies heavily on imported fossil fuels to meet its energy needs, which can be vulnerable to price fluctuations and supply disruptions. Shifting to domestic sources of clean energy can increase energy security and reduce reliance on imported fuels.

Job creation: Shifting to clean energy sources can create new jobs in industries such as solar and wind power. This can help boost local economies and reduce unemployment.

Cost-effectiveness: As technology continues to improve, the cost of clean energy sources such as solar and wind power has decreased significantly. In many cases, these sources are now cost-competitive with fossil fuels, making them an attractive option for meeting India's growing energy demand.

In conclusion, India's transition towards clean energy sources is critical to address the country's growing energy demand, reduce pollution, mitigate climate change, increase energy security, create new jobs, and lower costs. This transition requires significant investment in infrastructure and policy support, but it offers significant benefits for India's people and economy.

Keywords: Transition towards clean energy sources, Electricity Production in India

SCIENCE AND TECHNOLOGY

- ULTRAVIOLET TRANSIENT ASTRONOMY SATELLITE, OR ULTRASAT
- AUTOMATIC TRAIN SUPERVISION
- ALMA TELESCOPE
- CE-20 CRYOGENIC ENGINE
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ULTRAVIOLET TRANSIENT ASTRONOMY SATELLITE, OR ULTRASAT

CONTEXT: *Israel to launch first space telescope in 2026, will observe stellar collisions*

BACKGROUND: NASA will in 2026 launch Israel's first space telescope into orbit, where it will scan the universe for events such as stars colliding or exploding, the Weizmann Institute of Science said in a statement.

ABOUT THE TELESCOPE: The NASA launch rocket carrying the UV Transient Astronomy Satellite (ULTRASAT) will send it into orbit. The mission is a major undertaking of the Weizmann Institute of Science and Israel's Ministry of Innovation, Science and Technology, which oversees the Israel Space Agency (ISA). It is also a component of a recently announced agreement between the US space agency and Israel. The telescope will also measure ultraviolet light that is inaccessible from the surface of the Earth and send out real-time notifications for transient space events, which are ones that occur over a relatively short period of time, such as a few years rather than billions of years.

NASA will continue to partner with the project after the telescope is launched from the Kennedy Space Center. The telescope will be placed in a geostationary orbit that is matched to the Earth's rotation, keeping it thousands of miles above the same spot on the planet's surface.

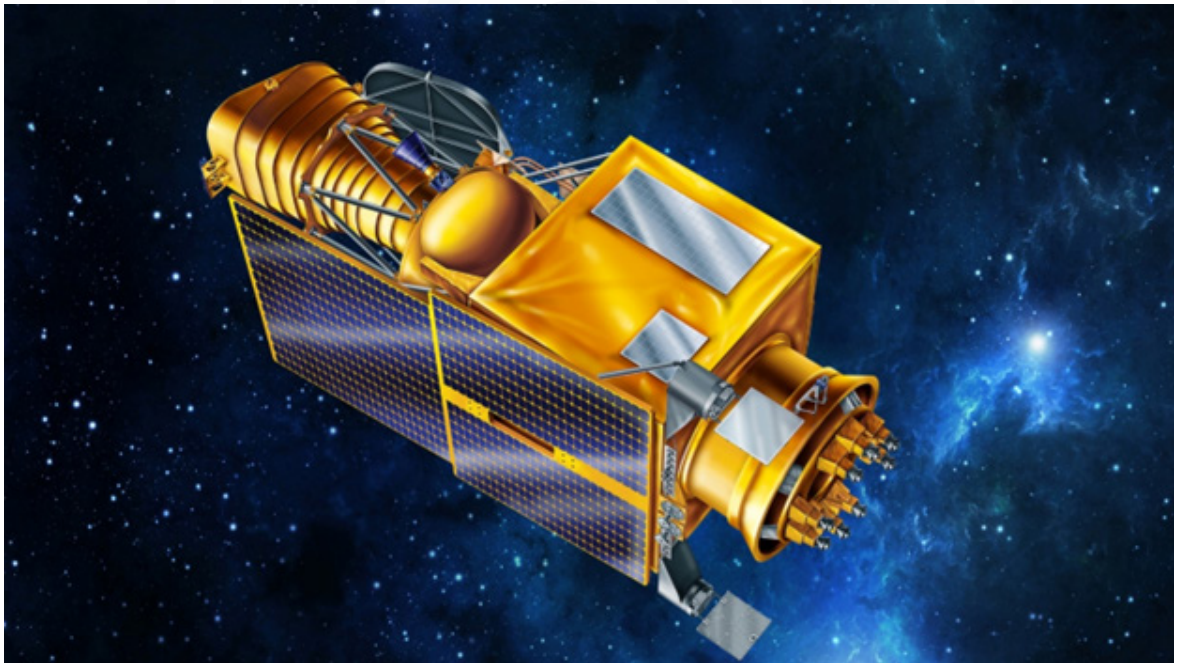
WHAT IS A SPACE TELESCOPE?

A space telescope is a telescope that is designed to be launched and operated outside the Earth's atmosphere. Unlike ground-based telescopes, which are affected by atmospheric turbulence, a space telescope can capture images of the universe with unprecedented clarity and precision. By orbiting above the Earth's atmosphere, a space telescope can observe a broader range of the electromagnetic spectrum, including ultraviolet, X-ray, and gamma-ray wavelengths, which are blocked by the atmosphere.

New planets have been found, distant galaxies have been observed, and cosmic radiation has been detected thanks to the use of space telescopes in astronomy. The Hubble Space Telescope, Chandra X-ray Observatory, and Spitzer Space Telescope are a few examples of well-known space telescopes.

Having a space telescope can enhance Israel's international standing and reputation as a leader in space exploration and technology. It can also provide opportunities for collaboration with other countries and organizations on space-related projects.

Keywords: Space telescope, NASA and ISA



AUTOMATIC TRAIN SUPERVISION

CONTEXT: *Bharat Electronics and Delhi Metro launch first ever Indigenous - Automatic Train Supervision*

BACKGROUND: Bharat Electronics stated that the Delhi Metro has begun using the i-ATS (Indigenous - Automatic Train Supervision), which was jointly developed by the business and Delhi Metro Rail Corporation (DMRC), for operations on its first route, the Red Line (Rithala to Shaheed Sthal).

HIGHLIGHTS: The Delhi Metro will install the i-ATS system for operations on other corridors and the upcoming independent corridors of the Phase – 4 Project as well. The Preventive Maintenance modules will also be introduced in the Phase 4 corridors using i-ATS.

Later, the i-ATS system is expected to be used in the operations of other rail-based systems including Indian Railways. This technology has been developed with the flexibility to work with different Signaling vendors' systems with suitable changes.

With this accomplishment, the nation has made progress towards a CBTC-based signalling system for the Metro line that was created domestically. A computer-based system called the ATS (Automatic Train Supervision) controls railway operations. It is a crucial component of the CBTC Signaling system.

Technology: Automatic Train Supervision (ATS) is a system used in railway transportation that provides a centralized control and supervision of train movements. It is an advanced technology that enhances the safety, efficiency, and reliability of train operations. ATS is typically composed of various subsystems that work together to automate and monitor train operations. These subsystems may include: Train Control System (TCS), Automatic Train Protection (ATP), Automatic Train Operation (ATO) and Communications Based Train Control (CBTC).In order to decrease the likelihood of accidents, increase the capacity of the rail network, and improve the dependability and punctuality of train services, ATS offers a comprehensive system for regulating and monitoring train operations. Millions of people around the world now have access to a secure, effective, and dependable form of transportation thanks to ATS, a crucial piece of technology that has changed the railway transportation sector.

Significance of Automatic Train Supervision in Indian railways

Improved safety: ATS enhances safety in train operations by providing real-time monitoring and control of train movements, preventing accidents due to human errors, over speeding, and other safety violations.

Increased efficiency: With ATS, train operations can be optimized for maximum efficiency, reducing delays and improving the overall performance of the railway network.

Better capacity utilization: ATS enables better utilization of the existing railway infrastructure by increasing the number of trains that can be operated safely and efficiently on the network.

Enhanced passenger experience: ATS ensures that trains run on time and reduces delays, which results in a more comfortable and convenient travel experience for passengers.

Future readiness: With the growing demand for railway transportation, ATS is an important step towards making Indian railways future-ready, by providing a modern, efficient, and safe mode of transportation that can meet the needs of a rapidly developing country.

A crucial technology for the Indian railway transportation sector, the implementation of ATS in the country's railways can have a substantial positive impact on safety, efficiency, capacity, passenger experience, and future readiness.

Keywords: Automatic Train Supervision, Significance of Automatic Train Supervision in Indian railways

ALMA TELESCOPE

CONTEXT:*The Atacama Large Millimetre/submillimetre Array (ALMA) — a radio telescope comprising 66 antennas located in the Atacama Desert of northern Chile — is set to get software and hardware upgrades that will help it collect much more data and produce sharper images than ever before, the journal Science reported recently.*

BACKGROUND: Fully functional since 2013, the radio telescope was designed, planned and constructed by the US's National Radio Astronomy Observatory (NRAO), the National Astronomical Observatory of Japan (NAOJ) and the European Southern Observatory (ESO). Over the years, it has helped astronomers make groundbreaking discoveries, including that of starburst galaxies and the dust formation inside supernova 1987A.

ABOUT ALMA: The ALMA telescope is a cutting-edge instrument that analyses celestial objects at millimetre and submillimeter wavelengths, which may pass through dust clouds and enable astronomers to study faint and far-off galaxies and stars. Also, it has exceptional sensitivity, enabling it to pick up radio signals that are incredibly faint.

ALMA is located on the Chajnantor plateau in Chile's Atacama Desert at an elevation of 16,570 feet (5,050 metres) above sea level because the millimetre and submillimeter waves it observes are highly vulnerable to atmospheric water vapour absorption on Earth. The desert is also the driest area on Earth, which means that most of its nights are cloud- and moisture-free, making it an ideal place for astronomical observation.

NOTABLE DISCOVERIES MADE BY ALMA

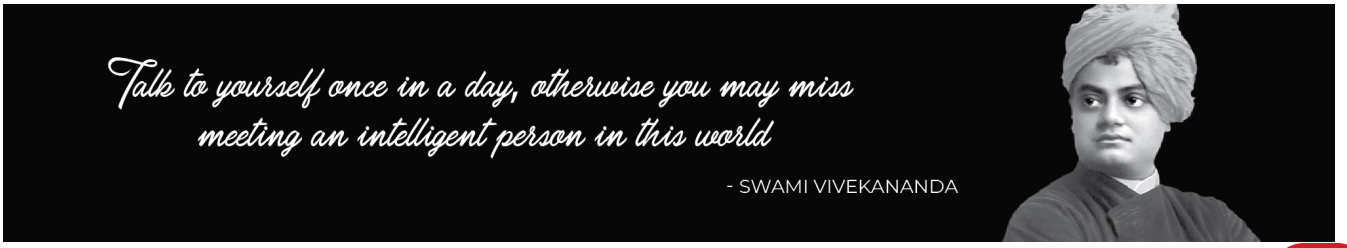
2013 saw the discovery by ALMA of starburst galaxies, which were previously assumed to have existed later in the universe's existence.

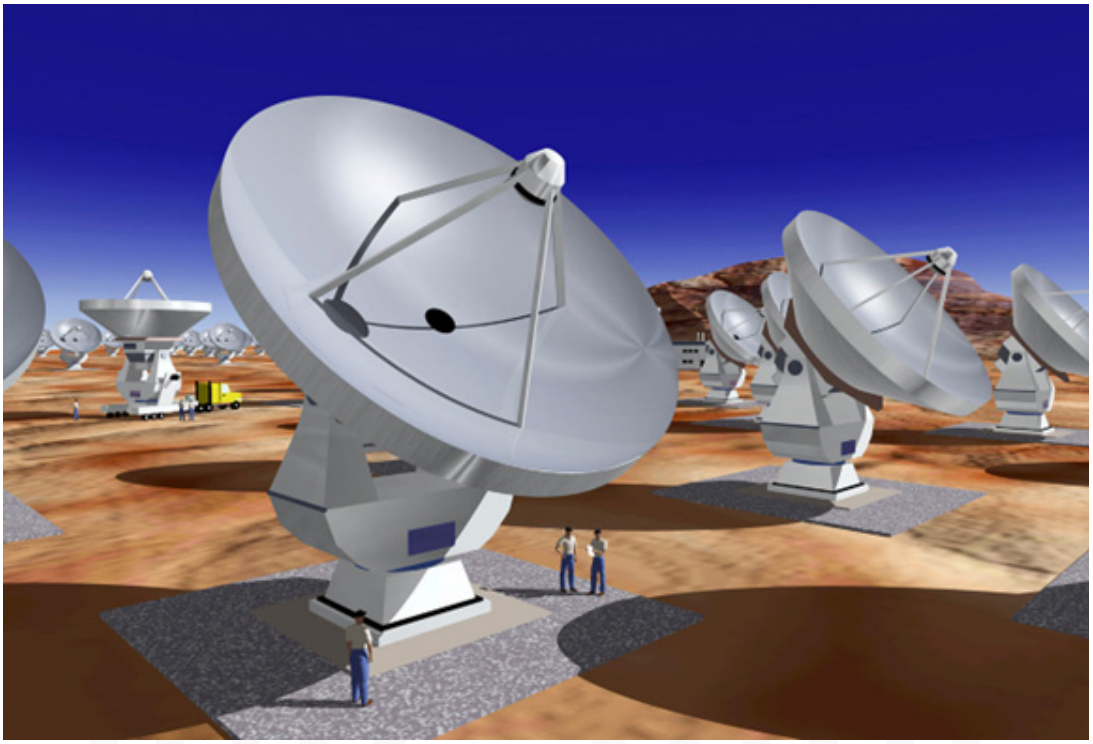
HL Tauri, a very young T Tauri star in the constellation Taurus, located about 450 light years from Earth, was imaged in great detail by ALMA.

A phenomenon known as the Einstein ring, which happens when light from a galaxy or star passes past a large object on its way to the Earth, was observed in incredibly fine detail in 2015 with the aid of the telescope.

It gave the first image of the supermassive black hole at the centre of our own Milky Way galaxy as a component of the Event Horizon Telescope project, a significant telescope array made up of a worldwide network of radio telescopes.

Keywords: ALMA Telescope, Discoveries of the Telescope





CE-20 CRYOGENIC ENGINE

CONTEXT: *ISRO successfully test fires cryogenic engine of its moon mission rocket*

BACKGROUND: Ahead of the expected Chandrayaan-3 mission later this year, the hot test of the CE-20 cryogenic engine was conducted successfully recently at the Indian Space Research Organisation (ISRO) Propulsion Complex in Mahendragiri, Tamil Nadu.

The Indian Space Research Organisation (ISRO) said it had successfully conducted the flight acceptance hot test of the CE-20 cryogenic engine. According to the space agency, the CE-20 cryogenic engine will power the Cryogenic Upper Stage of the rocket called LVM3-M4.

HIGHLIGHTS: The Chandrayaan-3 Mission's LVM3 launch vehicle's cryogenic upper stage will get thrust from the CE-20 cryogenic engine. The test was conducted in the High Altitude Test Facility for a total of 25 seconds, and the propulsion parameters were found to be satisfactory and consistent with expectations. The integrated flight cryogenic stage will now be created by combining the cryogenic engine with the propellant tanks, stage structures, and associated fluid lines. The High Altitude Test Facility conducted the heat test during the allotted 25 seconds. The test's propulsion parameters all met expectations and were deemed to be adequate.

WHAT IS A HOT TEST IN ENGINES?

In engines, a hot test is a sort of test used to confirm that an engine is performing properly under typical operating conditions after it has been assembled or repaired. In order to simulate the conditions the engine will encounter during normal operation, the test is typically conducted by running the engine under load for a certain amount of time.

Technicians keep an eye on the engine's performance during the hot test, including its power output, fuel usage, temperature, oil pressure, and emissions. Before the engine is put into operation, any flaws or problems are found and fixed. Engines from many types of vehicles, such as automobiles, boats, and industrial engines, can all be put through hot tests.

Cryogenic Technologies in Space: Cryogenic technologies relate to a range of industrial, scientific, and technological applications that utilize extremely low temperatures. Cryogenic technologies are utilized in space exploration to chill delicate sensors and equipment that work in space as well as to store and transfer fuels and other propellants that are needed to power spacecraft.

Cryogenic technologies are an essential component of space exploration, enabling spacecraft to travel farther, faster, and more efficiently, while also facilitating scientific research and discovery in the harsh environment of space.

Keywords: Chandrayaan-3 Mission, Cryogenic Technologies

NEXLETOL

CONTEXT: *A major study finds that the drug Nexletol, often used as a supplement for low-density lipoprotein (LDL)-lowering statins, is effective to a degree in its own right.*

HIGHLIGHTS: Nexletol is a brand name for the medication bempedoic acid, which is used to treat high cholesterol levels in adults. It is classified as a "cholesterol-lowering agent," and is used in combination with a healthy diet and exercise program to lower LDL cholesterol levels, which is also known as "bad cholesterol."

Nexletol works by inhibiting an enzyme in the liver that is involved in cholesterol synthesis, resulting in lower levels of LDL cholesterol in the blood. It is available in tablet form, and is typically taken once a day with or without food.

THE MAIN FINDING: Nexletol-treated patients had a 13% lower risk of a group of major cardiac problems. Then researchers teased apart those different conditions and found a 23% reduced risk of a heart attack, the biggest impact. The drug also cut by 19% procedures to unclog arteries. There wasn't a difference in deaths, which researchers couldn't explain but said might require longer to detect.

SIGNIFICANCE OF STUDY IN INDIA

The study on Nexletol's effectiveness in reducing the risk of certain cardiac events may have significant implications for patients with high cholesterol in India, where heart disease is a leading cause of death. According to the Indian Heart Association, cardiovascular disease affects nearly 50 million Indians and is responsible for approximately one-third of all deaths in the country.

A considerable section of the Indian population has elevated cholesterol levels, which have been shown in studies to be a significant risk factor for heart disease. The treatment and prevention of heart disease in India may potentially benefit from drugs like Nexletol that can lower cholesterol levels.

Keywords:Nexletol tablets, Significance of Study in India

ROBOTICS TECH EXTENSIVELY FOR MANHOLE CLEANING

CONTEXT: *Kerala to become first State to use robotics tech extensively for manhole cleaning*

BACKGROUND: By putting the robotic scavenger Bandicoot into service in the temple town of Guruvayur, Kerala became the first state in the nation to deploy robotics technology for cleaning all of its commissioned manholes.

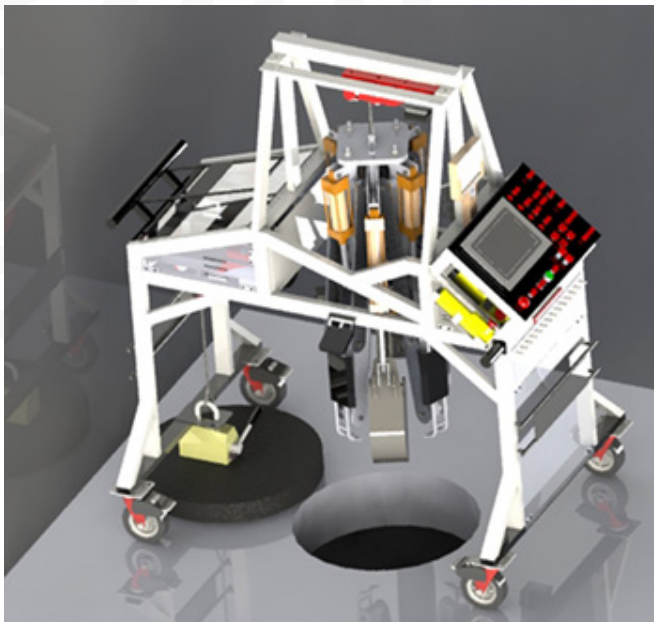
As part of the State Government's 100-day action plan, Kerala Water Authority (KWA) inducts Bandicoot into the Guruvayur Sewerage Project. The process of connecting residences, hotels, and other enterprises to the sewerage network is known as manhole commissioning.

Bandicoot, developed by Kerala-based Genrobotics, is already in use in urban bodies across the country, phasing out the practice of sanitation workers physically entering the manholes. Genrobotics has recently bagged 'Kerala Pride' award at the Huddle Global 2022 conclave organised by the Kerala Startup Mission.

BANDICOOT ROBOT: The Bandicoot robot is a waste segregation robot developed by the start-up company Genrobotics. It is designed to automate the process of cleaning and segregating waste, particularly in urban areas where waste management is a major challenge.

The Bandicoot robot works by using a combination of sensors, cameras, and artificial intelligence algorithms to detect and segregate different types of waste, such as plastic, metal, and glass. It can also pick up and dispose of hazardous waste, such as needles and syringes, which can be dangerous for human workers to handle.

The andicoot 2.0R are designed for all types of confined spaces. The fireproof design of 2.0R makes it ideal for refineries. Bandicoot 2.0R is an advanced tech that helps refineries to clean their SWS and OWS safely.



Manual Scavengers in India

Surveys conducted by the Social Justice and Empowerment Ministry in 2013 and 2018, mentioned that there are over 58,000 people engaged in manual scavenging in India. Activists claim that this number remains an underestimate and that the practice is prevalent despite a 2013 law prohibiting such employment. The latest data show that 347 workers died while or because of cleaning sewers and septic tanks between 2017 and 2022.

Social Significance of Bandicoot robot: In India, the Bandicoot robot's ability to end the practise of manual scavenging is one of its most important societal ramifications. In many places of India, especially in rural areas, manual scavenging – which entails the daily cleaning and disposal of human excreta – remains a dangerous and degrading practise.

The Bandicoot robot can be used to conduct this hazardous and stigmatised labour, lessening the necessity for human workers. The robot can assist in ensuring that human waste is handled properly and hygienically while reducing the risk to the health of human workers by automating the waste segregation and disposal process.

As it promotes the safety and dignity of sanitation employees, who historically have been forced to perform this work, this has important societal relevance. Those who have previously engaged in manual scavenging may be able to find new career options thanks to the Bandicoot robot, giving them a more respectable and secure source of income.

In conclusion, the usage of the Bandicoot robot in waste management can aid in resolving a significant social problem in India, enhancing the security and decency of sanitation employees, and fostering more diverse and egalitarian societies.

Keywords: sanitation in India, manual scavenging, social significance of technology

E-FUELS

CONTEXT: *Germany has declared last-minute opposition to a landmark European Union law to end sales of CO2-emitting cars in 2035, demanding that sales be allowed of new cars with internal combustion engines after that date if they run on e-fuels.*

Background: The EU regulations would make it virtually impossible to sell new fossil fuel-powered cars after 2035 by requiring all new vehicles sold after that date to emit zero CO2. Internal combustion engines would still be allowed under the rule, which was previously supported by Germany and the majority of EU member states and legislators (ICEs). But because there are few choices that could allow ICE automobiles to run without emitting CO2, it is viewed as the technology's death knell.

E-fuels: E-fuels, such as e-kerosene, e-methane, or e-methanol, are created by combining hydrogen produced from renewable or CO2-free power with CO2 emissions that have been absorbed. When used in an engine, the fuels emit CO2 into the atmosphere. Yet, the assumption is that these emissions will balance out the amount of CO2 removed from the environment to make the fuel, making the fuel overall CO2-neutral.

E-fuel production is not yet scaled up. The first commercial plant in the world, financed by Porsche, debuted in Chile in 2021 with a goal of producing 550 million litres annually. Other plants include Norsk e-Fuel in Norway, which will start producing in 2024 with an emphasis on aviation fuel.

E-fuel and India: The Indian government has set a target of achieving 450 GW of renewable energy capacity by 2030, and e-fuels could help the country achieve this goal. In 2021, the Indian Oil Corporation (IOC) announced that it plans to set up a demonstration plant for the production of e-methanol at its Panipat refinery in Haryana. The plant will use captured CO2 from the refinery and renewable energy to produce e-methanol.

In addition, India is also exploring the potential of using e-fuels in the aviation sector. The Indian government has set a target of increasing the share of biofuels in the aviation sector to 10% by 2030, and e-fuels could be an important part of this effort. Indian airlines, such as SpiceJet, have already conducted successful test flights using biofuels, and e-fuels could be the next step in this process.

CURRENT SIGNIFICANCE OF E-FUEL IN INDIA

India has set ambitious goals for the capacity of renewable energy, and e-fuels could play a significant role in this endeavour. By 2030, the government wants to have installed 450 GW of renewable energy capacity.

E-fuels may play a significant role in cutting carbon emissions in the aviation industry. By 2030, India wants to see a 10% increase in the use of biofuels in the aviation industry.

E-fuels have the potential to generate new business ventures and employment in India's renewable energy industry.

India's reliance on imported fossil fuels might be lessened, and its energy security could be improved, with the aid of e-fuels.

Future use of e-fuels as a way to lower carbon emissions from the transportation sector, improve energy security, and open up new markets for renewable energy sources has the potential to be significant. To become a viable and affordable replacement for fossil fuels, they will need to be scaled up in production and continue to get funding for research and development.

Keywords: e-fuels, carbon emission

TERRAN ROCKET

CONTEXT:: *Relativity postpones Florida launch of 3D-printed Terran rocket*

BACKGROUND: California-based startup Relativity Space called off the planned debut launch of its 3D-printed rocket in Florida over fuel temperature concerns, delaying a key test of the company's novel strategy for cutting manufacturing costs.

TERRAN ROCKET: Most of the 110-foot (33-meter) rocket, including its engines, came out of the company's huge 3D printers in Long Beach, California. 3D-printed metal parts made up 85% of the rocket, named Terran. Larger versions of the rocket will have even more and also be reusable for multiple flights.

INDIA AND 3D PRINTING IN SPACE TECHNOLOGY

Chennai-based space-tech startup Agnikul Cosmos successfully completed the test firing of Agnikul – the company's 3D-printed rocket engine – at the Vikram Sarabhai Space Center in Thiruvananthapuram.

Agnilet claims to be the world's first single-piece 3D-printed rocket engine.

The Agnilet rocket engine is designed to be used in Agnibaan – a small satellite launch vehicle that can carry payloads of up to 300 kilograms to a low-Earth orbit – which the company is currently developing.

The Agnilet rocket engine is a "semi-cryogenic" engine. It uses a mixture of liquid kerosene at room temperature and supercold liquid oxygen to propel itself.

3D Printing In Space Technology: 3D printing in space technology, also known as additive manufacturing, has revolutionized space exploration by allowing astronauts to manufacture tools, spare parts, and even entire spacecraft components on-demand.

It reduces the need to launch large amounts of spare parts and tools into space, which can save time and money.

3D printers can use a variety of materials, including plastics, metals, and even regolith (lunar soil).

The lack of gravity in space can lead to more precise printing, as there is no deformation or sagging of materials.

NASA has been experimenting with 3D printing since the early 2000s, and has sent 3D printers to the International Space Station.

In 2014, the first 3D printed object was manufactured in space, a part of a printer itself.

In 2019, NASA demonstrated the ability to 3D print entire habitats on the moon and Mars using local materials.

In addition to space exploration, 3D printing in space technology has potential applications in fields such as medicine and manufacturing.

It is expected to play a significant role in future space missions, such as the construction of lunar and Martian bases.

The technology also poses unique challenges, such as managing the production of waste material and ensuring the safety of astronauts.

3D printing in space technology has opened up numerous possibilities for space exploration and colonization. It enables the production of complex parts and tools in space, reducing the need for transporting them from Earth. With ongoing advancements and collaborations, 3D printing technology is likely to revolutionize space exploration and pave the way for a sustainable human presence in space.

Keywords: 3D printing, Space Technology

NISAR MISSION

CONTEXT: *NASA-ISRO Science Instruments Arrive in India Ahead of 2024 Launch*

BACKGROUND: According to a cooperative agreement inked in 2014, the US and Indian space agencies collaborated to build NISAR. The L-band and S-band synthetic aperture radar (SAR) equipment on the 2,800 kilogramme satellite make it a dual-frequency imaging radar satellite. While ISRO contributed the S-band radar, the GSLV launch vehicle, and the spacecraft, NASA provided the L-band radar, GPS, a high-capacity solid-state recorder to retain data, and a payload data subsystem.

HIGHLIGHTS: An Earth-observing satellite called NISAR was jointly built by the Indian Space Research Organization (ISRO) and the National Aeronautics and Space Administration (NASA) (NASA-ISRO Synthetic Aperture Radar). NISAR, once it has been launched into space, will monitor minute alterations in Earth's surface, assisting researchers in understanding the causes and effects of such events.

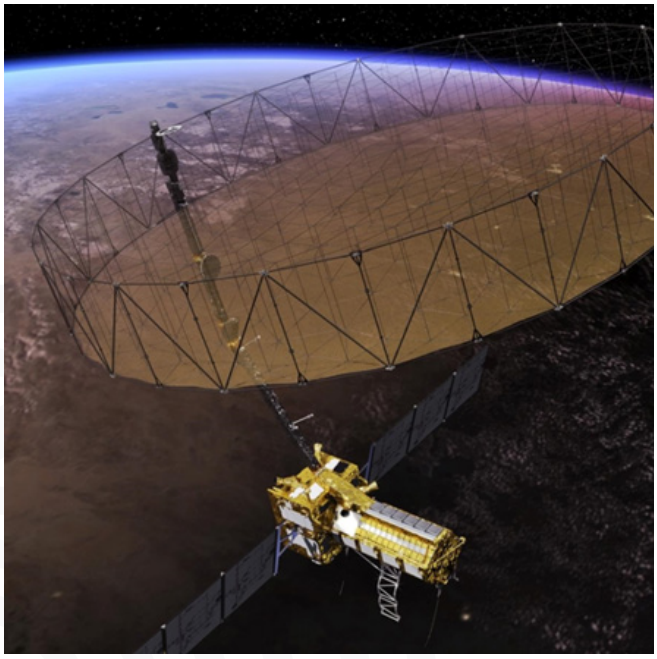
It will detect signals of impending natural catastrophes including earthquakes, landslides, and volcanic eruptions. In order to better understand carbon exchange, the satellite will also measure groundwater levels, track glacier and ice sheet flow rates, and monitor the planet's forest and agricultural sectors.

NISAR will be utilised by ISRO for a number of tasks, including as mapping agricultural areas, monitoring glaciers in the Himalayas, landslide-prone regions, and observing changes in the shoreline. NISAR will create high-resolution images using synthetic aperture radar (SAR). No matter the weather, SAR can gather data day or night because it can penetrate clouds.

Significance of the mission:

The Earth's surface, including the land, ice sheets, and coastal areas, will be mapped in high resolution by NISAR. This will enable us to examine changes over time in various areas, such as land use, deforestation, sea level rise, and ice sheet melting.

NISAR will aid researchers in their understanding of the mechanisms underlying climate change, including variations in the Earth's carbon cycle, ice sheet dynamics, and changes to the land surface. This data can be used to enhance climate models and guide the development of



policies that will lessen the effects of climate change.

NISAR can also help in disaster management by providing data on natural disasters like earthquakes, landslides, and floods. The radar can detect small changes in the Earth's surface that could signal potential hazards, allowing for early warnings and preparations.

Collaboration between NASA and ISRO: The joint mission between NASA and ISRO demonstrates international cooperation in space exploration and research, which can lead to new breakthroughs and advancements in science and technology.

NISAR is anticipated to be launched from Satish Dhawan Space Center into a near-polar orbit in January 2024. At least three years will pass before the satellite stops working. For at least three years, NASA will need the L-band radar for its global science operations. The S-band radar would be used by ISRO for a minimum of five years.

Keywords: NISAR, NASA-ISRO mission

ERNIE BOT

CONTEXT: *Chinese search giant Baidu unveils ERNIE bott*

BACKGROUND: The ERNIE Bot, which Baidu claims is built on a new-generation language model and is essentially a generative AI product, was unveiled to the public by Baidu. ERNIE is based on two internal models developed by Baidu: Pre-trained Conversation Generation Model and Improved Representation through Knowledge Integration (ERNIE) (PLATO).

HIGHLIGHTS: From its original release in 2019, it has developed from a natural language model to a multi-modal platform with capabilities for multiple industries and tasks. The bot excels at tasks including multi-modal generation, Mandarin language comprehension, mathematical calculation, business writing, and literary composition. According to Baidu, it can understand human intentions and provide logical, fluent responses. The search engine behemoth has positioned ERNIE Bot as a key AI platform created to support intelligent changes in a variety of business sectors, including banking, public affairs, media, energy, etc.

AI powered chat bots: AI-powered chatbots are computer programs that use artificial intelligence (AI) algorithms to simulate human conversation in real-time. They are designed to interact with users through a messaging interface, such as a website chat window or a messaging app.

The benefits of AI-powered chatbots are numerous. Here are some of the main advantages:

24/7 availability: Chatbots can be available 24/7, providing customers with instant responses to their inquiries, regardless of time or location. This can improve customer satisfaction and reduce the need for human customer support staff.

Cost-effective: Chatbots can handle a large volume of inquiries simultaneously, without the need for additional staff, which can reduce staffing costs and increase efficiency.

Personalization: AI-powered chatbots can use machine learning algorithms to understand customer preferences and behavior, enabling them to provide more personalized responses and recommendations.

Scalability: Chatbots can handle an unlimited number of conversations simultaneously, making them a scalable solution for businesses looking to handle large volumes of inquiries.

Improved data collection: Chatbots can collect and analyze data from conversations with customers, providing valuable insights that can help businesses improve their products, services, and customer experience.

India and chatbots: The first AI chatbots in India is currently available and is powered by ChatGPT. The financial technology business Velocity has introduced a chatbots by the name of Lexi and integrated it into their internal analytics tool.

AI-powered chatbots offer numerous benefits to businesses, including increased efficiency, cost savings, and improved customer satisfaction. As AI technology continues to advance, we can expect chatbots to become even more intelligent and capable of providing even better service to customers.

Keywords: chatbots, powered chatbots

XBB1.16 STRAIN

CONTEXT: *Covid's XBB1.16 strain found in 349 cases*

Background: XBB.1.16 variation of COVID-19, which may be the cause of the recent increase in coronavirus cases in the nation, has been found in a total of 349 samples, according to INSACOG data. According to INSACOG data received by PTI, Maharashtra has the largest number of cases related to this variety with 105, followed by Telangana with 93, Karnataka with 61, and Gujarat with 54.

XBB 1.16 variant: Given how quickly it is spreading and how contagious the new variant is, it is being viewed as a threat.

A recombinant lineage of the virus known as XBB.1.16 is a progeny of the XBB lineage of Covid-19. Mutant SARS CoV 2 strain XBB.1.16, which mostly affects Omicron, may deftly circumvent the immune system.

Symptoms: At present, XBB.1.16 variant does not seem to be causing serious health issues. Symptoms generally include upper respiratory issues like blocked nose, headache and sore throat, along with fever and myalgia or muscle pain which lasts for three to four days.

LVM-3

CONTEXT: *ISRO'S LVM-3 to launch second fleet of 36 satellites, completing OneWeb constellation*

BACKGROUND: A fleet of 36 OneWeb satellites will be launched by India's largest launch vehicle, LVM-3, in its second commercial launch, completing the first generation of the massive broadband constellation. The launch is scheduled to take place on March 26 at 9:00 am from the second launch pad of Sriharikota, the only spaceport in the nation. The company will be able to start providing global coverage after the final launch.

HIGHLIGHTS: LVM3 would place 36 OneWeb Gen-1 satellites totaling about 5,805 kg into a 450 km circular orbit with an inclination of 87.4 degrees. This is the sixth flight of LVM3. The LVM3 had five consecutive successful missions, including the Chandrayaan-2 mission.

The United Kingdom-based company, backed by the UK government and India's Bharti, plans to create a 588-satellite strong constellation to provide high-speed, low-latency global connectivity. These satellites will be placed in 12 rings of 49 satellites each, with every satellite completing a full trip around the Earth in 109 minutes. Sunday's launch will be the 18th fleet to be launched by the company.

BHARAT 6G PROJECT

CONTEXT: *Bharat 6G project: India plans to roll out high-speed internet by 2030*

BACKGROUND: According to a vision paper published by Prime Minister Narendra Modi, India is preparing to roll out high-speed 6G communication services by 2030 and has established a Bharat 6G initiative to discover and support development and implementation of the next-generation technology in the country.

HIGHLIGHTS: The government has also appointed an apex council to oversee the project and concentrate on matters like standardisation, identification of the spectrum for 6G usage, creation of an ecosystem for devices and systems, and determining finances for research and development, among other things. India's 6G project will be implemented in two phases.

The apex council will facilitate and finance research and development, design and development of 6G technologies by Indian start-ups, companies, research bodies and universities. By identifying priority areas for 6G research based on India's comparative advantages, it would help India become a leading global supplier of intellectual property, goods, and solutions of inexpensive 6G telecom solutions.

It is suggested that the 6G project be carried out in two stages: the first from 2023 to 2025 and the second from 2025 to 2030. Phase one will support exploratory concepts, riskier pathways, and proof-of-concept experiments. Ideas and concepts that exhibit promise and the potential to be embraced by the global peer community will be given the necessary support to be developed to completion, to establish their benefits and use cases, to develop implementation IPs, and to establish testbeds that will eventually lead to commercialization in phase two.

6G/ SIXTH GENERATION

6G is the sixth generation of wireless communication technology that is currently in the research and development phase. It is expected to be the successor to 5G and is likely to offer even faster and more reliable communication, as well as new features and capabilities.

Some of the potential benefits of 6G technology include:

Higher speeds: 6G is expected to provide faster data transfer rates than 5G, with theoretical speeds of up to 1 terabyte per second.

Lower latency: 6G is expected to have even lower latency than 5G, which will enable faster response times for applications that require real-time data transmission.

Improved connectivity: 6G is expected to provide better connectivity in remote and rural areas, as well as in crowded urban areas, by using a combination of new technologies such as satellite communications and advanced antenna systems.

Enhanced security: 6G is expected to incorporate advanced security features such as quantum cryptography to provide improved protection against cyberattacks.

New use cases: 6G is expected to enable new use cases such as holographic communication, augmented reality, and advanced autonomous systems.

How India benefit from 6G?

India is a big nation with a variety of geographic and demographic traits, and many places still lack trustworthy connectivity. With increased connectivity in remote and rural locations, 6G technology is anticipated to improve access to information and services, including e-commerce, healthcare, and education.

The development of new industries as well as the creation of new goods and services can be facilitated by the enhanced connection and advanced technology made possible by 6G. This could accelerate economic growth and generate new jobs.

In a number of industries, including manufacturing, transportation, and logistics, higher productivity and lower costs are anticipated as a result of the adoption of 6G technology.

India boasts a sizable pool of gifted scientists, engineers, and researchers considering that it is a developing nation. Indian researchers and businesses may have possibilities to contribute to the global technology ecosystem as a result of the development and implementation of 6G technology in India.

Challenges of 6G implementation

Significant infrastructure investment, including brand-new base stations, antennas, and fibre optic networks, will be needed for the deployment of 6G. India's geography is vast and diverse, making it difficult to implement 6G infrastructure in isolated and rural areas.

To achieve faster data transfer rates and lower latency, 6G technology will need access to additional frequencies and bigger bandwidths. The existing complexity and fragmentation of India's spectrum allocation rules, however, may make it difficult to allocate the necessary spectrum for 6G.

A strong legislative framework that encourages innovation while simultaneously assuring consumer protection, data privacy, and network security will be necessary for the adoption of 6G. To solve the particular difficulties presented by 6G technology, India's current legislative framework may need to be changed.

The rising use of linked devices and the Internet of Things

(IoT) will provide new security challenges for 6G networks, such as hacking, cyberattacks, and data breaches. Given its recent history of high-profile cybersecurity issues, India will confront substantial challenges in ensuring the security of 6G networks.

Overall, the deployment of 6G technology in India has the potential to improve the country's connectivity, drive economic growth, enhance security, improve efficiency, and foster innovation. However, it is important to note that the deployment of 6G will require significant investments in infrastructure, research, and development.

POLIO OUTBREAK

CONTEXT: *Burundi announces first polio outbreak in more than 30 years*

BACKGROUND: According to Burundian health officials, a four-year-old boy and two other kids with whom he had contact were all diagnosed with vaccine-linked polio in the Isale district of western Burundi. According to the World Health Organization, poliovirus type 2 was also identified in five samples of wastewater from the area taken as part of environmental surveillance (WHO). The eight samples that tested positive for the virus led Burundi's health authorities to proclaim the country's first outbreak in thirty years.

POLIO/ POLIOMYELITIS

The poliovirus, which causes polio, is easily transmitted by contaminated food, water, or surfaces. The virus can quickly spread to the neurological system after entering the body through the mouth and nose.

Despite the fact that the majority of polio sufferers exhibit no symptoms or just moderate ones, others can experience severe paralysis and muscle weakness that can last a lifetime.

The World Health Organization (WHO) advises that children receive the vaccine in many doses. Polio is prevented using both the oral polio vaccine (OPV) and the inactivated polio vaccine (IPV).

Worldwide polio eradication is the goal of the Global Polio Eradication Initiative, which was established in 1988.

Status of Polio in India

India was certified as polio-free by the World Health Organization (WHO) in March 2014 after no cases of wild poliovirus were reported for three consecutive years. This achievement was the result of a massive vaccination campaign that involved millions of health workers, volunteers, and government officials.

Polio Eradication programs in India

National Immunization Days (NIDs): Since 1995, India has conducted two National Immunization Days (NIDs) each year, where children under the age of five are targeted for vaccination against polio. During these campaigns, millions of health workers and volunteers go door-to-door to administer the oral polio vaccine (OPV) to children.

Sub-National Immunization Days (SNIDs): In addition to the NIDs, India also conducts Sub-National Immunization Days (SNIDs) in high-risk areas, where children are vaccinated against polio multiple times a year to ensure high vaccination coverage and prevent outbreaks.


CSAT

PARTNERSHIPS

PARTNERSHIP PROBLEMS

A form of mathematical aptitude test known as a "partnership problem" entails the division of gains or losses among two or more partners who make varying investments and put in varying amounts of time. In order to answer these questions correctly, you must be able to execute simple arithmetic operations as well as comprehend the concepts of ratio and proportion.

Partner shares are often established by multiplying each person's investment by the amount of time they contributed to the partnership. This method is used to solve partnership challenges. The partners then split the overall profit or loss according to their respective ownership interests.

Sample Problem

Q1. Arjun and Arun form a partnership by each contributing Rs.16000 and Rs.28000. They decided to split profits according to their capitalization ratio. Determine Arjun's portion of the company when the profit is Rs.1210 after a year.

770

440

360

480

Sample Solution:

Arjun and Arun's capitalization ratio is determined by the ratio of their contributions to the total investment, which is:

Arjun's contribution: Arun's contribution = Rs.16, 000: Rs.28, 000 = 4: 7

This means that the profit of Rs.1210 will be divided among them in the ratio of 4: 7.

To find Arjun's portion of the profit, we can use the following formula:

Arjun's portion = (Arjun's capitalization ratio / Total capitalization ratio) x Total profit

Substituting the values we get:

Arjun's portion = (4 / (4+7)) x 1210 = (4/11) x 1210 = 440

Therefore, Arjun's portion of the profit is Rs.440.

Q2. Anu and Binu starts a business by investing Rs.8000 and Rs.15000 respectively. After 4 Sonu joints the business by investing Rs.12000. If the profit after one year is Rs.3500, what is the difference between the profit share of Anu and Sonu?

320

400

450

500

Sample Solution:

Investment of Anu = Rs.8000

Term of Anu's Investment = 12 months

Investment of Binu = Rs.15000

Term of Binu's Investment = 12 months

Investment of Sonu = Rs.12000

Term of Sonu's Investment = 8 months (Since Sonu joined only after 4 months of starting the business)

Ratio of Investments of Anu: Binu: Sonu = (12*8000): (12*15000): (8*12000)

Ratio of Investments of Anu: Binu: Sonu =96000:180000:144000 (Simplifying using HCF)

Ratio of Investments of Anu: Binu: Sonu= 8:15:12

Total Profit = Rs.3500

Anu's Share Profit = 3500*8/35 = Rs.800

Sonu's Share Profit = 3500*12/35 = Rs.1200

Difference between the profit share of Anu and Sonu = 1200 – 800 = Rs.400

Sample problems to workout

Q1. A and B decided to start a business with an initial investment of Rs.12500 and Rs.15000 respectively. If they agreed to divide the profit in accordance with the investment ratio and the profit after one year is Rs.4950, then what is the profit share of B in the business?

2250

2700

2950

None of the above

Q2. Jacob and Jose decided to start a business with an initial investment of Rs.16000 and Rs.24000 respectively. They agreed to divide the profit in accordance with the investment ratio. As a part of Charity, 25% of the profit will go the charity purpose and the rest of the amount divide between Jacob and Jose. If the total profit after one year is Rs.8000, then what is the profit share of Jacob in the business?

3200

2400

3600

4800

Q3. Rajesh and Suresh decided to start a business by investing Rs.10000 and Rs.12000 respectively. After 6 months, Rohan joined the business with an amount equal to that of Rajesh's initial investment. At the end of one year, the total profit earned by them was Rs.1250. What is the difference between the profit shares of Suresh and Rohan?

450

600

550

480

Q4. Naveen and Anila decide to start a business in such a way that Naveen's share is thrice the amount of Anila. Arjun also decide to join the business by investing the exact half the amount of Anila's investment. If the Profit of the business after one year is Rs.13500, what is the difference of share between the Naveen and Arjun?

5500

6000

7500

8300

Q5. X and Y decided to start a business by investing an amount of Rs.18000 and Rs.25000 respectively. After 6 months Z also decide to join the business by investing 2/3rd of X's investment. If the Profit of the business after one year is Rs.7350, what is the profit share of Z?

900

1200

1350

8300

Q6. M and N decide to start a business by investing an amount of Rs.12000 and Rs.20000 respectively. After 4 months, M decided to invest 50% more amount of his initial investment into business while N decides to withdraw 50% of his initial investment in the business. If the total profit after one year is Rs.2750, what is the difference of profit share between the two partners?

220

250

270

300

Q7. Jithin and Nithin decided to start a business with an investment of Rs.15000 and Rs.25000 respectively. After 4 months, Jithin decide to withdraw 20% of his initial investment, while the Nithin decide to withdraw 30% of his investment after 6 months. If the profit after one year is Rs.4795, then what is the profit share of Nithin?

1820

2975

3225

None of the above

Q8. X and Y initially started a business with an investment of Rs.10000 and Rs.12000 respectively. After 6 months, X decides to invest 20% more into the business. Z decides to join the business by investing an amount equivalent to 1.5 times that the amount of Y after 4 months of business start. If the profit after one year is Rs.7050, then what is the profit share of Z?

1650

2250

2700

3200

Q9. A and B entered into a partnership investing Rs.16000 and Rs.12000 respectively. After 3 months A withdrew Rs.5000 while B invest Rs.5000 more. After 3 months C joins the business with a capital of Rs.21000. The share of B exceeds that of C, out of a total profit of Rs.26400 after 1 year by: [SSC]

2400

4800

3600

1200

Q10. A and B started a business with an investment of Rs.8000 and Rs.12000 respectively. After 4 months, A decides to invest 25% more into the business. C decides to join the business by investing an amount equivalent to 1.5 times that of B after 8 months of the business start. If the profit after one year is Rs.4375, what is the profit share of C?

1575

1725

2235

None of the above

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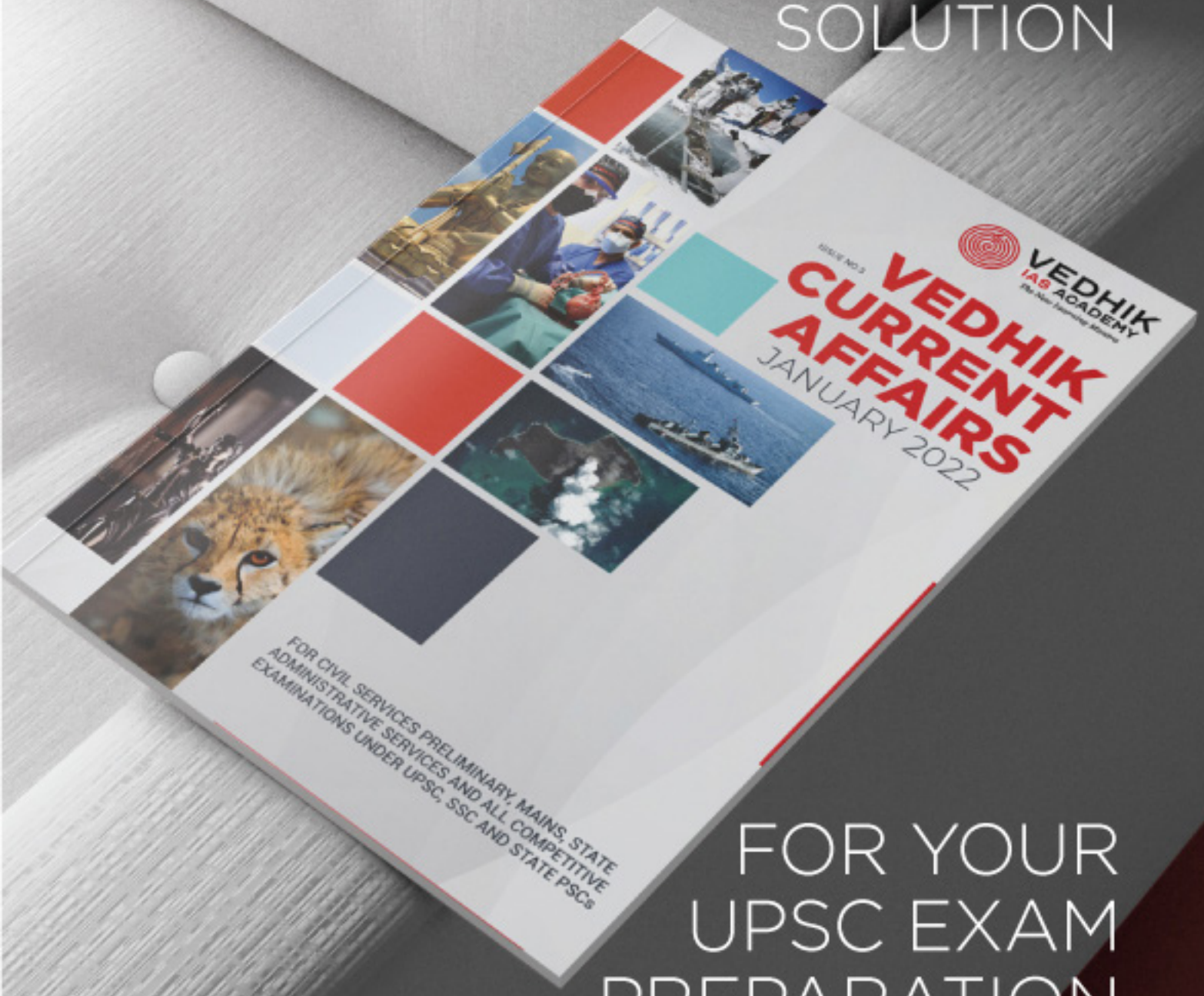

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ETHICS

MORAL PHILOSPOHY AND MORAL PHILOSOPHERS

MORAL PHILOSPOHY AND MORAL PHILOSOPHERS

Moral philosophy, also known as ethics, is the branch of philosophy that deals with moral principles, values, and theories of right and wrong behaviour. There are many different moral philosophies that have been developed throughout history, each with its own set of principles and beliefs. Here are some of the major moral philosophies:

VIRTUE ETHICS: Virtue ethics is a moral philosophy that focuses on the character traits and virtues that make someone a good person. It emphasizes the importance of developing virtues such as honesty, courage, compassion, and justice, and argues that living a virtuous life is the key to achieving happiness and fulfilment. It is one of the oldest and most influential ethical traditions in Western philosophy, with roots in ancient Greek philosophy, particularly the works of Aristotle.

According to virtue ethics, living a good life is not just a matter of following rules or maximizing pleasure or happiness. Rather, it is a matter of developing and embodying certain virtues or character traits, such as honesty, courage, compassion, and justice. These virtues are not just moral guidelines or abstract ideals, but rather habits or dispositions that become part of a person's character through practice and repetition.

Virtue ethics emphasizes the importance of personal responsibility and self-improvement. Rather than relying on external rules or codes of conduct, individuals are encouraged to develop their own sense of moral judgment and to cultivate their virtues through practice and reflection.

One of the key ideas of virtue ethics is that virtues are not just individual traits, but also social and cultural values. This means that virtues are not just about personal conduct, but also about the way individuals interact with others and contribute to the broader social and cultural context.

Critics of virtue ethics argue that it is too vague and subjective to be a useful moral theory. They argue that it is difficult to define or measure virtues, and that different people may have different ideas about what constitutes a virtuous character. They also argue that virtue ethics provides little guidance for making moral decisions in difficult or complex situations.

Despite these criticisms, virtue ethics has had a significant impact on contemporary moral philosophy and continues to be a subject of debate and discussion among philosophers and ethicists. Many contemporary philosophers have attempted to combine virtue ethics with other moral theories, such as consequentialism or deontology, in order to address some of its perceived shortcomings

DEONTOLOGICAL ETHICS: Deontological ethics is a moral philosophy that emphasizes the importance of following moral rules and duties. It argues that certain actions are inherently right or wrong, regardless of their consequences, and that individuals have a moral obligation to act in accordance with these rules and duties.

It is often associated with the work of the German philosopher Immanuel Kant, who argued that moral principles are based on reason and that certain actions are inherently right or wrong, regardless of their consequences.

According to deontological ethics, there are certain moral rules or duties that individuals have an obligation to follow, regardless of the situation or the potential consequences of their actions. For example, it is always wrong to lie or to harm innocent people, even if doing so might result in a greater overall good.

Deontological ethics emphasizes the importance of treating people as ends in themselves, rather than as means to an end. This means that individuals should never be used or exploited for someone else's benefit, but should be respected as autonomous beings with their own inherent value and dignity.

One of the strengths of deontological ethics is that it provides a clear and objective standard for moral behaviour. By focusing on moral rules and duties, it provides a framework for making moral decisions that is not dependent on personal preferences or subjective evaluations of consequences.

However, critics of deontological ethics argue that it is too rigid and inflexible, and that it fails to take into account the complexity and contextuality of moral decision-making. They argue that there may be situations in which violating a moral rule or duty is necessary in order to achieve a greater good or prevent a greater harm.

Despite these criticisms, deontological ethics continues to be a major ethical tradition in contemporary philosophy and has had a significant impact on many areas of practical ethics, such as medical ethics, business ethics, and environmental ethics.

CONSEQUENTIALIST ETHICS: Consequentialist ethics is a moral philosophy that judges the rightness or wrongness of actions based on their consequences. It argues that actions should be judged based on their ability to produce the greatest amount of happiness or pleasure for the greatest number of people. The most common form of consequentialist ethics is utilitarianism, which emphasizes the maximization of overall happiness or pleasure as the ultimate goal.

According to consequentialist ethics, an action is morally right if it produces the greatest overall amount of good, or the least overall amount of harm, for the greatest number of people. This means that individual rights or duties may be overridden if doing so leads to a greater overall benefit.

Consequentialist ethics emphasizes the importance of considering the long-term effects of an action, as well as the immediate consequences. It also recognizes that the consequences of an action may be difficult to predict, and that moral decision-making may require trade-offs between different goods or values.

Critics of consequentialist ethics argue that it fails to take into account the inherent value of individuals and their rights, and that it can lead to the justification of immoral actions if they are deemed to produce the greatest overall benefit. They also argue that it is often difficult to measure or compare different types of outcomes or benefits, and that it may be impossible to fully predict the consequences of an action.

Despite these criticisms, consequentialist ethics has had a significant impact on contemporary moral philosophy and has been applied to a wide range of practical ethical issues, such as environmental ethics, global justice, and public policy. Many contemporary philosophers have attempted to combine consequentialist ethics with other moral theories,

such as deontology or virtue ethics, in order to address some of its perceived shortcomings.

UTILITARIANISM: Utilitarianism is a consequentialist ethical theory that emphasizes the importance of maximizing happiness and minimizing suffering. It argues that actions should be judged based on their ability to produce the greatest amount of happiness or pleasure for the greatest number of people. It is based on the principle of utility, which holds that an action is morally right if it produces the greatest amount of happiness or pleasure for the greatest number of people, and wrong if it produces the opposite.

According to utilitarianism, moral decisions should be based on a calculation of the expected consequences of different actions, in terms of their impact on overall happiness or pleasure. This means that individual preferences or desires are not inherently valuable, but only to the extent that they contribute to overall happiness or pleasure.

Utilitarianism emphasizes the importance of impartiality and equality, as it requires individuals to consider the interests of all those affected by an action, regardless of their personal relationship or position. It also recognizes that the consequences of an action may be difficult to predict or measure, and that moral decision-making may require trade-offs between different goods or values.

Critics of utilitarianism argue that it fails to take into account the inherent value of individual rights and dignity, and that it can lead to the justification of immoral actions if they are deemed to produce the greatest overall benefit. They also argue that it may be difficult to measure or compare different types of outcomes or benefits, and that it may be impossible to fully predict the consequences of an action.

Despite these criticisms, utilitarianism has had a significant impact on contemporary moral philosophy and has been applied to a wide range of practical ethical issues, such as environmental ethics, animal welfare, and public policy. Many contemporary philosophers have attempted to refine or modify utilitarianism in order to address some of its perceived shortcomings, while others have developed alternative consequentialist theories, such as rule-utilitarianism or preference-utilitarianism.

CARE ETHICS: Care ethics is a moral philosophy that emphasizes the importance of caring relationships and the responsibilities that come with them. It argues that morality is rooted in relationships and that individuals have a moral obligation to care for others. It is based on the idea that care for others is a fundamental aspect of human nature and that ethical behaviour is grounded in our relationships with others.

Care ethics is often associated with the work of feminist philosophers such as Carol Gilligan and Nel Noddings, who argued that traditional ethical theories such as Kantian deontology and utilitarianism fail to adequately recognize the importance of care and relationships in moral decision-making.

According to care ethics, moral decisions should be based on the importance of caring relationships, rather than abstract moral principles or calculations of overall utility. This means that individuals should prioritize the needs and interests of those with whom they have a caring relationship, such as family members, friends, or members of their community.

Care ethics also emphasizes the importance of virtues such as compassion, empathy, and sympathy in moral decision-making. These virtues enable individuals to understand and respond to the needs of others, and to build caring relationships based on mutual respect and trust.

Critics of care ethics argue that it fails to provide clear moral guidelines for decision-making, and that it may be too subjective or emotional in its approach. They also argue that it may be difficult to reconcile the importance of caring relationships with the need for impartiality and justice in moral decision-making.

Despite these criticisms, care ethics has had a significant impact on contemporary moral philosophy and has been applied to a wide range of practical ethical issues, such as healthcare ethics, environmental ethics, and social justice. Many contemporary philosophers have attempted to integrate care ethics with other ethical theories, such as virtue ethics or consequentialism, in order to provide a more comprehensive framework for moral decision-making.

CONTRACTARIANISM: Contractarianism is a moral philosophy that emphasizes the importance of social contracts and agreements. It argues that moral rules and obligations are created through social agreements and that individuals have a moral obligation to follow these agreements. It is based on the idea that moral rules and principles are derived from rational agreements made by individuals in a hypothetical state of nature, where there is no government or social institutions.

According to contractarianism, moral rules and principles are derived from an agreement or contract made by individuals who are rational, free, and equal. This hypothetical agreement is known as the social contract, which establishes the moral basis for social and political institutions, such as government, law, and social norms.

Contractarianism emphasizes the importance of individual rights and freedoms, as well as the need for social cooperation and mutual benefit. It suggests that individuals should be free to pursue their own interests, but that they should also respect the rights and interests of others, in accordance with the social contract.

Critics of contractarianism argue that it may be too individualistic and fails to take into account the needs and interests of marginalized or disadvantaged individuals or groups. They also argue that it may be difficult to determine the terms of the social contract or to ensure that all individuals have an equal say in its creation.

Despite these criticisms, contractarianism has had a significant impact on contemporary moral philosophy and has been applied to a wide range of practical ethical issues, such as political philosophy, business ethics, and international relations. Many contemporary philosophers have attempted to refine or modify contractarianism in order to address some of its perceived shortcomings, while others have developed alternative social contract theories, such as feminist contractarianism or communitarianism.

EXISTENTIALISM: Existentialism is a philosophical movement that emphasizes individual freedom and responsibility. It argues that individuals must create their own meaning and purpose in life and that they have a moral obligation to act authentically and with integrity. Existentialism is a philosophical and cultural movement that emerged in the late 19th and early 20th centuries in Europe. Existentialism is often associated with the works of philosophers such as Jean-Paul Sartre, Martin Heidegger, and Friedrich Nietzsche.

Existentialism rejects the idea of objective, universal values and instead emphasizes individual experience and subjective meaning-making. It suggests that individuals are free to make their own choices and create their own values, but that this freedom comes with a responsibility to take ownership of one's choices and to accept the consequences of those choices.

Existentialism also emphasizes the importance of authenticity, or living in accordance with one's true self and values, rather than conforming to societal expectations or external pressures. It suggests that individuals must confront the inherent meaninglessness and absurdity of life, and create their own sense of purpose and significance in the face of this existential crisis.

Existentialism has had a significant impact on a wide range of fields, including philosophy, literature, psychology, and theology. Its emphasis on individual freedom, responsibility, and authenticity has been applied to a wide range of practical issues, such as mental health, education, and social justice.

Critics of existentialism argue that it may be too individualistic and fail to take into account the social and historical contexts in which individuals live. They also argue that it may be difficult to reconcile the emphasis on individual freedom with the need for social cooperation and mutual responsibility.

Despite these criticisms, existentialism continues to be a significant influence on contemporary thought and culture, and its emphasis on individual freedom, responsibility, and the search for meaning and purpose remains a powerful source of inspiration and motivation for many people.

MORAL THINKERS

Moral thinkers are individuals who have made significant contributions to the development of moral philosophy and ethical thought. They have influenced the way people think about morality, ethics, and the nature of human existence. Here are some of the major moral thinkers of the world and their contributions:

SOCRATES: Socrates was a philosopher and teacher who lived in ancient Greece. He is known for his method of questioning, which aimed at uncovering the truth about morality, ethics, and human nature. Socrates believed that the pursuit of wisdom was the key to living a good life.

ARISTOTLE: Aristotle was a philosopher and student of Plato who lived in ancient Greece. He developed a comprehensive system of ethics that emphasized the importance of virtuous behavior and the pursuit of happiness. Aristotle believed that the highest good was eudaimonia, which is often translated as "happiness" or "flourishing."

CONFUCIUS: Confucius was a philosopher and teacher who lived in ancient China. He developed a moral system that emphasized the importance of filial piety, respect for authority, and the cultivation of virtues such as kindness, humility, and sincerity. Confucianism has had a profound influence on Chinese culture and ethics.

IMMANUEL KANT: Immanuel Kant was a philosopher who lived in Germany during the 18th century. He developed a moral philosophy that emphasized the importance of reason and rationality in moral decision-making. Kant believed that moral principles were universal and applied to all rational beings.

JOHN STUART MILL: John Stuart Mill was a philosopher who lived in England during the 19th century. He developed a utilitarian system of ethics that emphasized the importance of maximizing happiness and minimizing suffering. Mill believed that actions should be judged based on their consequences, and that the greatest happiness of the greatest number should be the ultimate goal of morality.

FRIEDRICH NIETZSCHE: Friedrich Nietzsche was a philosopher who lived in Germany during the 19th century. He developed a moral philosophy that emphasized the importance of individualism, creativity, and the will to power. Nietzsche believed that traditional morality was a product of slave morality and that the superhuman individual should be the ultimate goal of morality.

MARTIN LUTHER KING Jr.: Martin Luther King Jr. was a civil rights leader and theologian who lived in the United States during the 20th century. He developed a moral philosophy that emphasized the importance of nonviolence, justice, and equality. King believed that love was the ultimate form of power and that social change should be pursued through peaceful means.

MORAL VALUES OF INDIA

Moral values are principles and beliefs that guide individuals and societies in determining what is right and wrong. In India, moral values have been an integral part of the country's cultural and spiritual heritage. Indian philosophy, religion, and literature are replete with teachings on moral values that continue to inspire people today

Here are some of the major moral values that have been emphasized in India:

AHIMSA: Ahimsa or non-violence is one of the most important moral values in India. It is the principle of refraining from harming or injuring any living being, including humans, animals, and plants. Ahimsa has been an essential aspect of various religions in India, including Hinduism, Buddhism, and Jainism.

SATYA: Satya or truthfulness is another important moral value in India. It is the principle of speaking the truth and being honest in all dealings. Satya is considered essential for maintaining integrity and building trust in personal and social relationships.

DHARMA: Dharma is a complex concept that encompasses various moral values, including righteousness, duty, justice, and compassion. It is the principle of living a virtuous and ethical life, following one's duties and responsibilities, and contributing to the well-being of society.

KARMA: Karma is the principle of cause and effect, where one's actions have consequences that determine one's future. It emphasizes the importance of taking responsibility for one's actions and striving for positive outcomes.

SEVA: Seva or selfless service is a moral value that emphasizes the importance of helping others without expecting anything in return. It is the principle of serving society and contributing to the welfare of others

Indian philosophy and literature are replete with teachings on these moral values. Some of the prominent thinkers who have contributed to the development of these moral values in India include:

GAUTAMA BUDDHA: Gautama Buddha was a philosopher and spiritual leader who founded Buddhism, one of the major religions in India. His teachings emphasized the

importance of non-violence, compassion, and mindfulness, and have had a profound impact on Indian society and culture.

MAHATMA GANDHI: Mahatma Gandhi was a political and spiritual leader who led India's struggle for independence from British rule. His philosophy of non-violence, satyagraha (civil disobedience), and self-reliance continues to inspire people around the world.

SWAMI VIVEKANANDA: Swami Vivekananda was a philosopher and spiritual leader who played a key role in the revival of Hinduism in India. His teachings emphasized the importance of self-realization, service to others, and unity of all religions.

RABINDRANATH TAGORE: Rabindranath Tagore was a poet, philosopher, and social reformer who won the Nobel Prize for Literature in 1913. His writings emphasized the importance of humanism, universalism, and spiritual values, and continue to inspire people around the world.

AMARTYA SEN: Amartya Sen is an economist and philosopher who has made significant contributions to the development of social welfare economics and development theory. His ideas on human development, capability approach, and social justice have had a profound impact on policy-making and development thinking in India and around the world.

TOPICS OF THE MONTH

INDIA AS A NUCLEAR POWER

- DR. Alexander Jacob IPS

PROBLEMS OF URBANIZATION

-DR. Babu Sebastian

MAN AND HIS ENVIRONMENT

-DR. G. Prasanna Kumar

INDIA AS A NUCLEAR POWER

Nuclear power is a very debated topic in every convention and has always been questioned for the bad it does rather than its good. In my opinion, nuclear power needs to be used, and the user should also be controlled and hedged with renewable energy sources as they are the only viable solution. Nuclear plants currently provide 11% of the world's electricity. With an ever-increasing demand for electricity being seen everywhere and the fossil fuels reducing each day, it is now more important than ever that major decisions should be made. In the upcoming decades, energy consumption will only increase and meet the rising demand; nuclear power plants will be required as they are the best source of traditional energy-producing sources. Although nuclear power plants are required, it is also necessary to gradually push renewable energy sources and promote them to create a sustainable future for future generations. Nuclear power plants' waste disposal and radioactivity are the concerning factors that have been the hot topic of most debates at conventions and meetings. In addition to that, a single misuse of this tremendous power can result in the disruption of life for all mankind. Striking a balance between the two will be crucial in the coming time as global warming and the energy crisis are on a constant rise. If nothing is done in the near time, countries could get submerged underwater within the coming decades, and the entire world will have to fight for survival.

The greatest source of energy in modern times is the atom, the fission of which generates colossal amounts of power. This power can be harnessed to either peaceful purposes or to destroy an enemy during war-time. For many years Indian scientists had been working on the methods of utilising nuclear power. The Atomic Energy Commission, comprising some of the country's most prominent and talented scientists, has made rapid headway in nuclear research. Indian nuclear technology achieved its hallmark on May 18,1974, when a clean nuclear test was held at Pokhran in the Rajasthan desert. It was an epoch-making event. It enabled India to gate-crash into the world's most exclusive Nuclear Club. For the past two decades or so, the nuclear "haves" had successfully kept out other countries. The Nuclear Non-proliferation Treaty, signed by the major nuclear powers, is highly discriminatory and unjust because it sought to perpetuate the nuclear monopoly of the major powers and debarred other countries from making progress in the nuclear field. India was the sixth nation to join the club.

The explosion was of 10 to 15 kiloton magnitude. It signified a technological breakthrough in the country's atomic development programme. There was a tremendous upheaval of earth, sand and stones at the site of the explosion. The crater had a radius of 200 metres and there was no cracking or fissuring of the earth. The explosion somewhat changed the landscape of the site and produced an artificial hill-a new beautiful site which appeared in the skyline from nowhere. According to the first official report on the findings of the test (released on March 25, 1975), the hill shot up from the earth like a piston with a speed of 108-km.per hour eventually reaching a dome shape 170-metre in diameter and 34 metre in height.

The official announcement made by the Indian Atomic Energy Commission merely stated that it had conducted a nuclear explosion using an implosion device at a depth of over 100 metres. It was stated to be of the same force as the atomic bomb dropped by the U. S. A. in 1945 on two cities of Japan, Nagasaki and Hiroshima, during World War II. India has apparently developed a technology which is more sophisticated than was used for that bomb-the first ever to be used in a war. Some Western Powers were sceptical at first and believed India's announcement of a nuclear explosion only when the U. S. Atomic Energy commission stated that it had detected it.

Dr. H. J. Bhabha's dream has thus been fulfilled. India has taken only four years for this technical job, against seven to 10 years taken by the leading nuclear powers. The cost has also been a fraction of what the Big Powers had spent for the same achievement. India's total expenditure on its nuclear programme to date is estimated at Rs. 162 crores. The cost of the test itself was only Rs. 30 lakhs or so, indicating the development of cheap nuclear technology. A U. S. State Department spokesman conceded on October 19, 1974, that the total cost of India's nuclear explosion including the amount for prior research and development was "less than one-tenth of one per cent of India's annual budget. " Scientists explained that in the implosion method used by India several pieces of the bomb material were kept apart within a spherical container. A chemical charge brought them together to form the critical mass required for an explosion.

The explosion establishes India's technological capability to make nuclear weapons if it wishes to do so. But this country has repeatedly declared that it has no intention to manufacture nuclear weapons of a destructive nature and that it intends to use such devices purely for peaceful purposes. Reaffirming this policy, the Prime Minister stated at a Press Conference on May 18 (the day of the explosion) that the test formed part of the study of peaceful uses of atomic energy. She hailed the experiment "as a good and clean job" and a "significant achievement" by India's scientists.

Dr. H. N. Sethna, Chairman of the Atomic Energy commission disclosed that there was no significant radio-activity even at a height of 30 metres when the first aerial survey was made by scientists from a helicopter. India was the first country to explode an atomic device underground. "We did so because we did not want to disturb the ecology and we did not want to add to radio-activity in the atmosphere". The absence of a fall-out, however, puzzled many scientists. According to Atomic Energy commission experts, it indicated that Indian technology had been developed to an extent that the scientists could hold a test even at a fairly shallow depth without contaminating the atmosphere.

India's entry into the nuclear club through an entirely indigenous effort came as a great morale- booster to the Government and the people. India's Defence Minister explained that the test was not for military purposes and that the defence forces knew that the advanced nuclear technology was not for their use. The blast was intended as a proof that India was no longer an impoverished and backward country but a modern technological power to be reckoned with. However, to dispel all doubts, Mrs. Gandhi made it abundantly clear that the explosion was part of a programme of tests to enable this country to keep abreast of developments in the nuclear technology, particularly with reference to its use in the field of mining and earth-moving operations. The Government also repeatedly stated that India did not propose to manufacture nuclear weapons and was opposed to the use of nuclear explosions for military purposes. Unfortunately, these official statements were received with scepticism in a number of foreign countries. The Soviet Union welcomed India to the Nuclear Club and

almost the entire Third World hailed the test. The Western reactions were mixed: some pronounced it as political aggrandizement or as economic precipitation. Pakistan's reaction was hysterical ; Canada has stopped supply of all nuclear material. This was the first time that a country conducting its initial nuclear test simultaneously proclaimed its opposition to the use of nuclear explosions for military purposes and disclaimed any intention to manufacture nuclear weapons.

The declarations of other nuclear powers present a striking contrast. The United States developed nuclear weapons because of the fear that Nazi Germany would pre-empt it in the race to invent the atomic bomb. The Soviet Union, Britain, France and China all hailed their first nuclear test explosion with the announcement that they were to be used to deter threats to their national security. The Soviet Union and China also took pride in having broken the monopoly of possession of nuclear weapons by a certain country or countries. The Chinese further proclaimed with their first test explosion that they would not be the first to use the weapon. By implication, they made it clear that they intended to develop the weapons to deter nuclear attacks and blackmail ; if deterrence failed, to use them in retaliation.

In India, however, we have had a different tradition in dealing with nuclear weapons and nuclear power. As early as March 12,1944, Dr. Bhabha, in a letter written to Sir Dorabji Tata Trust proposing the setting up of an Institute for fundamental research, prophesied: "When nuclear energy has been successfully applied for power production in say, a couple of decades from now, India will not have to look abroad for its experts but will find them ready at hand. " In 1954, at the first "Atoms for Peace" Conference in Geneva, Dr. Bhabha predicted the coming in of the fusion power in the next 20 years. In Asia, India set up its first research reactor "Apsara" in 1956 ahead of China and Japan. Similarly, the first plutonium separation facility was set up indigenously as early as 1964. These facts emphasise that in regard to atomic energy, India from the very beginning had a clear appreciation of its enormous potential and had worked out its own strategy to develop atomic power. India was also aware of its assets and limitations in implementing the atomic energy programme. India's thorium resources are vast while our uranium resources are limited. Our industrial infra-structure is still not sufficiently advanced to support a very large atomic power programme.

Radio-activity is still a major problem and perhaps it may take the advanced industrial countries like the U. S. A. and the U. S. S. R. another 10 to 15 years to master the technique completely. Dr. Bhabha's vision led to the establishment of the Tata Institute of Fundamental Research which has done splendid work.

Until recently, the United States and the Soviet Union had conducted nearly 30 underground explosions each for constructive peaceful applications and more such explosions were planned. These explosions were tests for purposes of canal excavations, underground storage, natural gas stimulation, underground mining, landslide dams, water reservoirs and oil stimulation.

However, in conducting the peaceful explosion of May 18, 1974 , India has upset the edifice of the Non-proliferation Treaty which prohibited the non-nuclear-weapon States from conducting even peaceful nuclear explosions for constructive purposes. The nuclear-weapon powers had tried to monopolise the technology in this field to themselves and had offered the potential benefits of this technology to non-nuclear weapon powers who acceded to the treaty on a non-discriminating basis. The Western nuclear "haves" tried to divide the world into two- nuclear powers and non-nuclear powers. India has become a nuclear-capable power and disclaims all intentions of becoming a nuclear-weapon power. This is a new situation which the sponsors of the Non-proliferation Treaty have to face. The test explosion and the Indian stand disclaiming any intention to acquire nuclear weapons will doubtless induce some fresh thinking on the issues of nuclear disarmament and the use of nuclear power for constructive purposes on the basis of common benefit to all nations, without imposing a monopolistic framework on the world.

It is noteworthy that Sir John Hill, Chairman of the British Atomic Energy Authority, said that benefits of nuclear technology must be enjoyed by all nations without being overshadowed by the threat of a nuclear holocaust. In such a contest, India's nuclear policy does not end with exploiting an atomic device. Its aim must always be to secure an international agreement on the banning of nuclear warfare, the cessation of nuclear testing and the progressive reduction of the existing stockpiles of nuclear weapons. At present, the prospects of such an agreement seem to be very bleak. China must be a party to an international agreement on banning nuclear warfare. It has not expressed its opposition to destruction of the nuclear arsenals. No politician, whatever his creed, can shut his eyes to the formidable cost of continuously stockpiling atomic weapons and building up delivery system and the terrible consequences of nuclear, bacteriological and chemical warfare. The efforts which are continuously being made by the U. S. A. and the Soviet Union to resolve their difference over disarmament are an acknowledgement of the monumental folly of dissipating valuable resources in competition for weapons of mass annihilation and of provoking universal death and destruction. Not until the spectre of a nuclear holocaust which at present haunts the world is completely banished should these efforts cease.

Though nuclear stockpiles and system of delivering nuclear weapons are continuously growing and fears are voiced everywhere regarding a nuclear war, there is a general feeling that the world is not likely to see a full-fledged thermo- nuclear war because of the dreadful consequences involved. The feeling is not unwarranted. A war between the super-Powers would inflict terrible destruction on both sides and their allies and bring no corresponding benefits. The United States did not use atom bombs when it had to protect South Korea from the North Koreans and the Chinese. President Nixon had made it clear, despite his country's deep involvement in Indo-China, that there was no question of his ordering the use of nuclear weapons.

The war of nerves between the Western bloc and the Warsaw Pact countries continues to rage, indirectly manifesting itself sometimes in Europe, sometimes in the Middle East and South-East Asia, sometimes over Cuba. However strained their relations become, they would never allow them to develop into war. Nuclear weapons in themselves constitute a great deterrent to a conflict. The Soviet Union and the United States are now in a position, whatever the size of their stockpiles, to annihilate each other. There is at present no protection against a nuclear attack except at a price which staggers imagination. Communist China's relations, both with the Soviet Union and the United States, are highly strained, but a nuclear conflict between Peking and Moscow or Peking and Washington is highly improbable. It is worth noting that Pakistan, which

openly welcomed the large number of nuclear weapon tests conducted in the atmosphere by China, was highly critical of the Pokhran explosion and made it a pretext for securing yet more sophisticated armaments from the U. S. A. Pakistan has also sought China's nuclear umbrella and has threatened to go nuclear itself, rejecting all the assurances given by India of her totally peaceful intentions.

these offences yet they manage to escape the grip of law by maintaining their relations with the high-ups in society. Clearly functioning of democracy is impaired. In order to make the businessmen to realise their responsibilities it is necessary that some strict steps must be taken within the frame work of law.

The most vulnerable section of the society, from the point of view of discipline, are the students. Revolutionary and new fledged ideas have a great appeal to them. They cannot stand the charm of persuasion. They are to be taught that without discipline they cannot get proper education. Agitations may be Gandhian method of protest but any good method which is misused can torpedo the whole system. Whatever might be the form of a discipline and however morally justified its aim may be it becomes a cancer in the body-politics. Indiscipline encourages anti-social elements and always puts the proper working out of gear. This Indiscipline breeds a generation of undependable citizens and gives momentum to disruptive forces.

The relevance of a political pattern is determined by its adequacy because it stitches up aspirations, functions, needs and demands of the society into a seamless web. The social unity which includes the unity of perspective, activities and aspirations fuse the divergent tendencies into semi-articulate whole. The system becomes a reflection of moods and motives and the pattern is that of behaviour. Under such circumstances if the political system projects a distorted image it will not satisfy the people. In case the object of reflection is itself disfigured, will not fit in the frame work of political institution. These institutions can function properly only if the people who established them are disciplined in every walk of life. Otherwise either the system will crack or people will lose faith in it.

Democracy presupposes that man possesses innate qualities to govern himself. They think that the people know their needs and welfare and can work for it in a more methodical manner. This supposition is based upon ideal calculations; man is generally swept away by emotions. Liberty often becomes licence so people must realise their duties. They must work for the common good. Workers in factories should aim at increasing production, people in the offices should facilitate the smooth working of the governmental machinery. So discipline becomes necessary.

Economy of the country is so closely linked up with political system that without a proper type of economic ordering there cannot be political stability. The economy of India was completely disturbed by the unprincipled sections of society. They indulged in black market, hoarding, smuggling and in many other activities which disrupted the economy of our country. Mere profit making should not be the aim of economic activity if some people are able to earn by trading in human lives. If others are able to oared resulting in numberless deaths due to starvation it will not serve the ends of justice. Democracy demands justice and equal treatment so that their free thinking may not be inhibited. For achieving this end we need discipline. Money should be just a means to carry on activities; it should not be the sole nexus of life.

For making a nation disciplined no mechanical method can be used for a long time. Once discipline becomes a part of our thinking we do not have to exert for remaining disciplined. It is through psychological methods that discipline can be fostered. Renan has correctly said that political institutions are destroyed by their triumphs. So for preserving democracy a nation has to adopt even anti-democratic methods. Discipline is the hub of human activity and disciplined activity will strengthen democracy. Democracy disciplined and enlightened is the finest thing in the world. A democracy prejudiced, ignorant, superstitious will land itself in chaos and may be self-destroyed. – Mahatma Gandhi

PROBLEMS OF URBANIZATION

It is now universally recognised that the progress of man depends upon social planning. Families, cities, economic development, education, in fact, every important phase of social life must be planned to ensure perfect harmony between man and his total environment. It was believed at one time that the human race cannot control and shape its destiny and that men make matters worse by interfering with the natural order of things and the natural scheme of social evolution. Today, this belief is utterly discredited. Already a great deal has been done to adapt the physical environment to man's needs and to overcome the difficulties created by floods, drought, deserts, hostile climate, niggardliness of nature, vagaries of the weather, fuel shortage and paucity of industrial raw materials. The world today is rapidly changing, more rapidly changing than most of us imagine and are intellectually and morally prepared for. We must learn to plan the change or at least to anticipate the effects of the change and to plan adjustments to them. Till comparatively recently, men lived in village communities, and their culture, mode of living, food and social organisation were adjusted to their surroundings. Modern urban life has produced a new environment, creating new problems of adaptation. Unfortunately, most modern cities are a haphazard growth ; the effects of living in huge cities have not been fully anticipated ; the social, economic and psychological consequences of industrialisation and urbanization have not been fully considered ; and the steps which should have been taken to bring about an adjustment between man and his new environment have not been forthcoming in ample measure. This is particularly true in the case of underdeveloped regions.

The old controversy between town and village life is puerile. Much has been written against urbanization, but the objection really is not to urbanization but to the unplanned drift to the towns from the countryside and to centralisation in industry and administration which has created so many problems of a baffling nature. The critics of urban civilization regard it as representing social decay. They deplore its artificiality, its sophistication, its intellectualism and loss of instinctive activity, its denial of family life and blood ties, its loss of vitality and of the will to live manifested in the decline in birth rate and in the high rate of suicides. They also point to the growing evils of urbanization-juvenile delinquency, prostitution, addiction to alcohol and drugs of the most injurious kind, slums, crimes and suicides. This indictment of urban civilisation is manifestly highly exaggerated on many points and wholly unwarranted on many others. For a balanced view on this question we must take note of two fundamental points. There is no biological or sociological evidence to support the theory of decay. Most of the evils to which the critics of urban civilisation draw attention are not inherent in it but are the result of a lack of social planning and foresight. Urbanization has undoubtedly created many grave social and psychological problems, but it has also many outstanding achievements to its credit.

Life in villages is simple and unostentatious. The luxury of the towns, as seen in the dresses of the people, in the hotels and restaurants, in the various modes of entertainment, in the social ceremonies and in expensive dwellings, provides a sharp contrast to the simplicity, frugality and austerity of village life. People in the countryside are strictly bound by their customs and traditions and by family and communal codes of morality. Individualism is deprecated and deviations from prescribed behaviour are severely frowned upon. The force of custom and tradition is not so strong in the cities and departure from them is quite common. Villagers are generally religious-minded and superstitious because their occupations, such as agriculture and fishing, bring them into intimate relations with Nature and with what they regard as the supernatural phenomenon. The urban people largely living in the man-made environment and, more or less, independent of the vagaries of the weather are less superstitious and less aroused by the religious emotion of awe and fear. They have more confidence in themselves and in the ability of man to shape his environment and mould his destiny. Since the villagers live in a small compact community and generally know one another, their relations are direct, intimate and personal, whereas city-dwellers live in bigger communities and various associations and their relations are impersonal, indirect and lacking in intimacy. The members of a trade union are bound to one another by the ties of a common cause rather than by those of friendship and neighbourhood. In villages social regulation is much easier because of the rigidity of the social mores and the strength of family influence, whereas in towns and cities the impersonal authority of the law and the moral codes of the various associations constitute the restraining influence.

Many factors have contributed to the rapid growth of cities and towns. The most important factor, of course, is economic. In this country agriculture which till recently was organised on primitive lines and is still undergoing a process of rationalisation cannot absorb all available labour. The pressure of manpower on land is very heavy so that most people depending on agriculture for their livelihood can hardly make both ends meet. They are either petty peasant-proprietors or tenants or agricultural labourers with only seasonal work and inadequate wages or members of the scheduled castes whose destitution and pitiable plight are hard to imagine. Unemployment and under-employment in rural areas have assumed staggering proportions. Individuals and families migrate to near or distant towns in search of employment and swell their numbers. Had the alien rulers not destroyed the country's cottage industries and handicrafts, had our system of land tenure not been landlord dominated and had the Government assisted the farmers in making agricultural production scientific, migration of the country people might not have been on such a big scale. Today, the village economy is undergoing rapid development and conditions are being created in which rural pursuits will become viable, but so rapidly is population expanding and so readily are our well-to-do agriculturists taking to agricultural machines and electric power that there is little possibility of rural unemployment being reduced to any appreciable extent save through migration to towns. Cities and towns are centres of trade and commerce. Factories employing thousands of workers are set up in them. It is in cities and towns that courts and universities and colleges are established, films are produced, newspapers are published, radio stations are built, Government offices employing thousands of men and women function, restaurants and hotels are started and thousands of persons cater to the tastes of men and women of fashion. Men of taste who patronise works of art, lawyers, doctors, teachers, artists and intellectuals live in metropolitan or other big cities. Ambitious men determined to make their mark in life make towns and cities the seat of their activity. Migration from towns to villages is insignificant partly because those who are used to the amenities of urban life are reluctant, despite attractive Government offers to induce educated classes to go back to village, to settle in the countryside where civic amenities and modes of entertainment are of a very limited character.

Rapid urbanization has created a very large number of

highly complex problems, particularly in underdeveloped or developing countries. A critic has expressed the view that the underdeveloped areas are over-urbanized in the sense that the stage of their economic development does not warrant such urbanization. The paramount need in these areas is that their limited financial resources should be utilised to the maximum possible advantage. If the trend towards urbanization persists, the funds badly needed for investment in productive enterprises may have partly to be diverted to social investment, that is, the provision of civic amenities-water, sewerage, schools, hospitals, houses etc. In a democratic State social investment cannot long be postponed. It is highly desirable that industrialisation should not be highly centralised in the existing big towns. We should aim at a balanced regional development. Of course, in determining the location of industries consideration will have to be paid to the availability of raw materials, labour and power, but unless some areas are to remain permanently depressed, centres of industrial production will have to be widely dispersed. The developing nations have one great advantage over the industrialised States. The latter did not plan their industrial growth, and urbanization took place in them haphazardly, creating innumerable social and economic problems for the Government, industry and labour. The former are in a position to plan the growth of industrial towns. The new towns situated in rural surroundings and providing all civic amenities can become ideal places, with plenty of fresh air, open spaces, hygienic conditions of work, adequate housing facilities, short distances, well-equipped schools and healthy entertainments.

The most noticeable evil associated with over-urbanization is market deterioration in the environment of the city and the appearance of slums. Cities in developing countries become overcrowded partly as a result of the natural increase in population over the decades and partly as a result of the migration of persons from the countryside and small towns where opportunities for gainful employment are wholly inadequate. Large-scale house construction to accommodate the poor worker or the petty tradesman is not possible because he cannot pay high rents which a housing entrepreneur expects. The poor are driven by necessity to living on footpaths or in slums under most intolerable conditions. They have to face the inclemencies of the weather like storms and monsoons or live amidst incredible squalor, dirt and disease. “Mobility from slum to non-slum housing”, as the editors of the book, “ Slums and Urbanization “ Point out in their general introduction, “becomes almost impossible because of the continuing gap between the rent they can afford and the rent that is determined by market conditions”. Had industrialisation been well-planned and had it been obligatory on the part of the employers to build houses for their employees or had the Government acquired land for house construction and set up housing co-operatives for the benefit of the poor, the present intolerable situation would not have arisen. In the new industrial towns which are springing up there is no problem of slum clearance which is so acute in our big cities like Bombay, Madras and Delhi. Slums are a disgrace to the community. They are unfit for human habitation.

Urbanization consequent upon industrialisation in developing nations has not only created slums but also denied to a large section of the people even elementary civic amenities-pure drinking water, underground drainage, hospitals and dispensaries, well-built and well-run schools and pucca roads. Our municipalities alone are not to blame for the present state of affairs. Where over-crowding is already a serious problem, any large addition to population is bound to complicate matters. The law cannot prevent migrations to already overpopulated cities. Article 19 of our Constitution gives every citizen the right to move freely throughout the entire territory and to reside and settle in any part of the country. But the municipal corporations and the Government cannot remain passive spectators of the scene and allow the creation or maintenance of slums and inadequate municipal services and civic amenities. When epidemics like cholera, typhus and malaria break out in a most vicious form, it is not only the slum-dweller but the entire community which suffers. These epidemics spring from slum squalor and over-crowding and poor municipal services. Rural people migrating to big cities find themselves in a wholly alien atmosphere. Before they migrated to large urban areas, they lived in fairly homogeneous groups, had their traditional codes of personal and social behaviour, participated in open-air entertainments, lived amidst their families and were bound by the constraints of convention. In big urban areas, living generally in slums and engaged in occupations of a tedious and dreary character and perpetually haunted by the spectre of unemployment and starvation, the migrants forget their moral or social code, throw away all the restraints which they had hitherto observed and take to crime, drink and prostitution. Not all the efforts to enforce prohibition and abolish prostitution have been able to make any significant impact because no other means of relieving boredom and giving some colour to a drab life exist.

Urbanization has created another vital problem, that of pollution of the environment. According to a biologist, the price of pollution could be the death of man. Pollution is the direct outcome of the application of science and technology to human problems. Man has learnt to turn deserts into fertile lands, harness the forces of Nature for his benefit, add immensely to production in all spheres so that the rapidly growing population may be well-fed, well-clothed, well-entertained and well-provided with all sorts of luxuries and comforts and overcome the gravitational pull of the earth and conquer space. But he has not yet learnt to live in peace with Nature and preserve the balance which has made life possible and given it such richness. We all know that a full-fledged thermo-nuclear war would destroy our civilisation and imperil the very existence of the human race. But we continue to add to the mounting stockpiles of these weapons of mass annihilation and stage atomic tests despite repeated warnings by scientists that these tests would contaminate the atmosphere and make this planet unfit for human habitation, especially most densely populated cities. The increasing use of science and technology in industry and agriculture is playing havoc with both urban and rural environments, but the urban environment is affected much more because most industries are located in the cities and more urban people use cars and other power-driven inventions. The former U. S. President, Nixon, had raised the question of pollution of the environment in a most pointed manner. “The great question of the 70s”, he had asked, “ is: Shall we surrender to our surroundings or shall we make our peace with nature and begin to make reparations for the damage we have done to our air, to our land and to our water. “ The air is being polluted by all kinds of poisonous gases and fumes from industrial plants and automobile exhausts.

We are passing through a period of acute international anarchy when the great powers are vying with each other to build up huge stockpiles of thermonuclear weapons and other engines of mass annihilation. It may be that the instinct of self-preservation will prevail over suicidal tendencies and mankind will destroy these dangerous weapons ; but there is also the possibility of thermonuclear weapons being employed and the nations having to face catastrophic consequences of their folly.

MAN AND HIS ENVIRONMENT

So far as human knowledge goes, life exists on this planet alone. It is our moral duty to see that we do nothing which hinders its growth and to take all steps to make it rich and meaningful. In all spheres of life haphazard growth has to be avoided, the laissez-faire philosophy has to be abandoned and everything has to be planned and directed into the right channels. In a sense man has been doing this for centuries. The invention of the simplest kind of tools in primitive times was man's first essay in civilisation. Since then he has made remarkable progress. He has learnt to control vast forces of Nature and subdue them for his material benefit. He has annihilated distances, revolutionised the methods of agricultural and industrial production used his knowledge of science and technology to banish poverty, disease and ignorance, from large parts of the globe overcome the gravitational pull of the earth and reached the moon and achieved other marvellous results. But he has not yet succeeded in creating an environment favourable to life's full growth. He has not maintained a happy balance between himself and Nature. He has not yet abjured war which now threatens to destroy human civilisation and imperil the very existence of the human race. He is still dominated by parochial loyalties of race, nation and religion and has only an imperfect awareness of his larger loyalty to the human species. If population expansion continues at the present rate, the world may be faced with an explosion the consequences of which are unpredictable. The use of science and technology has created as many problems as it has solved them-problems of conservation of natural resources, pollution of the environment, evils of unchecked urbanization and the like.

The fundamental problem before mankind is to make this planet a decent place to live in, to create an environment-physical, social, political-in which every man, regardless of his race, religion or nation, may enjoy to the fullest extent the conditions of civilised existence, in which his sence of beauty may be amply satisfied, in which man and Nature may live in perfect harmony. Such an environment can be created if man combines his knowledge with true wisdom, if he shows foresight, controls his egoistic impulses and makes living a co-operative effort. The elaborate civilisation which man has built up through the centuries is an index of his foresight. But foresight is not in evidence in a large number of cases. The most typical instance is that of war. War as an instrument of national policy has theoretically been renounced, but the spectre of a full-fledged war with the deadliest weapons of mass annihilation has not yet been banished from the minds of men. Security is still sought in multilateral and bilateral military alliances and highly sophisticated weapons. The only sensible way of ensuring a lasting peace is that a world state should be created. Today, the idea seems utopian. With the invention of nuclear and thermo-nuclear weapons and other diabolical methods of warfare, a situation has arisen in which, if war breaks out on a global scale, this planet will be flown up and will become unfit for human habitation. The future of this planet will always remain uncertain so long as stockpiles of thermo-nuclear weapons continue to mount and the means of delivering them continue to develop. Proliferation of nuclear weapons cannot be halted in the absence of comprehensive agreement on nuclear disarmament. Many countries are likely to develop their nuclear capability at no distant future. Nuclear test explosions are clearly most dangerous for life on this planet and must be banned. But, despite the clear knowledge that such explosions contaminate the atmosphere and constitute a great hazard not only for the present but also for the coming generations, testing of nuclear devices persists.

The ghost of Malthus has not been permanently laid. Malthus underestimated man's ability to develop natural resources to the extent of his requirements, but the point that he made that there is a limit to the numbers which this planet can support is irrefutable. There has to be a right balance between population and natural resources. If the present rate of population growth is not appreciably reduced, mankind will before long be confronted with a population explosion of a most disastrous kind. In view of the rapid material progress made in the West during the last hundred and fifty years or so and the spectacular achievements registered by modern science and technology, many people are inclined to be complacent on this issue and are apt to dismiss fears of population explosion as unwarranted. Complacency on this point is most fatal. The population of the world is fast expanding. According to the U. N. reports, the population of the world estimated in 1969 at 3,552 million is expected to increase to about 6,494 million by the end of the present century. The danger of unmanageable population growth is most acute in underdeveloped nations in which fatalism, abysmal poverty and ignorance combine to frustrate attempts at rational regulation and control. There are obvious limits to pressure on land. Food production even with the help of fertilizers may not keep pace with the unrestricted increase in numbers.

If peace is one and indivisible, so is economic prosperity. International economic stability and progress depends upon co-operation among all nations for common well-being. The material resources of the world are unevenly distributed. Population pressure varies with different countries, some countries with heavy population pressure having a very limited land area and poor natural resources, while others enjoy unlimited natural resources with relatively small number. Had we all lived as an international community, with common resources and problems, the present troubles arising from unequal distribution of Nature's bounty would not have appeared. After the second World War, it has begun to be increasingly realised that international economic life has to be properly regulated if economic anarchy is to be eliminated and that affluent members of the international community must help the poorer nations develop their limited resources and achieve economic maturity. But this realisation has not yet taken a firm hold on the rich nations' imagination. These nations are spending astronomical amounts on armaments and exploration of outer space but pleading their lack of resources when they are called upon to render aid to developing nations. The pace of development in backward countries can be greatly hastened if external aid on a liberal scale is forthcoming. The physical, social and psychological environment in developing countries is most depressing. Everywhere we see destitution, sickness, squalor, unemployment, slums and a sense of frustration. At present we have two worlds-the world of the rich nations and the world of the poor, separated by a deep gulf. Improvement of the environment has little meaning if nearly two-thirds of the human race is forced to live at a subsistence level. The anxiety of the well-to-do nations to preserve wild life and protect animals and fish is commendable. But human life too needs to be assured of the reasonable conditions of existence. It would be a tragedy if the rich nations of the world reduce their commitments to the developing nations to meet their additional expenditure on improving their environment and eliminating the evils revealed by the use of science and technology. In fact, the needs of the developing nations would increase if new measures are to be taken in hand to improve the environment. Poverty breeds pollution in a

most deadly form. The world would be a happier place to live in if all forms of colonialism and neo-colonialism ended, racialism in all its forms and manifestations disappeared, human rights were universally respected and a liberal social order was established. "Our political systems have to embrace new dimensions of planetary loyalty. We reject all forms of racial oppression and political enslavement. Above all, we see in war the ultimate misuse of science, the baleful destroyer of all economic and social benefit and the final betrayal of our common humanity". This was the statement of purpose read out at Stockholm by Prof. Margaret Mead on behalf of non-governmental organisations. The atmosphere of the world is highly vitiated by hatreds of various kinds-hatred engendered between nations over disputes, hatred caused by religious controversies, hatred, resentment and anger produced by racial oppression and political domination.

Industrialisation has immensely benefited mankind. But it has also created a large number of problems for the people. Industrialisation has led to urbanization. It is not argued that urbanization is undesirable in itself, but the haphazard growth of modern cities and towns has created a very unhealthy environment. It has given rise to overcrowding, slums, inadequate civic amenities. It is responsible for prostitution, juvenile delinquency, addiction to alcohol and drugs of the most injurious kind, crime etc. These evils are not inherent in urban civilisation. They could have been avoided if town growth had been systematically planned. It has been pointed out that underdeveloped areas are over-urbanized and that development would be hindered if the present migration of villagers to towns persists because funds badly needed for investment in productive enterprises would have to be diverted to social investment. Urbanization must be so planned that cities may enjoy all the advantages of villages. The new towns should be situated amidst rural surroundings so that their dwellers enjoy plenty of fresh air and have neat and clean houses. Slums are a disgrace to the community. They are unfit for human habitation. They breed all kinds of diseases and epidemics. Urbanization has polluted the environment. If the people cannot breathe fresh air, live in open spaces and got light, if they live amidst noise and excitement, if they lead hectic lives full of stresses and strains, they cannot be healthy and strong and cannot lead peaceful lives. Man can isolate himself from Nature only at his peril.

The acquisitive nature of man is his worst enemy, the greatest foe of civilisation. Nature has provided man with certain resources. He must learn to use them intelligently. Conservation of natural resources is as important as their exploitation. Nature has not meant these resources to be exploited by a few generations. They are meant to be used by all ages. It is a crime against humanity that these resources should be used up to enrich a greedy exploiter. The conservation of forests is indispensable for human life. Without it the output of oxygen would be seriously curtailed, the flow of rivers would be adversely affected. If the profit-motive is allowed to destroy forests, the environment would grievously suffer. The exploitation of forest wealth must be judiciously done. In India firewood is most extensively used for domestic purposes. The result is disastrous. It is "denuding our forests, eroding the soil, silting rivers and affecting the climate". We have to find a cheap fuel substitute. To meet the increasing demand for more food, fertilizers are being extensively used. Agricultural production can undoubtedly be stepped up if fertilizers are used, irrigation facilities are amply provided and better quality seeds are employed. But the fertilizers, if indiscriminately used, can also be harmful. They quickly exhaust the soil. In applying science and technology to agriculture the long range view is as important as the immediate gain. Fish is an important source of food for millions of persons all over the globe. Yet no attempt has hitherto been made to organise exploitation of fish on scientific lines. The poisonous waste poured by the industrially advanced states into the oceans contaminates the fish and makes it dangerous for human consumption. If fishing on the present scale continues and the profit-motive is allowed to operate regardless of the interests of humanity, the danger is that certain species like the whales may be threatened with extinction and the poor nations may be deprived of the cheap source of protein. Co-operation among states is also needed if floods are to be controlled, the spread of epidemics is to be checked and rivers are to be kept pure.

The creation of a happy environment is a co-operative effort. Statesmen, scientists, engineers, artists and men and women in the ordinary walks of life must develop full awareness of their obligations towards humanity. This is particularly true of statesmen and scientists. It is a crime against humanity to build up arsenals of thermo-nuclear weapons and other weapons of mass annihilation. The fact that they are not recognised as crimes and statesmen do not hesitate to contaminate the atmosphere by nuclear testing is an index of our lack of true culture. Scientists too have shown irresponsibility in regard to the social consequences of their research. The critics of the scientists have argued with considerable justification that "the main directions of physical science during the past hundred years, increasingly so in the last half century, have been set, directly and indirectly, by the requirements of industry carried on for private profit. " Scientific research is partly directed under instructions from politicians responsible for national defence. Here again our culture is to blame. The primary obligation of scientists and statesmen should be towards humanity. To involve human life in risk so that some monopolists may make millions is to betray total lack of perspective. The Government must not become a tool in the hands of private entrepreneurs out to make huge fortunes but must insist that their products do not pollute the environment. It is, however, a mistake to blame capitalism alone for the disregard of social consequences of scientific inventions. A socialist government would not hesitate to harm the environment if it felt that the national interest was served by it. This is the crux of the problem. The concept of one earth does not emotionally appeal to us, however strong may be our intellectual assent to it. Besides, men react only to immediate dangers. They are not moved by distant dangers. When experts warn mankind of population explosion, it ignores them.

When scientists say that a nuclear war would destroy humanity and blow up the planet or that radioactive fall-out from nuclear explosions contaminates the atmosphere, the warning re-remains unheeded, the complacent feeling being that mankind would somehow be spared the horrors predicted by scientists. We need more conferences on human environment so that nations may become aware of the havoc which certain forces and policies are causing to it. It is suicide to dismiss warnings on this subject as unwarranted pessimism. Refusal to acknowledge the existence of unpleasant realities is the surest sign of intellectual and mental immaturity, and the surest way to disaster.

SPACE FOR ROUGH WORKS

UPSC Civil Services (Mains) MOCK QUESTIONS

1. What is a fog alert system? Examine the relevance of such a system in India.

2. 'Methane Global Tracker report' is an important report highlighting the emission of methane throughout the world. Explain how methane is responsible for global warming? What are the different measures need to adopt to bring down the emission?

3. What do you mean by 3D printing Technology? Examine the future relevance of 3D printing

4. Technology in Indian space programs?

5. Discuss the function and Authority of the Election Commission of India. How has the

6. Commission maintained its integrity and its Independence?
   Privilege of the Parliamentarian with respect to Article 105 is absolute but that of the citizen regarding Article 19 is not absolute.
   Critically examine the various dimensions and phases of the cold war between 1947 and 1962. (Indian Civil Services (History), 2005)

7. What were the proposals of the Cabinet Mission Plan? Analyse the reactions of the Congress and the League to the proposals. (Indian Civil Services, 1999)

8. Examine the implications of the collapse of the banking sector in the Advanced economies upon the Indian economy.

9. Examine the amendments to the Prevention of Money Laundering Act, 2010.

10. Enumerate and discuss the different forms of economic recovery.

What were the proposals of the Cabinet Mission Plan? Analyse the reactions of the Congress and the League to the proposals.

The Cabinet Mission was sent to India in 1946 by the British government with the purpose of finding a solution to the Indian constitutional crisis. The mission was composed of three members, Lord Pethick-Lawrence, Sir Stafford Cripps, and A.V. Alexander. The proposals put forward by the mission, known as the Cabinet Mission Plan, were aimed at granting India self-governance and eventually independence.

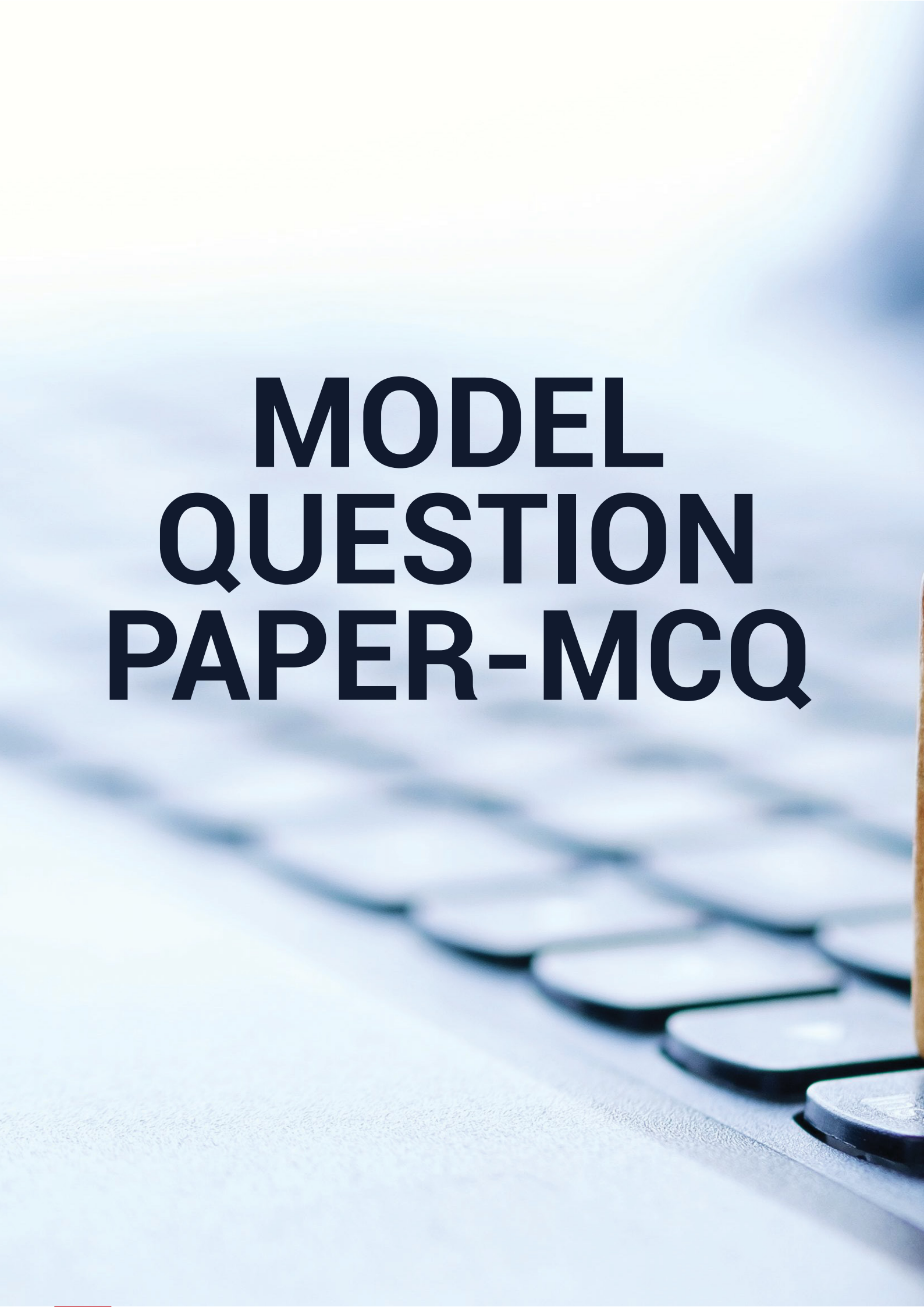
The Cabinet Mission Plan proposed the creation of a federal government in India, with power divided between the central government and the provinces. The plan envisaged three groups of provinces – Group A, Group B, and Group C – based on religious and other factors. The Muslim-majority provinces were to form Group B, and they were given the option to join a separate Muslim state or to remain part of India. The plan also proposed the creation of a Constituent Assembly to draft India's constitution.

The Congress, which had been at the forefront of the struggle for independence, was not happy with the Cabinet Mission Plan. The Congress felt that the plan did not give India the right to complete independence. The Congress rejected the idea of the Muslim-majority provinces being allowed to form a separate state, arguing that it would lead to the fragmentation of India. The Congress also felt that the plan gave too much power to the provinces at the expense of the central government.

On the other hand, the Muslim League welcomed the Cabinet Mission Plan. The League saw the plan as a means of achieving its goal of a separate Muslim state, which it had been demanding since the Lahore Resolution of 1940. The League believed that the plan gave the Muslim-majority provinces the option to form a separate state, which would protect their political rights and ensure their security.

The Hindu Mahasabha and the Sikh leaders were also critical of the Cabinet Mission Plan. They believed that the plan did not take into account their interests and aspirations. They felt that the plan was tilted in favor of the Muslims and did not give them a fair share of power.

In conclusion, the Cabinet Mission Plan proposed the creation of a federal government in India, with power divided between the central government and the provinces. It also proposed the creation of a Constituent Assembly to draft India's constitution. While the Muslim League welcomed the plan, the Congress rejected it, as did the Hindu Mahasabha and the Sikh leaders. The Cabinet Mission Plan did not lead to a solution to the Indian constitutional crisis, and India eventually achieved independence in 1947 through the partition of the country into India and Pakistan.



MODEL QUESTION PAPER-MCQ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PgDn
3
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1.Consider the following statements: (UPSC2020)

1.The value of Indo-Sri Lanka trade has consistently increased in the last decade.

2."Textile and textile articles" constitute an important item of trade between India and Bangladesh.

3.In the last five years, Nepal has been the largest trading partner of India in South Asia.

Which of the statements given above is/are correct?

a.1 and 2 only

b.2 only

c.3 only

d.1, 2 and 3

2.Pradhan Mantri Jan-Dhan Yojana' has been launched for

a.providing housing loans to poor people at cheaper interest rates

b.promoting women's Self-Help Groups in backward areas

c.promoting financial inclusion in the country

d.providing financial help to the marginalized communities

3.Which of the following is the most likely consequence of implementing the 'Unified Payments Interface (UPI)'?

a.Mobile wallets will not be necessary for online payments.

b.Digital currency will totally replace physical currency in about two decades.

c.FDI inflows will drastically increase.

d.Direct transfer of subsidies to poor people will become very effective.

4.If another global financial crisis happens in the near future, which of the following actions/policies are most likely to give some immunity to India?

1.Not depending on short-term foreign borrowings

2.Opening up to more foreign banks

3.Maintaining full capital account convertibility

Select the correct answer using the code given below:

a.1 only

b.1 and 2 only

c.3 only

d.1, 2 and 3

5.Which of the following best describes/ describes the aim of the 'Green India Mission' of the Government of India?

1.Incorporating environmental benefits and costs into the Union and State Budgets thereby implementing the `green accounting'

2.Launching the second green revolution to enhance agricultural output so as to ensure food security to one and all in the future

3.Restoring and enhancing forest cover and responding to climate change by a combination of adaptation and mitigation measures

Select the correct answer using the code given below.

a.1 only

b.2 and 3 only

c.3 only

d.1, 2 and 3

6.Consider the following pairs: (UPSC 2018)

Terms sometimes seen in news Context/Topic

Belle II experiment: Artificial Intelligence

Block chain technology: Digital / Crypto currency

CRISPR – Cas9: Particle Physics

Which of the pairs given above is/are correctly matched?

a.1 and 3 only

b.2 only

c.2 and 3 only

d.1, 2 and 3

7.Consider the following international agreements:

1.The International Treaty on Plant Genetic Resources for Food and Agriculture

2.The United Nations Convention to Combat Desertification

3.The world Heritage Convention

Which of the above has/have a bearing on biodiversity?

a.1 and 2 only

b.3 only

c.1 and 3 only

d.1, 2 and 3

8.Consider the following statements:

1.STATEMENT 1: The United Nations Capital Development Fund (UNCDF) and the Arbor Day Foundation have recently recognized Hyderabad as the 2020 Tree City of the World.

2.STATEMENT 2: Hyderabad was selected for recognition for a year following its commitment to growing and maintaining urban forests.

Which one of the following is correct in respect of the above statements?

a.Both Statement 1 and Statement 2 are correct and Statement 2 is the correct explanation for statement 1

b.Both statement 1 and Statement 2 are correct but Statement 2 is not the correct explanation for Statement 1

c.Statement 1 is correct But Statement 2 is not correct

d.Statement 1 is not correct but Statement 2 is correct

9.Consider the following States: (UPSC 2022)

1.Andhra Pradesh

2.Kerala

3.Himachal Pradesh

4.Tripura

How many of the above are generally known as tea-producing States?

a.Only one State.

b.Only two States.

c.Only three State.

d.All four States.

10.Region often mentioned in the news: (UPSC 2022)

1.Anatolia - Turkey

2.Amhara - Ethiopia

3.Cabo Delgado - Spain

4.Catalonia - Italy

How many pairs given above are correctly matched?

a.Only one pair

b.Only two pairs

c.Only three pairs

d.All four pairs

11.With reference to the "Tea Board" in India, consider the following statements: (UPSC 2022)

1.The Tea Board is a statutory body.

2.It is a regulatory body attached to the Ministry of Agriculture and Farmers Welfare.

3.The Tea Board's Head Office is situated in Bengaluru.

4.The Board has overseas offices in Dubai and Moscow.

Which of the statements given above are correct?

a.1 and 3 only

b.2 and 4 only

c.3 and 4 only

d.1 and 4 only

12.'Broad-based Trade and Investment Agreement (BTIA)' is sometimes seen in the news in the context of negotiations held between India and

a.European Union

b.Gulf Cooperation Council

c.Organization for Economic Cooperation and Development

d.Shanghai Cooperation Organization

13."Biorock technology" is talked about in which one of the following situations?

a.Restoration of damaged coral reefs

b.Development of building materials using plant residues

c.Identification of areas for exploration/extraction of shale gas

d.Providing salt licks for wild animals in forests/protected areas

14.Which one of the following statements best describes the term 'Social Cost of Carbon'? It is a measure, in monetary value, of the

a.Long-term damage done by a tonne of CO2, emissions in a given year

b.Requirement of fossil fuels for a country to provide goods and services to its citizens, based on the burning of those fuels

c.Efforts put in by a climate refugee to adapt to live in a new place

d.Contribution of an individual person to the carbon footprint on the planet Earth

15.Which one of the following groups of items is included in India's foreign-exchange reserves? (UPSC 2013)

a.Foreign-currency assets, Special Drawing Rights (SDRs) and loans from foreign countries

b.Foreign-currency assets, gold holdings of the RBI and SDRs

c.Foreign-currency assets, loans from the World Bank and SDRs

d.Foreign-currency assets, gold holdings of the RBI and loans from the World Bank

16.Consider the following statements regarding Nano Urea Liquid (UPSC 2020)

1.Nano Urea Liquid was first developed by the Council of Scientific and Industrial Research (CSIR)

2.India is the first country globally to start commercial production of Nano Urea

Which of the above statements is/are correct?

a.1 only

b.2 only

c.Both 1 and 2

d.Neither 1 nor 2

17.What is the Cas9 protein that is often mentioned in news? (UPSC 2019)

a.A molecular scissors used in targeted gene editing

b.A biosensor used in the accurate detection of pathogens in patients

c.A gene that makes plants pest-resistant

d.A herbicidal substance synthesized in genetically modified crops

18.With reference to the Parliament of India, which of the following Parliamentary Committees scrutinizes and reports to the House whether the powers to make regulations, rules, sub-rules, by-laws, etc., conferred by the Constitution or delegated by the Parliament are being properly exercised by the Executive within the scope of such delegation? (UPSC 2018)

a.Committee on Government Assurances

b.Committee on Subordinate Legislation

c.Rules Committee

d.Business Advisory Committee

19.Which one of the following statements best reflects the idea behind the "Fractional Orbital Bombardment System" often talked about in media?

a.A hypersonic missile is launched into space to counter the asteroid approaching the Earth and explode it in space.

b.A spacecraft lands on another planet, after making several orbital motions.

c.A missile is put into a stable orbit around the Earth and deorbits over a target on the Earth.

d.A spacecraft moves along a comet at the same speed and places a probe on its surface.

20.Consider the following countries: (UPSC 2018)

1.Australia

2.Canada

3.China

4.India

5.Japan

6.USA

Which of the above are among the 'free-trade partners' of ASEAN?

a.1, 2, 4 and 5

b.3, 4, 5 and 6

c.1, 3, 4 and 5

d.2, 3, 4 and 6

21.India Government Bond Yields are influenced by which of the following? (UPSC 2021)

1.Actions of the United States Federal Reserve.

2.Actions of the Reserve Bank of India.

3.Inflation and short-term interest rates.

Select the correct answer using the code given below:

a.1 and 2 only

b.2 only

c.3 only

d.1, 2 and 3

22) Article 38 of the Constitution of India explicitly puts the responsibility of the state in

establishing which of the following orders?

1. Legal

2. Social

3. Economic

4. Political

Select the correct answer code:

a) 1, 2

b) 1, 2, 3

c) 2,3, 4

d) 1, 2, 3, 4

Ans C, 2,3,4

23) Consider the following statements regarding Parliamentary System of Government.

1. The Constitution of India provides for a Parliamentary form of government, both at

the Centre and in the States.

2. Articles 74 and 75 deal with the Parliamentary system of government at the Union

level and State level respectively.

3. In the Parliamentary System, the Executive is not responsible to the legislature for

its policies and acts.

4. President is the Head of the State and is the nominal Executive.

Which of the above statements is/are correct?

a) 1, 3,4

b) 1, 2, 4

c) 1 only

d) 2, 3

Ans b

24) Which of the following countries share the black sea coast?

1) Ukraine

2) Turkey

3) Bulgaria

4) Romania

5) Georgia

6) Moldova

7) Russia

8) Greece

9) Armenia

10) Cypress

Which of the following is / are true

a) 1,2,4,7,8,9,10

b) 3,4,5,6,7,8,9

c) 1,2,3,4,5,6, 7

d) 1,3,4,6,8,9,10

Ans c

25) Consider the following statements.

1. The Constitution does not provide for the procedure for impeaching the Governor

by the State Legislature.

2. The Constitution lays down no provisions for the manner in which the Governor and

the state must engage publicly when there is a difference of opinion.

Which of the above statements is/are correct?

a) 1 only

b) 2 only

c) Both 1 and 2

d) Neither 1 nor 2

Correct

Solution: c)

The Constitution lays down no provisions for the manner in which the Governor and the

state must engage publicly when there is a difference of opinion.

There is no provision for impeaching the Governor by the State Legislature.

26)Consider the following statements regarding TARKASH, a joint military exercise.

1. TARKASH was a joint military exercise between India and Russia

2. It was a unique exercise which focused on Chemical, Biological, Radiological and

Nuclear (CBRN) terror response.

3. The National Security Guard of India participated in the exercise.

4. It was conducted off the coast of Arabian sea

Which of the above statements is/are correct?

a) 1, 2, 4

b) 1, 3

c) 2, 3

d) 1, 2, 3,4

Answer: c)

Indo-US joint exercise, named TARKASH, has for the first time included “Chemical, Biological,

Radiological and Nuclear (CBRN) terror response” in its drill.

Held in Chennai, Tamil Nadu, TARKASH is a joint exercise by the National Security Guard

(NSG) and US Special Operations Forces (SOF).

Chemical weapons include mustard gas (which damages the respiratory tract, skin, and eyes)

and nerve agents (victims rapidly become unconscious, have breathing difficulties, and may

die).

Biological agents like anthrax (causes fever, malaise, cough, and shock. Death can be within

36 hours), botulinum toxin (leads to paralysis of respiratory muscles) and plague are some

examples of biochemical weapons. Radiological weapons include weaponised radioactive

waste and dirty bombs as well as nuclear weapons.

27) Consider the following statements regarding election Commission:

1) election Commission is a constitutional Body

2) election Commission decides the schedules for both state and general elections

a) 1 only

b) 2 only

c) Both 1 and 2 only

d) Neither1 nor 2

28) Nord Stream gas pipeline, recently seen in news runs through the

a) Baltic Sea

b) Mediterranean Sea

c) Adriatic Sea

d) Black Sea

Incorrect

Solution: c)

Both Nord stream Pipe line 1 and 2 connects Russia and Germany

29) Consider the following statements regarding the Governor of a State.

1. The Constitution of India says that there shall be a Governor for each State.

2. Governor of a State is appointed by the President of India by warrant under his hand and seal.

3. Governor does not hold office during the pleasure of the

President of India.

Which of the above statements is/are correct?

a) 1 only

b) 1, 2

c) 1, 3

d) 1, 2, 3

Solution: b)

Article 153 of the Constitution says “There shall be a Governor for each State.” A few years

after the commencement of the Constitution, an amendment in 1956 laid down that

“nothing in this article shall prevent the appointment of the same person as Governor for

two or more States”.

30) Consider the following statements regarding the competition (Amendment) Bill 2022

1)was recently passed by the Lok Sabha with the aim of promoting fair competition in

the market and preventing anti-competitive practices

2) the Act provides for periodic revision of threshold and effects of anti-competitive

Conduct

Which of the above statements is / are true?

a) 1 only

b) 2 only

c) Both 1 and 2

d) Neither1 nor 2

Ans C

31) With reference to the Election Commission of India (ECI), consider the following

statements:

1. Part XV of the Indian constitution deals with the establishment of the ECI.

2. It was made a multi-member body by the Election Commissioner Amendment Act

1989.

3. The Chief Election Commissioner can be removed from office only through a process

of removal similar to that of a Supreme Court judge by Parliament.

Which of the statements given above is/are correct?

a) 1 and 2 only

b) 2 only

c) 2 and 3 only

d) 1, 2 and 3

Ans d

32) Discuss the function and Authority of the election Commission of India. How has the

Commission maintained its integrity and its Independence?

33) Privilege of the Parliamentarian with respect to Article 105 is absolute but that of the citizen regarding Article 19 is not absolute.

34). Consider the following statements.

1. A fog alert system is a safety system that helps to prevent accidents caused by low visibility due

to foggy conditions.

2. It typically consists of sensors placed along the roadway that detect the presence of fog and

trigger warning devices.

Select the correct statement/s using the code given

A. 1 only

B. 2 only

C. Both 1 and 2

D. Neither 1 nor 2

35). With reference to golden algae blooms often seen in news, consider the following statements.

1. They are a type of harmful algal bloom (HAB) that can occur in freshwater systems.

2. They reduce water clarity by producing organic matter that makes the water appear yellow-

brown.

3. Elevated levels of nitrate are typically associated with golden algae blooms.

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

A. 1 and 2 only

B. 2 and 3 only

C. 1 and 3 only

D. 1, 2 and 3

36). Which of the following is the primary goal of the Convention on International Trade in Endangered

Species of Wild Fauna and Flora (CITES)?

A. To promote international trade in endangered species

B. To regulate the trade of endangered species to ensure their survival

C. To eliminate all trade of endangered species

D. To allow unrestricted trade of endangered species for scientific research

37). The ‘CO2 Emissions in 2022 report’ often seen in news is released by

A. International Energy Agency

B. United Nations Environment Programme

C. World Wide Fund for Nature

D. Organization of the Petroleum Exporting Countries

38). Consider the following statements regarding methane as a greenhouse gas.

1. It has a higher global warming potential than carbon dioxide.

2. It emitted from anthropogenic sources only.

3. Reductions in methane emissions are an important strategy for mitigating the impacts of climate

change.

Select the correct statement/s using the code given

A. 1 only

B. 2 and 3 only

C. 1 and 3 only

D. 1, 2 and 3

39). The species 'Garcinia pedunculata' often seen in news is

A. An edible algae found in Kashmir Himalayas

B. A medicinal plant

C. An endangered mammal found in north eastern states

D. An invasive alien species

40). Consider the following statements.

A. Big cats are apex predators, which means they are at the top of the food chain in their

ecosystem.

B. Big cats play a key role in maintaining biodiversity within their ecosystems.

C. Big cats are often considered to be indicator species because they require large areas of intact

habitat to survive.

Select the correct statement/s using the code given

A. 1 only

B. 2 and 3 only

C. 1 and 3 only

D. 1, 2 and 3

41). What is the primary source of electricity generation in India?

A. Natural gas

B. Coal

C. Nuclear

D. Solar

42) Ultraviolet Transient Astronomy Satellite, OR ULTRASAT often seen in news belongs to

A. USA

B. Japan

C. Israel

D. UAE

43) With reference to Automatic Train Supervision system, consider the following statements.

1. System monitors the location and movement of trains, ensuring safety and efficiency.

2. System provides passengers with real-time train schedule and delay information.

3. System automates train maintenance and repair processes.

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

A. 1 only

B. 2 and 3 only

C. 1 and 3 only

D. 1, 2 and 3

44) Which of the following best describes a hot test in engines often seen in news?

A. A test performed on an engine in a cold environment.

B. A test performed on an engine without any load.

C. A test performed on an engine under normal operating conditions.

D. A test performed on an engine without any fuel.

45) Which of the following best describes the Bandicoot Robot?

A. A robot designed for underwater exploration.

B. A robot designed for military reconnaissance.

C. A robot designed for cleaning up manholes.

D. A robot designed for space exploration.

46) With reference to e-fuels often seen in news, consider the following statements.

1. They are fuels derived from biomass sources such as corn and sugarcane.

2. They can be used in existing internal combustion engines without requiring any modifications.

Identify the correct statement/s.

A. 1 only

B. 2 only

C. Both 1 and 2

D. Neither 1 nor 2

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OMR ANSWER SHEET

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Candidate Sign

Invigilator Sign

INSTRUCTIONS FOR FILLING THE SHEET

1. This sheet should not be folded or crushed.
2. Use only blue/black ball point pen to fill the circles.
3. Use of pencil is strictly prohibited.
4. Circles should be darkened completely and properly.
5. Cutting and erasing on this sheet is not allowed.
6. Do not use any stray marks on the sheet.
7. Do not use marker or white fluid to hide the mark.

WRONG METHODS  CORRECT METHOD 

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