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MAY 2023

FOR CIVIL SERVICES PRELIMINARY, MAINS, STATE
ADMINISTRATIVE SERVICES AND
ALL COMPETITIVE EXAMINATIONS UNDER
UPSC, SSC AND STATE PSCs

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CONTENTS

CONTENTS

CONTENTS

- DR. Alexander Jacob IPS

- DR. Babu Sebastian

-DR. G. Prasanna Kumar

- Mr.solomon John

HISTORY-
ARTS AND CULTURE

MARATHA QUEEN AHILYABAI HOLKAR

CONTEXT: *On the 298th birth anniversary of Maratha queen Ahilyabai Holkar, the Maharashtra Government has announced its decision to rename Ahmednagar as Ahilyanagar.*
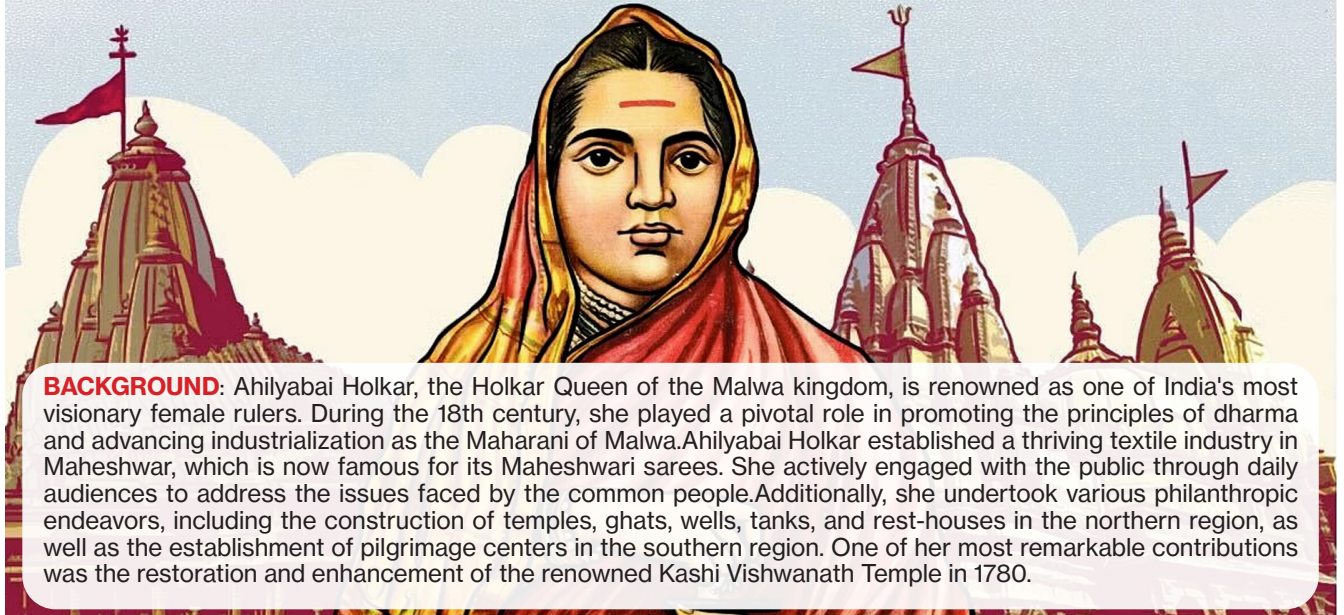
BACKGROUND: Ahilyabai Holkar, the Holkar Queen of the Malwa kingdom, is renowned as one of India's most visionary female rulers. During the 18th century, she played a pivotal role in promoting the principles of dharma and advancing industrialization as the Maharani of Malwa.Ahilyabai Holkar established a thriving textile industry in Maheshwar, which is now famous for its Maheshwari sarees. She actively engaged with the public through daily audiences to address the issues faced by the common people.Additionally, she undertook various philanthropic endeavors, including the construction of temples, ghats, wells, tanks, and rest-houses in the northern region, as well as the establishment of pilgrimage centers in the southern region. One of her most remarkable contributions was the restoration and enhancement of the renowned Kashi Vishwanath Temple in 1780.

EXCAVATIONS AT PURANA QILA

CONTEXT: *The ongoing excavations at Purana Qila, the site of the ancient "sixth city" of Delhi, have uncovered a fascinating history spanning more than 2,500 years, with the revelation of nine distinct cultural levels. These excavations have yielded a diverse array of artifacts, including Hindu deity idols, over a hundred coins, and nearly thirty seals, among others. These remarkable findings will be curated and displayed in an Open Air Site Museum within the fort premises.*

BACKGROUND: Purana Qila, which functioned as both an internment camp for Japanese civilians of British India during World War II and a refugee camp after the Partition, has been the site of several excavations. Professor BB Lal, a recipient of the Padma award, conducted excavations in 1955 and 1969-73, followed by excavations led by Dr Vasant Kumar Swarnkar of the ASI in 2013-14 and 2017-18.

The ongoing excavation work, initiated in January and overseen by the Ministry of Culture, aims to establish a comprehensive chronology of the site. Artefacts from various historical periods such as Pre-Mauryan, Mauryan, Sunga, Kushana, Gupta, Post Gupta, Rajput, Sultanate, and Mughal have been discovered, providing valuable insights into the history of the area.

Currently, structures from the early Kushana level have been uncovered at a depth of 5.50 meters. It is anticipated that further excavation will shed additional light on the ancient city of Indraprastha. Noteworthy recoveries from the site include a stone image of Vaikuntha Vishnu, a terracotta plaque of Gaja Laxmi, a stone image of Ganesha, seals and sealings, coins, terracotta figurines, beads made of various stones, and a bone needle, as listed by the ministry.

According to information from the District South East website, Purana Qila is one of the oldest forts in Delhi. It is believed that the present citadel of Purana Qila was constructed during the reigns of Humayun and Afghan Sher Shah Suri. Excavations have revealed traces dating back to the pre-Mauryan period, around the 3rd century BC. During the initial excavations led by BB Lal in 1954–55 and 1969–72, traces of Painted Grey Ware (PGW) were found beneath the mound. Lal, who was focused on excavating various sites mentioned in the Mahabharata, discovered these traces as a common feature at those locations. The fort served as the inner citadel of the city of Din Panah during Humayun's rule. Humayun renovated the fort in 1533 and completed the construction five years later. Sher Shah Suri, the founder of the Suri Dynasty, defeated Humayun in 1540 and named the fort Shergarh, adding several more structures to the complex during his five-year reign. Purana Qila and its surroundings flourished as the "sixth city of Delhi".

IMPORTANT FACTS ON INDIA'S NEW PARLIAMENT BUILDING

CONTEXT:*Hanging from the ceiling in the Central Foyer of India's recently inaugurated Parliament building on Sunday (May 29) is a Foucault pendulum, swinging close to the floor while rotating on its axis.*

FOUCAULT PENDULUM OF INDIA'S NEW PARLIAMENT BUILDING

BACKGROUND:Suspended from a skylight located at the apex of Constitution Hall, the pendulum symbolizes the harmonious connection between the concept of India and the vastness of the cosmos. Crafted by the National Council of Science Museum (NCSM) in Kolkata, this monumental pendulum holds the distinction of being the largest of its kind in India, towering at a height of 22 meters and weighing an astonishing 36 kilograms.

SENGOL: AN ANCIENT SOUTH INDIAN TRADITION SYMBOLISING A DHARMIC KINGSHIP

CONTEXT : *As a significant gesture, the sacred sceptre that was presented to Jawaharlal Nehru on the eve of India's Independence, symbolizing the transfer of power from the British, was entrusted to Prime Minister Narendra Modi during the inauguration of the new Parliament building.*

BACKGROUND: Known as a sengol or chenkol, this regal sceptre embodies virtues such as righteousness, justice, authority, and the proper exercise of power. Its origins can be traced back to Tamil Nadu, where it served as a prominent emblem of kingship. In the Madurai Nayakas dynasty, for instance, the sengol was first placed before the deity Meenakshi in the grand temple during significant events, and later transferred to the throne room, symbolizing the king's divine role. Furthermore, it held the role of a legitimizing instrument. When the Sethupatis of Ramnad attained their royal status in the seventeenth century, they acquired a ritually sanctified sengol from the priests of the Rameswaram temple, denoting their accountability to the deity in wielding power and their elevation from a chiefly status to a more revered kingly position. Thus, within its historical context, the sengol can be described as a representation of a dharmic kingship.

THE DANCING GIRL OF MOHENJODARO

CONTEXT: The International Museum Expo 2023 in New Delhi was inaugurated by the Indian Prime Minister Narendra Modi. During the event, the PM revealed a contemporary and stylized life-size version of a 5-feet tall toy inspired by the Bronze Dancing Girl in the Channapatna style. According to the PIB, the mascot symbolizes a modern-day "dwarpaal" or "door-guardian" that welcomes the audience to the International Museum Expo 2023 experience.

BACKGROUND: The Dancing Girl is considered one of the remarkable artistic achievements of the Mohenjodaro artists. It originates from the Indus Valley Civilization and dates back to around 2500 BCE.

The 'Dancing Girl' is a bronze sculpture measuring 10.5 cm in height, 5 cm in width, and 2.5 cm in depth.

GRAVES OF KHATIYA VILLAGE IN GUJARAT'S KUTCH DISTRICT

CONTEXT: *The expansive 16-hectare area near Khatiya village in Gujarat's Kutch district, characterized by dry and arid soil, has yielded numerous intriguing discoveries. Among these findings are a shell bangle, pottery fragments, stone blades, and even human skeletal remains. Since 2018, an international team of archaeologists from various disciplines has unearthed and examined 197 out of the 500 graves discovered at the site. However, the true identity of those buried in these graves remains a captivating mystery, hidden deep within the site.*

BACKGROUND:Dholavira, a significant UNESCO World Heritage Site and one of the largest metropolises of the Harappan civilization, is located approximately 150 kilometers away from Khatiya. This distance leads researchers to believe that it is unlikely that individuals from the urban settlements of Dholavira were buried at the Khatiya site.

Other well-known Harappan sites in western Kutch include Desalpar, Khirsara, Kotda Bhadli, and Nadapa. However, each of these sites represents urban and post-urban periods of the Harappan civilization and is situated more than 50 kilometers away from Khatiya. Considering that the Khatiya site served as a pre-urban Harappan cemetery, there is a possibility that either a significant settlement existed in Khatiya or smaller settlements surrounded the area, utilizing the cemetery as a common burial ground.

WIt was one of the southernmost sites of the Indus Valley civilisation. This port city is believed to have been built in 2,200 BC. It was a thriving trade centre in ancient times, with its trade of beads, gems and ornaments reaching West Asia and Africa.

LOTHAL

CONTEXT: *Via video conferencing, Indian Prime Minister Narendra Modi conducted a review of the progress in constructing the National Maritime Heritage Complex (NMHC) site in Lothal, Gujarat.*

Indus Valley Civilisation
-Mature Phase-
(c. 2600-1900 BCE)
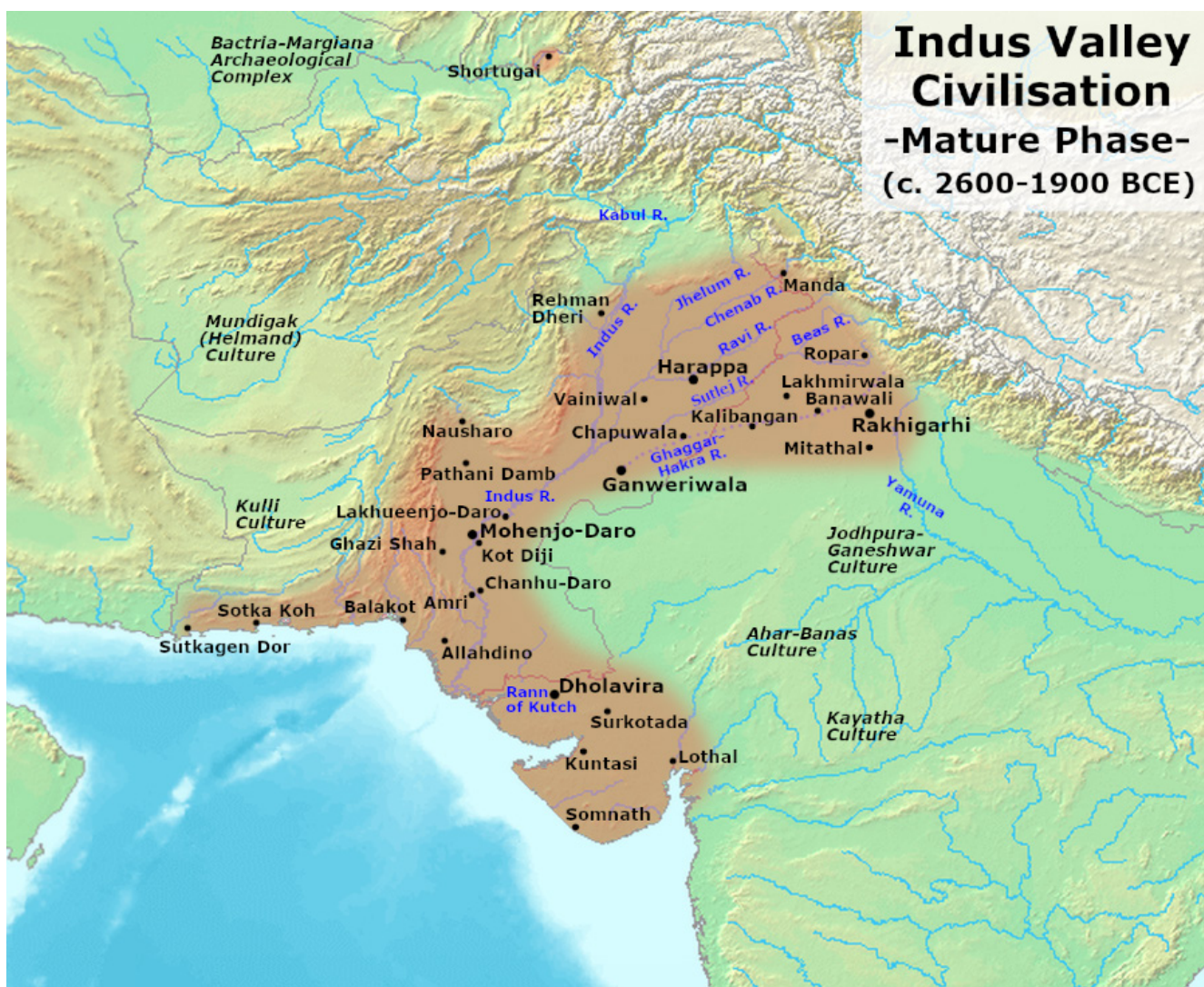
BACKGROUND:Lothal, situated in the Bhāl region of Gujarat, held significant importance during the Indus Valley Civilization as a prominent trading center and a symbol of India's maritime prowess and prosperity. The name "Lothal" in Gujarati is derived from "Loth" and "(s)thal," meaning "the mound of the dead." It is believed that the port city was established around 2,200 BC. During ancient times, Lothal thrived as a bustling trade hub, exporting beads, gems, and ornaments to West Asia and Africa. Notably, archaeologist SR Rao led the team that discovered various Harappan sites, including the port city of Lothal. Excavation work took place in Lothal from February 1955 to May 1960. According to the Archaeological Survey of India (ASI), Lothal featured the world's earliest known dock, which connected the city to a historical course of the Sabarmati River.

INDIA'S ENTRY INTO THE WORLD HERITAGE LIST FOR THE YEAR 2022-2023

CONTEXT: *The Ministry of Culture has officially nominated the Hoysala Temples of Belur, Halebid, and Somnathapura in Karnataka for India's entry into the World Heritage List for the year 2022-2023. Three heritage sites from India were added to the tentative list of UNESCO World Heritage Sites, Vadnagar- A multi-layered historic town, Gujarat, Sun Temple, Modhera and its adjoining monuments and Rock-cut Sculptures, and Reliefs of the Unakoti, Tripura.*

BACKGROUND: Hoysala Temples of Belur, Halebid, and Somnathapura in Karnataka.To showcase the rich culture and history of Odisha, the Odisha Tourism Development Corporation (OTDC) has introduced guided walking tours to various heritage sites.These walking tours will provide tourists with captivating narratives about places like the 11th-century Lingaraj temple, Shanti Stupa, 10th-century Mukteshvara temple, Khandagiri and Udaygiri caves. The Hoysaleswara temple, also known as the 'Halebidu' temple, is a magnificent 12th-century structure dedicated to Lord Shiva. Located in Halebidu, Karnataka, it was once the capital of the Hoysala Empire. The temple reflects the Shaivism tradition but incorporates elements from Vaishnavism, Shaktism, and Jainism. Intricate sculptures within the temple depict scenes from the Ramayana, Mahabharata, and Bhagavata Purana.The Mukteshvara Temple is a 10th-century shrine dedicated to Lord Shiva, situated in Bhubaneswar. It is included in the "Guided Walking Tour" program initiated by the Odisha Tourism Development Corporation (OTDC) to promote the state's cultural heritage.Constructed in 1010 CE by Rajaraja I, the Brihadeshwara Temple in Thanjavur stands as a remarkable testament to the artistic brilliance of the Chola dynasty. Known for its grandeur, the temple is considered one of the finest examples of Chola architecture.
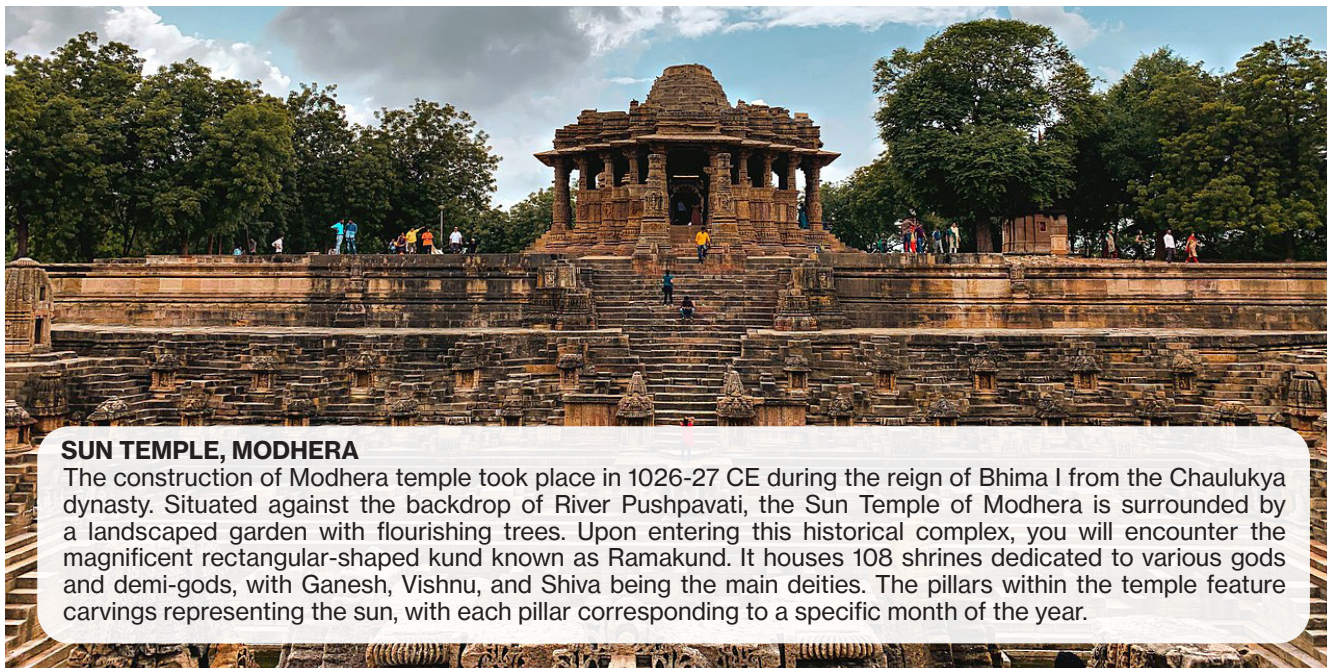
SUN TEMPLE, MODHERA
The construction of Modhera temple took place in 1026-27 CE during the reign of Bhima I from the Chaulukya dynasty. Situated against the backdrop of River Pushpavati, the Sun Temple of Modhera is surrounded by a landscaped garden with flourishing trees. Upon entering this historical complex, you will encounter the magnificent rectangular-shaped kund known as Ramakund. It houses 108 shrines dedicated to various gods and demi-gods, with Ganesh, Vishnu, and Shiva being the main deities. The pillars within the temple feature carvings representing the sun, with each pillar corresponding to a specific month of the year.

GEOGRAPHICAL INDICATION (GI) TAG FOR BASOHLI P INTING, ONATTUKARA ELLU AND NAGASWARAM

CONTEXT: *The Geographical Indication (GI) Tag has been awarded to the renowned Basohli Painting from the Kathua district in the Jammu division.*

BACKGROUND:The Pahari School of Art emerged in the hilly regions of Basohli, Kulu, Guler, Kangra, Jammu, and Garhwal during the period spanning the 17th to 19th centuries. Basohli served as the initial hub of the Pahari school, showcasing its distinctive bold and vibrant style. The Guler paintings evolved from this style, characterized by more delicate drawings and serene color palettes.Over time, the artistic expression in Jammu paintings gained clarity, simplicity, and a sense of individuality, eventually transforming into the harmonious and elegant Kangra paintings.Basohli played a pivotal role in the genesis of the Pahari style and paved the way for the flourishing of other artistic centers.

The districts of Kerala are now home to the prized Onattukara sesame, which has been bestowed with a Geographical Indication (GI) tag. This GI-tagged sesame variety is renowned for its exceptional medicinal properties.

The artisans of Narasinganpettai, a small village situated 15km from Kumbakonam in the Tanjore district, have successfully obtained the Geographical Indication (GI) tag for their traditional wind musical instrument, the Nagaswaram. Among the various regions in the state of Tamil Nadu where nagaswarams are crafted, only the Barinagaswaram of Narasinganpettai produces the smooth Madhyamam Swara. This revered classical instrument holds significance in auspicious occasions, royal courts, and temples. The artists of Narasinganpettai have diligently preserved the art of playing the Nagaswaram for over three centuries.
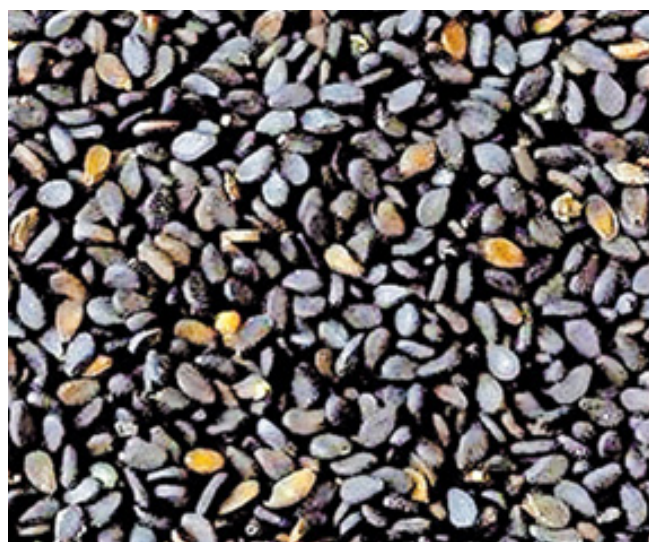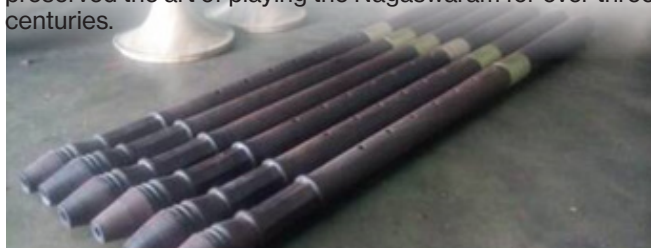
KONGTHONG: THE 'WHISTLING VILLAGE.

CONTEXT: *A Member of the Legislative Assembly (MLA) from Meghalaya has requested the UNESCO heritage designation for Khongthong, the sole 'whistling village' in the country, where inhabitants communicate through whistling*

BACKGROUND:Situated in the East Khasi Hills of Meghalaya, the village of Kongthong is recognized for its distinct nickname, the 'whistling village.' This name stems from the village's exceptional custom called 'Jingrwai Lawbei,' in which mothers compose melodic tunes for their infants, which subsequently become their names.

The inhabitants of Kongthong belong to the Seng Khasi Tribe and converse in the Khasi language.

THE KHOONI DARWAZA

CONTEXT: *With its historical significance ranging from witnessing the events of the 1857 Revolt to its proximity to the Maulana Azad Medical College, the Khooni Darwaza holds a pivotal place in India's history. Situated near the Delhi Gate, this gate was constructed during the reign of Sher Shah Suri in the 16th century and acquired its name from the violent killings that occurred there during the Indian Rebellion of 1857.*
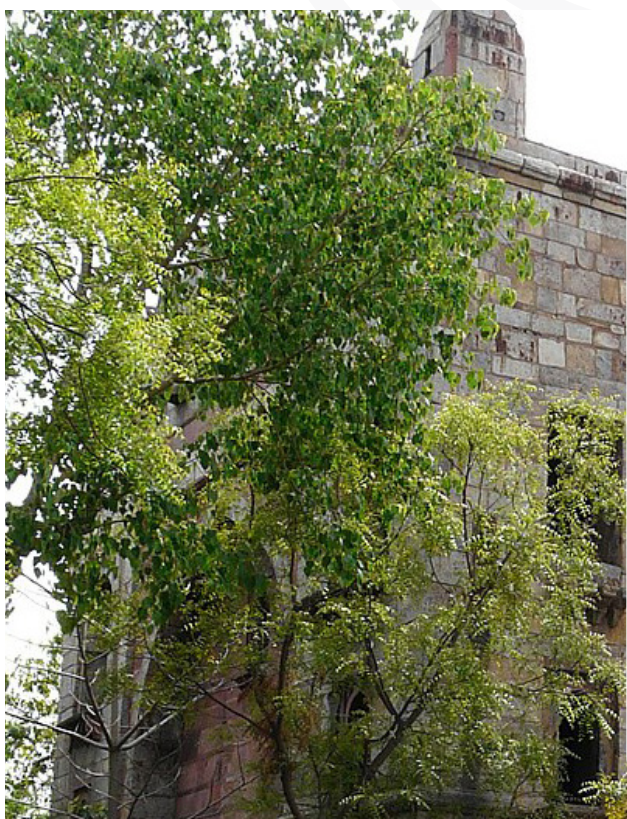
BACKGROUND:The architecture of the Khooni Darwaza showcases a fusion of Mughal and Afghan styles. Constructed using quartzite stone, the three-storeyed gate features three arched entrances, with the central one being the largest. Within the confines of the Old Fort, Sher Shah also built the Quila Khuna Masjid, exemplifying Afghan architecture, which was later restored by Lord Curzon during his viceroyship. Akbar is said to have followed Sher Shah's architectural techniques when constructing various buildings in Agra, reflecting a similar style. Lal Darwaza, one of the gates constructed by Sher Shah in his new city of Delhi, along with Kabuli Darwaza, likely named due to the caravans passing through it en route to Kabul.

Formerly known as Lal Darwaza, the gate is now called Khooni Darwaza due to the tragic event of Lt. Hodson shooting Bahadur Shah Zafar's sons and grandson there in 1857, following the recapture of Delhi by British forces and the Last Emperor seeking refuge in Humayun's Tomb. The Khooni Darwaza also witnessed significant bloodshed during the independence movement, as thousands of refugees lost their lives mercilessly while seeking safety at Purana Qila.

25TH ANNIVERSARY OF POKHRAN-II

CONTEXT: *In a series of nuclear bomb test explosions, India conducted three tests at the Indian Army's Pokhran Test Range on May 11, 1998. Two additional bombs were tested two days later on May 13. Known as Operation Shakti (meaning "strength"), these tests were aimed at demonstrating India's ability to develop fission and thermonuclear weapons with yields of up to 200 kilotons. This achievement positioned India among the select group of nations capable of deploying nuclear weapons.*

BACKGROUND:

POKHRAN-I : On May 18, 1974, with the support of Indira Gandhi, India conducted its first nuclear test at the Pokhran test site. Codenamed Operation Smiling Buddha, Pokhran-I was presented as a "peaceful nuclear explosion" with limited military implications. However, the international community largely rejected India's narrative. The test faced widespread condemnation, and countries such as the US and Canada imposed significant sanctions on India. These sanctions dealt a major blow to India's nuclear program, significantly slowing down its progress.

POKHRAN-II: While the 1974 tests were ostensibly carried out for peaceful purposes, the 1998 tests marked the culmination of India's nuclear weaponization efforts. As a result of Pokhran-II, the Indian government publicly declared itself as a nuclear-armed state. Although the 1998 tests also drew sanctions from certain countries, such as the US, the level of condemnation was not as widespread as in 1974. Given India's rapidly growing economy and market potential, the country was able to assert its position and solidify its status as a prominent nation-state.

THE SUN TEMPLE AT KONARK

CONTEXT: *The Archaeological Survey of India is developing an initial plan to safely remove the sand that was filled inside Odisha's Sun Temple by the British 118 years ago to prevent its collapse.*

BACKGROUND:Situated on the eastern coast of the Indian subcontinent, the Sun Temple at Konark stands as a remarkable example of temple architecture and art. Its conception, scale, proportion, and the exquisite narrative power of its sculptural embellishments reveal its magnificence. The temple serves as a remarkable testament to the 13th-century kingdom of Orissa and exemplifies the divine embodiment, forming an invaluable link in the history of the spread of the worship of Surya, the Sun God. In this context, it is directly and materially connected to Brahmanism and tantric belief systems. The Sun Temple represents the pinnacle of Kalingan temple architecture, incorporating all its defining elements in a complete and flawless manner. A masterpiece of creative brilliance in both conception and execution, the temple

portrays the Sun God's chariot, with twelve pairs of wheels drawn by seven horses, symbolizing its celestial movement. The vimana, or main sanctuary, originally featured a towering structure with a shikhara, or crowning pinnacle, which was demolished in the 19th century.

G-7 SUMMIT: SPECIAL GIFTS REPRESENTING INDIA'S CULTURE

CONTEXT: *During his visit to Germany for the G-7 summit, the Indian Prime Minister Narendra Modi presented special gifts to the G-7 leaders, showcasing India's rich traditional art and culture.*

To Japan's Prime Minister Fumio Kishida, he gifted exquisite black pottery pieces from Nizamabad. This black pottery received the GI tag in 2015 and is renowned for its dark, glossy body adorned with engraved silver patterns. Originating from the Kutch region of Gujarat, this unique craft is used to create various decorative items such as bouquets, plates, and lamps.

To South Africa's President Cyril Ramaphosa, he presented Dokra art with a Ramayana theme from Chhattisgarh. Dokra art is an ancient bell metal craft practiced by the Ojha metal smiths residing in states like Jharkhand, Chhattisgarh, Odisha, West Bengal, and Telangana. This art form utilizes the lost-wax casting technique, which has been employed in India for over 4,000 years.

To France's President Emmanuel Macron, he gifted Itr bottles in a Zardozi box from Lucknow, Uttar Pradesh. The Zari Zardozi box is intricately hand-embroidered on khadi silk and satin tissue, featuring the colors of the French National Flag. The motifs adorning the box are traditional Indo-Persian designs, with hand-embroidered lotus flowers.

THE MAHAKALESHWAR TEMPLE

CONTEXT: *In Madhya Pradesh's Ujjain, the Mahakaleshwar Corridor was inaugurated by Prime Minister Narendra Modi.*

The Mahakal Maharaj Mandir Parisar Vistar Yojna aims to expand, beautify, and decongest the Mahakaleshwar temple and its surrounding area in the Ujjain district. As part of the plan, the temple premises of Mahakaleshwar, currently covering an area of approximately 2.82 hectares, will be expanded to 47 hectares. The Ujjain district administration will carry out this development in two phases. Following the Vishwanath temple in Varanasi and the Kedarnath shrine in Uttarakhand, the Mahakal temple becomes the third 'jyotirlinga' site to undergo significant improvements. India has a total of 12 jyotirlinga sites, revered as manifestations of Lord Shiva. Apart from Mahakal, these include Somnath and Nageshwar in Gujarat, Mallikarjuna in Andhra Pradesh, Omkareshwar in Madhya Pradesh, Kedarnath in Uttarakhand, Bhimashankar, Triyambakeshwar, and Grishneshwar in Maharashtra, Viswanath in Varanasi, Baidyanath in Jharkhand, and Rameshwar in Tamil Nadu. Mahakal is the only jyotirlinga that faces south, while all the other jyotirlingas face east.

AKASHVANI

CONTEXT: *The Central government issued an order stating that the public broadcaster, formerly known as All India Radio (AIR), should be exclusively referred to as Akashvani in all broadcasts and programs. Previously, the two names were used interchangeably.*

BACKGROUND:After Guglielmo Marconi sent the first radio transmission in 1895, it took more than two decades for radio broadcasting to become commercially available. In India, the Radio Club of Bombay initiated the first commercial transmission in 1923. The Calcutta Radio Club was established in the same year, and a year later, radio broadcasts reached Madras with the Madras Presidency Radio Club. Usha Mehta is remembered for her role in organizing an underground radio station that operated during the Quit India Movement.

All India Radio (Akashvani), recognized as the world's largest radio network, has once again been voted as the most trusted electronic media organization in the country. According to a survey conducted by Reuters Institution in 46 countries, All India Radio and Doordarshan enjoy the highest level of trust.

GEOGRAPHY

THE HELMAND RIVER

CONTEXT: *Iran and Afghanistan have been embroiled in a prolonged disagreement regarding the distribution of water from the Helmand River. Recently, conflicts erupted along the border between the two nations.*

BACKGROUND: This river, Afghanistan's longest, originates near Kabul in the western Hindu Kush mountain range. It then meanders southwest through arid regions for approximately 1,150 kilometers (715 miles) before reaching Lake Hamun, which spans the Afghanistan-Iran border. The Helmand River plays a critical role in supporting agriculture, livelihoods, and ecosystems in the area.

THE GALAPAGOS ISLANDS

CONTEXT: *After acquiring bonds at a significantly reduced price, Credit Suisse, a Swiss bank, has facilitated a debt-for-nature exchange with Ecuador. As part of the agreement, Ecuador has committed to allocating millions of dollars each year for the next two decades to safeguard one of the planet's most invaluable ecosystems.*

BACKGROUND: The Galapagos Islands, situated in a remote location, boast pristine natural surroundings and hold the status of a UNESCO World Heritage site. These islands played a pivotal role in Charles Darwin's exploration and subsequent formulation of his theory of evolution, as they harbor a diverse array of animal life.

THE PACIFIC ISLAND COUNTRIES (PICS)

CONTEXT: *Upon his arrival in Papua New Guinea for the Forum for India–Pacific Islands Cooperation (FIPIC) summit, Indian Prime Minister Narendra Modi received a warm reception from Papua New Guinea's Prime Minister James Marape.*

BACKGROUND: The Pacific Island Countries (PICs) consist of a collection of 14 island nations situated in the Southwestern Pacific. These nations include the Cook Islands, Fiji, Kiribati, the Marshall Islands, Micronesia, Nauru, Niue, Samoa, the Solomon Islands, Palau, Papua New Guinea, Tonga, Tuvalu, and Vanuatu. These islands are strategically positioned at the intersection of significant maritime trade routes. Among the Pacific Island Countries (PICs), Fiji and Papua New Guinea (PNG) have the largest populations and wield the most influence.
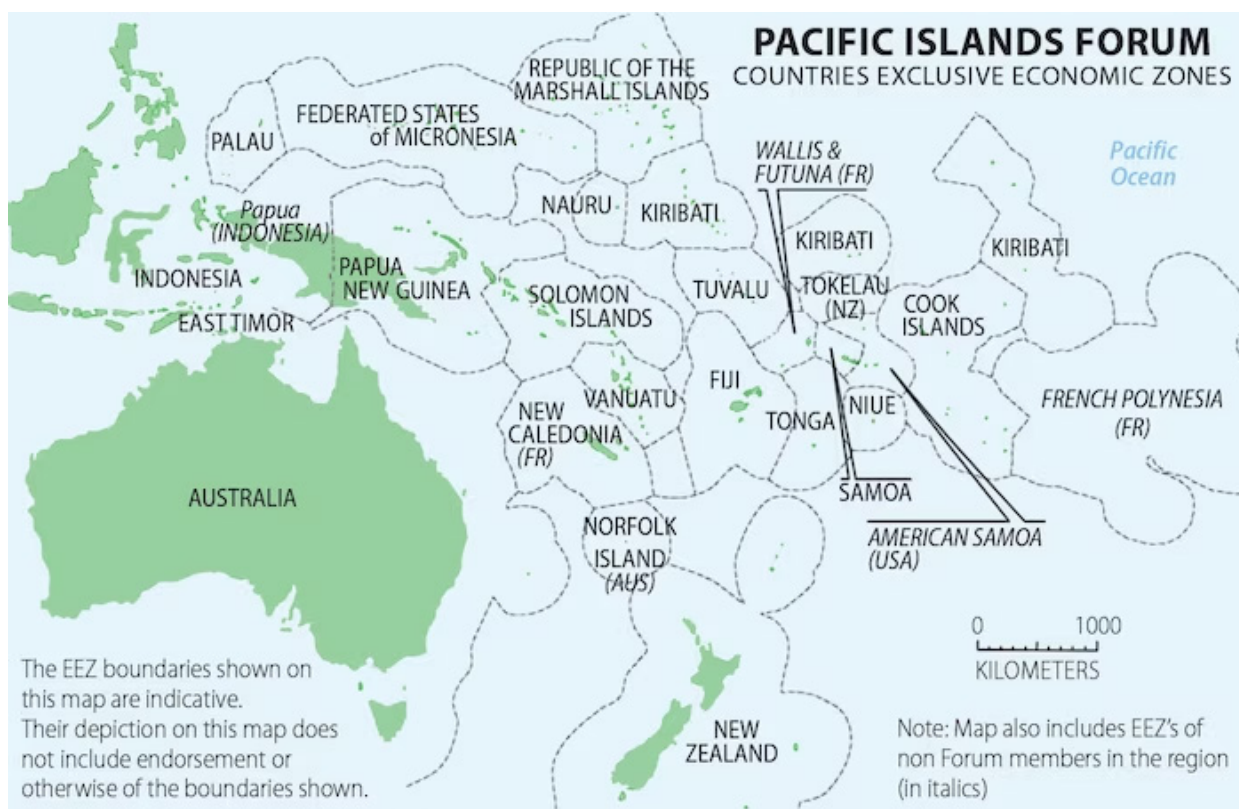
THE ZOJILA TUNNEL

CONTEXT: *India's longest road tunnel, the Zojila tunnel, is set to become the longest bi-directional tunnel in Asia, spanning an impressive length of 14.15 km. Its primary purpose is to establish a vital connection between Srinagar and Leh.*

BACKGROUND: The upcoming Zojila tunnel will ensure uninterrupted connectivity between Ladakh and the rest of India throughout the year. This development will greatly benefit the local population, who will enjoy improved access, as well as the military, as it will expedite the movement of troops and essential supplies in this strategically significant region.

Additionally, a connecting tunnel will be constructed from Z-Morh on NH1 to the Zojila tunnel, situated in the Zojila Ghats between Sonmarg and Kargil. This comprehensive project, spanning a distance of 33 km, is a joint effort between the union territories of Jammu and Kashmir and Ladakh.

The closure of this route during severe winter conditions, due to the risks of avalanches, landslides, and treacherous roads, leaves areas beyond the pass isolated from the rest of the country for a minimum of five months.

BI-DIRECTIONAL TUNNEL TO LEH

First survey 1997

Planning started 1999 (after Kargil war)

Drass

Minamarg

Length of tunnel 14.2 km

Baltal

Srinagar-Leh highway

Cost of Project ₹6,809cr

Completion target 7 years

Srinagar — J&K

Existing road

Tunnel to be built **400 meters beneath** (more than 5 times height of Qutub Minar) the existing road

Parallel escape tunnel of 14.2 km

Design speed at **80 kmph**

8 ventilation sections

Pedestrian cross passage at every 250 meters & vehicle cross passage at 750 mters

Emergency telecommunication system

Peak min temperature at **-45 degree**

THE TURKISH STRAITS

CONTEXT: *Turkey is preparing to enforce an international treaty governing the transit of naval vessels through its strategically significant straits, granting them the authority to regulate the movement of Russian warships between the Black Sea and the Mediterranean Sea.*

BACKGROUND: The Turkish Straits, also referred to as the Bosporus and Dardanelles Straits or the Black Sea Straits, serve as vital waterways connecting the Black Sea to the Aegean Sea via the Sea of Marmara. These straits constitute the sole passage for Black Sea ports to reach the Mediterranean and other destinations beyond.

YANKTI KUTI VALLEY

CONTEXT: *The Yankti Kuti valley, located in the easternmost region of Pithoragarh district in Uttarakhand, has witnessed the occurrence of glacial advances.*

BACKGROUND: The intense tectonic movements that took place many thousands of centuries ago along a significant tributary of the Kali Ganga river, in what is now the Pithoragarh district of Uttarakhand, may have resulted in a sudden alteration of the glacial flow direction. The Kuthi Yankti River serves as a prominent tributary of the Kali Ganga River.

THE SUN HALOS

CONTEXT: Under specific favorable conditions, the atmosphere can create captivating visual phenomena such as halos, sun pillars, and sundogs. Halos form as a result of sunlight or moonlight bending, or refracting, through ice crystals found in thin cirrus clouds, resulting in a ring of light around the sun or moon. Halos typically appear as bright, white rings, but they can also exhibit various colors.

Sundogs, also known as mock suns or parhelia, are colored patches of light that emerge due to the refraction of light through ice crystals. They appear approximately 22 degrees away from the sun, either to the left, right, or on both sides, depending on the presence of ice crystals. The colors of sundogs usually range from red near the sun to blue on the outer edge.

Sun pillars manifest as vertical shafts of light extending above the sun, most commonly observed during sunrise or sunset. They form when ice crystals descend through the air, reflecting the sun's rays. Keep an eye out for sun pillars when the sun is low on the horizon and cirrus clouds are present.

MAMMATUS CLOUDS

Mammatus clouds exhibit some of the most extraordinary and distinct cloud formations characterized by a series of bulges or pouches protruding from the base of a cloud. The appearance of Mammatus formations can vary greatly, ranging from the classic protruding shape to an elongated tube hanging down from the cloud above. Mammatus clouds are commonly observed along coastlines and over bodies of water. These cloud formations can display smooth, ragged, or lumpy lobes, and they may have varying degrees of opacity or translucency. Mammatus clouds typically develop in conjunction with large cumulonimbus clouds. Turbulence within the cumulonimbus cloud often leads to the formation of Mammatus, particularly beneath the projecting anvil as it rapidly descends to lower altitudes.

SPACE FOR ROUGH WORK

POLITY AND GOVERNANCE

UPHOLDING CONSTITUTIONAL INTEGRITY

CONTEXT: *The Kesavananda Bharati vs State of Kerala case, delivered by the Supreme Court of India on April 24, 1973, marked a significant milestone in the constitutional history of India. It involved a crucial legal battle that redefined the relationship between Parliament, the Constitution and the Judiciary. This essay examines the case and explores the concept of the Basic Structure Doctrine, which emerged as a result of this landmark judgment. It further delves into the application of the doctrine over the past 50 years and highlights its significance in safeguarding constitutional integrity.*

BACKGROUND: Parliament's Power to Amend the Constitution

The case of Kesavananda Bharati vs State of Kerala was rooted in the debate surrounding the extent of Parliament's power to amend the Constitution. Prior to the Kesavananda Bharati case (April 24, 1973), several key judgments and Constitutional amendments by the Parliament shaped the discourse.

SIGNIFICANT MILESTONES TO KESAVANDA BHARATI CASE IN 1973

1. The Insertion of the 9th Schedule and Judicial Review

The 1st Amendment of 1951 introduced the 9th Schedule, which shielded laws placed within it from judicial review. The Shankari Prasad (1951) and Sajjan Singh (1965) cases upheld the 1st Amendment, asserting Parliament's unrestricted power to amend any part of the Constitution.

2. Golaknath Case: Parliament's Limitations on Amending Fundamental Rights

The Golaknath vs State of Punjab case in 1967 marked a significant shift in the interpretation of Parliament's amending power. The Supreme Court ruled that Parliament could not amend fundamental rights.

3. The 24th Amendment and Insulating Amendments from Judicial Review

The 24th Amendment Act of 1971 amended Articles 13 and 368 of the Constitution, granting Parliament the power to amend any provision of the Constitution and shielding such amendments from Judicial Review.

4. The Kesavananda Bharati Case and the Basic Structure Doctrine

The Kesavananda Bharati case was decided by a 13-judge Constitution Bench of the Supreme Court. The verdict, with a narrow 7-6 majority, established the concept of the Basic Structure Doctrine.

UNDERSTANDING THE BASIC STRUCTURE DOCTRINE

The Basic Structure Doctrine, originating from the German Constitution, defines certain inherent and intrinsic aspects of the Indian Constitution that are inviolable and cannot be amended even by Parliament. While parliamentary democracy, fundamental rights, judicial review, and secularism are considered basic structures, the court determines additional elements on a case-by-case basis.

APPLICATION OF THE BASIC STRUCTURE DOCTRINE

The Basic Structure Doctrine has played a pivotal role in judicial review of laws passed by the Indian Parliament. The court has invoked this doctrine sparingly but has mostly struck down amendments that curtail judicial powers.

CONSTITUTIONAL AMENDMENTS EVALUATED UNDER THE BASIC STRUCTURE DOCTRINE

Since the landmark Kesavananda Bharati case in 1973, the Constitution of India has been amended by the Parliament nearly 60 times. The Supreme Court of India has evaluated over 16 constitutional amendments in light of the Basic Structure Doctrine. Out of these, 9 amendments have been upheld by the court, affirming their compatibility with the fundamental principles and values of the Constitution. However, in 6 instances, the court has exercised its authority to partially strike down amendments that were found to infringe upon or undermine the basic structure of the Constitution. These cases demonstrate the judiciary's commitment to preserving the integrity of the Constitution and ensuring that amendments do not dilute its core principles and fundamental rights.

SIGNIFICANT STRUCK-DOWN AMENDMENTS

Several amendments have been struck down entirely or partially by the Supreme Court based on the Basic Structure Doctrine. These include the Constitution (99th Amendment) Act, 2014, establishing the National Judicial Appointments Commission. NJAC would have been responsible for the appointment and transfer of judges, replacing the current Collegium system. It was struck down on the grounds that it threatened Judicial Independence- a basic feature of the Constitution

SIGNIFICANCE OF THE KESAVANANDA BHARATI VERDICT

The Kesavananda Bharati case holds immense significance in the constitutional history of India. Despite the narrow majority of 7-6, the verdict had far-reaching implications for the balance of power between the judiciary and the majoritarian Parliament.

First and foremost, the case rejected majoritarian impulses and reaffirmed the foundations of a modern democracy. It established a clear boundary on the power of Parliament to amend the Constitution, emphasizing that certain core principles and values are beyond the scope of amendments. This marked a crucial assertion by the judiciary in safeguarding the constitutional rights and liberties of the citizens.

By establishing the concept of the Basic Structure Doctrine, the Kesavananda Bharati verdict introduced a novel approach to constitutional interpretation. It declared that the Constitution possesses a basic structure, comprising essential features that cannot be tampered with or altered by the Parliament. This doctrine acts as a safeguard against arbitrary amendments and preserves the fundamental principles of the Constitution, such as democracy, secularism, and judicial review.

The case also highlighted the importance of an independent judiciary in upholding the constitutional framework. It affirmed the judiciary's role as the custodian of the Constitution and protector of individual rights. The verdict's significance lies in its ability to check and balance the powers of the executive and legislative branches, ensuring that the rule of law prevails over majoritarian rule.

Furthermore, the Kesavananda Bharati case set a precedent for future judicial review of constitutional amendments. It provided a framework for evaluating the validity of amendments in light of the Basic Structure Doctrine, thereby establishing a principled and consistent approach to constitutional interpretation.

AYURVEDA PHYSICIANS AND ALLOPATHY DOCTORS NOT EQUATED: SUPREME COURT

CONTEXT: : *The Supreme Court of India overturns the 2012 Gujarat High Court order that granted equal pay and status to Ayurveda practitioners in government hospitals, distinguishing them from allopathic doctors.*

BACKGROUND: The apex court was hearing a batch of appeals challenging a 2012 Gujarat High Court order which had held that Ayurveda practitioners are entitled to be treated at par with doctors with MBBS degrees. A Bench of Justices V. Ramasubramanian and Pankaj Mithal had given the mentioned cases.

Supreme Court's Rationale for Unequal Treatment of Ayurveda Practitioners in Government Hospitals:

The Supreme Court provided several justifications for its decision to treat Ayurveda practitioners differently from doctors with MBBS degrees:

- Unequal Work Responsibilities: The court observed that both categories of doctors were not engaged in equal work, thus rendering equal pay unjustifiable.

- Specialized Skills: Allopathic doctors were found to be responsible for performing emergency duties, providing trauma care, handling complicated medical conditions, and conducting post-mortem/autopsy procedures.

- Patient Load Discrepancy: Doctors with MBBS degrees typically attend to a significantly larger number of patients during outpatient days in general hospitals, unlike Ayurveda practitioners who may have a comparatively lesser patient load.

By highlighting these factors, the Supreme Court established the rationale behind the differential treatment of Ayurveda practitioners in government hospitals compared to doctors with MBBS degrees.

STATUS OF DOCTORS IN INDIA:

The status of doctors in India reflects a significant disparity in the availability of healthcare professionals, particularly in the allopathic sector. According to reports, there is a considerable shortage of allopathic doctors in the country. The World Health Organization (WHO) recommends a doctor-population ratio of 1:1000, but in India, the ratio stands at approximately one allopathic government doctor for every 10,926 people. This glaring gap underscores the challenges faced in providing adequate healthcare services to the population.

In contrast to the shortage of allopathic doctors, the number of registered practitioners in the AYUSH (Ayurveda, Yoga and Naturopathy, Unani, Siddha, and Homeopathy) system has witnessed an increase. As of 2018, there were around 8 lakh registered AYUSH doctors in the country. These alternative systems of medicine have gained popularity among certain sections of the population and play a significant role in the healthcare landscape.

Over the years, efforts have been made to improve the availability of healthcare professionals in India. There has been a gradual increase in the number of allopathic medical practitioners, dental surgeons, and nurses per lakh population. This positive trend is a result of various initiatives aimed at expanding medical education, increasing the number of medical colleges, and improving the healthcare infrastructure.

SIGNIFICANCE

However, despite these efforts, the demand for healthcare services in India continues to outstrip the available supply of medical professionals. The shortage of allopathic doctors, especially in rural areas, remains a significant challenge. The government and relevant authorities need to focus on addressing this gap by implementing measures such as increasing the number of medical colleges, improving infrastructure in rural areas, and promoting healthcare education and training programs.

NEW TROIKA FOR THE RISE OF INDIA'S NORTH EAST

CONTEXT: *The third India-Japan Intellectual Dialogue (April 11–12, 2023), hosted by the Asian Confluence (ASCON), in Agartala, Tripura. Many transformative changes are happening in India's North East.*

BACK GROUND: Emerging Economic Development in India and Bangladesh with the Support of Japan

India and Bangladesh have made significant strides in overcoming security challenges, paving the way for economic development. This progress has been supported by political changes and the establishment of strong bilateral linkages. Japan has emerged as a crucial development partner, providing substantial support to both India, particularly in the Northeast region, and Bangladesh.

The joint efforts of India and Bangladesh have addressed various security challenges, creating a favourable environment for economic growth. Strengthened security measures have contributed to stability, serving as a solid foundation for further development. Political changes have fostered positive transformation and collaboration, leading to closer ties in trade, infrastructure, and people-to-people interactions.

Japan's involvement, especially in India's Northeast region, has been instrumental in promoting infrastructure projects and regional connectivity. Japan's contributions in sectors like technology and manufacturing have bolstered economic growth in both countries. As India and Bangladesh continue to address security challenges and strengthen political ties, their partnership with Japan holds great potential for further economic development, highlighting the importance of regional cooperation in fostering stability and prosperity

NATIONAL CIVIL SERVICES DAY

CONTEXT: *Every year 21st April is celebrated as the National Civil Services day. The first National Civil Services Day was celebrated on 21st April 2006.*

The Indian bureaucracy has been criticized for its heavy reliance on paperwork, causing delays in decision-making and inefficiencies in delivering public services. Complex administrative procedures and hierarchical structures often hinder timely issue resolution and effective policy implementation. The intricate rules and processes, while intended for accountability, can become burdensome, slowing down decision-making. The topdown decision-making approach, with multiple levels of approval, creates bottlenecks and reduces the efficiency in the administration. This in common bureaucratic red tape.anila please high light the term bureaucratic red tape in a suitable colour

BACKGROUND: By ensuring the implementation of the policies of the govt. and thereby the passage of the benefits to the people, the civil services form the backbone of the government administration. The day commemorates the event when Sardar Vallabhai Patel, independent India's first home minister created the Indian Administrative service in 1947, by calling them to be the **"steel frame of India"**.

The civil services in India consists of

- Indian Administrative services (IAS)
- Indian Police service
- Indian Forest Service
- And host other services generally known as the Central Services (Group A & B)

MAJOR ISSUES FACED BY THE INDIAN CIVIL SERVICES

EXCESSIVE PAPERWORK: The Indian bureaucracy has been criticized for its heavy reliance on paperwork, causing delays in decision-making and inefficiencies in delivering public services. Complex administrative procedures and hierarchical structures often hinder timely issue resolution and effective policy implementation. The intricate rules and processes, while intended for accountability, can become burdensome, slowing down decision-making. The top-down decision-making approach, with multiple levels of approval, creates bottlenecks and reduces the efficiency in the administration. This in common parlance is called bureaucratic red tape.

ETHICAL ISSUES IN CIVIL SERVICES: There has been a growing concern about the erosion of ethical values within the civil services. Instances of corruption, bribery, and unethical behavior have raised questions about the integrity of some civil servants. This erosion of ethical values undermines public trust in the system and hampers the delivery of fair and transparent governance. It is imperative to promote a culture of ethical conduct, strengthen accountability mechanisms, and provide robust training on ethics and integrity to civil servants. Upholding and reinforcing ethical values within the civil services is crucial for maintaining public confidence and ensuring effective and unbiased service delivery.

LACK OF PROFESSIONALISM & CAPACITY BUILDING IN INDIAN CIVIL SERVICES:

The Indian Civil Services have been criticized for a lack of professionalism and inadequate capacity building. Concerns have been raised about the competency and skills of civil servants in certain areas. Insufficient training programs and professional development opportunities hinder their ability to effectively address the complex challenges of governance. To enhance professionalism, there is a need for robust capacity building initiatives that provide continuous skill enhancement, promote specialized knowledge, and foster a culture of continuous learning within the civil services.

INEQUITABLE INCENTIVE SYSTEM FOR MERITORIOUS AND UPRIGHT OFFICERS

There is a prevailing concern regarding the ineffective incentive system within the Indian Civil Services that fails to adequately reward meritorious and upright officers. The existing system often does not incentivize exceptional performance, integrity, or innovative thinking. This can demotivate deserving officers and create a disincentive for them to go above and beyond their duties.

RIGID AND OUTMODED RULES AND PROCEDURES RESTRICT THE EXERCISE OF INDIVIDUAL JUDGEMENT AND EFFICIENT PERFORMANCE.

These outdated frameworks restrict flexibility, adaptability, and the ability to respond effectively to dynamic situations, hindering innovation and hindering optimal decision-making. Reforms to modernize and streamline these rules and procedures are essential to promote a more agile and efficient civil service that can effectively address the evolving needs of society.

LACK OF ACCOUNTABILITY AND TRANSPARENCY: The absence of robust mechanisms for holding officials accountable for their actions and the lack of transparency in decision-making processes undermines public trust and hampers efforts to combat corruption and malfeasance. The absence of effective protection for whistle-blowers further discourages individuals from exposing wrongdoing, perpetuating a culture of impunity and hindering efforts to ensure transparency and accountability within the civil services.

PATRIMONIALISM: It is a system in which individuals in power utilize public resources and positions for personal gain or to benefit their own networks and allies. Patrimonialism, though not pervasive, has been observed in the Indian Civil Services. Instances of nepotism and favouritism have raised concerns about the influence of personal networks and familial connections in appointments and promotions, potentially compromising meritocracy and fairness within the system.

POLITICAL INTERFERENCE: Political interference in the Indian Civil Services has led to arbitrary transfers and created an environment of insecurity in tenures. Civil servants often face frequent and unexpected transfers based on political considerations, which can disrupt their work and undermine their ability to provide stable and consistent governance.

INERTIA TO RESIST CHANGE FROM BUREAUCRACY: The major resistance to changes occurs from within the civil service themselves. Some civil servants may resist changes in procedures, policies, or administrative reforms due to various reasons such as fear of the unknown, concerns over job security, or a preference for the status quo. This resistance can hinder the implementation of necessary reforms and impede efforts to modernize

and improve the efficiency and effectiveness of the civil services. Addressing this resistance requires effective communication, stakeholder engagement, and creating a conducive environment for civil servants to embrace and adapt to changes.

EFFORTS FROM GOVT. TO IMPROVE THE CIVIL SERVICE.

1) TOWARDS CAPACITY BUILDING AND SPECIALISATION

MISSION KARMAYOGI: Mission Karmayogi is a government initiative launched in September 2020 by the Government of India with the aim of transforming the capacity, performance, and efficiency of civil servants in India. It is a comprehensive program that focuses on building the capacities and skills of civil servants to enhance their effectiveness and promote good governance.

The key objectives of Mission Karmayogi include:

COMPETENCY BUILDING: The initiative seeks to provide continuous learning and development opportunities for civil servants to enhance their skills and competencies through a competency framework and a digital platform for e-learning.

INDIVIDUAL DEVELOPMENT PLANS: It aims to create individual development plans for civil servants, which will help identify their strengths and areas for improvement, and design personalised training programs accordingly.

INSTITUTIONAL FRAMEWORKS: Mission Karmayogi aims to establish institutional frameworks, such as the Prime Minister's Human Resource Council and the Capacity Building Commission, to oversee and facilitate the implementation of capacity-building initiatives.

INTEGRATED GOVERNMENT HR MANAGEMENT: The initiative aims to promote an integrated and holistic approach to human resource management in the government, including performance management, career progression, and talent management.

COLLABORATION AND PARTNERSHIPS: Mission Karmayogi emphasises collaboration and partnerships with national and international institutions, as well as knowledge sharing, to foster a culture of continuous learning and best practices.

Through Mission Karmayogi, the government aims to create a future-ready civil service that is responsive, accountable, and capable of effectively addressing the evolving needs and challenges of governance in India.
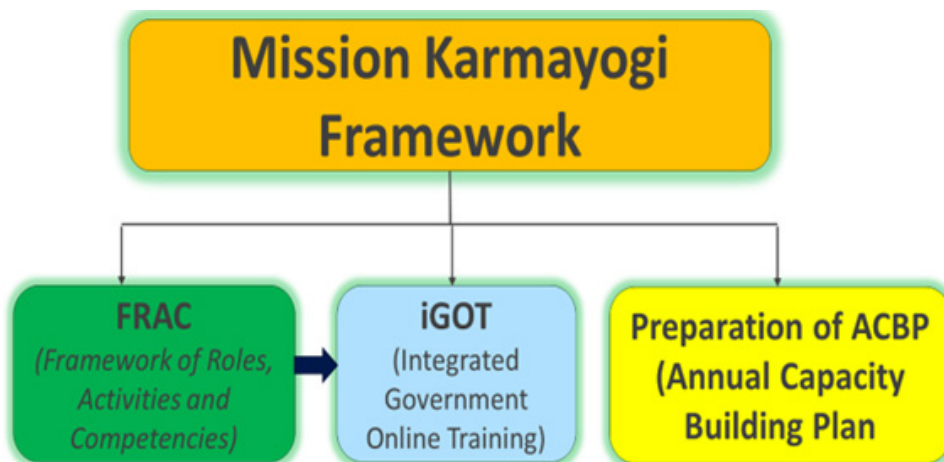
LATERAL ENTRY: Lateral Entry refers to the practice of hiring individuals from outside the traditional bureaucratic or civil service system into senior-level positions in the government. It is an alternative recruitment method that aims to bring in expertise, fresh perspectives, and specialized skills to supplement the existing talent pool in the civil services. Lateral entry is typically used to fill specific positions that require domain expertise or technical knowledge. Proponents argue that it can enhance efficiency, innovation, and effectiveness in governance

2)TOWARDS TRANSPARENCY AND ACCOUNTABILITY:

SVAMITVA: The Svamitva is a government initiative in India aimed at providing legal property rights to residents in rural areas. Under the scheme, comprehensive surveys and mapping of land parcels are conducted using modern technology to demarcate individual residential and habitation areas. Property cards are then distributed to landowners, facilitating transparency, reducing land disputes, and enabling access to credit and government benefits. The scheme aims to promote rural development, financial inclusion, and entrepreneurship by ensuring accurate documentation of land ownership. It leverages technology to streamline the process and empower rural communities, contributing to inclusive growth and equitable distribution of resources.

THE CENTRALISED PUBLIC GRIEVANCE MONITORING SYSTEM (CPGRAMS): This is an online platform established by the Government of India to monitor and address public grievances across various government departments. It provides a centralized mechanism for citizens to register complaints and track their resolution. CPGRAMS ensures transparency and accountability in grievance handling by assigning unique registration numbers to complaints and enabling real-time monitoring by government officials. The system facilitates effective communication between complainants and concerned authorities, streamlining the grievance redressal process. It also generates valuable data and analytics to identify systemic issues and improve service delivery. CPGRAMS promotes citizen-centric governance and contributes to building trust and accountability in public administration.

RTI, CITIZEN CHARTER etc: The Right to Information (RTI) is a legal framework that empowers citizens to access information held by public authorities, promoting transparency and accountability in governance. Citizen Charter, on the other hand, is a document that outlines the rights and services guaranteed to citizens by government departments, ensuring efficient and accountable service delivery.

3) DESIRED OUTCOME FROM THE CIVIL SERVICES

MAXIMUM GOVERNANCE, MINIMUM GOVERNMENT" is a principle that emphasizes efficient and effective governance with minimal interference and bureaucracy. It aims to streamline government processes, reduce red tape, and enhance service delivery to citizens. The principle encourages a lean and agile government that focuses on essential functions while delegating responsibilities to lower levels of administration. It promotes the use of technology and digital platforms to simplify procedures, enhance transparency, and improve accountability. By optimizing governance structures and processes, "Maximum Governance, Minimum Government" aims to create an environment conducive to economic growth, innovation, and citizen empowerment, ultimately leading to better public services and overall development.

COOPERATIVE FEDERALISM: Cooperative federalism is a principle that emphasizes collaboration and cooperation between the central government and state governments in a federal system. It promotes joint decision-making, resource sharing, and coordination in policy implementation, recognizing that the federal and state governments are interdependent and need to work together to address complex issues and meet the needs of citizens effectively.

CONCLUSION: Civil Service Day holds great significance in India as it highlights the crucial role played by civil servants in nation-building and governance. It serves as a reminder of the dedication and commitment of civil servants towards public service. The day provides a platform for acknowledging their achievements, discussing challenges, and fostering a spirit of innovation and excellence in the civil services. By recognizing the contributions of civil servants, Civil Service Day reinforces the importance of a competent and accountable bureaucracy in driving inclusive development and serving the needs of the citizens. It also encourages continuous improvement, professionalism, and a citizen-centric approach in the civil services, paving the way for a more effective and responsive administration.

NATIONAL MEDICAL DEVICES POLICY, 2023

CONTEXT: *The Union Cabinet's approval of the National Medical Devices Policy, 2023 marks a significant step towards strengthening the medical devices industry in the country. With a high dependency on imported medical devices, the policy aims to promote domestic manufacturing, innovation, and self-reliance.*

BACKGROUND: A High Dependency on Imports:

Nearly 80% of medical devices sold in India are imported, particularly high-end devices.

India's per capita spending on medical devices is significantly lower than the global average. (At $3 in India with global average being $47.)

OBJECTIVES OF THE POLICY:

Facilitating Orderly Growth:

- The medical devices sector holds a 5% share in the global market.
- Aim to achieve a 10-12% share in the global market over the next 25 years.
- Expanding the market size to $50 billion by 2030 from the current $11 billion.
- Enabling Ecosystem for Manufacturing
- Encouraging domestic investments and production of medical devices.
- Promoting the safety and efficacy of medical devices.
- Providing support in training and capacity-building programs.

STRATEGIES TO PROMOTE THE MEDICAL DEVICE SECTOR:

A. Streamlining Regulatory Processes:

- Creation of a Single Window Clearance System for Licensing of Medical Devices.
- Enhancing the role of Indian Standards like BIS.
- Designing a coherent pricing regulation.

B. Enabling Infrastructure:

- Developing medical device parks and clusters aligned with the National Industrial Corridor Program.

- Integration with the proposed National Logistics Policy 2021.

C. Facilitating R&D and Innovation:

- Establishing Centers of Excellence in academic and research institutions.
- Supporting innovation hubs and "plug and play" infrastructures.
- Encouraging start-ups in the medical device sector.

D. Attracting Investments in the Sector:

- Support through schemes like Make in India, Ayushman Bharat program, and Heal-in-India.
- Promoting public-private partnerships.

E. Human Resources Development:

- Skilling, reskilling, and up skilling of professionals in the medical device sector.
- Developing partnerships with foreign academic and industry organizations.

F. Brand Positioning and Awareness Creation:

- Learning from global manufacturing and skilling best practices.
- Building strong networks and knowledge-sharing forums.

GOVERNMENT INITIATIVES:

1. Production-Linked Incentive (PLI) Scheme for Medical Devices:

- Commissioning of 14 projects producing 37 products.
- Manufacturing of high-end medical devices initiated.

2. Setting up Medical Devices Parks:

- Parks established in Himachal Pradesh, Madhya Pradesh, Tamil Nadu, and Uttar Pradesh.

3. Medical Devices Rules 2017:

- Classification of medical devices into four classes based on risks and international standards.

4. National Health Policy 2017:

- Emphasis on promoting R&D and domestic manufacturing of medical devices.

SIGNIFICANCE:

The National Medical Devices Policy, 2023 holds the potential to transform the medical devices industry in India. By promoting domestic manufacturing, innovation, and self-reliance, the policy aims to address the high dependency on imports and foster the growth of the healthcare sector. Through streamlined regulatory processes, infrastructure development, R&D support, and strategic initiatives, the policy is expected to propel India towards becoming a competitive and innovative player in the global medical devices market. Ultimately, the policy is poised to cater to the healthcare

RULE OF LAW

CONTEXT: *certain incidents in Uttar Pradesh and constitutional principles of Rule of Law*

BACKGROUND: The Rule of Law is a fundamental principle that upholds the supremacy of the law and ensures that no individual or entity is above it. In India, the Rule of Law is enshrined in the Constitution (Article 14), emphasizing that all authorities must adhere to it. It establishes a framework that promotes equality, justice, and accountability. It ensures that everyone is subject to the law, regardless of their position or influence, and that they are treated fairly and impartially. The Rule of Law in India safeguards individual rights, prevents arbitrary exercise of power, and fosters a just and democratic society based on the principles of justice, liberty, and equality.

A.V Dicey and his 3 Principles of RULE OF LAW

A.V. Dicey, a British jurist, outlined three key principles of the Rule of Law. Each principle along with examples that illustrate their application are listed below

1)SUPREMACY OF LAW:

Under this principle, the law is supreme, and no individual, including the government, is exempt from it. Everyone is subject to the law and must abide by it.

Example: In India, the Prime Minister is the head of the government and enjoys lot of real authority. But being a public servant, is also subject to the law. If the Prime Ministers commits a crime, they can be held accountable and prosecuted like any other citizen.

2)EQUALITY BEFORE THE LAW:

This principle asserts that all individuals, regardless of their status, wealth, or influence, are equal before the law. No one is above the law, and everyone should be treated impartially.

Example: If a wealthy business tycoon and an ordinary citizen are accused of the same crime, both should receive equal treatment under the law. They should face the same legal procedures and be subject to the same consequences if found guilty.

3)INDIVIDUAL RIGHTS AND LIBERTIES:

This principle ensures the protection of individual rights and liberties. It guarantees that individuals have certain inherent rights that cannot be arbitrarily taken away by the government or any other entity.

Example: Freedom of speech and expression is a fundamental right in India. Citizens have the liberty to express their opinions and criticize the government without fear of retaliation, as long as it does not incite violence or harm others.

These principles collectively establish a framework where laws are supreme, everyone is equal before the law, and individual rights and liberties are protected. They are vital in maintaining a just and democratic society, fostering accountability, and upholding the principles of justice, fairness, and equality.

CERTAIN EXCEPTIONS TO RULE OF LAW IN INDIAN CONTEXT

There are certain exceptions and immunities granted to the President and Governors of states in India. These exceptions are provided to ensure the smooth functioning of their constitutional roles.

1) Non-answerability: The President and Governors are not answerable to any court for the exercise of their powers and duties. This means that they cannot be sued or held personally accountable in a court of law for the decisions they make in their official capacity.

2) Immunity from Criminal Proceedings: The President and Governors enjoy immunity from criminal proceedings during their tenure in office. This means that no criminal case can be initiated against them for any act committed during their term, regardless of its nature.

3) Notice Period for Civil Proceedings: Before initiating a civil proceeding against the President or a Governor, a two-month notice period must be served. This provides an opportunity for the President or Governor to respond or take appropriate action before the legal proceedings commence.

These exceptions and immunities are designed to safeguard the independence and impartiality of these constitutional offices. However, it is important to note that these exceptions are not absolute and do not shield them from accountability for unconstitutional or unlawful actions. In cases of grave misconduct, impeachment procedures or other constitutional mechanisms can be invoked to hold them accountable.

RULE of Law Vs RULE BY LAW

The Rule of Law and Rule by Law are two contrasting concepts in governance. The Rule of Law emphasizes the supremacy of law, equality before the law, and protection of individual rights, ensuring that all individuals, including the government, are subject to the law.

In contrast, Rule by Law refers to a system where the law is used as a tool for the authorities to maintain their power and control, often disregarding principles of fairness and justice.

For example, under the Rule of Law, a government official can be held accountable for corruption, while under Rule by Law, the same official may go unpunished due to political influence or manipulation of legal processes.

THE ROLE OF THE INDIAN JUDICIARY IN SAFEGUARDING THE RULE OF LAW

The Indian judiciary plays a crucial role in establishing the Rule of Law in India through various functions and landmark judgments. Here are some examples highlighting the role of the judiciary in upholding the Rule of Law:

ASSUMPTION OF RULE OF LAW: In the case of Bachhan Singh v. State of Punjab, the Supreme Court highlighted three fundamental assumptions of the Rule of Law:

a) legislation by a democratically elected legislature,

b) limitations on legislative power, and

c) The necessity of an independent judiciary to safeguard citizens from abuses of power.

PROTECTION OF FUNDAMENTAL RIGHTS: In Kesavananda Bharati v. State of Kerala, the Supreme Court declared that the Constitution of India has a basic structure that cannot be amended by the Parliament, ensuring the protection of fundamental rights and preventing the dilution of the constitutional framework.

JUDICIAL REVIEW: In Maneka Gandhi v. Union of India, the Supreme Court established the principle that the law must be valid, and a just, reasonable, and fair procedure must be followed before depriving an individual of their life and liberty. This judgment emphasized the importance of constitutional safeguards and due process.

INTERPRETATION OF LAWS: In Vishakha v. State of Rajasthan, the Supreme Court issued guidelines for preventing sexual harassment in the workplace. This judgment highlighted the judiciary's role in interpreting laws and filling gaps in legislation (legislative lacunae) until the Parliament enacts a specific law.

These examples demonstrate how the Indian judiciary actively contributes to the establishment and preservation of the Rule of Law by ensuring the supremacy of the Constitution, protecting fundamental rights, conducting judicial review, and providing guidance in the interpretation of laws. Through its independent and impartial role, the judiciary safeguards the principles of justice, fairness, and equality in the Indian legal system.

RULE OF LAW INDEX

According to the Rule of Law Index 2022 published by the World Justice Project (WJP), India has been ranked 77 out of 140 countries. This marks a slight decline from its 2019 ranking of 68 out of 126 countries. The WJP Index evaluates countries based on various factors, including constraints on government powers, absence of corruption, open government, fundamental rights, order and security, regulatory enforcement, civil justice, and criminal justice.

India's performance in the index reveals areas that require improvement. The country scored 94 in adherence to fundamental rights, highlighting the need for further emphasis on protecting and upholding individual liberties. In civil justice, India ranked 111, reflecting challenges in ensuring timely and effective resolution of civil disputes. The country scored 89 in criminal justice, indicating the need for reforms to enhance the efficiency and fairness of the criminal justice system. Additionally, India received a score of 93 in the absence of corruption, emphasizing the importance of continued efforts to combat corruption at all levels.

While the WJP Index does not provide sub-national ranks, the India Justice Report 2022 identifies Uttar Pradesh (UP) as the worst-performing state among the 18 large and mid-sized states of India. This suggests that UP faces significant challenges in areas such as governance, access to justice, and protection of fundamental rights.

India's ranking in the Rule of Law Index highlights both achievements and areas for improvement. The country must prioritize strengthening adherence to fundamental rights, enhancing civil and criminal justice systems, and combatting corruption to further advance the rule of law and ensure justice for its citizens. The identification of Uttar Pradesh as the worst-performing state underscores the need for targeted efforts to address specific challenges at the sub-national level. Overall, sustained reforms and a commitment to the principles of the rule of law will

contribute to a just and inclusive society in India.

WHY RULE OF LAW MATTERS

The rule of law is a fundamental principle that establishes the framework for a just and orderly society. It refers to a system where laws are applied equally to all individuals, including those in positions of power, and where legal processes are fair, transparent, and predictable. The rule of law matters for several reasons, and research has highlighted its positive correlation with various socioeconomic outcomes.

Firstly, a strong adherence to the rule of law is associated with higher economic growth. When laws are clear, consistently enforced, and protect property rights, it promotes business confidence, investment, and economic stability. It provides a level playing field for businesses, encourages innovation and entrepreneurship, and ensures that contracts and transactions are enforceable. This fosters economic development and attracts both domestic and foreign investment.

Secondly, the rule of law is linked to better educational attainment. When legal frameworks are robust and ensure equal access to education, it creates an environment where individuals can pursue learning opportunities without discrimination or undue obstacles. This leads to increased literacy rates, improved educational outcomes, and greater human capital development, which are crucial for a country's long-term growth and development.

Thirdly, the rule of law is essential for improved health outcomes. It establishes the legal and regulatory framework for public health measures, access to healthcare, and protection against harmful practices. When laws are enforced, it helps in controlling disease outbreaks, ensuring the safety and efficacy of medical treatments, and protecting individuals' rights to health and well-being.

Lastly, the rule of law contributes to greater peace and stability. When legal institutions are strong, independent, and trusted by the public, it reduces the likelihood of conflicts and social unrest. It provides a mechanism for resolving disputes peacefully, upholds human rights, and fosters a sense of justice and fairness in society. A stable and peaceful environment is conducive to economic development, social progress, and overall well-being.

In summary, the rule of law matters because it underpins economic growth, educational attainment, health outcomes, and peace and stability. By providing a foundation of fairness, justice, and predictability, it creates an environment where individuals and businesses can thrive, societies can progress, and people's rights and well-being are protected. Promoting and upholding the rule of law is crucial for achieving sustainable development and building inclusive and prosperous societies.

CONCLUSION : The Rule of Law has become an essential principle in civilized societies, synonymous with individual liberty. Its promotion is crucial for the socio-economic development and overall well-being of citizens. Stricter adherence to the Rule of Law is positively correlated with higher economic growth, improved educational attainment, better health outcomes, and greater peace and stability. By upholding fairness, justice, and predictability, countries can foster inclusive societies where individuals can thrive and fundamental rights are protected. Embracing the Rule of Law is essential for building prosperous and harmonious nations.

THE TASK OF REINVIGORATING A FEELING OF BROTHERHOOD

CONTEXT: *Given India's embrace of the concept of 'unity in diversity', fostering a sense of fraternity becomes an indispensable virtue.*

Background: Fraternity, derived from the French word "fraternité," encompasses the concepts of brotherhood, friendship, community, and cooperation. In the context of society, fraternity signifies a sense of common brotherhood among individuals, fostering unity and solidarity within social life.

Fraternity goes beyond mere coexistence and acknowledges the interdependence and interconnectedness of individuals. It emphasizes the importance of mutual respect, empathy, and support among members of a community or society. It promotes the idea of a shared purpose, where individuals work together towards common goals, transcending divisions based on race, religion, caste, gender, or socio-economic status.

In the Indian context, fraternity holds significant importance as India is a diverse nation with various languages, cultures, religions, and traditions. It serves as a unifying force, binding people together despite their differences. Fraternity encourages inclusivity, tolerance, and understanding, allowing individuals to celebrate diversity while promoting a harmonious coexistence.

THE CONCEPT OF FRATERNITY IN INDIAN CONSTITUTION

Fraternity, as enshrined in the Indian Constitution, holds significant importance and reflects the vision of a united and inclusive nation. During the submission of the Draft Constitution to the President of the Constituent Assembly on February 21, 1948, B.R. Ambedkar, the chairman of the Drafting Committee, highlighted the inclusion of the clause on "fraternity" in the Preamble. This decision was made despite it not being part of the initial Objective Resolution.

Consequently, the Preamble of the Indian Constitution, adopted on November 26, 1949, and amended by the 42nd Amendment in 1976, explicitly mentions fraternity as a fundamental principle. It emphasizes the role of fraternity in ensuring the dignity of every individual and the unity and integrity of the nation.

In addition, Article 51A of the Constitution, expanded by the 42nd Amendment in 1976, places a responsibility on every citizen to promote harmony and the spirit of common brotherhood among all people in India. Although both the Preamble and the Fundamental Duties cannot be legally enforced, they possess a moral and spiritual appeal, serving as guiding principles for the nation.

IMPORTANCE OF FRATERNITY

The concept of fraternity plays a crucial role in fostering social cohesion and unity within a society. It serves as a cornerstone of constitutional morality, reinforcing the ideals of justice, liberty, and equality. Fraternity goes beyond mere tolerance and embraces the spirit of brotherhood, cooperation, and mutual respect among individuals.

Fraternity is closely intertwined with social solidarity. It is through a sense of fraternity that individuals recognize and uphold the inherent dignity and rights of others. By promoting inclusivity, understanding, and empathy, fraternity paves the way for a harmonious society where every individual can thrive.

For example, in the context of justice, fraternity ensures that equal treatment and opportunities are extended to all members of society, regardless of their background or circumstances. It inspires people to stand up against discrimination and advocate for fairness and equal rights. Fraternity brings people together in the pursuit of common goals, fostering a sense of shared responsibility and collective well-being.

Similarly, in the realm of liberty, fraternity acts as a unifying force. It encourages individuals to exercise their freedoms responsibly, taking into account the well-being and interests of others. Through fraternity, people recognize the interdependence of their liberties and work towards maintaining a balance between individual freedoms and the collective good.

Moreover, fraternity strengthens the pursuit of equality. It promotes inclusivity and understanding among diverse groups, challenging prejudices and stereotypes. By fostering a sense of brotherhood and community, fraternity creates an environment where everyone has an equal opportunity to participate, contribute, and succeed.

To illustrate, consider the efforts of social movements advocating for gender equality. Fraternity plays a crucial role in breaking down gender barriers, fostering respect, and promoting the empowerment of women. It encourages men and women to work together towards creating a society free from gender-based discrimination and prejudice.

In essence, fraternity is not merely a concept but a lived value that shapes the social fabric of a nation. It requires fostering a sense of belonging and shared purpose among individuals, transcending differences and embracing the diversity that enriches society. By cultivating fraternity, societies can create a strong foundation for social harmony, unity, and progress.

CHALLENGES FOR THE CONCEPT OF FRATERNITY IN INDIA

The concept of fraternity in India faces several challenges that hinder its full realization and implementation:

Limited Understanding and Practice: Fraternity remains the least understood, discussed, and practiced aspect among the four pillars of constitutional morality. Its significance and practical implications are often overlooked or underestimated.

Inequality and Prejudice: Socio-economic disparities, caste-based discrimination, religious tensions, and other forms of inequality pose significant challenges to fostering a sense of fraternity. Deep-rooted prejudices and biases can hinder the establishment of inclusive and cohesive communities.

Politics of Hate and Weak Democratic Opposition: The rise of divisive politics and the spread of hate speech pose challenges to the principles of fraternity. When political leaders promote divisive ideologies and engage in hate speech, it undermines the spirit of brotherhood and solidarity among citizens. Additionally, a weak democratic opposition can fail to effectively counter such divisive narratives.

Nationalism and Solidarity: In certain contexts, fraternity can be overshadowed by a narrow form of loyalty to the state, emphasizing nationalism over the principle of solidarity among citizens. This exclusive form of nationalism may hinder the promotion of inclusivity and equal rights for all.

Feminist Criticism: Some feminists argue that the traditional definition of fraternity tends to exclude "sisterhood" and the specific experiences and struggles faced by women. They argue for a more inclusive understanding of fraternity that embraces gender equality and addresses the unique challenges faced by women.

Inter-State Conflicts and Security Challenges: Inter-state conflicts, left-wing extremism, terrorism, cyber security threats, and the spread of fake news can undermine the sense of fraternity among communities. These challenges create divisions and erode trust, making it difficult to foster unity and cooperation.

Addressing these challenges requires concerted efforts from various stakeholders, including the government, civil society organizations, educational institutions, and individuals. Promoting awareness and understanding of fraternity, fostering dialogue and inclusivity, and actively combating inequality and prejudice are crucial steps towards realizing the full potential of fraternity in Indian society.

Initiatives taken by the Indian Govt. to strengthen Fraternity

Inter-State and Zonal Councils: The establishment of inter-state and zonal councils facilitates regular interaction and coordination between the central government and state governments. These councils provide a platform for discussing and resolving issues of common interest, fostering cooperation, and promoting a sense of unity among different regions.

Social Initiatives: Initiatives like Ek Bharat – Shrestha Bharat aim to enhance cultural understanding, integration, and exchange between different states and union territories of India. These initiatives foster mutual respect, appreciation of diverse cultures, and promote a sense of brotherhood and unity among the people.

National Foundation for Communal Harmony (NFCH): The NFCH works towards promoting communal harmony and national integration. It supports programs and initiatives that aim to bridge communal divides, encourage dialogue, and promote understanding among different religious and social groups. The foundation plays a crucial role in fostering a spirit of fraternity and solidarity among communities.

Common Minimum Programme for Value Education: The government has launched a "Common Minimum Programme for Value Education" across the entire schooling system. This program focuses on instilling core constitutional values, including the values of unity, harmony, respect for diversity, and the spirit of fraternity among students. By integrating these values into the education system, the government aims to cultivate a sense of brotherhood and social cohesion from an early age.

These initiatives and programs contribute to creating an environment that promotes fraternity,

intercultural understanding, and unity among diverse communities in India. By fostering dialogue, education, and cooperation, the government aims to address the challenges and strengthen the principles of fraternity within society.

TASK AHEAD

Moving forward, it is crucial to strike a balance between upholding the dignity of individuals and ensuring the unity and integrity of the nation. To achieve this, certain steps can be taken:

Establishing a Functioning Moral Order: It is essential to foster a society where moral values and ethics are upheld. This requires cultivating a collective public conscience that promotes empathy, compassion, and respect for one another. By nurturing a sense of moral responsibility and accountability, individuals can actively imbibe the principles of fraternity and contribute to a harmonious society.

Embracing Gandhian Principles: Mahatma Gandhi, the father of the Indian nation, advocated for a set of principles known as the "Seven Social Sins." These sins include wealth without work, politics without principles, and commerce without morality, among others. By adopting these principles as the guiding ethos of India's socio-political fabric, society can work towards eradicating social evils, promoting equality, and fostering a spirit of brotherhood.

By emphasizing the importance of a moral order and embracing Gandhian ideals, India can pave the way for a society that values fraternity and promotes unity among its citizens. It requires a collective effort to nurture these principles and create an environment where individuals are driven by a sense of responsibility towards each other, ultimately leading to a more cohesive and inclusive nation.

CONCLUSION: Dr B.R. Ambedkar envisioned an India where the divisions based on caste and religion would gradually dissipate, giving way to a society united by the spirit of fraternity. To realize this vision, it is imperative to invest in the concept of fraternity and its principles. By fostering a deep sense of brotherhood and solidarity among its diverse population, India can safeguard itself from the perils of social fragmentation.

Ambedkar's dream of a cohesive and inclusive nation necessitates a collective commitment to promoting fraternity as a fundamental value. This entails transcending barriers and prejudices, promoting dialogue and understanding, and celebrating the shared humanity that binds every individual together. By investing in initiatives that foster interfaith and inter community harmony, encourage empathy and inclusivity, and address inequalities, society can pave the way for a future where unity triumphs over division.

It is through sustained efforts and a conscious commitment to the principles of fraternity that India can truly achieve social cohesion and realize its full potential as a diverse and united nation. By cherishing the ideals of brotherhood and embracing the richness of its diversity, India can build a society that is not only harmonious and resilient but also serves as a beacon of hope and inspiration for the world.

INTERNATIONAL RELATIONS

CHINA'S C + C5 INITIATIVE IN CENTRAL ASIA

CONTEXT: *China organised a virtual gathering of trade ministers from the alliance referred to as C+C5.*

China and the five central Asian republics of Uzbekistan, Kazakhstan, Tajikistan, Turkmenistan and Kyrgyztan are now referred to as the C + C5 .

CENTRAL ASIA - CHINA'S EXTENDED NEIGHBOURHOOD

China has deep-rooted historical connections with the Central Asian region, characterized by extensive trade, cultural exchanges, and strong interpersonal ties, all tracing back to the ancient Silk Route. The Central Asian region holds a significant place in China's history as a vital hub along this legendary trade route.

The modern era marked a turning point in China's engagement with Central Asia, coinciding with the dissolution of the Soviet Union in 1991. Following this historic event, China swiftly recognized the opportunity to establish diplomatic relations with the newly independent Central Asian nations. In 1992, formal diplomatic ties were established, paving the way for a new chapter in China's regional interactions.

China's engagement with the region took on a more structured form with the formation of the Shanghai Five in 1996, serving as a precursor to the establishment of the Shanghai Cooperation Organisation (SCO). The Shanghai Five, initially comprising China, Kazakhstan, Kyrgyzstan, Russia, and Tajikistan, laid the groundwork for increased cooperation and collaboration in various fields, including trade, security, and cultural exchanges.

As the relationship between China and the Central Asian nations grew stronger, the Shanghai Cooperation Organisation came into being in 2001, expanding its membership to include Uzbekistan. The SCO has since become a prominent multilateral organization, fostering regional cooperation and providing a platform for dialogue on a wide range of issues. Its objectives encompass not only economic and trade matters but also security concerns, counter-terrorism efforts, and cultural exchanges.

MUTUAL BENEFIT FOR CHINA & C5

China's engagement with Central Asia has continued to deepen over the years, driven by mutual economic benefits and shared interests.

- Presently, China plays a vital role in the region's infrastructure development, including the construction of transportation networks, energy pipelines, and trade corridors.

- The Belt and Road Initiative (BRI), proposed by China in 2013, further solidifies China's commitment to enhancing connectivity and economic integration with Central Asia and beyond.

- Central Asia is a ready-made market for cheap exports and gave China overland access to markets in Europe and West Asia.

- The region is resource rich with massive gas and oil reserves and strategic minerals such as Uranium, copper and gold.

- China wants to ensure a peaceful relationship in the Xinjian region for which the co-operation of the Central Asian are important

Therefore, China's historical, cultural, and trade links with the Central Asian region have laid a solid foundation for their present-day relationship. From the establishment of diplomatic relations to the formation of multilateral organizations such as the SCO, China's engagement with Central Asia continues to evolve, promoting regional cooperation, economic growth, and mutual understanding.

Chinese investments have played a crucial role in the modernization and improvement of the Soviet-era infrastructure in Central Asian countries. These investments have enabled significant upgrades and development projects to be undertaken. In 2013, President Xi Jinping introduced the Belt and Road Initiative (BRI) during his visit to Almaty, the capital of Kazakhstan. The BRI represents a contemporary adaptation of the ancient Silk Road, embodying China's commitment to fostering connectivity and economic cooperation.

China's commitment to the region is evident in the substantial financial injections it has made, amounting to billions of dollars, across various sectors. These investments encompass a wide range of initiatives, including oil and gas exploration, the establishment of robust transportation networks such as railways, roads, and seaports, as well as investments in digital technologies and green energy. This comprehensive approach supports the advancement of the region's technological capabilities and contributes to sustainable development.

One significant advantage for the landlocked Central Asian countries in their association with China is the access it provides to the Pacific Ocean and the economically vibrant East Asian markets. This strategic advantage offers significant economic opportunities, facilitating international trade routes, expanding export potential, and promoting economic diversification.

In contrast to Western countries, China's engagement does not involve scrutinizing governance models or human rights records. China adopts a non-interference approach and prioritises economic cooperation and development without imposing stringent conditions. This approach allows for more flexibility and pragmatism in bilateral relations.

It is wise to say that Chinese investments have played a pivotal role in upgrading Soviet-era infrastructure and undertaking development projects in Central Asian countries. The Belt and Road Initiative, launched by President Xi Jinping, represents a contemporary rendition of the Silk Road and signifies China's commitment to connectivity and cooperation. China's financial investments have covered a wide spectrum of sectors, including transportation, energy, and technology, while providing landlocked countries with access to international markets. Unlike the West, China focuses on economic cooperation rather than governance or human rights, fostering a unique approach to bilateral relations in the region.

FRICTION POINTS BETWEEN CHINA AND CENTRAL ASIA

The Chinese government's actions directed towards the Muslim population in Xinjiang have engendered resentment among the countries in Central Asia, where Islam holds significant religious prominence.

- The growing presence of Chinese labourers and swift land acquisitions by China in these nations have sparked public demonstrations.

GRAND PLAN for C + C5

- Central Asia relies heavily on Russia for its economic stability and considers Russia as its primary provider of security.

- • Over the past year, Russia has increased its trade with Central Asian countries as part of efforts to find alternative sources for imports previously sourced from Europe.

- • The significant presence of Central Asian migrants in Russia further strengthens the economic interdependence between the region and Russia.

- • Both Russia and China are vying to become the leading trading partner in the area, with bilateral trade between China and the five Central Asian countries reaching $70.2 billion last year.

- • Taking advantage of Russia's focus on the Ukraine situation, Beijing is leveraging the opportunity to expand its influence within Russia's strategic sphere of influence.

- • The conflict in Ukraine has raised concerns among Central Asian countries about the potential risks associated with their security relationship with Moscow.

- Overall, Central Asia's economic dependence on Russia, Russia's efforts to diversify its trade partnerships, and China's manoeuvres to assert its influence all contribute to a dynamic landscape in the region, impacted by shifting geopolitical considerations and security concerns.

UZBEKISTAN
Uzbek state owned mining firm agreed in 2014 to supply 2000 tones of uranium or to India in a span of 4 years

KAZAKHSTAN
India signed a deal with kazakhsthan in 2015 to secure 5000 tonnes of uranium for it's nuclear reactors.

TAJIKISTAN
India bulit varob 1 hydro power station, keen to enhance ties in hydropower generation.

TURKMENISTAN
India keen to built long awaited turkmenistan – afganistan – pakistan – india gas pipline

KYRGYZSTAN
India strengthening ties with kyrgyzstan. Signed agreements, including co operation in the fields of energy.

Despite having trading connections with Central Asian countries, India faces obstacles due to the lack of a direct land route caused by Pakistan's denial of passage and uncertainties in Afghanistan following the Taliban's takeover.

- The Chabahar port in Iran presents an alternative route for India, but its development is still incomplete.

- India's engagements in the region, including its participation in the Shanghai Cooperation Organisation (SCO), primarily revolve around security concerns.

- Suggestions have been made for India to establish "air corridors" to facilitate connectivity for people and trade in Central Asia, similar to its efforts in Afghanistan.

- In a significant move, India organized a virtual summit of the C5 (Central Asian countries) last year, marking its largest outreach to the region.

- New Delhi's leadership of the SCO this year may present an opportunity for India to diversify its relationships with this strategically important region.

CONCLUSION

Despite facing challenges in terms of land connectivity and security-driven engagements, India has sought alternate routes and initiated diplomatic efforts to deepen ties with Central Asian countries. The development of the Chabahar port and the potential establishment of air corridors could provide avenues for enhanced trade and people-to-people connectivity. India's virtual summit with the C5 and its leadership role in the SCO offer platforms to strengthen cooperation and explore opportunities for diversifying relations. By capitalizing on these initiatives, India aims to expand its presence and engagement in Central Asia, realizing the region's significance in its broader strategic objectives.

EXPANDING BRICS

CONTEXT: *In a notable development, several countries, including Saudi Arabia, UAE, Algeria, Egypt, Bahrain, and Iran, have shown keen interest in joining the emerging-markets bloc known as BRICS, which comprises Brazil, Russia, India, China, and South Africa.*

BACKGROUND: BRICS is an acronym that represents a group of emerging-market economies, namely Brazil, Russia, India, China, and South Africa. The concept of BRICS was initially coined by economist Jim O'Neill in 2001. The bloc was formally established in 2006, with the objective of promoting cooperation and dialogue among its members on various economic, political, and social issues. BRICS nations are characterized by their significant influence in regional and global affairs, as well as their potential for economic growth and development.

BRICS, founded in 2009 with its headquarters in Shanghai, is an acronym representing Brazil, Russia, India, China, and South Africa. The term "BRIC" was initially coined by British economist Jim O'Neill in 2001 to identify the emerging economies of Brazil, Russia, India, and China. Over time, South Africa joined the group in 2010, expanding it to BRICS. Together, these nations comprise 41% of the global population, 24% of the global GDP, and 16% of global trade, with expectations of reaching 35% of the global economy by 2028.

BRICS operates under a rotational chairmanship, with each member assuming the role annually according to the B-R-I-C-S acronym. Currently, South Africa holds the chairmanship for 2023. The bloc has initiated several significant projects, including the New Development Bank (NDB), Contingent Reserve Arrangement (CRA), BRICS Payment System, Customs Agreements, and a Remote Sensing Satellite.

In a new development, BRICS is planning to establish its own "new currency" system, marking a significant step towards reducing dependence on the US dollar for trade. This move aims to promote greater financial independence and strengthen economic cooperation among the member countries.

IMPORTANCE OF BRICS FOR INDIA:

Geo-Politics: BRICS offers India a platform to maintain a balanced approach in its strategic interests, bridging relations between the US and the Russia-China axis.

Global Economic Order: BRICS plays a crucial role within the G20, shaping global economic policies and fostering financial stability, allowing India to actively participate in decision-making processes.

Voice of Developing Nations: BRICS has emerged as the voice of developing countries, empowering India to advocate for the rights and concerns of developing nations on various global platforms.

Counterterrorism Efforts: BRICS serves as a valuable forum for India to strengthen its fight against terrorism. The grouping allows for coordinated efforts and joint initiatives to address the common threat of terrorism.

Global Engagement: BRICS provides India with the opportunity to engage with China and address mutual disputes constructively. Additionally, it helps India garner support and build alliances with other partner countries within the grouping.

CHALLENGES FOR BRICS:

Economic Divergence: BRICS faces economic challenges due to the varying growth trajectories of its member countries. While China and India continue to exhibit high growth rates, Brazil and Russia have experienced economic recessions. South Africa also grapples with sluggish economic performance, marked by high levels of unemployment and inequality.

Political Differences: Political divergences among BRICS members pose challenges to their unity. Russia's actions in Crimea and involvement in conflicts have strained relations with other members. China's territorial claims in the South China Sea have created tensions with countries having competing claims in the region.

Institutional Constraints: BRICS has encountered hurdles in implementing its institutional mechanisms. The New Development Bank (NDB), designed to provide development financing, has faced difficulties in disbursing loans and identifying viable projects. The Contingent Reserve Arrangement (CRA), a pool of foreign exchange reserves, is yet to be tested.

Coordination Difficulties: Disagreements over the governance structure of the NDB and the CRA, as well as differing priorities in trade, investment, and climate change, have hindered the ability of BRICS to present a unified front on various issues.

External Pressures: The rise of protectionism, nationalism, and populism in some advanced economies has posed external pressures on BRICS, impacting trade, investment, and access to capital for member countries. BRICS must navigate these challenges to ensure their collective resilience and cooperation.

PATH AHEAD OF BRICS:

Reforming Multilateral Institutions: BRICS countries should collectively advocate for the reform of multilateral institutions such as the UN Security Council. This includes advocating for the inclusion of more developing countries as permanent members, ensuring better representation and decision-making.

Strengthening Counterterrorism Efforts: BRICS countries should enhance cooperation in combating terrorism. This can be achieved through sharing best practices, intelligence, and coordinating efforts to disrupt the funding and resources of terrorist groups.

Embracing Technological Solutions for Sustainable Development: BRICS countries should promote the sharing of experiences and expertise in adopting and implementing technological and digital solutions to address the Sustainable Development Goals (SDGs). This can lead to more efficient and innovative approaches in sectors such as healthcare, education, and agriculture.

Enhancing People-to-People Cooperation: BRICS countries should foster greater people-to-people connections. This can be done through organizing joint

cultural events, exhibitions, and festivals, establishing more student exchange programs and scholarships, and encouraging tourism and business visits among member countries. These initiatives will facilitate greater understanding, cooperation, and collaboration among the people of BRICS nations.

Overall, by pursuing these strategies, BRICS can further strengthen its cooperation and contribute to the development and well-being of its member countries and the global community.

CONCLUSION: Despite the challenges faced by BRICS, such as internal differences, global economic slowdown, and geopolitical tensions, the group can maintain its relevance by adopting a proactive approach. BRICS should expand its agenda to promote comprehensive development and enhanced cooperation among all member states. This can be achieved by prioritizing the democratization of international issues, giving voice to developing countries, and advocating for a more inclusive global governance system. Furthermore, BRICS should emphasize the importance of respecting cultural diversity and promoting peaceful resolution of conflicts. By addressing these key areas, BRICS can strengthen its position as a significant player in global affairs and contribute to a more equitable and harmonious world order.

GLOBAL BUDDHIST SUMMIT IN NEW DELHI

CONTEXT: *India recently organized a significant global Buddhist summit in New Delhi, attracting prominent figures from the international Buddhist community, including the esteemed presence of the Dalai Lama.*

BACKGROUND: SOFT POWER DIPLOMACY

Soft power can be described as the capacity to achieve desired outcomes through attraction and persuasion rather than through force or economic incentives. Soft power diplomacy involves leveraging cultural, social, and economic resources to s hape the attitudes and behaviours of other nations, moving beyond traditional military or economic coercion. The term "soft power" was introduced by Joseph Nye in the 1990s to emphasize the importance of non-coercive approaches in international relations.

Examples of soft power diplomacy encompass a range of initiatives. Cultural exchanges enable the sharing of artistic, literary, and traditional expressions, fostering mutual understanding and appreciation. Educational programs facilitate academic collaborations, student exchanges, and scholarships, promoting cross-cultural learning and people-to-people connections. Humanitarian aid and disaster relief efforts provide assistance to countries in need, demonstrating goodwill and compassion. Public diplomacy campaigns involve strategic communication and information dissemination to shape public opinion and enhance a country's image on the global stage.

Soft power is increasingly recognized as a crucial component of a nation's foreign policy toolkit. It allows countries to influence global narratives, build international alliances, and enhance their reputation. By leveraging their cultural heritage, values, and socio-economic strengths, countries can forge meaningful connections, enhance cooperation, and project their influence in a more subtle and persuasive manner. Soft power complements traditional hard power elements, offering a more nuanced and inclusive approach to international relations.

IMPORTANCE OF BUDDHISM FOR INDIA's SOFT POWER DIPLOMACY

India's rich connection with Buddhism holds significant importance for its soft power diplomacy. The country's historical and cultural ties to Buddhism serve as a strong fo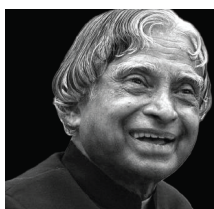undation to foster diplomatic relations with Buddhist nations such as Sri Lanka, Myanmar, Thailand, Cambodia, and Vietnam. India's shared heritage and deep-rooted connections to Buddhism create opportunities for cultural exchanges, mutual understanding, and collaboration in various sectors.

India, as the birthplace of Buddhism, can leverage its Buddhist heritage and teachings to promote religious harmony and engage with countries like China, which has a substantial Buddhist population. By highlighting common spiritual values and promoting dialogue, India can foster greater understanding and cooperation between nations.

In addition to cultural and religious aspects, India's association with Buddhism also presents economic benefits. The country is home to several significant Buddhist sites, including seven of the eight most important ones globally. The Indian government has recognized the potential of these sites and has been actively developing the Buddhist Circuit, a tourist trail that connects these locations. This initiative not only promotes religious tourism but also enhances economic ties, attracting visitors from around the world and contributing to the local economy.

India's soft power diplomacy through its Buddhist cultural heritage holds immense potential for strengthening its relations with Southeast Asian countries and projecting its influence in the region. With 97 percent of the world's Buddhist population residing in Asia, countries like Bhutan, Myanmar, Thailand, and Sri Lanka consider Buddhism integral to their national values and identity. This shared religious and cultural bond creates a favourable environment for India to engage with these nations and deepen its diplomatic ties.

India's approach to soft power projection is rooted in providing an alternative to the contested global politics, with morality as the guiding principle. Through its Panchamrit principles, which include "Sanskriti Evam Sabhyata" (culture and civilization), India emphasizes the cultural and civilizational links it shares with Southeast Asian countries. By highlighting these commonalities, India can foster a sense of shared heritage, strengthen people-to-people connections, and enhance mutual understanding.

You have to dream before your dreams can come true..

- A. P. J. ABDUL KALAM

THE EIGHT GREAT BUDDHIST PILGRIMAGE SITES
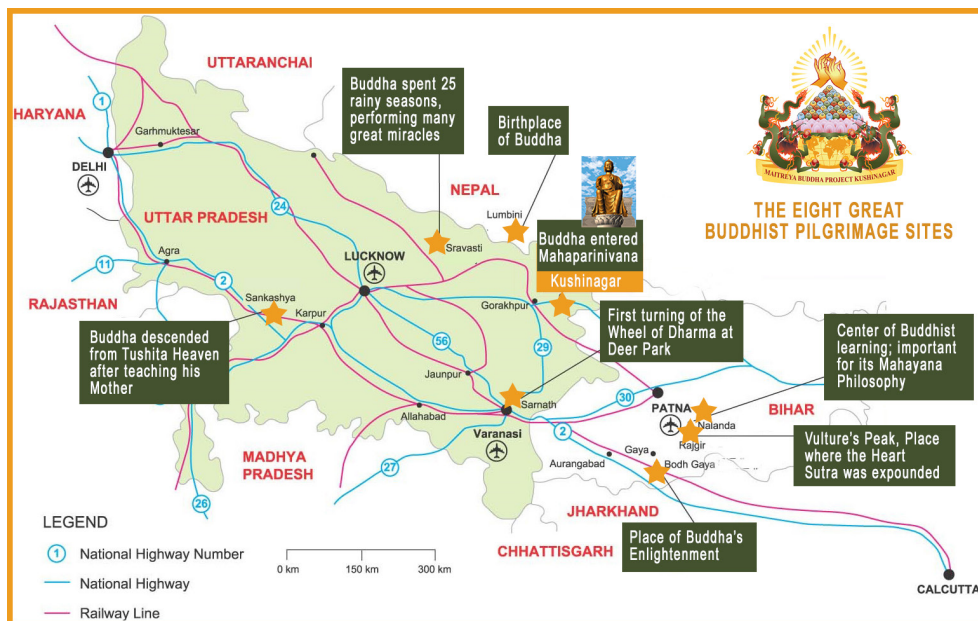
By leveraging its Buddhist cultural diplomacy, India can enhance its influence in the region and forge stronger partnerships. Cultural exchanges, educational programs, and collaborative initiatives in areas like art, literature, and philosophy can contribute to building trust, goodwill, and enduring relationships. Furthermore, India's emphasis on morality and its commitment to promoting peace, harmony, and ethical values resonates with the core principles of Buddhism, providing a solid foundation for fostering greater cooperation and understanding.

In conclusion, India's soft power projection through its Buddhist cultural diplomacy has the potential to strengthen its relations with Southeast Asian countries and increase its influence in the region. By emphasizing shared heritage, promoting cultural exchanges, and upholding moral principles, India can forge deeper connections, enhance its diplomatic standing, and contribute to regional stability and prosperity.

Overall, India's affiliation with Buddhism serves as a valuable asset for its soft power diplomacy. By emphasizing historical and cultural ties, promoting religious harmony, and harnessing the economic potential of Buddhist sites, India can effectively strengthen its diplomatic relations, foster goodwill, and project its influence on the global stage.

COMPARING INDIA AND CHINA'S USE OF BUDDHISM FOR SOFT DIPLOMACY

India:

India has been actively promoting Buddhism as a soft power tool since the 1950s. Its objective is to counter China's growing influence in the region and beyond while promoting India's rich cultural heritage. India's key strategies involve restoring ancient Buddhist sites, constructing new ones, supporting scholars and monks, and fostering cultural exchanges to promote Buddhism.

China:

China has been using Buddhism as a tool of soft power diplomacy for over two decades, particularly in Southeast Asia and other parts of the world. Its objective is to promote Chinese culture and expand its influence globally. China effectively employed Buddhist diplomacy during the Cold War to engage with neighboring countries and continues to utilize this approach to gain legitimacy for initiatives like the Belt and Road Initiative. China has also made significant investments in building Chinese Buddhist temples and monasteries abroad.

Film Link:

India has not been able to effectively utilize the film industry domain to promote Buddhism, whereas China, with its influence over Hollywood, has dominated the narrative around Buddhism through cinema.

Examples of Initiatives:

India's initiatives include the restoration of the ancient Nalanda University, organizing the International Buddhist Conclave, hosting the first global Buddhist summit, and promoting Buddhist circuit tourism in India. On the other hand, China has established the World Buddhist Forum, which brings together Buddhist leaders from around the world. China also supports the restoration of ancient Buddhist sites, such as the Angkor Wat temple complex in Cambodia.

Overall, both India and China recognize the soft power potential of Buddhism and have actively employed it in their diplomatic endeavours. While India focuses on leveraging its cultural heritage to counter China's influence and promote its own interests, China strategically uses Buddhism to showcase Chinese culture and expand its global influence.

CHALLENGES FACED BY INDIA IN PROMOTING SOFT POWER THROUGH BUDDHISM:

India encounters various challenges in utilizing Buddhism as a means of soft power diplomacy:

- Neglected Heritage Sites: Many of India's ancient Buddhist sites suffer from neglect and poor maintenance, hindering efforts to attract visitors and promote Buddhist tourism.

- Competition with Other Countries: Despite hosting significant Buddhist sites like Bodhgaya, Sarnath, and Kushinagar, India faces tough competition from countries like Thailand and Cambodia, which are preferred destinations for Buddhist tourists.

- Fragmented Buddhist Community: The Indian Buddhist community is fragmented along sectarian lines, posing difficulties in establishing a unified approach to promoting Buddhism.

• Overshadowed by Economic and Political Power: India's cultural influence, including Buddhism, is often overshadowed by its economic and political clout, which can hinder the recognition of its soft power on the global stage.

CONCLUSION:

To address these challenges, it is crucial for India to forge connections with different Buddhist schools of thought, including Nagarjuna Buddhism, which remains largely unexplored in academic study. Emphasis should also be placed on effective implementation of initiatives like the Nalanda University project and the proper management of Buddhist tourist sites, ensuring the success of the Buddhist Circuit Project and enhancing India's soft power through Buddhism.

Prime Minister Modi's statement, "India has not given 'Yuddha' to the world but 'Buddha'," highlights the significance of promoting peace and cooperation through Indian diplomacy. As Buddha, the pioneer of peace, emphasized non-violence and harmony, his teachings can serve as a guiding light for India's diplomatic endeavours on the global stage. In these challenging times, embracing Buddha's principles can foster a diplomatic approach focused on peaceful resolutions and collaboration, aligning India's actions with the values of peace and understanding.

INDIA CRITICIZES UNSC VETO AS POLITICALLY DRIVEN INSTEAD OF MORALLY OBLIGED

CONTEXT: *India asserts that the utilization of veto power within the United Nations Security Council (UNSC) is primarily influenced by political motivations rather than moral obligations,*

BACKGROUND: Veto power is a unique privilege granted to the permanent members of the United Nations Security Council (UNSC) consisting of China, France, Russia, the United Kingdom, and the United States. This authority enables these countries to reject or veto any proposed action by the UNSC that does not align with their national interests or foreign policy objectives. In the UNSC, decisions are typically reached through a majority vote of nine out of the fifteen Council members. However, if any of the five permanent members exercise their veto power, the decision is automatically rejected.

THE NEED FOR VETO POWER

The justification for granting veto power lies in its ability to prevent hasty or ill-considered decisions by the UNSC, which could potentially have detrimental consequences. It serves as a safeguard against rushed actions and ensures that all decisions receive thorough scrutiny. Moreover, the inclusion of veto power has been viewed as a means to strengthen the United Nations, as it grants significant authority to the P5 nations. By providing these countries with the ability to implement and enforce initiatives, veto power seeks to avoid the shortcomings experienced by the League of Nations, which lacked the necessary power to effectively carry out its proposed measures.

For the permanent members of the Security Council, veto power offers a sense of security in safeguarding their respective interests. It ensures that their positions and priorities cannot be overridden or disregarded by the other Council members. This recognition of their influence and protection of their national concerns enhances the perceived importance and role of the P5 nations within the United Nations framework.

Thus, the veto power vested in the permanent members of the UNSC serves to prevent hasty decisions, strengthen the UN's effectiveness, and protect the interests of the P5 countries. While it has its critics who argue for its reform or abolition, the system continues to shape the dynamics of the Security Council and the broader UN landscape.

ISSUES WITH THE USE OF "VETO POWER":

Immobilization of the UNSC: The ability of a single permanent member to veto resolutions can paralyze the UNSC's ability to take necessary action. For instance, Russia's frequent use of veto power has hindered the imposition of sanctions on itself for violating Ukraine's sovereignty.

Violation of "Sovereign Equality": The concentration of veto power in only five countries contradicts the principle of sovereign equality among states. This perpetuates a post-World War II mind-set where the victors hold disproportionate influence over global decision-making.

Political considerations over moral obligations: Veto power has been employed for political motives rather than fulfilling moral obligations. The United States, for instance, has used its veto over 80 times, sometimes disregarding widespread condemnation and protests. In 1972, it vetoed a resolution calling for an end to its bombing of North Vietnam.

Inaction on pressing issues: The UNSC's silence on significant international conflicts, such as the 2003 Iraq War, the 2008 conflict in Georgia, and the 2009 deaths of Sri Lankan Tamils, raises concerns about its passivity in addressing urgent situations.

Lack of accountability: Instances where veto power is used to protect allies or shield wrongdoings raise questions about accountability. In 2017, Russia vetoed a resolution condemning the use of chemical weapons in Syria, despite substantial evidence of their deployment by the Syrian government.

Anachronistic, unjust, and counterproductive: Critics argue that the veto power is outdated, unjust, and counterproductive to effective international crisis management. Its disproportionate influence can impede credible and collective action when faced with urgent situations.

Hindrance to reform: The presence of veto power creates challenges in reforming and modernizing the UNSC to reflect contemporary geopolitical realities. Proposals for expanding the permanent membership or limiting the veto have encountered resistance from existing permanent members.

Underrepresentation of diverse perspectives: The veto power held by a select few nations restricts the representation of diverse viewpoints and interests on the global stage, potentially limiting the inclusivity and effectiveness of international decision-making.

Erosion of trust and legitimacy: The perceived misuse or selective use of veto power by certain permanent members erodes trust and undermines the legitimacy of the UNSC in the eyes of the international community, diminishing its

credibility as a global peacekeeping and conflict resolution body.

These issues highlight the complexities and criticisms surrounding the veto power in the UNSC. Calls for reform and alternative decision-making mechanisms continue to arise in order to address these concerns and enhance the effectiveness and fairness of the United Nations system.

SUGGESTIONS FOR REFORMING THE VETO SYSTEM:

Abolish the veto power: Consideration could be given to amending the UN Charter to eliminate the veto power altogether. Such a reform would require approval from two-thirds of the General Assembly and subsequent ratification by member states. Abolishing the veto power would promote equality among nations and prevent its potential misuse.

Limit the use of the veto power: The scope of the veto could be restricted to prevent its application in cases of severe crimes against humanity or genocide. This limitation would ensure that the veto cannot be employed to obstruct action when grave human rights violations are at stake.

Expand the permanent membership: Expanding the number of permanent members in the UNSC would address the issue of underrepresentation and provide a more balanced representation of the global balance of power. This reform would reduce the concentration of veto power within a small group of states and allow for a broader range of perspectives and interests to be included in decision-making processes.

Create longer-term non-permanent seats: Introducing longer-term non-permanent seats in the UNSC would enhance continuity and consistency in decision-making. Currently, non-permanent seats rotate every two years, which can hinder the Council's effectiveness. Longer-term seats would provide greater stability and enable member states to contribute more substantially to ongoing discussions and deliberations.

Increase transparency and accountability: To enhance the accountability of permanent members, requirements could be put in place for them to publicly justify their use of the veto. This increased transparency would shed light on the decision-making process and encourage more responsible use of the veto power.

These suggested reforms aim to address the limitations and concerns associated with the current Veto system. Implementing such reforms would require extensive negotiations and consensus-building among member states, but they hold the potential to make the UNSC more democratic, representative, and effective in fulfilling its mandate of maintaining international peace and security.

India's Advocacy for UN Reforms: Beyond the Veto Power

Categories of Membership: India advocates for expanding the categories of membership in the UN to ensure a more inclusive representation of nations. Currently, there are only two categories, namely, member states and non-member observer states. India proposes the creation of additional categories that could allow for greater participation and engagement, especially for entities like territories or regions seeking recognition.

The relationship between the Security Council and the General Assembly: India emphasizes the need to strengthen the relationship between the Security Council and the General Assembly. This could involve enhancing communication, cooperation, and coordination between the two bodies to ensure a more cohesive and comprehensive approach to addressing global issues.

Regional representation: India supports efforts to enhance regional representation within the UN system. It advocates for fair and balanced regional distribution of seats in different UN bodies, including the Security Council. India believes that regional representation can promote a more equitable and effective decision-making process, taking into account the diverse perspectives and interests of different regions.

The size of an enlarged Council: India raises concerns about the size of an enlarged Security Council. It believes that any expansion should strike a balance between ensuring adequate representation and maintaining the Council's ability to function efficiently. India supports a moderate expansion that includes both permanent and non-permanent seats, with due consideration given to various regions.

Working Methods of the Council: India highlights the need to reform the working methods of the Security Council. It calls for greater transparency, inclusivity, and participation in decision-making processes. India advocates for improved engagement with non-permanent members and encourages a more consultative approach to decision-making within the Council.

CONCLUSION: India emphasizes the importance of addressing not only the veto power but also other aspects of the UN that require reforms. By striking a balance between the interests of the P5 countries and the aspirations of other member states, the UN can become more representative, inclusive, and democratically accountable. India draws upon the lessons learned from the experiences of the League of Nations to advocate for meaningful reforms that can strengthen the effectiveness and legitimacy of the UN in addressing global challenges.

INDIA JAPAN & BANGLADESH, A NEW TROIKA FOR UNLEASHING NORTH EAST'S POTENTIAL

CONTEXT: *The third India-Japan Intellectual Dialogue (April 11–12, 2023), hosted by the Asian Confluence (ASCON), in Agartala, Tripura. Many transformative changes happening in India's North East.*

BACKGROUND: EMERGING ECONOMIC DEVELOPMENT IN INDIA AND BANGLADESH WITH THE SUPPORT OF JAPAN

India and Bangladesh have made significant strides in overcoming security challenges, paving the way for economic development. This progress has been supported by political changes and the establishment of strong bilateral linkages. Japan has emerged as a crucial development partner, providing substantial support to both India, particularly in the Northeast region, and Bangladesh.

The joint efforts of India and Bangladesh have addressed various security challenges, creating a favourable environment for economic growth. Strengthened security measures have contributed to stability, serving as a solid

foundation for further development. Political changes have fostered positive transformation and collaboration, leading to closer ties in trade, infrastructure, and people-to-people interactions.

Japan's involvement, especially in India's Northeast region, has been instrumental in promoting infrastructure projects and regional connectivity. Japan's contributions in sectors like technology and manufacturing have bolstered economic growth in both countries. As India and Bangladesh continue to address security challenges and strengthen political ties, their partnership with Japan holds great potential for further economic development, highlighting the importance of regional cooperation in fostering stability and prosperity.

UNLEASHING THE POTENTIAL OF THE NORTH EAST

The third India-Japan Intellectual Dialogue and the ongoing development of the Matarbari Deep Sea Port signify significant efforts towards realizing the vision of enhanced connectivity and economic cooperation in the Northeast region of India. However, several challenges remain to be addressed. There are opportunities to be explored and obstacles in leveraging the competitive advantage of the Northeast region, highlights the importance of regional collaboration, and outlines a way forward for comprehensive connectivity and industrialization.

I. ASSESSING THE COMPETITIVE ADVANTAGE OF THE NORTHEAST REGION:

The Northeast region of India holds immense potential for economic growth and development. Endowed with abundant natural resources and strategically located at the crossroads of Nepal, Bhutan, China, Bangladesh, and Myanmar, it possesses a unique advantage. Furthermore, the region's educated population excels in the services sector, making it an attractive destination for potential investors.

II. THE IMPERATIVE FOR COLLABORATIVE INVESTMENTS:

While Japan has been actively involved in the development of the Northeast region, relying solely on a single investor is not feasible. Collaboration among multiple investors is essential for sustainable economic growth. Additionally, restrictions on investment flow from Bangladesh pose a challenge that must be addressed to fully harness the region's potential. Neglecting the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) hampers progress towards establishing the envisioned Bay of Bengal Community (BOBC), necessitating a change in approach.

III. EMBRACING COMPREHENSIVE CONNECTIVITY AND ACCELERATING INDUSTRIALIZATION:

A joint focus on comprehensive connectivity and accelerated industrialization in both Bangladesh and the Northeast region will create new avenues for economic growth and job opportunities. By establishing regional industrial value chains in sectors where the Northeast enjoys a competitive advantage, such as agro-processing, man-made fibres, and handicrafts, the newly developed connectivity links can be fully utilized and productive.

IV. EXPANDING POLICY CONVERGENCE AND ENSURING INCLUSIVITY:

To strengthen India-Japan collaboration in the Northeast, it is crucial to expand policy convergence and ensure that all stakeholders are involved. By fostering a people-centric approach, the vision of connecting a large part of South Asia with Southeast Asia can be realized. Furthermore, India can play a significant role in assisting Bangladesh in becoming an integral part of the Act East Policy, thus enhancing regional cooperation and integration.

CONCLUSION:

Efforts made through the India-Japan Intellectual Dialogue and the development of the Matarbari Deep Sea Port represent important steps towards realizing the vision of enhanced connectivity and economic cooperation in the Northeast region. Leveraging the region's competitive advantage, addressing challenges related to investment flow, and prioritizing the BIMSTEC are essential for progress. By embracing comprehensive connectivity, accelerating industrialization, expanding policy convergence, and fostering inclusivity, India and Japan can work together to establish a prosperous Bay of Bengal Community and strengthen regional integration between South Asia and Southeast Asia.

INDIA-UAE CEPA

CONTEXT: *Since its implementation in May 2022, the India-UAE Comprehensive Economic Partnership Agreement (CEPA) has had a transformative effect on the bilateral trade between the two nations. Projections indicate a substantial boost in the value of bilateral trade in goods, with expectations exceeding USD 100 billion, and an equally significant surge in trade in services, anticipated to exceed USD 15 billion within a span of five years. The CEPA holds immense potential for fostering closer economic ties, creating new avenues for collaboration, and driving mutual prosperity between India and the UAE.*

BACKGROUND: The trade relations between India and the United Arab Emirates (UAE) have witnessed significant growth and cooperation in recent years. The UAE stands as India's third-largest trading partner, following the United States and China, with bilateral trade reaching a turnover of USD 68 billion in 2021. The economic ties between the two nations are multifaceted, covering various sectors such as petroleum and petrochemicals, gems and jewellery, textiles, machinery, and agricultural products. Additionally, the UAE has emerged as the seventh-largest investor in India, with investments spanning diverse sectors including infrastructure, real estate, renewable energy, and information technology. The strong trade and investment links between India and the UAE demonstrate the robust and mutually beneficial nature of their economic partnership.

DIFFERENCE BETWEEN CEPA, CECA AND FTA

CEPA (Comprehensive Economic Partnership Agreement), CECA (Comprehensive Economic Cooperation Agreement), and FTA (Free Trade Agreement) are different types of trade agreements that countries establish to enhance economic cooperation and facilitate trade. Here are the key differences between them:

1) CEPA: It is a comprehensive trade agreement that encompasses goods, services, and investments. It offers a high level of integration as it covers not only trade in goods but also services, investments, and other areas of cooperation.

Examples of CEPA include India-Singapore CEPA, Japan-Indonesia CEPA, etc.

2) CECA: It covers a wide range of areas, including trade, investment, technology, and cultural exchanges. CECA: It provides a medium level of integration as it encompasses a wide range of areas but is not as comprehensive as CEPA.

CECA: Examples of CECA include India-Korea CECA, India-Malaysia CECA, etc.

3) FTA: It is a trade agreement that primarily focuses on the elimination or reduction of tariffs and other trade barriers in goods between participating countries. FTA: It offers a low level of integration as it solely focuses on trade in goods and does not include services or investments.

An example of an FTA is the India-UK FTA.

T   hus CEPA provides a comprehensive framework covering goods, services, and investments, while CECA covers a broader range of areas but is not as extensive as CEPA. On the other hand, an FTA primarily focuses on reducing trade barriers in goods between participating countries.

VARIOUS DIMENSIONS OF INDIA-UAE CEPA:

Trade in Goods: The CEPA provides preferential market access for over 80% of products traded between India and the UAE. This has contributed to a significant increase in bilateral trade, reaching historic highs during FY 2022-23 with a 16% increase.

Trade in Services: The CEPA covers 11 broad service sectors and more than 100 sub-sectors, including business services, communication services, financial services, tourism, and transport services. It facilitates greater cooperation and market access in these sectors between India and the UAE.

Investment: The CEPA establishes a liberal and non-discriminatory regime for cross-border investment between India and the UAE. It provides a framework for promoting and protecting investments, encouraging greater economic cooperation between the two countries.

Technical Barriers to Trade (TBT): The CEPA addresses technical regulations, standards, and conformity assessment procedures to ensure that they do not create unnecessary obstacles to trade. It promotes transparency and cooperation in removing barriers related to technical regulations.

Sanitary and Phytosanitary (SPS) Measures: The CEPA aims to safeguard human, animal, and plant health by setting standards for food safety, animal and plant health, and related issues. It enhances cooperation in ensuring the safety and quality of agricultural and food products.

Dispute Settlement: The CEPA includes provisions on dispute settlement, providing a mechanism for resolving disputes through consultations and negotiations. This helps to ensure the effective implementation and enforcement of the agreement.

Movement of Natural Persons: The CEPA facilitates the temporary entry of businesspersons, investors, and skilled professionals between India and the UAE. It streamlines procedures and promotes easier mobility of individuals for business purposes.

Pharmaceutical Products: The CEPA includes provisions on pharmaceutical products, promoting cooperation in the regulation and marketing of pharmaceuticals between India and the UAE. It aims to enhance collaboration in the healthcare sector.

Intellectual Property Rights (IPR): The CEPA includes provisions on protecting and enforcing intellectual property rights between India and the UAE. It strengthens the framework for the protection of copyrights, trademarks, patents, and other forms of intellectual property.

Digital Trade: The CEPA addresses digital trade and e-commerce, fostering the development of digital economy and trade between India and the UAE. It promotes cooperation in areas such as data flows, privacy protection, and online consumer protection.

Overall, the India-UAE CEPA covers various dimensions of trade, investment, technical regulations, dispute settlement, and cooperation in sectors such as services, pharmaceuticals, intellectual property rights, and digital trade. It aims to enhance economic ties and create a favourable environment for bilateral trade and investment between the two countries.

SOME ADDITIONAL ASPECTS OF INDIA – UAE CEPA

In addition to the mentioned dimensions, the India-UAE CEPA also includes other relevant aspects:

Customs Cooperation: The agreement emphasizes customs cooperation and the simplification of customs procedures to facilitate smoother trade flows between India and the UAE. It promotes efficient clearance of goods, reduces trade barriers, and enhances customs cooperation and information exchange.

Small and Medium-sized Enterprises (SMEs): The CEPA recognizes the importance of SMEs in both economies and aims to create a conducive environment for their growth. It includes provisions to facilitate the participation of SMEs in bilateral trade, encourage their integration into global value chains, and promote cooperation and exchange of best practices.

Technical Cooperation: The agreement promotes technical cooperation between India and the UAE, particularly in areas of mutual interest. It encourages the sharing of knowledge, expertise, and technology to enhance capacity building and improve the competitiveness of both countries.

Investor-State Dispute Settlement (ISDS): The CEPA includes provisions for investor-state dispute settlement mechanisms, providing a framework for resolving disputes between investors and the host country. It offers protection and recourse for investors, thereby enhancing the confidence of businesses and promoting foreign direct investment.

Market Access for Agriculture: The CEPA addresses market access for agricultural products between India and the UAE. It aims to enhance cooperation in areas such as trade facilitation, sanitary and phytosanitary measures, and technical barriers to trade in agricultural goods.

Strategic Cooperation: The India-UAE CEPA goes beyond economic aspects and emphasizes strategic cooperation between the two countries. It recognizes the importance of a comprehensive partnership and aims to strengthen political, cultural, and social ties, fostering a deeper understanding and collaboration between India and the UAE.

The India-UAE CEPA represents a comprehensive and multifaceted agreement that covers a wide range of dimensions to promote bilateral trade, investment, technical cooperation, dispute resolution, and strategic collaboration. It serves as a framework for deepening the economic relationship between India and the UAE, unlocking new opportunities, and fostering mutual growth and development.

THE INDIA-UAE CEPA MAY ENCOUNTER VARIOUS CHALLENGES, INCLUDING:

Competition from other existing trade agreements in the region: The presence of other regional trade agreements can create competition and potentially divert trade flows away from the India-UAE CEPA. It requires effective positioning and differentiation to attract businesses and maximize the benefits of the agreement.

Diverse business and cultural practices: India and the UAE have distinct business practices and cultural norms. Bridging these differences and aligning business strategies and practices can pose challenges and require effective communication, understanding, and adaptation.

Disparity in development and economic size: India and the UAE have differences in terms of development levels and economic sizes. Balancing the interests and addressing the asymmetries to ensure equitable benefits for both parties can be a challenge in implementing the CEPA.

Resistance from domestic industries: The liberalization of trade under the CEPA may face opposition from certain domestic industries in both countries. Protecting domestic interests while ensuring the overall benefits of the agreement requires careful consideration and implementation.

Differences in regulatory standards and intellectual property protection: India and the UAE may have variations in regulatory standards, intellectual property protection, and other trade-related regulations. Harmonizing these standards and ensuring effective enforcement can be challenging and require cooperation and mutual understanding.

To overcome these challenges, effective communication, regular dialogue, and cooperation between India and the UAE are crucial. Both countries should work towards addressing concerns, streamlining regulatory frameworks, promoting awareness among businesses, and facilitating smooth implementation of the CEPA.

CONCLUSION:

The bilateral trade relationship between India and the UAE has witnessed significant growth, establishing the UAE as one of India's key partners in the Arab region. Despite encountering recent challenges, such as the impact of the COVID-19 pandemic and changing global dynamics, the strong and resilient ties between the two countries have persisted. With a shared commitment to expanding trade and fostering closer economic cooperation, India and the UAE are well-positioned to continue strengthening their bilateral relationship and exploring new avenues for mutual growth and prosperity.

WTO : THE PROHIBITION OF INDIA'S TARIFFS ON TECHNOLOGY PRODUCTS

CONTEXT: *Three dispute settlement panels at the World Trade Organization (WTO) have ruled that India's tariffs, ranging from 7.5% to 20%, imposed on specific information and communication technology (ICT) products, including mobile phones, are not in line with India's obligations under the WTO agreement*

Ensuring transparency and predictability in the global trading system is a key objective of the World Trade Organization (WTO). To achieve this, WTO member countries are bound by legal obligations to adhere to the maximum tariff rates specified in their Goods Schedule. These tariff commitments aim to prevent countries from imposing excessively high tariffs on trade. By upholding these commitments, countries contribute to a fair and predictable trading environment. Compliance with these obligations promotes trust and stability among WTO members, fostering a conducive atmosphere for international trade and economic cooperation.

ALLEGATIONS AGAINST INDIA

The allegations made against India in the complaints filed by the EU, Japan, and Taiwan pertain to the violation of Article II of the General Agreement on Tariffs and Trade (GATT). The WTO panels, after examining the case, have concluded that India's tariffs exceed the maximum tariff rates specified in its Goods Schedule. This breach of tariff commitments is the basis of the allegations against India. The complainants argue that India's actions are inconsistent with its obligations under the GATT, and the panels have upheld these allegations, highlighting the violation of Article II of the GATT by India's tariff measures.

IMPLICATIONS FOR INDIA:

Complying with the ruling of the WTO panel would require India to dismantle its protective tariff barriers that were put in place to promote domestic manufacturing of ICT products. This could have significant implications for India's domestic industry and its efforts to boost local production. Moreover, failure to comply with the ruling could result in the European Union (EU) imposing trade sanctions on India, further affecting its trade relations with the EU. Additionally, even if the EU does not resort to trade sanctions, the ruling could be used as leverage during the ongoing negotiations for a Free Trade Agreement (FTA) between India and the EU.

OPTIONS AVAILABLE TO INDIA:

India has the option to appeal against the panel ruling under the Dispute Settlement Understanding (DSU) of the WTO. However, it is important to note that the Appellate Body, which is responsible for hearing appeals, has been non-functional since 2019 due to the United States blocking the appointment of its members. This poses a challenge for India in pursuing an appeal and seeking a resolution through the established WTO process.

Alternatively, the EU has established an alternative appellate mechanism within the WTO known as the Multi-Party Interim Appeal Arbitration Arrangement (MPIA). However, India is currently not a party to this arrangement, limiting its access to this avenue of dispute resolution.

Legally, India is not obligated to comply with the panel rulings until its appeal is heard. This provides India with some time to assess its options, strategize its approach, and potentially negotiate with the EU to find a mutually acceptable resolution. Furthermore, according to WTO regulations, the EU is not permitted to impose trade

sanctions on India while an appeal is pending, offering India some breathing room in terms of potential trade consequences.

In summary, India is faced with the challenge of balancing its domestic manufacturing objectives, complying with international trade obligations, and protecting its trade relations with the EU. Exploring the available avenues for appeal, engaging in negotiations, and navigating the evolving landscape of international trade will be crucial for India to address the implications of the WTO panel ruling effectively.

WTO PANELS REJECTION OF INDIA'S ARGUMENTS

The WTO panels have dismissed India's argument regarding its legal obligations on tariffs. They have stated that India's obligations are derived from its Goods Schedule, not the Information Technology Agreement (ITA) signed in 1997. The panels have rejected India's claim that its commitments under the ITA are limited to the products listed in the agreement and do not extend to new products resulting from technological advancements after the agreement's conclusion.

Furthermore, the panels have also rejected India's argument based on the Vienna Convention on the Law of Treaties. India contended that an error in a treaty would invalidate its consent to abide by the terms. However, the panels have deemed this argument as unfounded and not applicable in this case.

Consequently, the panels have recommended that India revise its tariff rates and bring them in line with its Goods Schedule. This implies that India should lower its tariff rates on certain ICT products to ensure compliance with its WTO obligations.

These rulings highlight the importance of adhering to the legal framework established by the WTO and the significance of honouring commitments made in international agreements. India will need to consider the panels' recommendations and evaluate its tariff policies in light of its WTO obligations to ensure compatibility with its Goods Schedule. Compliance with the rulings will be crucial in maintaining trade relations and avoiding potential trade sanctions.

CONCLUSION:

In conclusion, the WTO panels' rejection of India's argument regarding tariffs on ICT products underscores the need for adherence to international trade obligations. India's compliance with the panels' recommendations to align its tariff rates with its Goods Schedule is crucial for maintaining a transparent and predictable multilateral trading system. The absence of an operational Appellate Body and India's non-inclusion in the alternative appellate mechanism pose additional challenges. Resolving these issues will be essential to uphold the rules-based international trading order and promote fair trade practices among nations.

THE STATE OF THE WORLD'S CHILDREN 2023: FOR EVERY CHILD, VACCINATION!

CONTEXT: *UNICEF released its global Flagship report "The state of the world's children 2023: for every child, Vaccination". The report highlights the importance of childhood immunisation.*

BACKGROUND: UNICEF, established in 1946 and integrated into the United Nations in 1953, is a global agency committed to supporting national endeavours in enhancing the well-being of children by focusing on their health, nutrition, education, and overall welfare. Headquartered in New York, UNICEF operates under the principles of the Convention on the Rights of the Child, adopted in 1989. In the context of India, UNICEF collaborates closely with the Indian government and local partners to address the specific needs and challenges faced by children in the country. It implements numerous programs and initiatives, including those related to immunization, education, sanitation, child protection, and emergency response, to ensure the rights and development of children in India.

MAJOR FINDINGS OF THE REPORT

- The decline in vaccine Confidence Globally: Over a third of the 55 countries studied for the report showed a decline in the use of Vaccines

- The largest decline in childhood immunisation in 30 years: A total of 67 million children missed out in vaccinations between 2019 & 2021. In 2022, the measles cases were more than double the total in the previous year.

- Existing inequalities in Vaccination access: Unvaccinated children often live in hard-to-reach communities such as the rural areas and urban slums.

- Growing threat of Vaccine hesitancy: there is a growing threat of vaccine hesitancy due to factors such as access to misleading information about declining trust in vaccine efficiency.

INDIA SPECIFIC FINDINGS

Decrease in number of Zero- dose Children during the Pandemic: Between 2020 & 2021, the number of Zero-dose children in India decreased from 3 million to 2.7 Million. But India was amongst the top 20 countries with the largest number of Zero dose children. 98% of the population In India currently perceive vaccines as important for children.

"*Be not afraid of greatness. Some are born great, some achieve greatness, and others have greatness thrust upon them.*"

- WILLIAM SHAKESPEARE

Emphasizes sustained	India was able to bring down the number of zero-dose children due to sustained evidence-based catch-up campaigns (e.g., Intensified Mission Indradhanush (IMI), ASHA workers, routine immunization)
evidence-based catch-up campaigns	Increase the implementation of Immunization Agenda 2030 and Gavi Strategy 5.0 to promote equity and sustainably scale up immunization coverage.
Strengthen demand for vaccination	Demand for vaccination can be strengthened by talking to communities, tackling gender barriers, and rethinking accountability in health systems.
Importance of investing in primary healthcare	Spending more on immunization and health by investing in primary health care at the national level can help promote sustainable and equitable vaccine coverage.
Need to build resilient systems	E.g., India's digital health platform TeCHO+ (Technology Enabled Community Health Operations) and electronic vaccine intelligence network (eVIN) increased vaccination coverage while enhancing data entry efficiency

KEY WORDS:

"Zero dose children" refers to children who have not received any vaccines at all or have not received any vaccines according to the recommended schedule for their age.
Vaccine Hesitancy: Vaccine hesitancy refers to the reluctance of an individual or a group of people to get vaccinated despite the availability of vaccines.
Vaccine confidence refers to the level of trust and belief individuals and communities have in the safety and effectiveness of vaccines.

CONCLUSION: The UNICEF State of the World's Children Report is an annual publication that provides data, analysis, and recommendations on the well-being and rights of children globally, serving as a catalyst for action and advocacy to improve their lives.

UNICEF plays a vital role in ensuring equitable access to immunization for every child in India. By working closely with the Indian government and local partners, UNICEF strengthens the immunization program and health systems across the country. Their efforts focus on reaching the most marginalized and hard-to-reach populations, including remote rural areas and urban slums. Through advocacy, capacity building, and supply chain support, UNICEF helps establish strong immunization systems that ensure no child is left behind. By reaching the last child with immunization, UNICEF contributes to the overall health of the community, preventing outbreaks of vaccine-preventable diseases and reducing morbidity and mortality rates. In this way, UNICEF's collaboration with India supports not only the health and well-being of individual children but also contributes to building a resilient and healthier nation, ready to face future pandemics effectively.

INTERNAL SECURITY

COMMAND CYBER OPERATIONS AND SUPPORT WINGS

MISINFORMATION COMBAT ALLIANCE (MCA)

MANIPUR CLASHES

COMMAND CYBER OPERATIONS AND SUPPORT WINGS

CONTEXT: *The Indian Army constituted Command Cyber Operations and Support Wings (CCOSWs) to assist its formations in dealing with cyberspace security challenges.*

BACKGROUND: A new unit of the Indian Army - Command Cyber Operations and Support Wings (CCOSWs) was created in response to the growing threat of cyber warfare. The CCOSWs are responsible for protecting the Indian Army's networks and systems from cyber-attacks, as well as developing and executing cyber operations. The CCOSWs comprise of both military personnel and civilian experts.

COMPONENTS OF THE CCOSWs:

- **CYBER OPERATIONS CENTRE (COC)**: Monitor and respond cyber threats.

- **CYBER SECURITY DIRECTORATE (CSD)**: Develop and implement cyber security policies and procedures.

- **CYBER TRAINING CENTRE (CTC)**: Train Indian Army personnel in cyber security.

MANDATE: The CCOSWs are a key part of the Indian Army's efforts to defend against cyber threats. The CCOSWs are well-positioned to protect the Indian Army's networks and systems from cyber-attacks, and to develop and execute cyber operations. The Lead Directorates and Test Bed formations will facilitate the absorption of niche technologies and improve the exploitation of futuristic technologies across the army.

Here are some of the key tasks that the CCOSWs will undertake:

- Monitor and respond to cyber threats
- Develop and implement cyber security policies and procedures
- Train Indian Army personnel in cyber security
- Conduct cyber operations
- Develop and maintain cyber capabilities
- Conduct research and development in cyber security
- Collaborate with other government agencies and the private sector on cyber security matters

STATS AND FIGURES:

1.2 Billion mobile subscribers

750 Million were smartphone users

448 Million social media users

62 % of large and middle-market companies are still in the formative stages of digitalisation in India.

1 Billion smartphone users by 2026

Deloitte
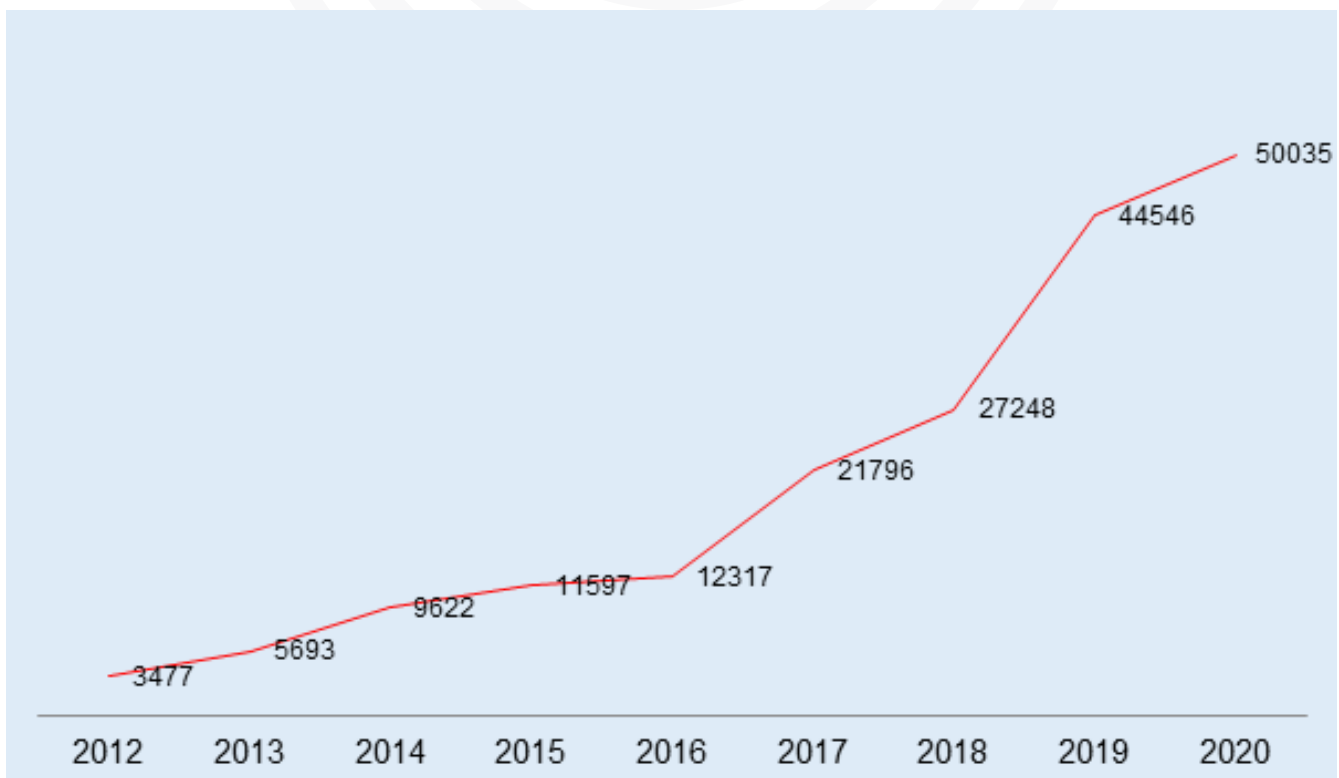
FIGURE: Bar chart representation of cyber-attacks reported in India.
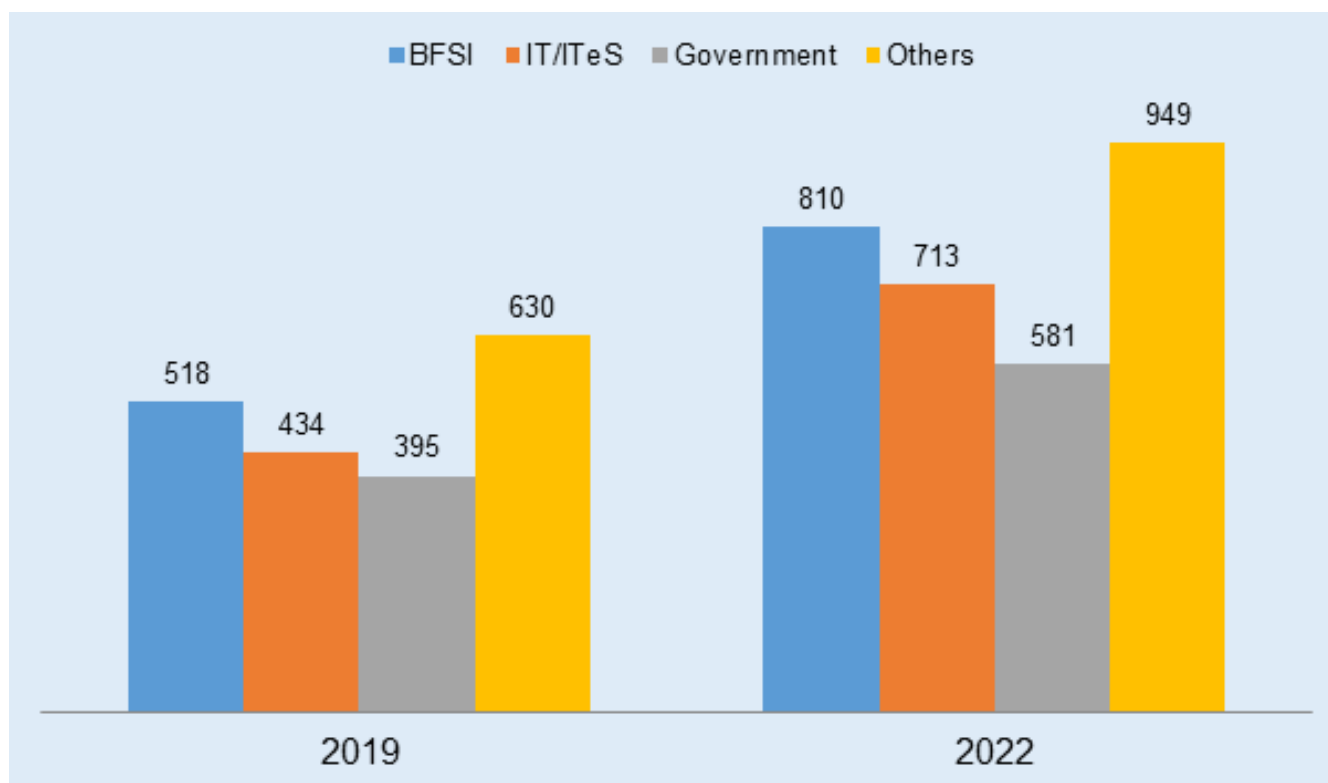
FIGURE: Bar chart representation of value of expenditure towards cyber security in India in 2019 with a forecast for 2022, by sector (in million U.S. dollars)

Guidelines issued by Computer Emergency Response Team (CERT-In) to prevent Cyber Breaches:

- **SERVICE PROVIDERS, INTERMEDIARIES, DATA CENTER PROVIDERS, CORPORATES, & GOVERNMENT ORGANIZATIONS**: Mandatory to report cyber incidents within 6 hours of their detection.

- **VIRTUAL ASSET, EXCHANGE, & CUSTODIAN WALLET PROVIDERS**: Required to maintain records on KYC and financial transactions for a period of 5 years.

- **CLOUD, VIRTUAL PRIVATE NETWORK (VPN) SERVICE PROVIDERS**:

- Register validated names, emails, and IP addresses of subscribers and information and assistance to CERT-In for any action taken to mitigate the impact of the cyber incident.

- Connect and synchronize all their ICT systems clocks to the Network Time Protocol (NTP) Server of the National Informatics Centre (NIC) or National Physical Laboratory (NPL) to ensure the chain of events is accurately reflected in the time frame.

STEPS TAKEN BY THE GOVERNMENT TO SPREAD AWARENESS ABOUT CYBER CRIMES:

- **COMPUTER EMERGENCY RESPONSE TEAM - India (CERT-In)**: Established under the Union Ministry of Electronics and Information Technology (MEIty) as the national nodal agency for responding to computer security incidents.

- **INDIAN CYBER CRIME COORDINATION CENTRE (I4C):** Established to handle issues related to cybercrime in the country in a comprehensive and coordinated manner.

- **NATIONAL CRITICAL INFORMATION INFRASTRUCTURE PROTECTION CENTRE (NCIIPC):** Established for protection of critical information infrastructure in the country.

- ONLINE CYBERCRIME REPORTING PORTAL: Enable complainants to report complaints pertaining to Child Pornography/Child Sexual Abuse Material, rape/gang rape imageries or sexually explicit content.

- CYBER SWACHHTA KENDRA (Botnet Cleaning and Malware Analysis Centre): Detect malicious programmes and free tools to remove such programmes.

- CRISIS MANAGEMENT PLAN: Formulated plans for countering cyber-attacks and cyber terrorism.

CONCLUSION:

Cybercrimes in India caused Rs 1.25 trillion loss in 2019. Cyber threats will continue to increase as the country starts developing smart cities and rolling out 5G network, among other initiatives. Cyberattacks on Indian organizations have more than doubled in recent years. According to a report of security firm Palo Alto Networks, ransomware attacks on Indian organizations in 2021 increased 218% year-on-year (YoY). The CCOSWs are a significant development in the Indian Army's efforts to defend against cyber threats. The CCOSWs will play a key role in protecting the Indian Army's networks and systems from cyber-attacks, and in developing and executing cyber operations

MISINFORMATION COMBAT ALLIANCE (MCA)

CONTEXT: *The Misinformation Combat Alliance (MCA) is a group of 14 digital publishers that have proposed forming a self-regulatory body to provide fact-checking services to social media platforms.*

BACKGROUND: Misinformation Combat Alliance (MCA) is a non-profit organization founded in Delhi, India in 2020 to combat the spread of misinformation and disinformation through education, advocacy, and research. MCA is a member of the Global Disinformation Index, a project that aims to create a global database of websites and social media accounts that spread misinformation and disinformation as well as a member of the International Fact-Checking Network, a network of fact-checking organizations from around the world. MCA is funded by a combination of grants, individual donations, and corporate sponsorships. In 2021, MCA launched a new initiative called the Misinformation Combat Academy. The academy is a free online course that teaches people how to identify and combat misinformation and disinformation.

MANDATE: A member of several international networks of fact-checkers and researchers, MCA works closely with governments, the media, and civil society organizations.

- Raise awareness about the dangers of misinformation and disinformation, and to provide tools and resources to help people identify and combat it.

- Advocate for policies that will help to reduce the spread of misinformation and disinformation.

RECENT DEVELOPMENT: Recently, the Centre made an amendment to Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021 to include a provision for the establishment of a government-run body to fact-check any misinformation about the government.

CONCLUSION: MCA is committed to working with other organizations to combat the spread of misinformation and disinformation. MCA is a leading voice in the fight against misinformation and disinformation. The organization's work is essential to protecting people from the dangers of these harmful phenomena.

MANIPUR CLASHES

CONTEXT: *The ethnic clashes in Manipur that erupted on May 03, 2023 between the Meitei people, a majority that lives in the Imphal Valley, and the tribal community from the surrounding hills, including the Kuki and Zo peoples left more than 70 people dead, and hundreds left wounded.*

DEMOGRAPHY: Meitei and Meitei Pangals, who constitute roughly 64 % of the state's population predominantly reside in the Manipur valley, which constitute approximately 10 % of the geographical area. Tribes, predominantly the Kukis that make up remaining 35 % of the Manipur's population reside in hills surrounding the valley, that makes up remaining 90 % of the state's geographical area comprises, which are home to the recognized tribes. Out of 60 Assembly constituencies of the state, 40 are in the valley.

ISSUE: The Meitei's living in the Manipur plains have been demanding the status of Scheduled Tribes since 2012 under the aegis of the Scheduled Tribes Demand Committee of Manipur (STDCM). A single judge of the Manipur High Court passed an order asking the government to consider the demand of the Meitei community for ST status. The order has been strongly opposed by groups representing the state's tribal communities such as Kukis and Nagas, living in Hills. Besides, the Kukis and other tribals also point out the dominant representation of Meitei community in

the State Legislature. Additionally, the Meitei language is already included in the Constitution, and sections of the Meitei community are already classified as Scheduled Castes or Other Backward Classes with access to opportunities associated with that status. An ethnic clash are due to longstanding tensions between hill and valley people, the Meitei demand for ST (Scheduled Tribe) status, and a recent order by the Manipur High Court.

CONCLUSION: The government has also promised to take steps to promote peace and harmony between the different ethnic groups in Manipur. However, it remains to be seen whether these measures will be enough to prevent future violence. The Manipur clashes are a reminder of the challenges that India faces in its efforts to maintain peace and stability in its northeastern states. The region is home to a diverse range of ethnic groups, many of which have a history of conflict with each other. The Indian government will need to do more to address the grievances of these groups if it wants to prevent further violence in the region.

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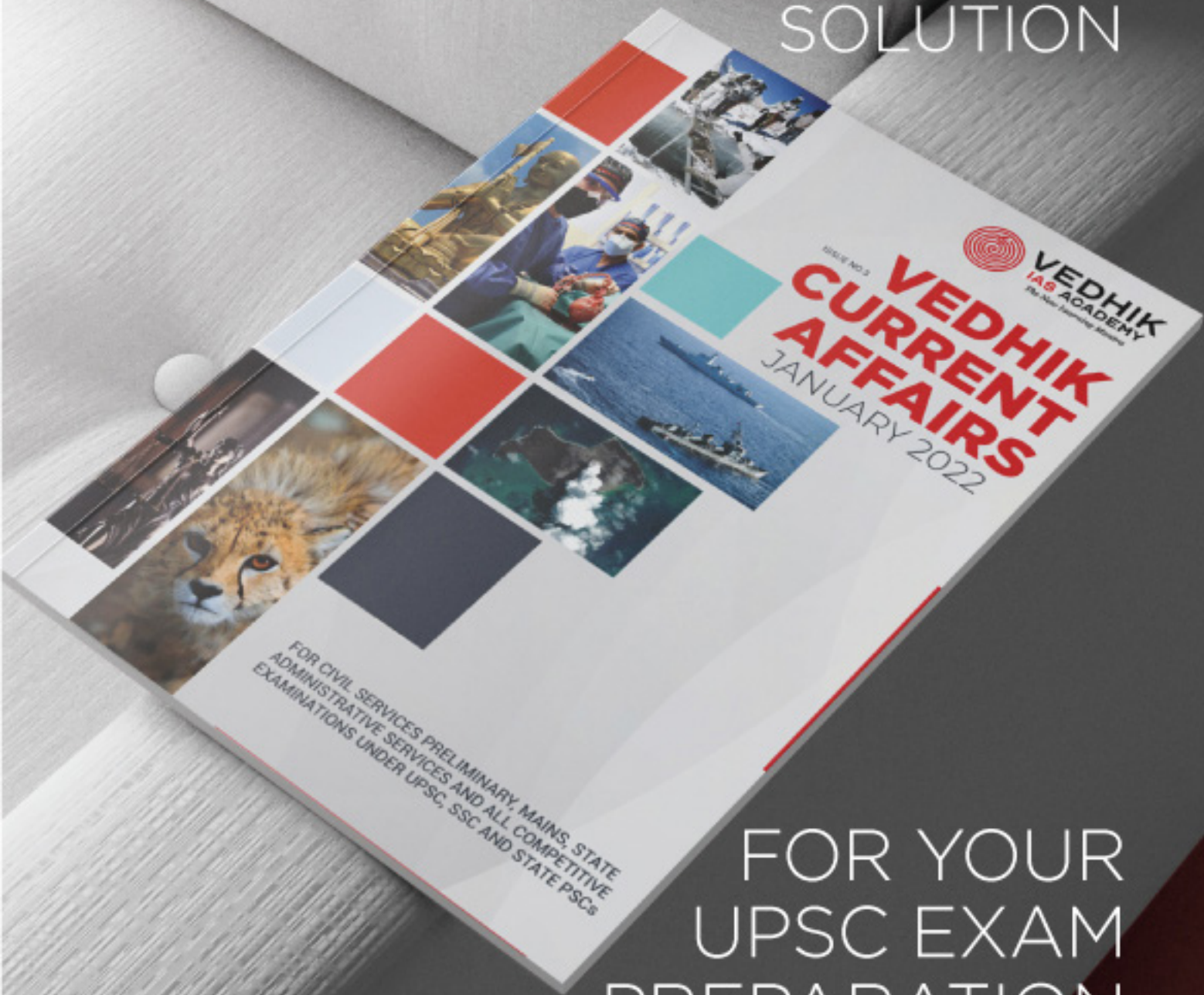
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AGRICULTURAL EXPORTS-IMPORTS

CONTEXT: *Both agricultural exports from and imports into India have scaled new highs in the fiscal year that ended March 31, 2023.*
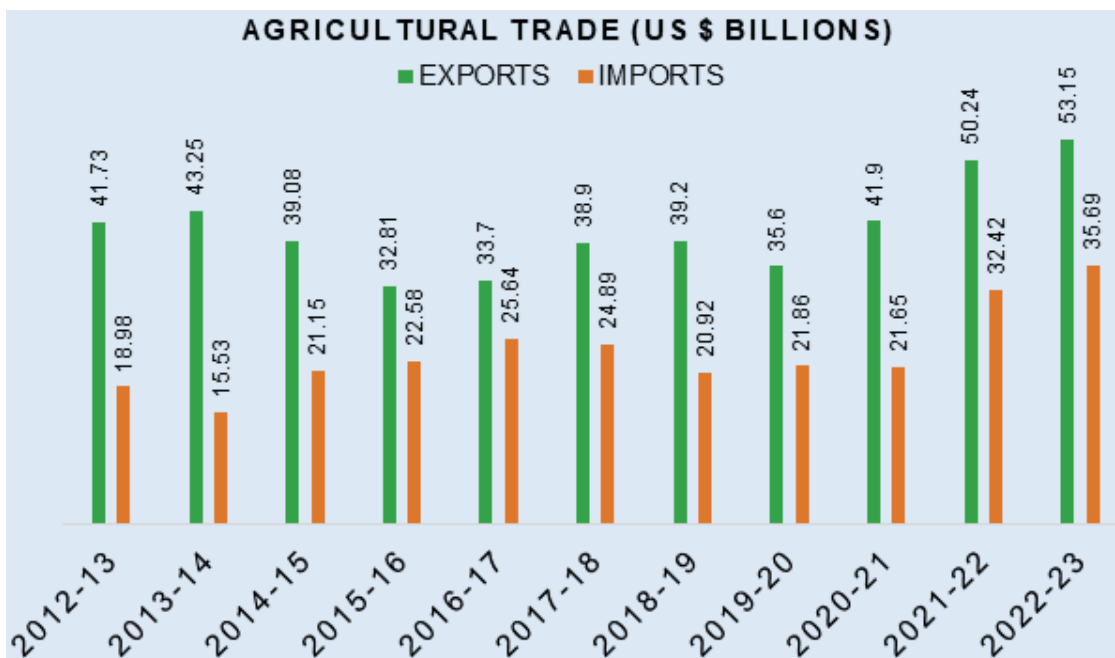
FIGURE: Bar char representation of agricultural trade in US $ (Billions). Source: Department of Commerce, Union Ministry of Commerce and Industries. Provisional data on agri imports-exports.
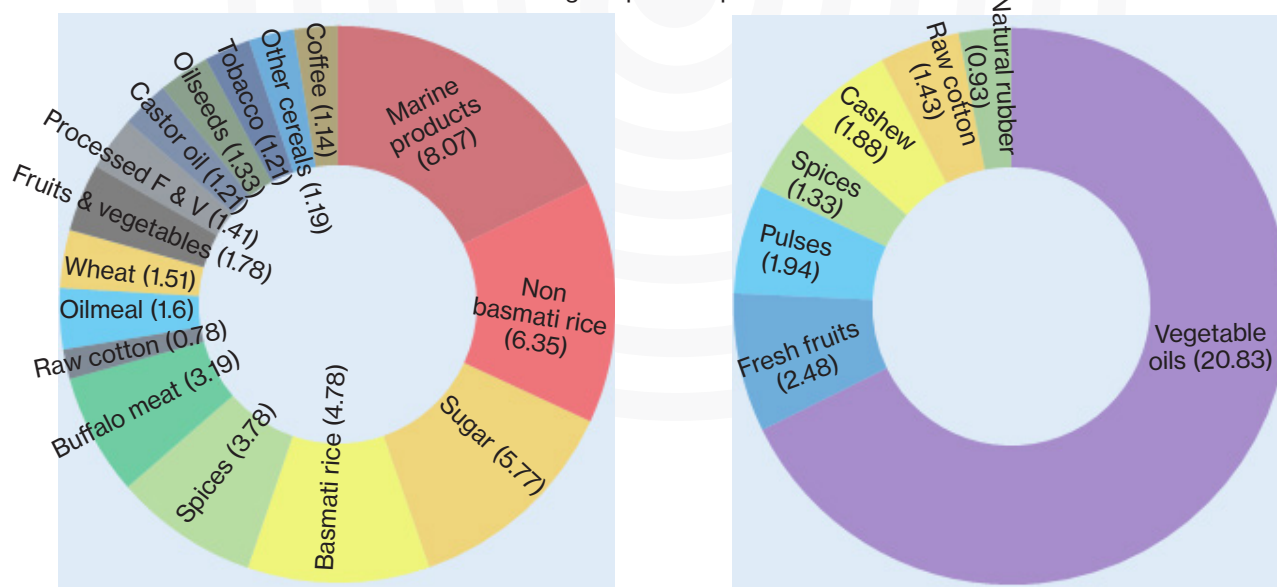
FIGURE: (L) Pie chart representation of top agricultural commodities exported by India (US $ Billions). (R) Pie chart representation of top agricultural commodities imported by India (US $ Billions).Source: Department of Commerce, Union Ministry of Commerce and Industries. Provisional data on agri imports-exports

BACKGROUND: The agricultural exports have grown 6 % in 2022-23 from US $ 444.4 billion to US $ 447.46 billion, reflecting a 5.3% rise from 2021-22. The imports of agricultural products have grown 16.1% from US $ 711.85 billion to US $ 714.24 billion. Agricultural trade surplus has marginally dipped from US $17.82 billion to US $17.46 billion. The import of fertilizers have risen from US $14.17 billion in 2021-22 to US $17.21 billion in 2022-23. The UN FAO's Food Price Index (FPI) – a weighted average of world prices of a basket of food commodities over a base period value (2014-16 = 100) – remains high since 2020-21. It made India's agri-commodities more globally price competitive.

AGRICULTURAL EXPORT IMPORT PROFILE OF INDIA

India is the largest exporter of rice ahead of Thailand. India primarily export Basmati rice to the Persian Gulf countries. The non-basmati shipments are more diversified primarily to Asian countries, including Bangladesh, China, Sri Lanka, Malaysia, Vietnam, UAE and Iraq and Africa countries, including the Senegal, Ivory Coast and Benin to Somalia and Madagascar.

India has emerged as the world's second largest exporter of sugar after Brazil. Indian mills have built markets for both raw sugar among refineries in Bangladesh, Indonesia, Malaysia, Saudi Arabia and Iraq and regular plantation

whites in African countries, Afghanistan, Sri Lanka and China.

India has traditionally been a net exporter of spices, cashew and cotton, but have stagnated since 2020-21. The exports of raw cotton, guar-gum and oil meals, have declined.

India imports approximately 60 % of India's vegetable oil requirements, 10% of pulses.

CHALLENGES

India is a major producer of agricultural products, facing numerous challenges in exporting its produce. Some of the key challenges include:

HIGH POST-HARVEST LOSSES: India suffers from high post-harvest losses, estimated to be around 20 % - 30 % of the total produce. These losses are due to a number of factors, including poor storage facilities, inadequate transportation, and lack of awareness among farmers about post-harvest management, leading to spoilage and loss of revenue.

VARYING QUALITY STANDARDS: The lack of uniformity in quality standards for agricultural produce in India make it difficult for exporters to meet the requirements of foreign buyers.

TECHNICAL BARRIERS TO TRADE: India faces a number of technical barriers to trade, such as Sanitary & Phytosanitary (SPS) measures, making it difficult to export agricultural produce.

GLOBAL COMPETITION: India faces competition from other countries, such as China, which are also major exporters of agricultural produce. The spice imports have increased, reflecting reduced price competitiveness compared to Vietnam in pepper and Guatemala in pepper.

CLIMATE CHANGE: Climate change is affecting agricultural production in India, which could lead to lower yields and increased prices. This could make it more difficult for India to compete in the global market.

INCREASING DEMAND: The demand for agricultural products is increasing globally, which could put pressure on Indian prices. This could make it more difficult for Indian farmers to make a profit.

GOVERNMENT POLICIES: The cultivation of GM Bt cotton and high global prices had enabled India to become the world's top producer ahead of China and second largest exporter of natural fibre after the US. But, as the government is not permitting new gene technologies, the country has turned from a net exporter to an importer of cotton.

STEPS TO PROMOTE AGRICULTURAL EXPORTS: The Centre launched the Agriculture Export Policy, 2018 to harness export potential of Indian agriculture to make India a global power in agriculture and raise farmers' income. The major initiatives under the Agriculture Export Policy, 2018 to increase the exports include 'District as Export Hub' Initiative of the Department of Commerce, Transport and Marketing Assistance for Specified Agriculture Products to mitigate the freight disadvantage for the export of agriculture products. Trade Infrastructure for Export Scheme (TIES), Market Access Initiatives (MAI) Scheme and the Export Promotion Schemes of APEDA to name a few.

CONCLUSION: Despite these challenges, India has the potential to become a major exporter of agricultural produce. The government is taking a number of steps to address these challenges, such as investing in infrastructure, improving quality standards, and negotiating trade agreements. If these steps are successful, India could become a major player in the global agricultural market.

BHARAT TAP INITIATIVE

CONTEXT: *The Centre is planning to introduce BHARAT TAP, a star rating system for water fixtures - water taps, and sanitary fixtures.*
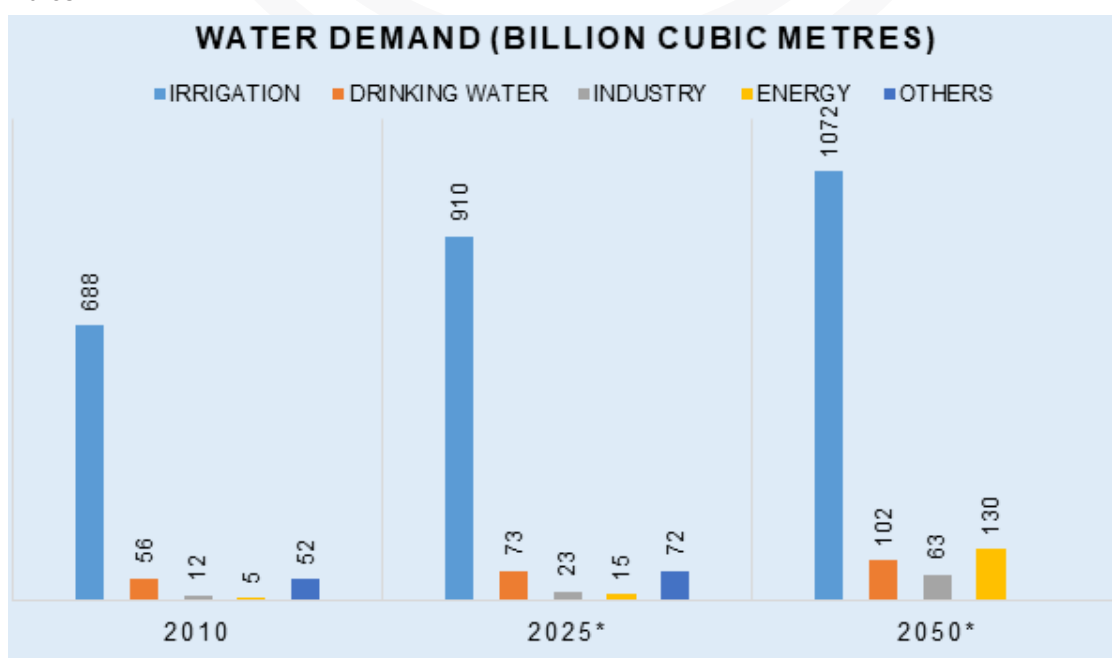
FIGURE: Bar chart representation of sector-wise forecasted water demand.

BACKGROUND: Bharat Tap initiative is a collaborative effort of Indian Plumbing Association (IPA) and manufacturers for water fixtures - water taps, and sanitary fixtures, similar to the ratings of electrical appliances to improve water utilisation efficiency. The water fixtures are star-rated as 3, 4, and 5 stars based on water efficiency. An estimated 40 % savings in water consumption at the source can be achieved with provision of low-flow, sanitary ware at scale. Water and energy saving due to less water and energy required for pumping, transporting, and purification.

ATAL MISSION FOR REJUVENATION & URBAN TRANSFORMATION (AMRUT): The Government of India (GoI) launched phase I AMRUT, a national urban renewal mission in June 2015 to improve the quality of life in 500 cities by providing them with basic civic amenities such as water supply, sewerage, and storm water drainage. AMRUT also aims to reduce pollution in cities by promoting the use of public transport and non-motorized transport. The first phase of the mission, which was launched in June 2015, will cover a period of five years (2015-2020). The second phase of the mission, which will be launched in 2020, will cover a period of five years (2020-2025). The MoHUA

has approved a total of 77,640 Cr. for the mission, which includes committed Central Assistance (CA) of 35,990 Cr.

KEY ACHIEVEMENTS OF AMRUT:

Access to tap water: ~ 10 Cr. people

Sewerage connections: ~ 5 Cr. people

Length of new water pipelines laid: ~ 1,500 km

Length of new sewerage pipelines laid: ~ 2,500 km

Sewage Treatment Plants (STPs) commissioned: ~ 1,000

Public toilets constructed: ~ 100,000

City bus shelters constructed: ~ 500

Length of new footpaths constructed: ~ 100 km

Parks commissioned: ~ 100 parks

CONCLUSION: AMRUT has been a major success in improving the quality of life in cities. The mission has helped to provide basic civic amenities to millions of people, and it has helped to reduce pollution in cities. AMRUT is a major step forward in the development of India's urban area.

CLEARING CORPORATIONS

CONTEXT: *The European Union (EU) capital market regulator - European Securities and Markets Authority (ESMA) has derecognised six Indian central counterparties (CCPs) from April 30, 2023. The derecognised central counterparties are The Clearing Corporation of India (CCIL), Indian Clearing Corporation Ltd (ICCL), NSE Clearing Ltd (NSCCL), Multi Commodity Exchange Clearing (MCXCCL), India International Clearing Corporation (IFSC) Ltd (IICC), and NSE IFSC Clearing Corporation Ltd (NICCL).*

"an organisation associated with an exchange to handle the confirmation, settlement, and delivery of transactions in a prompt and efficient manner."

- CLEARING CORPORATIONS (CC)
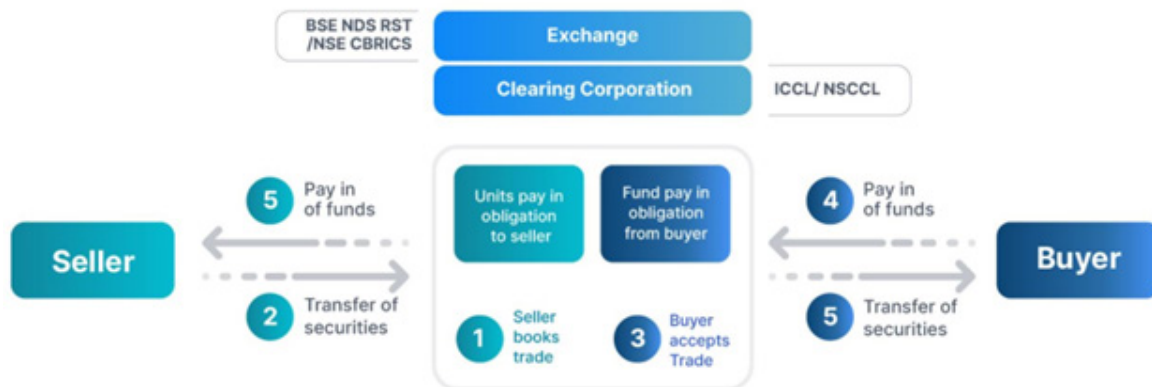
DERECOGINITION OF INDIAN CLEARING CORPORATIONS:

The European Securities and Markets Authority (ESMA) derecognised Indian CCPs with 'no cooperation arrangements' between ESMA and Indian regulators – the Reserve Bank of India (RBI), the Securities and Exchange Board of India (SEBI) and the International Financial Services Centres Authority (IFSCA). As per the European Market Infrastructure Regulations (EMIR), a CCP in a third

country recognised by ESMA can only provide clearing services to European banks.

CONCLUSIONS: The derecogonition of six Indian central counterparties (CCPs) from April 30, 2023 by European Union (EU) capital market regulator - European Securities and Markets Authority (ESMA) prevent Clearing Corporations no longer be able to provide services to clearing members and trading venues established in the European Union (EU).
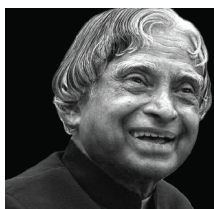
You have to dream before your dreams can come true..

- A. P. J. ABDUL KALAM

DEBT-FOR-CLIMATE SWAPS

CONTEXT: *The debt-for-climate swaps, also known as debt-for-nature swaps have grown relatively popular among low- and middle-income countries.*

"a debt restructuring practice, wherein the creditor forgoes a portion of the foreign debt/provides its debt relief, in return for a commitment to invest in specific environmental mitigation and adaptation projects."

- DEBT-FOR-CLIMATE/DEBT-FOR-NATURE SWAPS

BACKGROUND: A debt-for-climate swap is a financial instrument that allows a country to reduce its debt burden by committing to undertake climate-related investments. The creditor agrees to forgive a portion of a country's debt in exchange for the country committing to invest in climate-related projects, such as renewable energy, energy efficiency, or climate adaptation. In the first debt-for-climate swap in 1991, the United States agreed to forgive US $ 30 million of Bolivia's debt in exchange for Bolivia commitment to invest in renewable energy and energy efficiency projects implemented in Bolivia. In 2017, Seychelles announced the successful conclusion of negotiations for a debt-for-adaptation swap under a tripartite model. The Nature Conservancy (TNC), a US-based environmental organisation, bought US $ 22 million of its debt in exchange for a promise to create 13 new marine protected areas.

SIGNIFICANCE: Debt-for-climate swaps have been used in a number of countries, including Bolivia, Costa Rica, Ecuador, and Mexico. Debt-for-climate swaps can be a valuable tool for countries that are struggling to repay their debt and that are also facing the challenges of climate change. Such countries can reduce their debt burden, free up resources to invest in climate-related projects, which can help them to adapt to the impacts of climate change and to reduce their emissions.

BENEFITS: Debt-for-climate swaps secure two objectives - DEBT RELIEF, freeing up fiscal resources of the debtor Governments and improving their resilience without triggering a fiscal crisis or sacrificing spending on other development priorities and Developed countries to fulfil their commitments to support developing countries through this attractive and transparent instrument.

BENEFICIARIES: Low and middle-income countries, Small Island Developing States (SIDS) are most vulnerable to climate change and are least able to afford the investment to strengthen resilience due to their debt burden. The COVID-19 pandemic resulted in a 73 % drop in international tourist arrivals in 2020, which aggravated the debt crisis of these countries. The signatories to the Paris Agreement and the Glasgow Financial Alliance for Net Zero (GFANZ) have a commitment to provide financial assistance to developing countries to build clean, climate-resilient futures.

CONCLUSION: Overall, debt-for-climate swaps can be a valuable tool for countries that are facing the challenges of climate change and that are also struggling to repay their debt. However, they are complex and challenging to implement, and there are a number of risks associated with them.

EAT RIGHT FOOD STREET PROJECT

CONTEXT: *The Union Ministry of Health has proposed to launch '100 food streets across 100 districts' in the country to promote safe and hygienic food practices.*

BACKGROUND: The Eat Right India movement is a nationwide long-term initiative launched by the Food Safety and Standards Authority of India (FSSAI) in 2018 to promote safe and healthy eating habits among Indians with the goal of reducing the burden of diet-related diseases in India. The Eat Right India movement is built on three pillars:

- **EAT HEALTHY**: Promoting a healthy diet, rich in fruits, vegetables, and whole grains and encouraging people to reduce their intake of processed foods, sugary drinks, and unhealthy fats.

- **EAT SAFE**: Ensuring food safe to eat, improving food safety practices throughout the food supply chain, from production to processing to consumption.

- **EAT SUSTAINABLY**: Promoting sustainable food production and consumption practices, encouraging people to choose foods produced in a way that protects the environment and human health.

EAT RIGHT FOOD STREET PROJECT: The Union Ministry of Health & Family Welfare in collaboration with the Ministry of Housing & Urban Affairs with technical support from Food Safety and Standards Authority of India (FSSAI) launched 'EAT RIGHT FOOD STREET PROJECT' under the National Health Mission (NHM). The project focussed upon setting up of 100 food streets in 100 districts across the country. The objective of the EAT RIGHT FOOD STREET PROJECT is to promote safe and healthy food practices, reduce food-borne illnesses, and improve overall health outcomes. A financial assistance of Rs 1 Cr. would be provided to States and Union Territories to set up food streets.

SIGNIFICANCE: The project aims to improve the quality and safety of food served at street food stalls, and to make it easier for consumers to find healthy and nutritious options to eat. The project provides training to street food vendors on food safety practices, besides financial assistance to upgrade their equipment and facilities.

BENEFITS:
- Improved food quality and safety
- Increased availability of healthy food options
- Increased awareness of the importance of healthy eating
- Reduced risk of foodborne illness
- Improved consumer satisfaction

CONCLUSION: The project is expected to benefit over 100 million people in India. It is expected to reduce foodborne illnesses by 20% and improve the overall health outcomes of the population. Despite challenges, the Eat Right Food Streets Project is a promising initiative that has the potential to make a significant impact on the health and well-being of the people of India.

FERTILISER – STAT AND FIGURES

CONTEXT: *Data from the Union Ministry of Agriculture and Family Welfare (A&FW) suggest of increase in sale of fertilisers, despite a slew of measures taken by the Centre and States to reduce the use of the fertilisers.*

BACKGROUND: Chemical nitrogen fertilizer, white in colour artificially provides nitrogen, a major nutrient required by plants. India is the top importer of urea, importing approximately 30% of its annual consumption. India is to commission 5 new Urea plants by 2025 to add 6.5 million tons of capacity to its existing 32 plants with a total 26 million tons of capacity to end this import dependence. Additionally, India is boosting nano urea production with a target of 5 million tons by 2025 to reduce consumption by improving consumption efficiency.
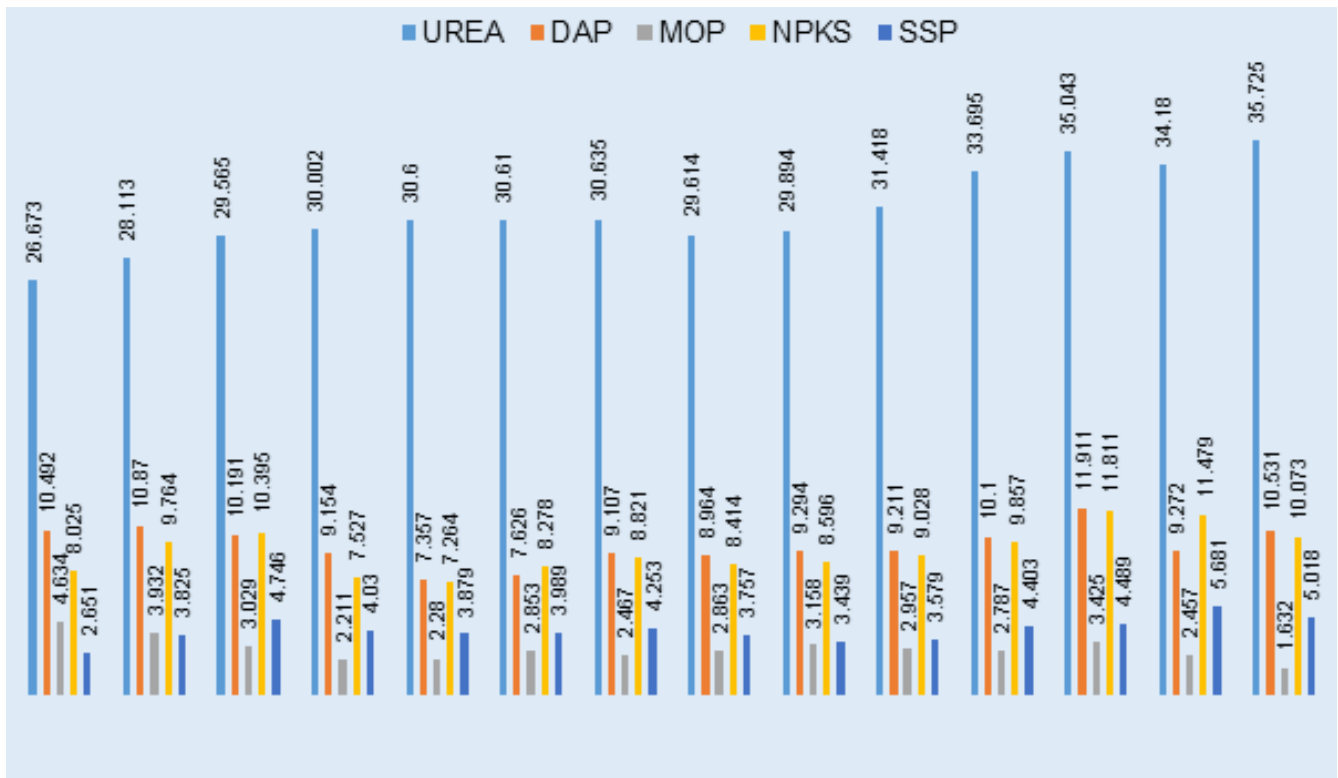
FIGURE: Bar chart representation of sale of fertilisers (MMTPA).

CROP YIELD RESPONSE TO FERTILISERS
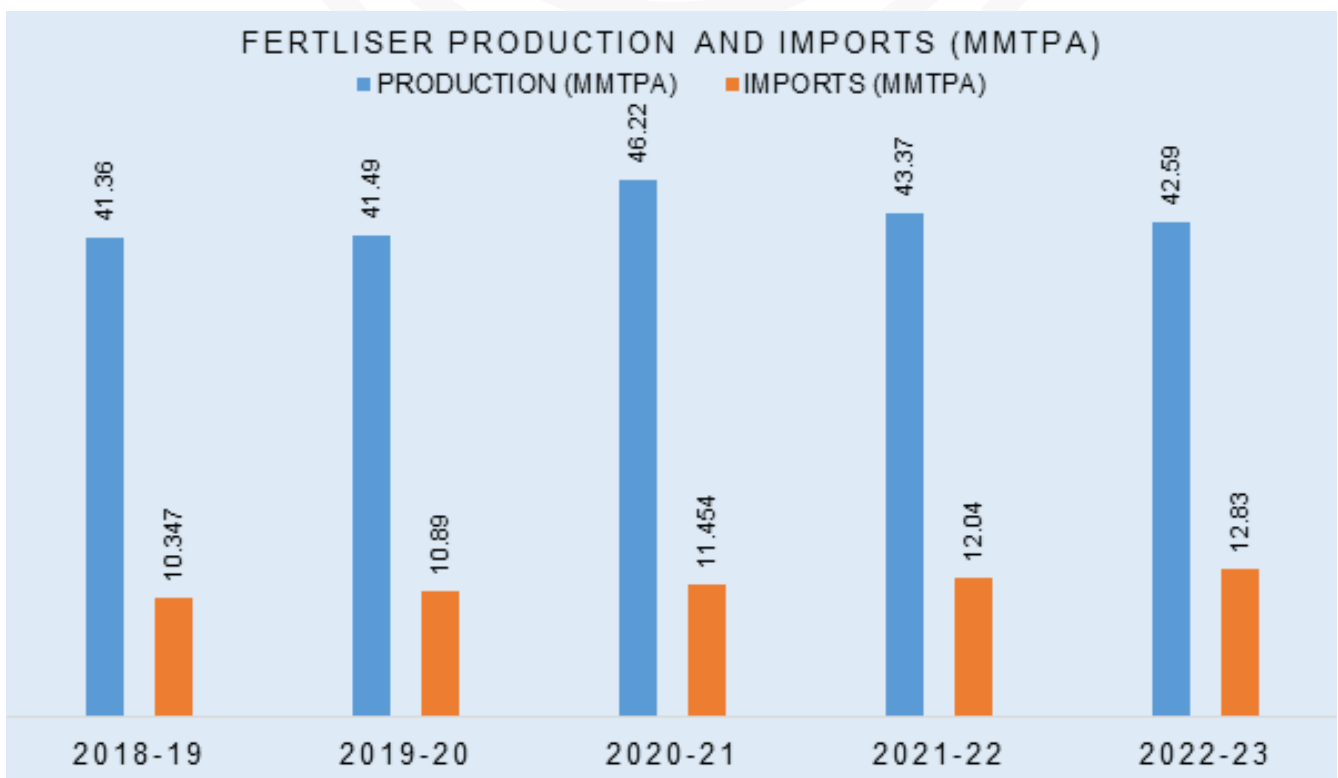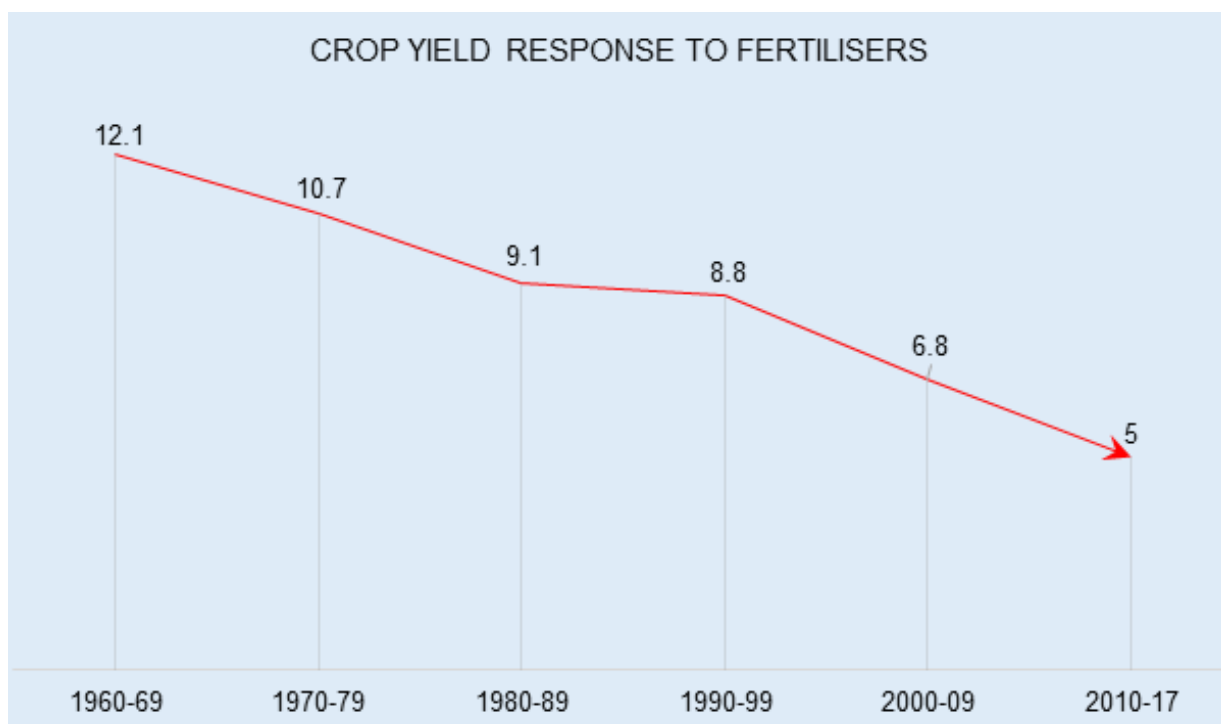
FIGURE: Bar chart representation of utilisation of fertilisers (lakh tonnes).

RECENT INITIATIVES: Check illegal diversion for non-agricultural use, and increasing nitrogen use efficiency, have failed in reducing urea consumption.

2015 – INTRODUCTION OF NEEM COATED UREA: Mandatory coating of all indigenously manufactured and imported urea with neem oil.

2021 – NANO UREA: PM Narendra Modi recently inaugurated India's first liquid nano urea plant of Indian Farmers Fertiliser Cooperative (IFFCO) Limited located at Kalol, Gujarat.

2022 – PM PRANAM SCHEME: States would be eligible to receive 'HALF OF SAVINGS IN FERTILISER SUBSIDIES' run by the Department of Fertilisers as GRANTS. 70% of the GRANTS for asset creation to adopt alternate fertilisers at the village, block and district levels. 30% GRANT for incentivising farmers, Panchayats, FPOs and Self-Help Groups (SHGs) involved in the reduction of fertiliser use and awareness generation.
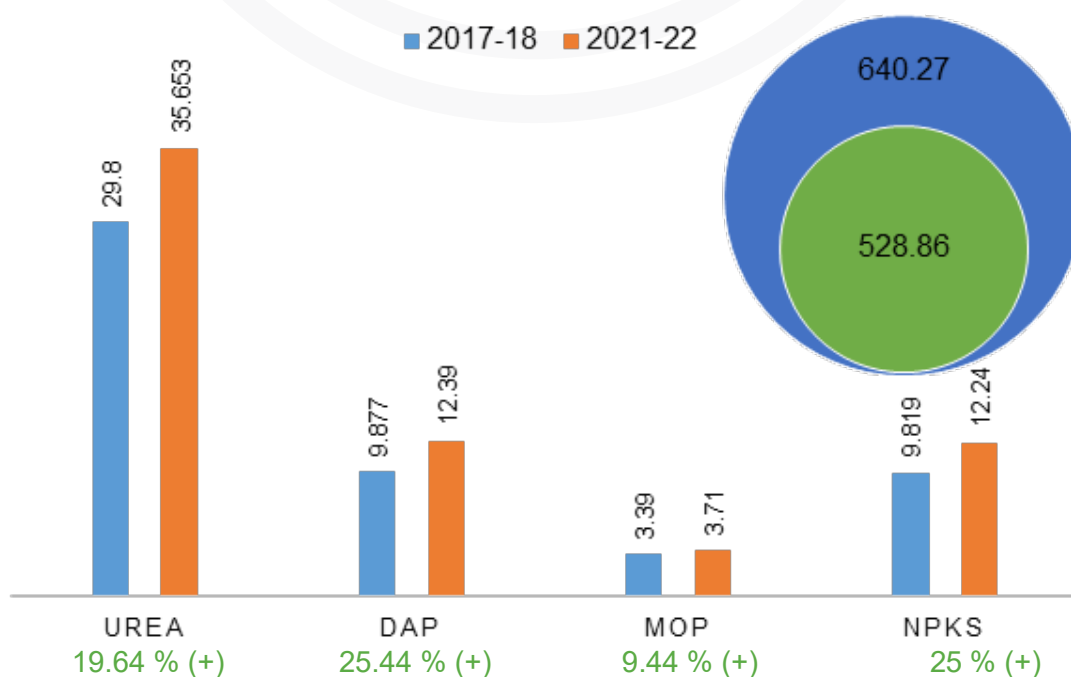
FIGURE: Bar chart comparative representation of chemical fertilisers consumed in MMTPA.

COMPARISION

COST: 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.

EFFICIENCY: Efficiency as high as 85-90 % for fertilizers in nano form capable of being absorbed by the stomata, pores found on the epidermis of leaves facilitate targeted supply of nutrients to crops compared to an efficiency of about 25 % of conventional urea.

PUBLIC FINANCE: Reduces fertilizer subsidy bill of the India heavily dependent on imports of the nitrogenous-based urea fertilizer.

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: Reduces the unbalanced and indiscriminate use of conventional urea reducing soil, water, and air pollution.

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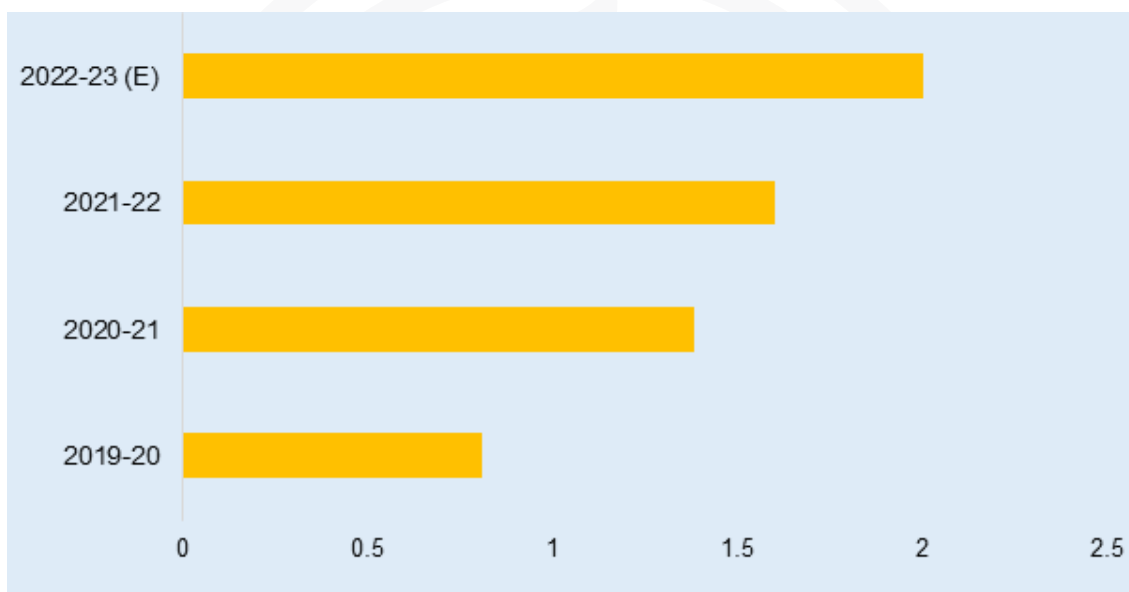
FIGURE: Bar chart representation of fertiliser subsidies (trillion INR) Source: Union Ministry for Fertilizers and Chemicals. Budgetary Estimates (BE).

NUTRIENT BASED SUBSIDY SCHEME, 2010: The market prices of Phosphatic and Potassic (P&K) fertilizers, except for Urea are decontrolled, but a fixed amount of subsidy decided on an annual basis is provided on each grade of subsidized, based on the nutrient content present in them.

UREA PRICING POLICY: The market prices of Urea fertilizers, except for Urea is statutorily fixed by the Government of India. The Centre pays subsidy on urea to fertiliser manufacturers on the basis of cost of production at each plant and the units are required to sell the fertiliser at the government-set Maximum Retail Price (MRP).

MODE OF SUBSIDIES PAYMENTS: The Point-of-Sale (PoS) machines are present in the retailer is linked to the Department of Fertilizers' e-Urvarak DBT portal. Farmers purchasing fertilizers provide identity proof (Aadhar or Kisan Credit Card) to certify sales. The sales registered on the e-Urvarak portal get DBT for the companies under Direct Benefit Transfer (DBT) system introduced in 2018.

CONCLUSION:

The challenges facing the fertilizer sector in India are complex and there is no easy solution. However, the government is taking steps to address these challenges and to improve the efficiency and sustainability of the fertilizer sector.

You have to dream before your dreams can come true..

- A. P. J. ABDUL KALAM
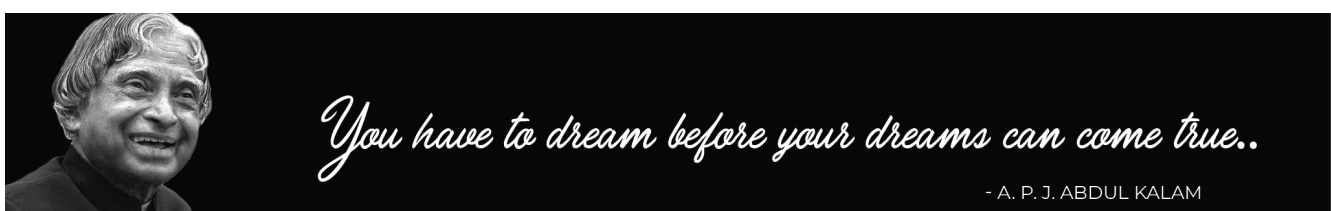
HEAT INDEX

CONTEXT: *The India Meteorological Department (IMD) has announced plans to launch a composite index next year to measure the impact of heat on India's population.*

"Prolonged summers with elevated temperatures and humidity where temperatures exceed Normal Historical (30-year period) Maximum Temperature of over 400 C by 50 C to 60 C or an excess of 40 C to 50 C above a normal historical maximum temperature of over 400 C"

-HEAT WAVES

BACKGROUND: The India Meteorological Department (IMD) was founded in 1875 with its headquarters located at New Delhi under the Union Ministry of Earth Science is the principal agency responsible for meteorological observations, weather forecasting and seismology in India. According to IMD data, the number of heat waves increased by 24 % during 2010-2019 compared to 2000-2009. The mortality rate for tropical cyclones decreased by 94 % whereas it increased by 62 % for heat waves between 2000 and 2019.

RECENT EVENTS: The Konkan region, including Mumbai, experienced sweltering heat under the direct influence of the prevailing heat wave in the adjacent Saurashtra-Kutch regions of Gujarat. Heat waves in Konkan region can be attributed to the hot and dry winds from northwest India approaching the parts of Konkan, besides the slow movement of sea breeze along the Maharashtra coast and the overall clear sky conditions. According to a study, the Western Indian Ocean Region (WIOR) experienced the largest increase in marine heat waves at a rate of about 1.5 events per decade, followed by the north Bay of Bengal at a rate of 0.5 events per decade. From 1982 to 2018, the Western Indian Ocean had a total of 66 events, while the Bay of Bengal had 94 events.

"a coherent area of extreme warm sea surface temperature (SST) for an extended period that persists for days to months observed in all major ocean basins over the recent decade"

-MARINE HEAT WAVES
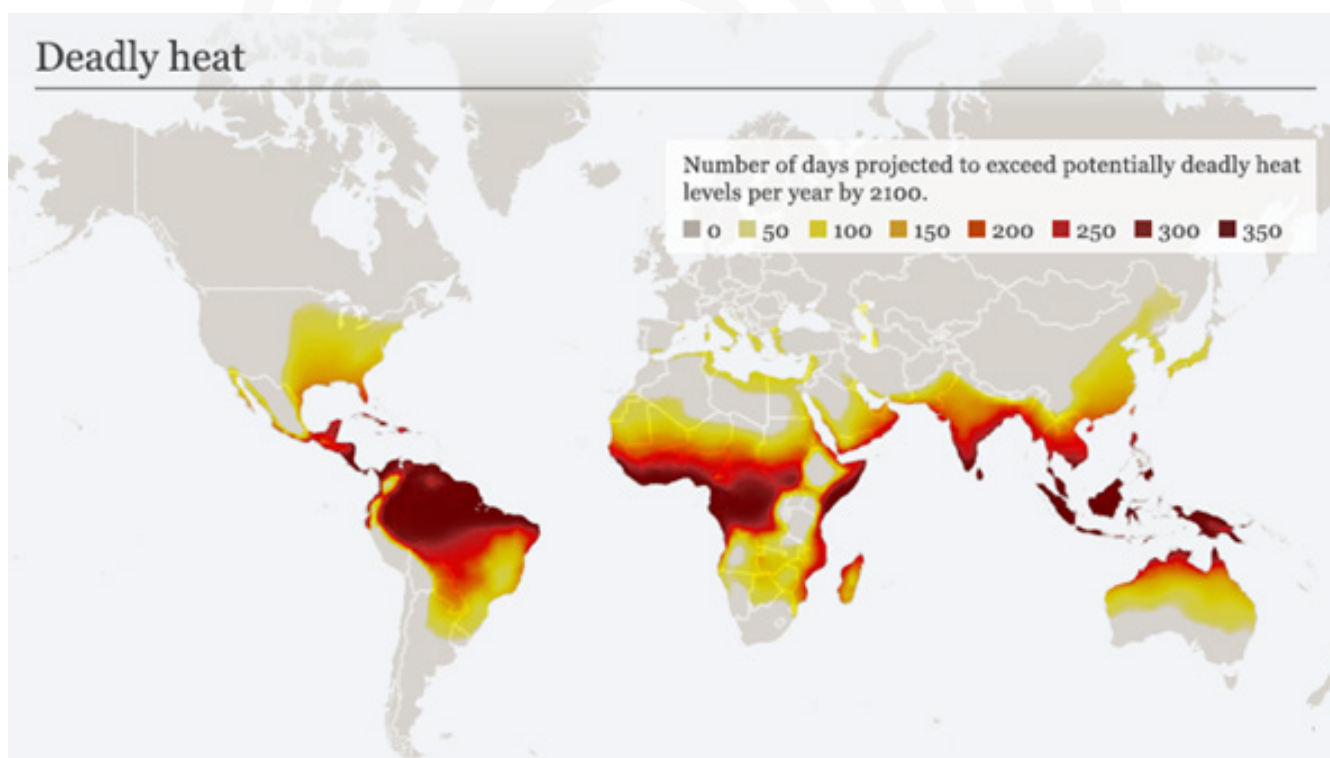
FIGURE: Heat wave Hazard Zonation Map of the World.

Relative Humidity %	Temperature °C																
	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43
40	27	28	29	30	31	32	34	35	37	39	41	43	46	48	51	54	57
45	27	28	29	30	32	33	35	37	39	41	43	46	49	51	54	57	
50	27	28	30	31	33	35	36	38	41	43	46	49	52	55	58		
55	28	29	30	32	34	36	38	40	43	46	48	52	54	58			
60	28	29	31	33	35	37	40	42	45	48	51	55	59				
65	28	30	32	34	36	39	41	44	48	51	55	59					
70	29	31	33	35	38	40	43	47	50	54	58						
75	29	31	34	36	39	42	46	49	53	58							
80	30	32	35	38	41	44	48	52	57								
85	30	33	36	39	43	47	51	55									
90	31	34	37	41	45	49	54										
95	31	35	38	42	47	51	57										
100	32	36	40	44	49	56											

	Caution		Extreme Caution		Danger		Extreme Danger

FIGURE: Heat wave Index Table

"the combination of air temperature and relative humidity, it is the measure of how hot it really feels when relative humidity is factored in with the actual air temperature."

- HEAT INDEX

REASONS FOR FREQUENT HEAT WAVES IN INDIA

URBAN HEAT ISLAND EFFECT: Paved and concrete surfaces in urban areas and a lack of tree cover magnify the effect making ambient temperatures feel 300C - 400C more than actual temperature.

GLOBAL WARMING: More heat waves were expected as globally temperatures had risen by an average 0.800C in the past century. Higher daily peak temperatures and longer, more intense heat waves are becoming increasingly frequent. High intensity of UV rays in medium-high heat wave zones.

IMPACT OF HEAT WAVES: Heat waves cause cramps, exhaustion, stress, heat stroke and very severe heat waves even lead to death. Continuous and constant exposure to high temperatures could result in nausea and heat cramps, resulting in rapid rise of the body temperature. Dehydration (absence of adequate water within the body) could also aid in heat exhaustion. Headaches, dizziness and nausea are some of the symptom. The elderly, children, and people with heart and respiratory problems, kidney diseases and psychiatric disorders are particularly affected. Extreme periods of high temperatures can lead to a significant reduction in crop yields and cause reproductive failure in many crops.

CONCLUSION: Heat waves are a common occurrence in India, and they can have a devastating impact on the country. In 2022, India experienced its hottest April in 122 years, and the heat wave is expected to continue into the summer months.The heat wave is a serious problem in India, but the government is taking steps to address it. By working together, we can help to protect people from the dangers of heat waves.

INDIA COAL ACTION PLAN 2023-24

CONTEXT: *The Union Ministry of Coal in India has formulated an ambitious Action Plan for FY 2023-24, aimed at improving the production, efficiency, sustainability, and new technologies in the coal sector.*

INDIA COAL ACTION PLAN 2023-24:

COAL ANALYTICS: Achieve the coal production target of 1012 MT for FY 2023-24. The Union Ministry of Coal has set a target to produce 1.3 billion tonnes (BT) in FY 2025 and 1.5 BT by FY 2030 to replace imported coal with domestically mined coal.

Increase coal production and efficiency

Formulate a coking coal strategy to enhance coking coal availability in the country

Improve the quality of coal

PRIVATE INVESTMENT: Achieve CAPEX target of 21030 Cr. for FY 2023-24.

Monetize assets in the coal sector for better resource utilisation

Allocate 25 new coal mines for commercial mining in FY 2023-24

INFRASTRUCTURE PROJECTS:

Monitor new railway line projects critical for coal evacuation.

Adopt a Coal Logistics Plan for effective and environmentally friendly transport of coal

SAFETY IN MINES

Ensure the best safety standards in coal mines.

Conduct safety management & response drills.

Scientifically close mines to restore ecological balance

TECHNOLOGY PUSH TO COAL

Implement technology roadmap in the coal sector.

Promote clean coal technology such as Coal to Hydrogen, Coal & Lignite gasification, and CBM/CMM.

SUSTAINABILITY IN COAL SECTOR

Develop eco-parks/mine tourism.

Utilise mine water/overburden and implement energy-efficient measures
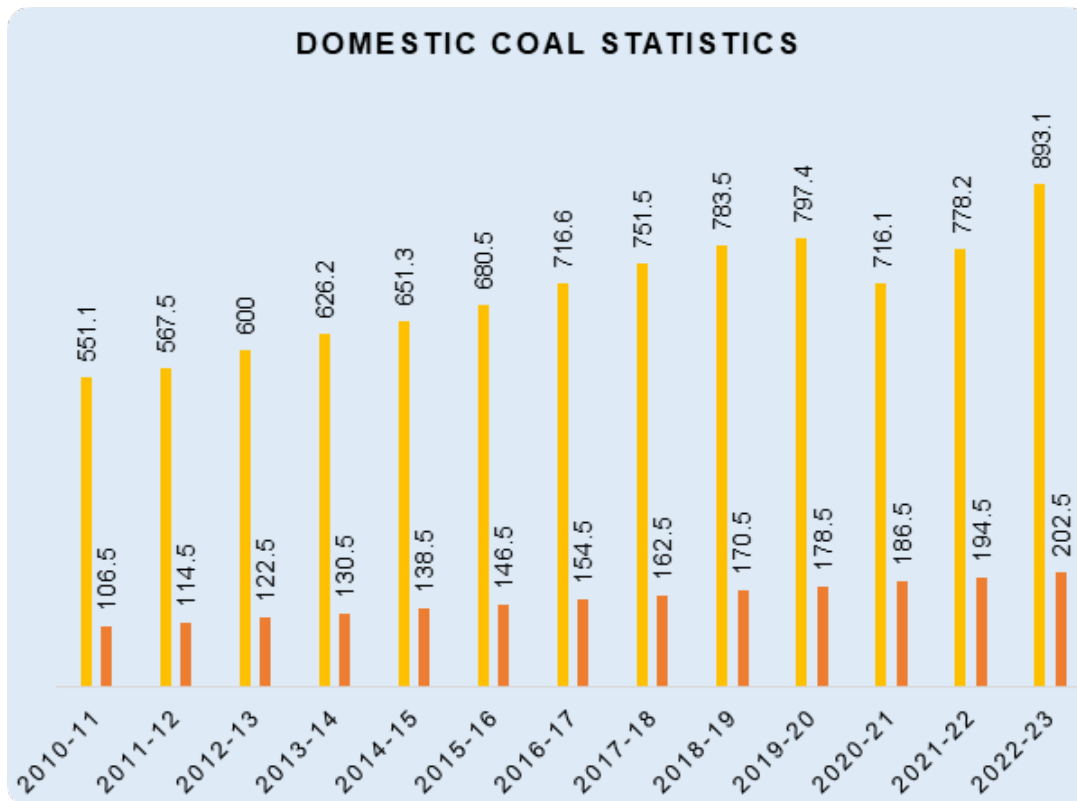
FIGURE: Bar chart representation of the domestic coal production and coal imports in Million Metric Tonnes per Annum (MMTPA).
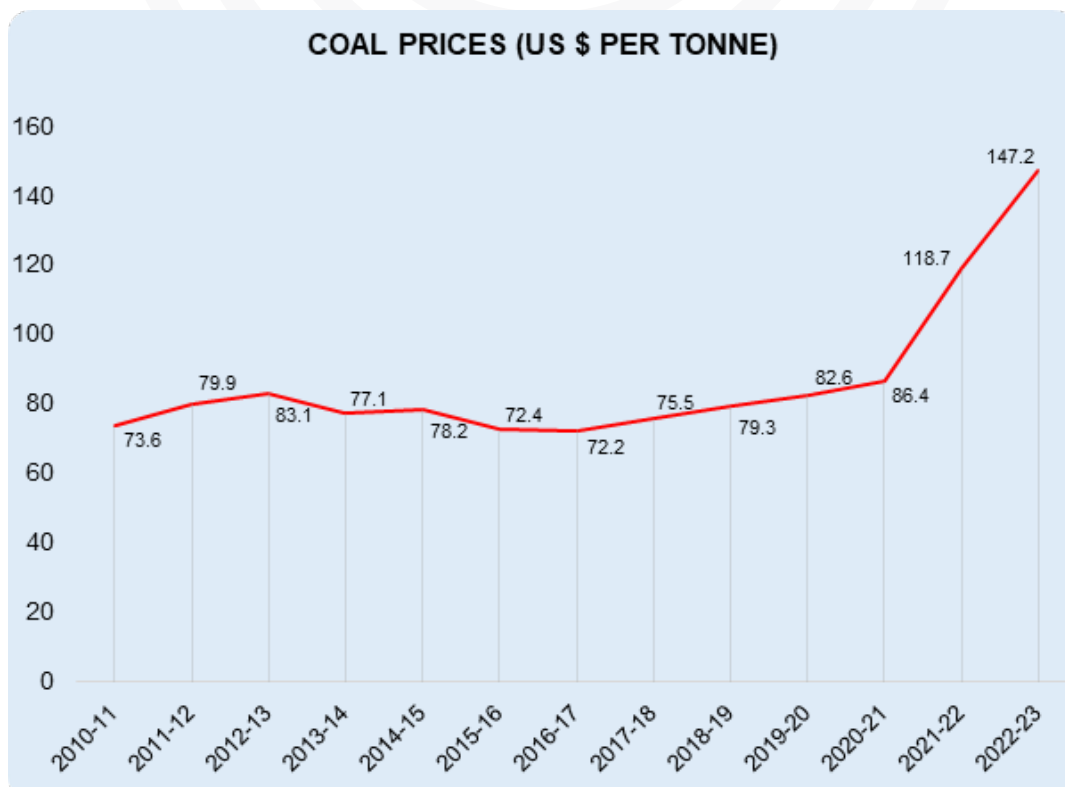
FIGURE: Line chart representation of the coal price in global markets (US $ PER TON).

CONCLUSION: Despite the challenges in the coal sector from poor infrastructure, years of under investment and environmental impacts, the India Coal Action Plan 2023-24 is a comprehensive and ambitious plan that has the potential to make a significant contribution to India's energy security

LOGISTIC PERFORMANCE INDEX 2023

CONTEXT: *India has climbed six places to rank 38th in the 7th edition of the World Bank's (WBs) Logistics Performance Index (LPI) 2023. India was ranked 44 in the in the World Bank's (WBs) Logistics Performance Index (LPI) 2018 and 54 in the in the World Bank's (WBs) Logistics Performance Index (LPI) 2014.*

BACKGROUND: The LPI is a global ranking of 139 countries based on their logistics performance on a scale of 0 to 5, with 5 being the highest score. The index measures the efficiency of domestic logistics system, which includes factors such as customs clearance, infrastructure, and timeliness of delivery. Such benchmarking tool help countries identify challenges and opportunities in their performance on trade logistics. The World Bank has published Logistics Performance Index (LPI) every two years from 2010 to 2018. However, after the COVID-19 break, the report has been released now in 2023.

DIMENSIONS:

• Quality of trade and transport infrastructure
• Competence and quality of logistics services
• Efficiency of customs and border management clearance
• Ease of arranging competitively priced shipments
• Ability to track and trace consignments
• Frequency with which shipments reach consignees within scheduled or expected delivery times

HOW INDIA IMPROVED ITS RANKING?

INFRASTRUCTURE: India has made significant investments in infrastructure in recent years, including roads, railways, and ports. This has made it easier and faster to transport goods around the country.

CUSTOMS CLEARANCE: The government has also made reforms to the customs clearance process. This has made it easier and faster for businesses to clear goods through customs.

E-COMMERCE: The growth of e-commerce has also helped to improve logistics in India. E-commerce companies have invested in their own logistics networks, which has made it easier for them to deliver goods to customers quickly and efficiently.

STATE OF LOGISTICS SECTOR IN INDIA: The logistic sector employs more than 22 million people and expected to grow at the rate of 10.5 % over the next 5 years. The highly fragmented and complex logistics system result in logistics cost, approximately 13 - 14 % of GDP, compared to 2 – 5 % for other developed economies.
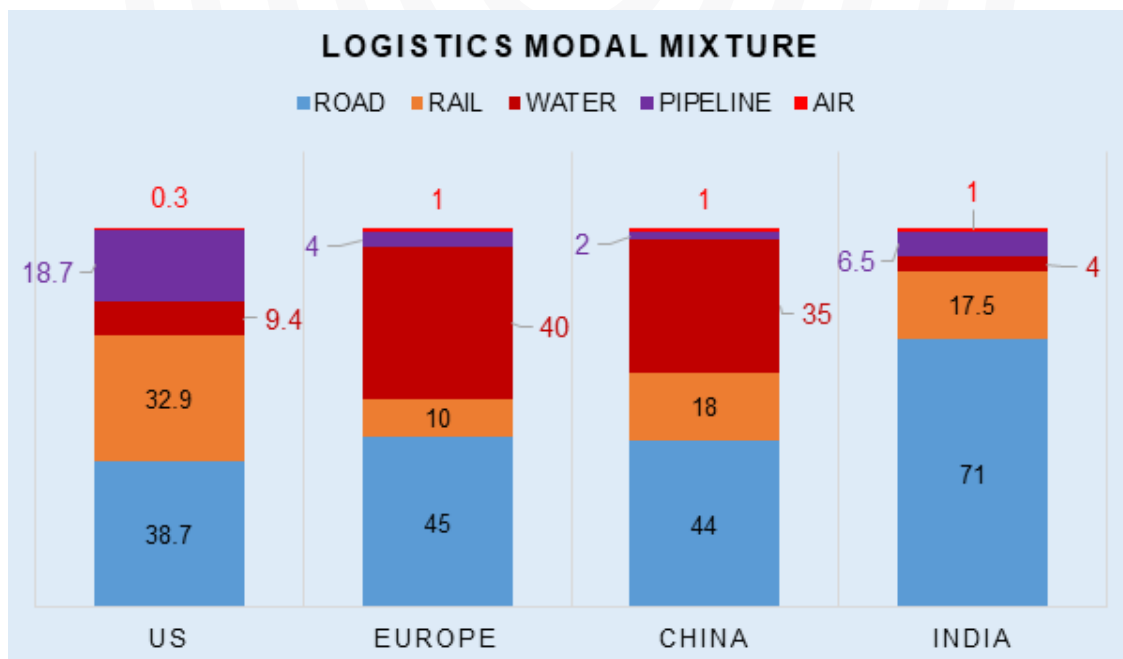
FIGURE: Bar chart representing the sectorial logistics modal mixture.

LOGISTICS COST AS A PERCENTAGE OF GDP

Country	Value
INDIA	14
US	8
CHINA	9.8
SINGAPORE	8
GERMANY	8.6
DENMARK	6.1
FRANCE	9.5
SWEDEN	7.3
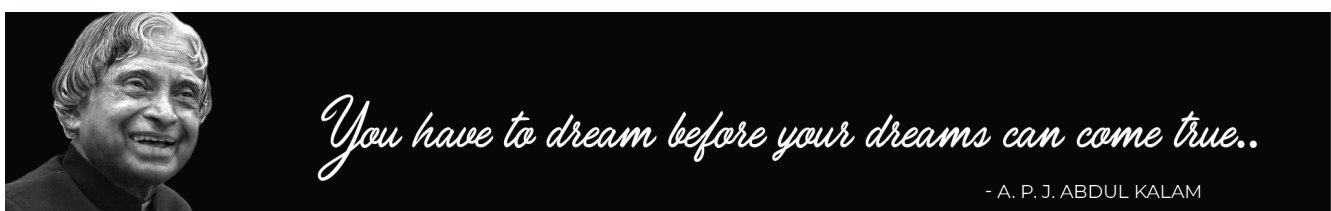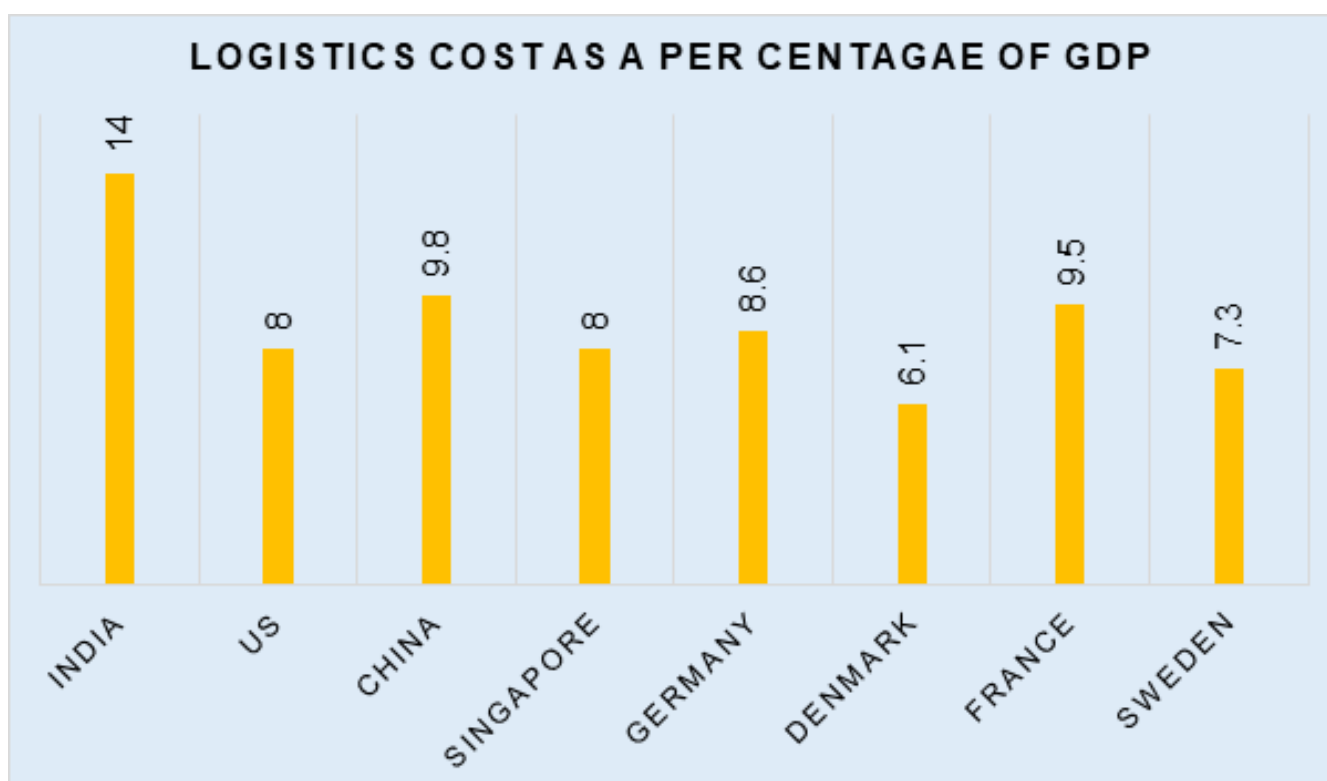
FIGURE: Bar chart representing the logistics cost as a percentage of domestic GDP.

RECENT EVENTS

India has launched the National Logistics Policy (NLP), announced in the Union Budget 2022-23 to promote the seamless movement of goods and enhancing the competitiveness of the industry. The policy seeks to diversify not only India's export basket but also of products and countries.

TARGETS

- Reduce costs for the logistics sector to 10 % in 5 years.
- Develop skills among youth to create employment opportunities.
- Promote seamless movement of goods for enhancing competitiveness of industries across the nation.
- Focus on some key areas like process re-engineering, digitization and multi-modal transport.

PILLARS

INTEGRATION OF DIGITAL SYSTEM (IDS): Integrate data from several departments - road transport, railway, customs, aviation, and foreign trade and commerce for smooth trade and commerce.

UNIFIED LOGISTICS INTERFACE PLATFORM (ULIP): Enable information exchange on a real-time basis in a confidential manner to improve shorter and smooth cargo movement. The National Industrial Corridor Development Corporation (NICDC's) Logistics Data Bank Project has been leveraged to develop ULIP.

EASE OF LOGISTICS (ELOG): Simplify the rules and ease the logistics business.

SYSTEM IMPROVEMENT GROUP (SIG): Monitoring all logistics-related projects to remove bottle-necks in a time-bound manner.

FOCUS ON SKILLING: Attention towards skilling for generating employment opportunities in logistics sector.

E-HANDBOOK: Standardise warehouses for physical assets.

CONCLUSION: The Government of India is committed to further improving the logistics performance of the country. The government has a number of initiatives underway to improve infrastructure, reduce delays at customs, and promote e-commerce. These initiatives are expected to help India continue to improve its ranking in the LPI in the coming years.

MAHARISHI

CONTEXT: *The G20 Meeting of Agricultural Chief Scientists (MACS) unanimously agreed to launch a Millet Initiative – MAHARISHI ((Millets And OtHer Ancient Grains International ReSearcH Initiative), proposed by India for research in the field of millets.*

BACKGROUND: The G20 Meeting of Agricultural Chief Scientists (MACS) involves the meeting of ministries or governmental bodies responsible for agricultural research in the respective G20 states as well as leading research institutions which strategically advise these decision-makers. The first meet of MACS was held in Mexico in 2012.

FEATURES: The MAHARISHI focus upon research and awareness about agro-biodiversity, food security, and nutrition aligning with the International Year of Millets 2023. The Indian Institute of Millets Research (IIMR), Hyderabad serves as the secretariat of MAHARISHI. The International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), One CGIAR Centres, and other international organizations provides technical support for the MAHARISHI.

ABOUT MILLETS: Millet, often referred to as nutri-cereals or dryland-cereals is a common term used to refer small-seeded grasses. Millets are drought prone crops, especially suitable for sub-tropical semi-arid climates and red soil, especially suitable for dry farming and dry land farming. The Centre approved 2018 as National Year of Millets.

SORGHUM
RAGI
PEA MILLET
SMALL MILLET
PROSO MILLET
FOXTAIL MILLET
BARNYARD MILLET
KODO MILLET
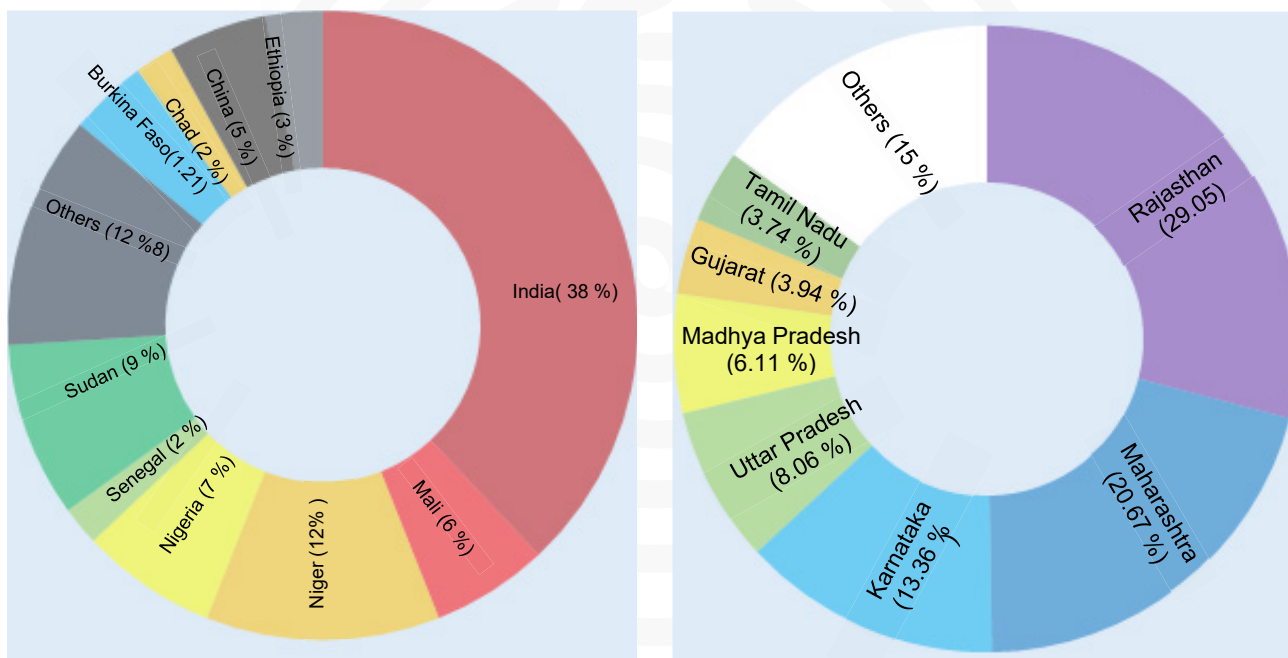
FIGURE: (A) Pie chart representation of countries representing share of global millet production (2021-22) (B) Pie chart representation of States representing share of domestic millet production (2021-22)
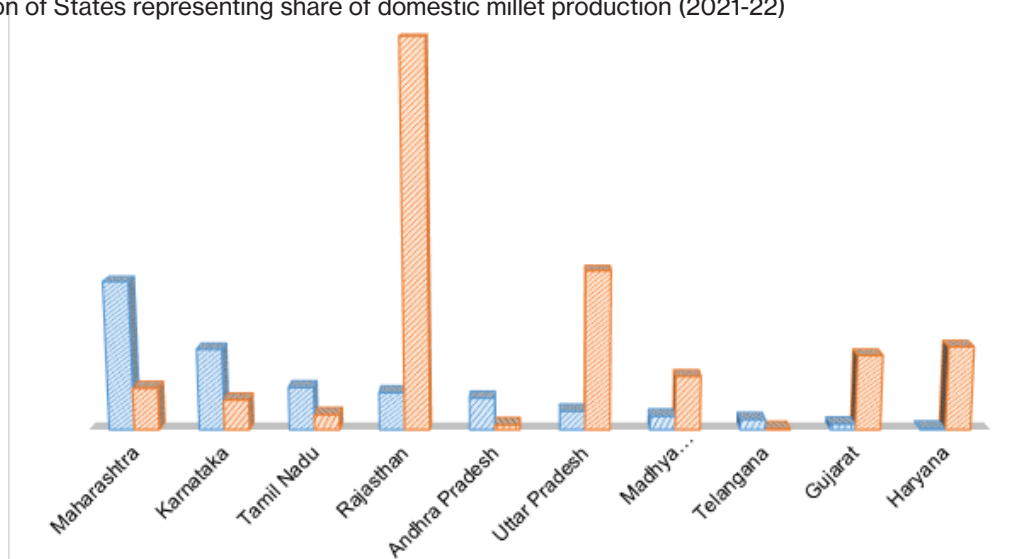
FIGURE: (L) Bar chart representing the production of Jowar in India. (R) Bar chart representing the production of Bajra in India

SIGNIFICANCE:

NUTRITIONALLY SUPERIOR: Millets are rich in proteins with a balanced amino acid profile, crude fibre and minerals such as iron, zinc, and phosphorous. Promoting consumption of millets can address nutritional deficiency, especial among children and women. Broadening the dietary practices including millets can address pellagra (niacin deficiency), Anaemia (iron deficiency), Vitamin B complex deficiency in a cost-effective and culturally acceptable manner. It can also help tackle health challenges such as obesity, diabetes and lifestyle problems as they are gluten free and also have low glycemic index and are high in dietary fibre and antioxidants.

DROUGHT-PRONE CROPS: Millets are mainly grown on marginal land in dry areas of temperate, sub-tropical, and tropical regions. Millets are Millets are drought-prone crops-important staple cereal crop for millions of small holder dryland farmers. Millets are photo-insensitive and resilient to climate change. They are hardy, resilient crops that have low carbon and water footprint. They can withstand high temperatures and grow on poor soils with little or no external inputs. They have multiple untapped uses such as food, feed, fodder, biofuels and brewing.

CONCLUSION: The Government formulated a 5-year strategic plan for the promotion of millets and value-added millet products in the international market. The Centre has constituted a Nutri Cereals Export Promotion Forum mobilise start-ups for export promotion of value-added products in the Ready to Eat (RTE) and Ready Serve (RTS) category.

PARVATMALA PARIYOJANA

CONTEXT: *The G20 Meeting of Agricultural Chief Scientists (MACS) unanimously agreed to launch a Millet Initiative – MAHARISHI ((Millets And OtHer Ancient Grains International ReSearcH Initiative), proposed by India for research in the field of millets.*

BACKGROUND:

The Centre has been relentlessly pursuing efforts to improve connectivity across India. The Centre launched Bharatmala Pariyojna in 2015 to improve connectivity between remote areas and satellite cities of megacities through tunnels, bridges, elevated corridors, flyovers, overpass, interchanges, bypasses, ring roads etc. Similarly, the Sagarmala Programme was launched in 2015 to enhance the performance of the country's logistics sector. The programme envisages unlocking the potential of waterways and the coastline to minimize infrastructural investments required to meet these targets.

CONCLUSION:

Approximately, 30 % of India's land area is covered by mountains. The inhospitable terrain has been the primary reason for ensuring connectivity to the region. The Parvatmala Yojana is expected to improve connectivity and promote tourism sector in these regions.

NATIONAL ROPEWAYS DEVELOPMENT PROGRAMME – PARVATMALA

OBJECTIVE: Development of ropeway and alternative mobility solutions technology to improve connectivity and convenience for commuters, besides promoting tourism especially in hilly areas.

NODAL MINISTRY: Union Ministry of Road Transport and Highways (MoR&TH)

MODE: Public Private Partnership mode

REGIONS: Uttarakhand, Himachal Pradesh, Manipur, Jammu & Kashmir and other North Eastern states

BENEFITS:

Economical mode of transportation
Faster mode of transportation
Environmentally friendly
Last mile connectivity
Ideal for mountainous terrain

PM CARES FUND

CONTEXT: *The PM's Citizen Assistance and Relief in Emergency Situations Fund (PM CARES Fund) received 535.44 Cr. as foreign donations during the last three years. It was created on 27 March 2020, following the COVID-19 pandemic, for the purpose of redressing the pandemic in India*

FOREIGN DONATIONS (₹ Cr.)

2021-22	40.12
2020-21	494.92
2019-20	0.4
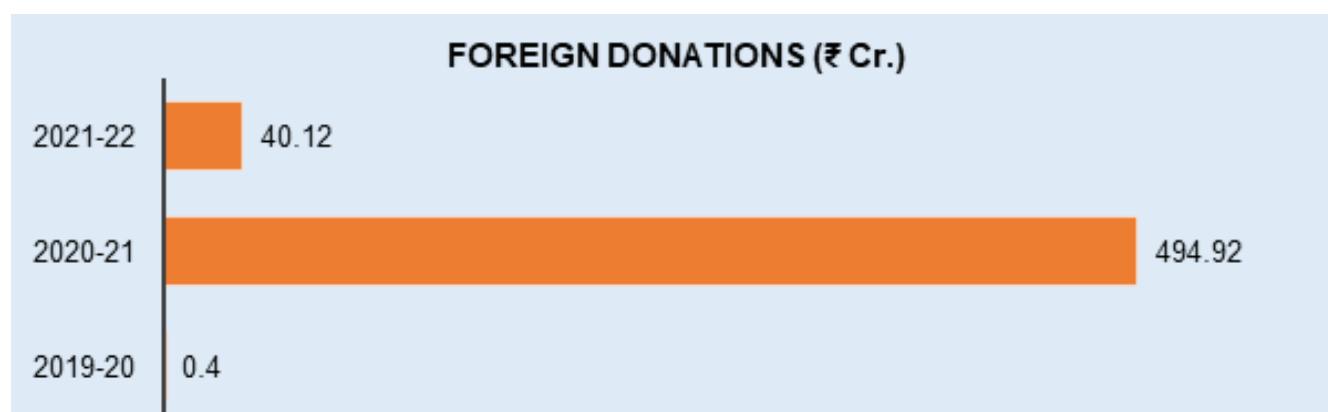
FIGURE: Bar chart representation of the foreign donations to the PM CARES Fund

PM CITIZEN ASSISTANCE & RELIEF IN EMERGENCY SITUATIONS FUND

TYPE: Public Charitable Trust registered under the Registration Act, 1908

COMPOSITION:
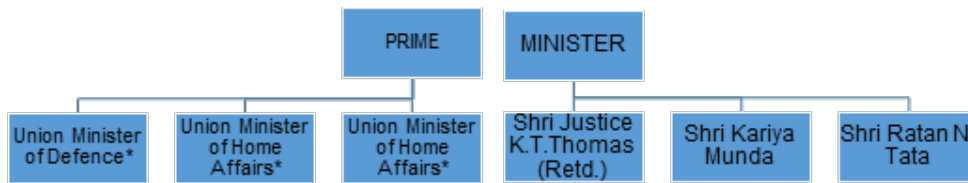
FIGURE: Schematic representation of composition of the PM CARES Fund

The Prime Minister, as the Chairperson of the Board of Trustees of the PM CARES Fund, has nominated following three trustees to the Board:

- Shri Justice K T Thomas (Retd.)
- Shri Kariya Munda
- Shri Ratan N. Tata
- Any person appointed a Trustee shall act in a pro bono capacity.

CONTRIBUTIONS: Donations from domestic and foreign sources.

OBJECTIVE:

- Undertake and support relief or assistance of any kind relating to a public health emergency or any other kind of emergency, calamity or distress, either man-made or natural, including the creation or upgradation of healthcare or pharmaceutical facilities, other necessary infrastructure, funding relevant research or any other type of support.

- Render financial assistance, provide grants of payments of money or take such other steps as may be deemed necessary by the Board of Trustees to the affected population.

- Undertake any other activity, which is not inconsistent with the above Objects.

OTHER FEATURES:

- Fund consists entirely of voluntary contributions from individuals/organizations and does not get any budgetary support.

- Donations to PM CARES Fund deemed as Corporate Social Responsibility (CSR) expenditure under the Companies Act, 2013 would qualify for 80G benefits for 100% exemption under the Income Tax Act, 1961.

- PM CARES Fund receive exemption under the FCRA with separate account for receiving foreign donations to enable PM CARES Fund to accept donations and contributions from individuals and organizations based in foreign countries.

RBI GOLD RESERVES

CONTEXT: *The RBI's gold reserves touched 794.64 metric tonnes in fiscal 2023, an increase of nearly 5% over fiscal 2022.*
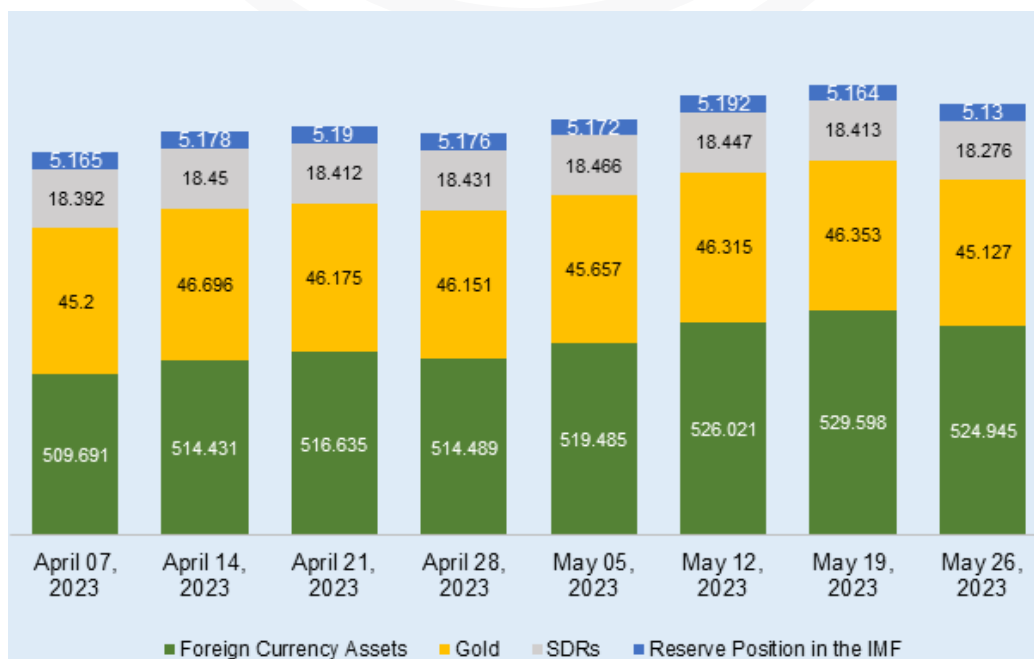
FIGURE: Bar chart representation of Forex Reserves (US $ Billion)

COMPOSITION OF GOLD RESERVES (TONNES)

GOLD DEPOSIT (RBI) (56.32)

GOLD DEPOSIT (DOMESTIC) (301.1)

GOLD DEPOSIT (OVERSEAS) (437.22)
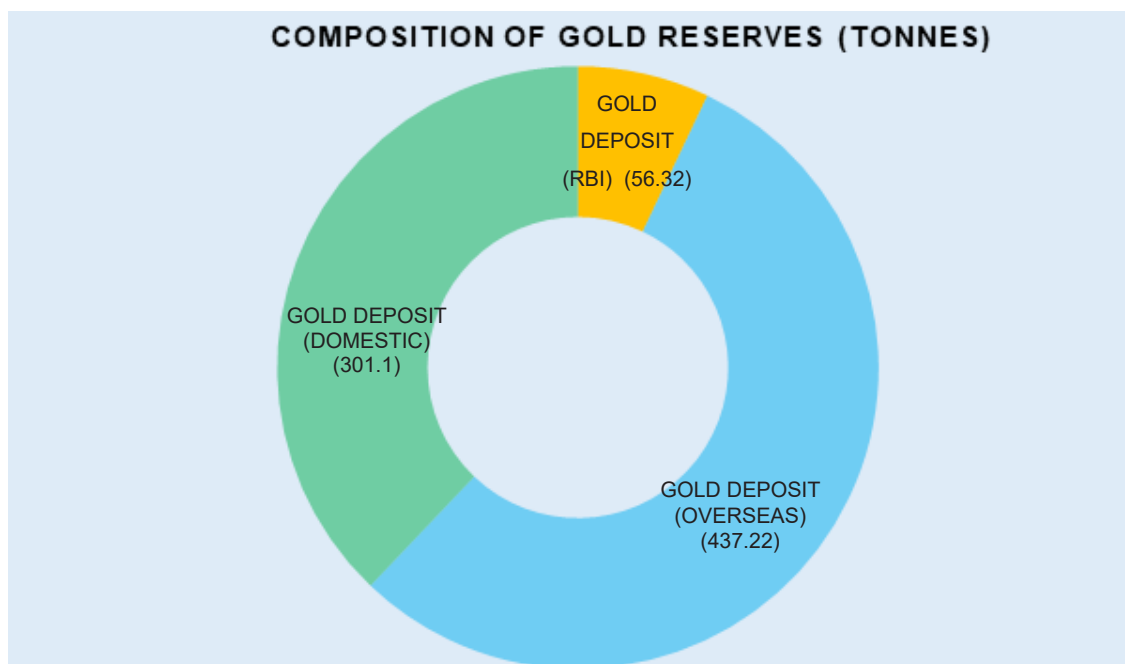
FIGURE: Bar chart representation of Forex Reserves (US $ Billion)

BACKGROUND: During the era of the gold standard – a monetary system that existed until 1971, the standard economic unit of account is based on a fixed quantity of gold. At present, the value derives from a guarantee to redeem promises to pay depositors, note holders/paper money/trading peers. Unlike fiat currencies, which can be subject to inflation or devaluation due to various economic factors, the value of gold tends to be relatively stable over time, which makes it an attractive asset for central banks to hold as a reserve. Additionally, gold is highly liquid, which means it can easily be converted into cash or used to settle international transactions.

WHY A RENEWED INTEREST ON GOLD?: All major Central Banks, including the Reserve Bank of India (RBI), Monetary Authority of Singapore (MAS), the People's Bank of China (PBoC), etc., have been buying gold to diversify its overall reserves. Gold is considered a more safe, secure and liquid asset suitable as a long-term store of value during crisis times. The negative interest rates in the past, the weakening of the dollar, global uncertainty and rising inflation are key drivers behind the decision to hold gold.

RBI REPORT ON CURRENCY AND FINANCE, 2022-23

CONTEXT: *The Reserve Bank of India (RBI) released a report on currency and finance for the financial year (FY) 2022-23 with the theme of the report 'Towards a Greener Cleaner India'.*

BACKGROUND: The RBI Report on Currency and Finance (RCF), an annual publication provides an overview of the state of the Indian economy, with a focus on the monetary and financial sectors. The 2022-23 RCF released on May 24, 2023 released a report on currency and Finance with the theme "Revive and Reconstruct" in the context of nurturing a durable recovery post-Covid-19. RBI joined Network for Greening the Financial System (NGFS) which aims to strengthen the global response to meeting Paris Agreement goals. It issued sovereign green bonds (SGBs) for green infrastructural investments and released a framework for mobilizing green deposits by regulated entities.

CLIMATE CHANGE RELATED RISKS

CLIMATE STRESS TEST: State lenders exposed to primary sectors vulnerable to climate-related risks are more susceptible than domestic private lenders.

INFRASTRUCTURE FINANCING: RBI estimate an additional annual investment of about 2.5 % of GDP by 2030 for climate-change disaster resilient infrastructure.

MACROECONOMIC IMPACT: India is expected to witness damages estimated in monetary terms around 3 - 10 % of its domestic GDP annually by 2100 due to climate change.

JOB LOSS: RBI estimate job losses, approximately 3.4 Cr. from heat stress associated with productivity decline by 2030.

RBI AND CLIMATE CHANGE POLICY OPTIONS TO MITIGATE CLIMATE RISKS

- Carbon pricing using carbon taxes
- Emission trading system
- Green taxonomy to identify sustainable green assets and activities
- Targeted R&D investments by governments
- Addressing variability in wind and solar power supply
- Developing an indigenous renewables supply chain

FOCUS AREAS OF THE 2022-23 RCF

I.Maintaining price stability

II.Promoting financial stability

III.Supporting economic growth

IV.Ensuring financial inclusion

KEY FINDINGS OF THE 2022-23 RCF

I.The Indian economy had recovered strongly from the COVID-19 pandemic, with real GDP growth of 8.7 % in 2021-22, after contracting by 6.6 % in 2020-21.

II.Inflation rose to 6.95% in April 2023, from 4.79% in March 2023. The report also noted that inflation had risen in 2022-23, due to a number of factors, including the Russia-Ukraine war and the rising cost of food and energy. The RBI responded to the rise in inflation by raising the repo rate by 0.40% in May 2022. The report noted RBI continuing to monitor the inflation situation and take further action as needed.

REFORMS SUGGESTED:

- Seven wheels of economic progress to achieve medium-term GDP growth of 6.5 % - 8.5 %
- Rebalancing of monetary and fiscal policies to achieve price stability
- Promoting Fourth Industrial Revolution (IR 4.0)
- Transition to new zero-emissions for sustainable growth
- Reducing government debt
- Implementing structural reforms such as improving access to low-cost land, raising the quality of labour, promoting innovation and technology, and rationalizing subsidies.
- Promoting payments using CBDC can significantly cutting down energy consumption and environment-friendly compared to alternative cashless methods.

CONCLUSION: The 2022-23 RCF is a comprehensive and informative report that provides valuable insights into the Indian economy. The report is a valuable resource for policymakers, businesses, and individuals who are interested in the Indian economy.

UDAN 5.0

CONTEXT: *The Union Ministry of Civil Aviation has launched the 5th round of the Regional Connectivity Scheme (RCS) – Ude Desh Ka Aam Nagrik (UDAN) to improve connectivity in remote and regional areas of the country.*

BACKGROUND: Also known as the Regional Connectivity Scheme (RCS), the UDAN scheme launched in 2017 as a key component of National Civil Aviation Policy seeks to provide affordable, economically viable and profitable air travel on regional routes to the common man even in small towns. The Regional Connectivity Scheme (RCS) envisages providing connectivity to un-served and underserved airports of the country through the revival of existing airstrips and airports.

UDAN SCHEME

NODAL MINISTRY: Union Ministry of Civil Aviation

OBJECTIVE: Enhancing air connectivity to remote non-metro Tier II and III cities of the country and making air travel affordable.

SIGNIFICANCE: Help revive unused and underused airports in Tier- II and Tier- III cities. The Union Ministry has listed out 394 'Unserved*' and 16 'Underserved**' Airports / Airstrips.

STRATEGY: Fiscal support to the aviation sector.

COMPARATIVE ANALYSIS:

	UDAN 1.0	UDAN 2.0	UDAN 3.0	UDAN 4.0	UDAN 5.0
FOCUS CATEGORY					
	Category 1 (19-78 Seats)	Category 1 (19-78 Seats)	Category 1 (19-78 Seats)	Category 1 (19-78 Seats)	Category 2 (20-80 Seats) Category 3 (>80 Seats)
DISTANCE LENGTH CAP (Km)					
	500	500	800	1200	No restriction on the distance between the origin and destination of the flight
VIABILITY GAP FUNDING CAP					
	70 % for Cat-1, 90 % for Hilly States, J&K, Ladakh, NE and Island regions	Same	Same	Same	60 % for Priority Areas, 20 % for Non-Priority Areas
NUMBER OF AIRPORTS					
	70 3	25 6	88	766	766
EXCLUSIVITY					
	3	3	3	3	1

AIR TRAFFIC IN INDIA (MILLIONS)

■ DOMESTIC   ■ INTERNATIONAL

Year	Domestic	International
2018	122	65
2020	163	79
2022	212	94
224	268	112
2026	327	130
2028	393	150
2030	459	171
2032	526	194
2034	595	218
2036	665	244
2038	739	271
2040	821	303
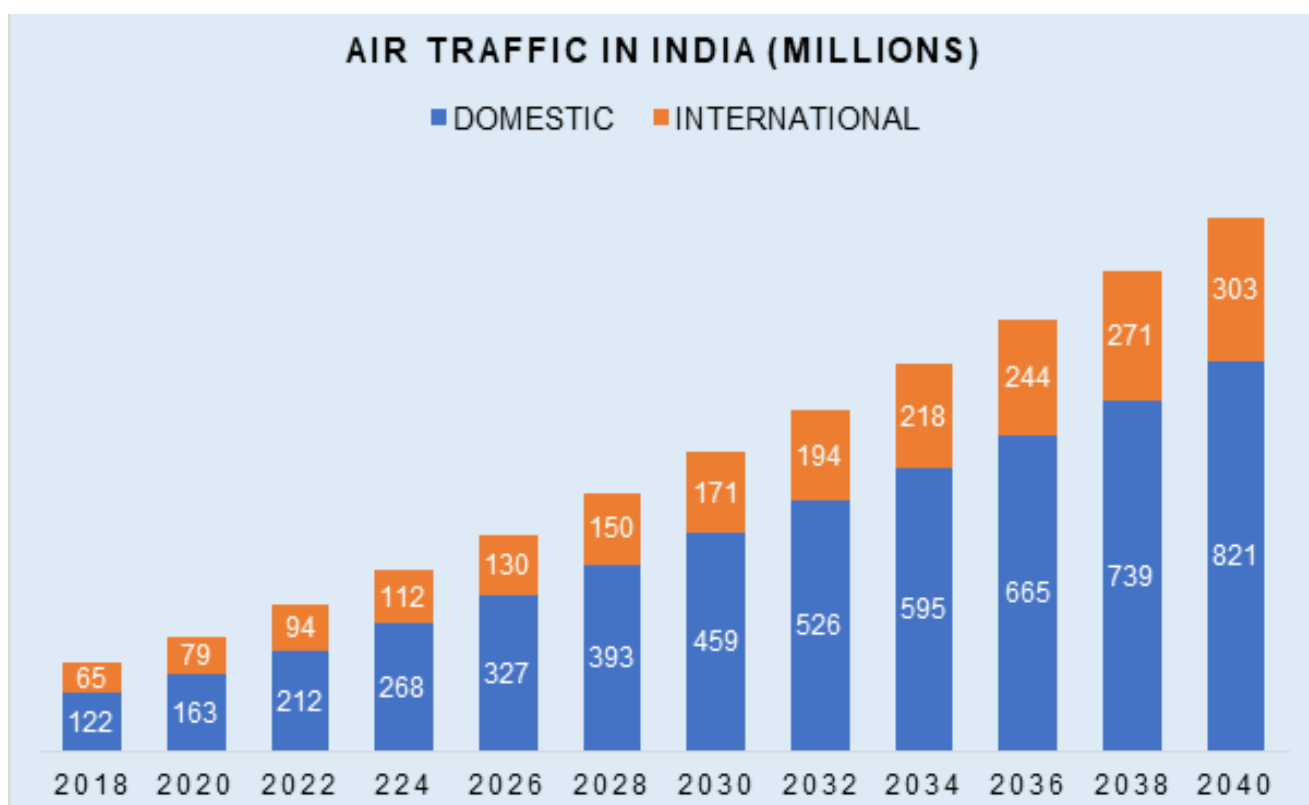
FIGURE: Bar chart representing forecasted domestic air passenger traffic. Source: 'Vision 2040' Report, Global Aviation Summit, 2019.

OTHER FEATURES OF UDAN 5.0:

- Consider Network and Individual Route Proposal only proposed by airlines, prohibiting no predetermined routes.

- Prohibit awarding the same route to a single airline more than once, whether in different networks or in the same network.

- Reduced the time deadline for the Airlines to commence operations from 6 months to 4 months of the award of the route.

The Centre would provide Grant-in-aid from Regional Connectivity Scheme Fund set up by levying a 2 % cess on all domestic and overseas tickets to revive airports. The states would provide Viability Gap Funding (VGF) for a fixed period over the operational costs.

Scheduled Commercial Airlines enjoys landings free of cost; tax benefits over ATF for a period of 10 years; electricity, water and necessary facilities at concessional rates; roads, rail and waterway connectivity etc.

* Unserved Airports have no scheduled commercial flight.

** Underserved Airports have 7 or less scheduled commercial flights per week.

CONCLUSION:

The Centre launched the Regional Air Connectivity Scheme UDAN (Ude Desh ka Aam naagrik). The number of air passengers is expected to increase from 16 Cr to 52 Cr by 2037. Hence, investments in aviation sector is vital for sustainable growth.

ECOLOGY

CITY NATURE CHALLENGE

INDIA'S FIRST WATER BODIES CENSUS

INDIA'S FIRST SOLAR CITY

GANDHISAGAR WILDLIFE SANCTUARY

INDEX TO QUANTIFY HEAT IMPACT

WATER BUDGET

14TH PETERSBERG CLIMATE DIALOGUE

14-POINT SUMMER ACTION PLAN TO TACKLE POLLUTION

HARIT SAGAR GUIDELINES 2023

MERI LIFE

CITY NATURE CHALLENGE

CONTEXT: *The City Nature Challenge involves more than 30 Indian cities.*

BACKGROUND: The City Nature Challenge, an app-based competition that captures observations of nature, will have participation from over 30 Indian cities. From April 28 to May 1, the city with the most observations will be declared the winner.

The iNaturalist app (available for Apple and Android phones) allows participants to take and post pictures of the world's natural plants and animals. The species name is suggested by the programme using artificial intelligence. Members of the community will work together to verify these recommendations.

The picture data automatically extracts the GPS coordinates for the observation. An observation becomes available to scientists and researchers once it has been verified. They can use this information to study various plant and animal species or calculate the biodiversity in a certain area.

ORGANISED & LEAD BY: Bengaluru, Mumbai, Hyderabad, and Delhi are The Bombay Natural History Society, World Wide Fund for Nature-India, and The Naturalist School.

INDIA'S FIRST WATER BODIES CENSUS

CONTEXT: *: India's first water bodies census released by Ministry of Jal Shakti.*

BACKGROUND: The report of India's first water bodies' census, a thorough database of the nation's ponds, tanks, lakes, and reservoirs, has been made public by the Ministry of Jal Shakti. More than 2.4 million water bodies were counted during the 2018–19 census, which covered all states and union territories.

Major Findings

1. Definition of Water bodies:-

All natural or man-made units bounded on all sides with some or no masonry work used for storing water for irrigation or other purposes (e.g. industrial, pisciculture, domestic/drinking, recreation, religious, ground water recharge etc.) will be treated as water bodies in this Census. These are usually of various types known by different names like tank, reservoirs, ponds etc. A structure where water from ice-melt, streams, springs, rain or drainage of water from residential or other areas is accumulated or water is stored by diversion from a stream, nala or river will also be treated as water body.

The state of Maharashtra is the leader in water conservation initiatives. Tamil Nadu has the most lakes, whereas West Bengal has the most ponds and reservoirs, Andhra Pradesh has the most tanks, and West Bengal has the most ponds and reservoirs.

With the exception of Daman & Diu, Dadra & Nagar Haveli, and Lakshadweep, the country's 33 States and UTs performed the first census of water bodies with the reference year 2017–18. The fact that Maharashtra is at the top of the category for water conservation schemes is just one of the report's many noteworthy points.

In the State of Maharashtra, 97,062 water bodies have been counted as part of the first census of water bodies; 99.3% of them (96,343) are in rural regions, and the remaining 0.7% (719) are in urban ones.

Percentage Distribution of Water Bodies

- Ponds
- Tanks
- Lakes
- Reservoirs
- Water conservation schemes
- Others

(9.3, 2.5, 12.1, 0.9, 15.7)

Distribution of Public Owned Water Bodies

Pie chart values: 2.3, 0.1, 42.7, 53.7, 1.2

Legend:
- State Irrigation
- Co - Operative
- Panchayat
- Muncipality
- Other Govt. Agencies
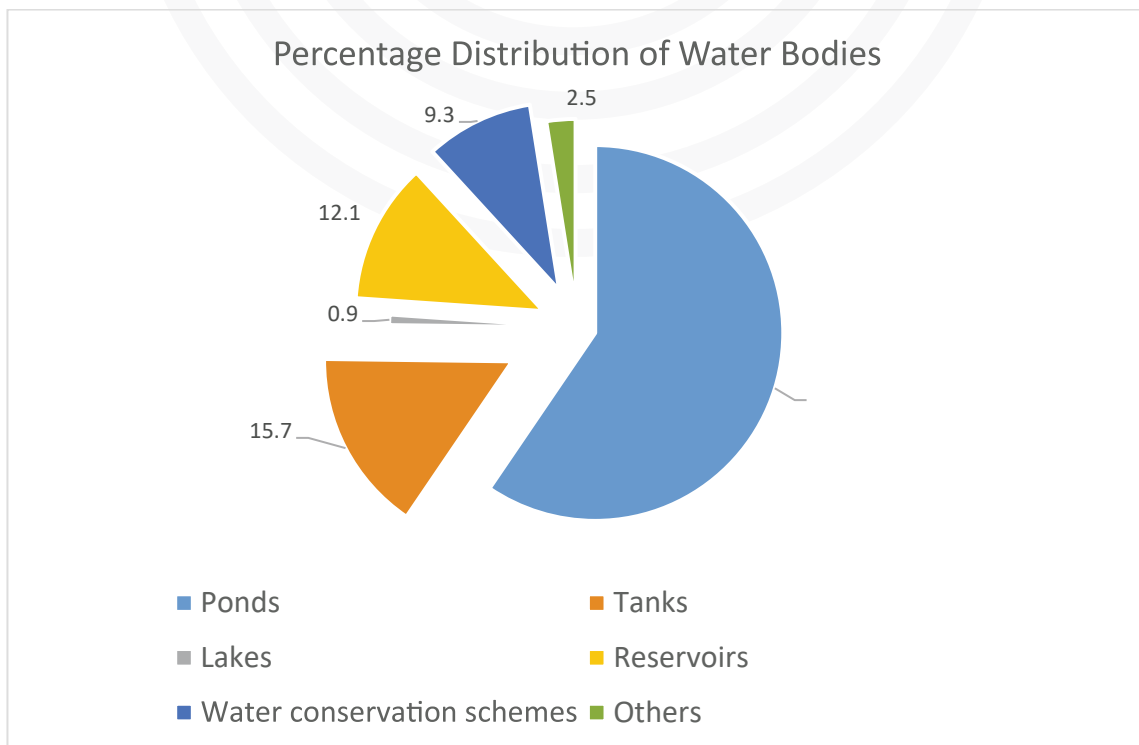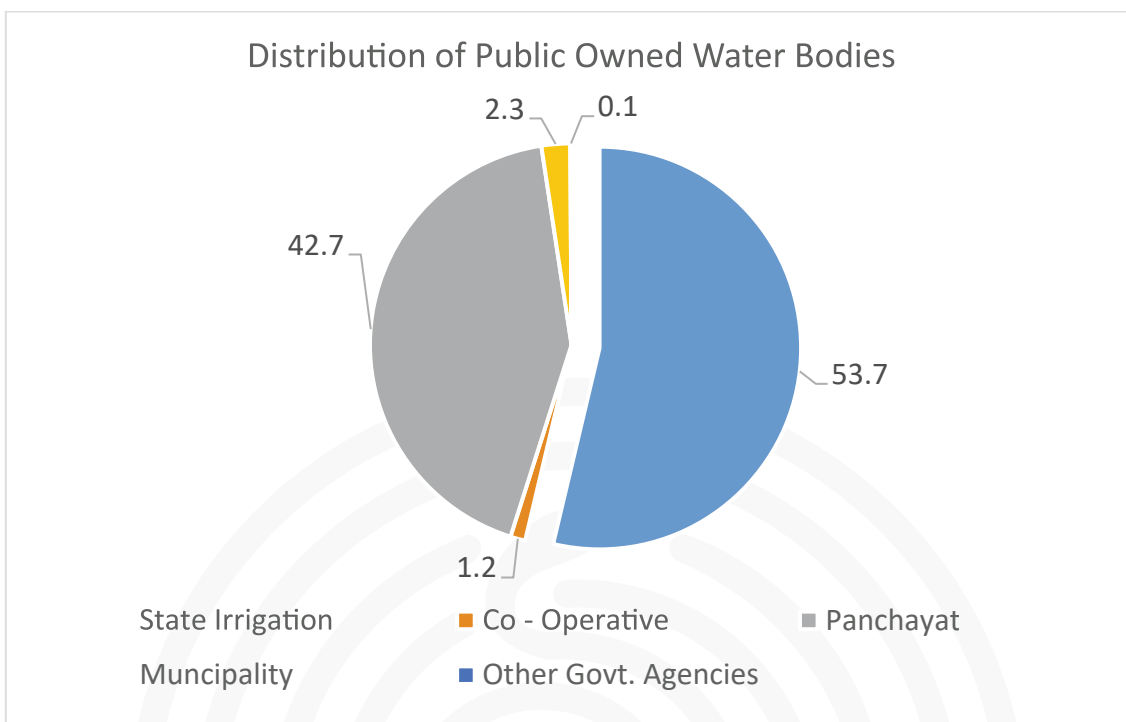
SIGNIFICANCE OF WATER CENSUS IN INDIA

- Planning: Water census helps in formulating effective water management and planning strategies in India.

- Resource Assessment: It provides data on the availability and distribution of water resources across the country.

- Water Security: Census helps identify regions facing water scarcity, enabling targeted interventions and ensuring water security.

- Pollution Monitoring: It aids in identifying areas with water pollution, facilitating pollution control measures and water quality improvement.

- Infrastructure Development: Data from the water census assists in designing water infrastructure projects and improving irrigation systems.

- Groundwater Management: Census helps monitor and manage groundwater resources, addressing issues such as depletion and contamination.

- Climate Change Impact: It helps assess the impact of climate change on water availability, enabling adaptation measures to be formulated.

- Decision Making: Water census data guides policymakers, scientists, and stakeholders in making informed decisions regarding water-related issues in India.

INDIA'S FIRST SOLAR CITY

CONTEXT: *Madhya Pradesh's Sanchi will become India's first solar city.*

BACKGROUND: The Raisen district of Madhya Pradesh's world heritage site Sanchi is slated to become India's first solar city. In the state, solar energy usage is consistently encouraged. All around the state, there are numerous solar power installations in operation.

Concept of a solar city and its significance.

- Renewable Energy Transition: The initiative to transform Sanchi into India's first solar city highlights the country's commitment to promoting renewable energy sources, particularly solar power.

- Sustainable Development: Establishing a solar city aligns with the principles of sustainable development by reducing reliance on fossil fuels and mitigating environmental impacts, such as greenhouse gas emissions.

- Energy Independence: By harnessing solar energy, Sanchi aims to become self-sufficient in meeting its energy needs, decreasing dependence on conventional energy sources and reducing associated costs.

- Heritage Conservation: As a world heritage site, the adoption of solar energy in Sanchi showcases a commitment to preserving the cultural and historical significance of the location while embracing modern sustainable technologies.

- Showcase and Inspiration: Sanchi's transformation into a solar city can serve as a model and inspiration for other cities in India and globally, encouraging them to explore renewable energy solutions and contribute to a cleaner and greener future.

- Economic Benefits: The shift towards solar power can create job opportunities, promote local industries related to solar energy, and contribute to the economic development of the region.

- Environmental Impact: Utilizing solar energy significantly reduces carbon emissions, air pollution, and environmental degradation associated with conventional energy generation , leading to improved air and water quality.

- Public Awareness and Education: The project offers an opportunity to raise public awareness about the benefits of solar energy and promote sustainable practices among residents and visitors to the city.

GANDHISAGAR WILDLIFE SANCTUARY

CONTEXT: *MP: Gandhisagar Sanctuary to be second new home of cheetahs*

Background: In order to keep the title of "cheetah state," Gandhisagar Sanctuary will be built as a second habitat for cheetahs. The decision was made in response to suggestions from experts that not all cheetahs could fit in Kuno National Park (KNP).

GANDHI SAGAR WILDLIFE SANCTUARY

- Situated on the northern boundary of Mandsaur and Nimach districts in Madhya Pradesh, India.
- Situated along the Chambal River, near the Gandhi Sagar Dam, which forms the boundary between Madhya Pradesh and Rajasthan.
- It was notified in 1974 and more area was added in 1983. The Chambal River passes through the sanctuary dividing it into two parts.
- The western part is in Nimach district and eastern part is in Mandsaur district. It is in the Khathiar-Gir dry deciduous forests ecoregion.
- The principal tree species found in the Sanctuary are Khair (Acacia catechu), Salai, Kardhai, Dhawda, Tendu, Palash etc.
- The predominant animal species that inhabit the sanctuary are the deer, of which the most easily sighted are the chinkara or Indian gazelle, Nilgai and sambar.
- In addition the Indian leopard, langur, Indian wild dog, peacock, otter, and Mugger crocodile are present.

INDEX TO QUANTIFY HEAT IMPACT

CONTEXT: *Next year, India will have its own index to measure the effects of the heat.*

BACKGROUND: Next year, India will introduce its own composite index to measure the effects of heat on its people and to produce impact-based heat wave advisories for particular areas. Last week, the IMD started producing an experimental heat index for several regions of the nation that accounts for air temperature and relative humidity to gauge how hot it actually feels. In addition to considering temperature and humidity, it will also take into account factors like wind speed and exposure time. It will serve as a reliable heat stress indicator for people.

WHY HEAT INDEX IS IMPORTANT FOR A COUNTRY?

Heat Index helps assess the combined effects of temperature and humidity, providing a more accurate representation of how hot it feels.

It helps in determining the risk of heat-related illnesses and taking necessary precautions to protect public health.

Heat Index alerts can be issued to inform people about potentially dangerous heat conditions and promote safety measures.

It aids in planning and implementing heat mitigation strategies, such as providing cooling centers and adjusting work schedules.

Heat Index data helps vulnerable populations, including the elderly and young children, by raising awareness of extreme heat risks.

It supports disaster management by identifying areas prone to heatwaves, allowing for targeted emergency response and resource allocation.

Heat Index information is crucial for industries like agriculture, construction, and outdoor activities to ensure worker safety and productivity.

Monitoring the Heat Index helps track long-term climate trends and assess the impact of global warming on heat stress.

WATER BUDGET

CONTEXT: *Chief Minister unveils Kerala's first water budget with focus on conservation*

BACKGROUND: The Chief Minister announced the release of Kerala's water budget, noting that it was the first of its kind to be created at the local body level in the nation. Recent research have indicated that the State's water shortage is getting worse. To maintain adequate water supply in this situation, projects based on water consumption levels are crucial. The water budget compares the amount of water a region will get over time to the amount of water that will be consumed there based on population estimates.

WHAT IS WATER BUDGET?

A water budget is a quantitative analysis that evaluates the balance of water inputs and outputs within a defined system or area over a specific time period. It involves accounting for various factors such as precipitation, evaporation, runoff, infiltration, and withdrawals.

The goal is to assess the availability and distribution of water resources and understand the overall water balance. By comparing the inflows (such as rainfall and groundwater recharge) with the outflows (such as evaporation, surface runoff, and water consumption), a water budget helps determine if there is a surplus or deficit of water, providing valuable information for water resource management, planning, and conservation efforts.

SIGNIFICANCE OF WATER BUDGET IN INDIAN STATES

- Water Resource Management: Water budgets help in assessing the availability and utilization of water resources within states, aiding in effective management and planning.
- Water Allocation: By understanding the water budget, states can allocate water resources more efficiently,

ensuring equitable distribution among various sectors like agriculture, industry, and domestic use.

- Drought and Water Scarcity Management: Water budgets assist in monitoring water availability during drought periods, enabling states to implement timely mitigation measures and water conservation strategies.

- Groundwater Management: The water budget helps track groundwater recharge, withdrawals, and overall sustainability, aiding in managing and conserving this vital resource.

- Infrastructure Planning: The data from water budgets aids in designing and implementing infrastructure projects like reservoirs, canals, and water supply systems, ensuring optimal utilization of water resources.

- Water Pollution Control: Water budgets provide insights into the impacts of pollution on water bodies, facilitating targeted measures to control and mitigate pollution for maintaining water quality.

- Climate Change Adaptation: As climate change affects rainfall patterns and water availability, water budgets help states assess the impact and plan adaptation strategies to cope with changing hydrological conditions.

- Policy Formulation: Water budgets provide a scientific basis for formulating water-related policies and regulations, supporting informed decision-making by state governments and water management authorities.

14TH PETERSBERG CLIMATE DIALOGUE

CONTEXT: *The Petersberg Dialogue on Climate Change was held in Berlin from May 2-3, 2023.*

CONTEXT: Berlin hosted the Petersberg Dialogue on Climate Change on May 1-2, 2023. The 28th Conference of Parties (COP28) to the United Nations Framework Convention on Climate Change was hosted by Germany and the United Arab Emirates. The Agenda mandates achieving Net Zero power generation and the decarbonization of key industries, as well as the phaseout of coal by 2030 in Organisation for Economic Co-operation and Development nations and by 2040 in all other countries.

PETERSBERG CLIMATE DIALOGUE

- **OBJECTIVE**: The Petersberg Climate Dialogue aims to facilitate high-level political discussions and promote international cooperation on climate change issues.

- **HOST COUNTRY**: Germany hosts the conference, which takes place in Petersberg, a hill near Bonn.

- **PARTICIPANTS**: The conference brings together representatives from various countries, including ministers, government officials, international organizations, and stakeholders from civil society and the private sector.

- **INFORMAL NATURE**: The Petersberg Climate Dialogue adopts an informal and interactive format, encouraging open dialogue and exchange of ideas among participants.

- **KEY THEMES**: The conference covers a wide range of climate-related topics, including mitigation, adaptation, finance, technology transfer, and capacity building.

- **PREPARATORY MEETINGS**: In the lead-up to the annual United Nations Climate Change Conference (COP), the Petersberg Climate Dialogue serves as an important platform for countries to discuss and align their positions on key issues.

- **MINISTERIAL DECLARATION**: At the conclusion of each conference, a ministerial declaration is released, summarizing the discussions and outlining shared commitments or aspirations.

- **INTERNATIONAL CLIMATE ACTION**: The Petersberg Climate Dialogue contributes to strengthening international climate action and the implementation of the Paris Agreement by fostering collaboration, building trust, and mobilizing political will.

14-POINT SUMMER ACTION PLAN TO TACKLE POLLUTION

CONTEXT: *Delhi government launches 14-point summer action plan to tackle pollution*

BACKGROUND: The Delhi government's 14-point Summer Action Plan against Air Pollution was unveiled by the chief minister. He said that the plan, which is currently in effect, includes short-, medium-, and long-term actions to address problems like dust pollution, industrial pollution, open burning, and solid waste management.

Controlling dust pollution, putting an end to open burning (including landfill fires), industrial pollution, managing solid waste, using the real-time source apportionment study, increasing green cover, planting trees, developing city forests, urban farming, developing lakes and water bodies, developing parks, creating an e-waste eco park, using eco clubs in schools and colleges to create awareness, and conducting neighbourhood conversations are all included in the 14-point action plan.

Why Delhi need a summer action plan to tackle pollution?

Seasonal Pollution Spikes: Delhi experiences severe pollution spikes during the summer months, primarily due to factors such as dust storms, agricultural stubble burning,

and high temperatures leading to increased emissions from vehicles and industrial activities.

Health Impacts: The high pollution levels in Delhi during summer have detrimental effects on public health, contributing to respiratory problems, allergies, cardiovascular diseases, and other health issues. A summer action plan is necessary to mitigate these health risks.

Vulnerable Populations: Vulnerable groups like children, the elderly, and individuals with pre-existing respiratory conditions are more susceptible to the adverse effects of summer pollution. An action plan can include measures to protect these populations and ensure their well-being.

Air Quality Index (AQI) Levels: The air quality in Delhi often reaches hazardous levels during the summer, with the Air Quality Index (AQI) frequently exceeding the recommended limits. A comprehensive plan can aim to reduce the AQI levels and improve overall air quality.

Compliance with Environmental Standards: Delhi has

set environmental standards and targets for air quality improvement. A summer action plan can outline specific measures and strategies to achieve these targets and ensure compliance with environmental regulations.

Public Awareness and Behavior Change: An action plan can focus on raising public awareness about the impact of pollution, encouraging behavior change, and promoting sustainable practices such as reducing vehicle emissions, conserving energy, and minimizing waste generation.

Collaboration and Governance: A well-structured summer action plan requires collaboration between various stakeholders, including government bodies, environmental agencies, local communities, and residents. Effective governance and coordination are essential for implementing and monitoring pollution control measures.

Long-Term Environmental Sustainability: A summer action plan serves as part of a broader strategy for achieving long-term environmental sustainability in Delhi. By addressing the specific pollution challenges faced during summer, the plan contributes to creating a cleaner, healthier, and more livable city.

2014
1
Introduction of the "Odd-Even" traffic rationing scheme

2015
2
Launched the "Swachh Delhi" app to report and address complaints related to air pollution sources.

2016
3
Graded Response Action Plan (GRAP) is implemented to combat air pollution.

2017
4
The Supreme Court bans the sale of firecrackers during Diwali to combat pollution during the festival season.

2018
5
Launched the "Clean Air Campaign" to combat air pollution.

2019
6
Introduces the "Red Light On, Gaadi Off" campaign.

2020
7
Launched the "Green Delhi" app to facilitate reporting of pollution-related complaints.

2021
8
Installation of smog towers in different parts of the city to purify the air.

2022
9
Government mandates the use of cleaner fuels like Compressed Natural Gas (CNG) for commercial vehicles, phasing out more polluting fuels.

HARIT SAGAR GUIDELINES 2023

CONTEXT: *Ministry of Ports, Shipping & Waterways has launched 'Harit Sagar' the Green Port Guidelines.*

BACKGROUND: The Ministry of Ports, Shipping & Waterways has introduced "Harit Sagar," the Green Port Guidelines, to fulfil the greater objective of achieving the Zero Carbon Emission Goal. According to the "Working with Nature" philosophy, Harit Sagar Guidelines - 2023 anticipate ecosystem dynamics in port development, operation, and maintenance while minimising influence on biotic components of the harbour environment.

HIGHLIGHTS: It places a focus on the use of clean and environmentally friendly energy in port operations and the development of port capabilities for the storage, processing, and bunkering of greener fuels such as green hydrogen, green ammonia, green methanol, and green ethanol.

Guidelines gives Major Ports a framework for developing a thorough action plan to achieve targeted results in terms of a quantified reduction in carbon emissions over specified timelines, through focused implementation and close monitoring of Green Initiatives, and to achieve Sustainable Developmental Goals (SDG).The guidelines' main goals are to reduce trash through the four R's: Reduce, Reuse, Repurpose, and Recycle in order to achieve zero waste discharge from port operations and to encourage monitoring based on EPIs.

AWARDS TO THE PORTS

For their exceptional performance on a few operational and financial metrics during FY 2022–2023, the main ports received prizes. Ports with the greatest incremental improvements were also recognised, and they were graded according to how well they performed overall in 2022–2023. The goal is to inspire the major ports to perform better and better throughout the course of the upcoming year by creating fair and healthy competition among them.

- The Deendayal Port in Kandla: Prize for the greatest absolute performance for the fiscal year 2022–2023 for handling the most cargo – 137.56 MMT.

- Paradip Port: Ship Berth Day Output, Jawaharlal Nehru Port was recognised for reaching a significant milestone in turnaround time.

- The Kamarajar Port got recognized in pre-berthing detention time while Cochin Port received performance shield in turn-around-time (non-container port).

- The award for best incremental performance was bagged by Paradip Port for attaining the highest cargo growth rate of 16.56% last year.

MERI LiFE

CONTEXT: *India releases the "Meri LiFE" app to promote young engagement in combating climate change.*

BACKGROUND: To engage youth and empower them to combat climate change, the government released the "Meri LiFE" (My Life) smartphone application. The Prime Minister's Mission LiFE served as inspiration for the app, which seeks to encourage thoughtful use rather than wasteful consumption. Lifestyle for the Environment, or LiFE.

The Objective LiFE Portal offers free access to more than 100 works of art, movies, and educational resources produced by the ministry for LiFE. Ministries and organisations can upload event reports and monitor the development of the ongoing mass mobilisation push through the Meri LiFE Portal.

Mission LiFE

Indian culture and living customs are intrinsically sustainable, according to Mission Lifestyle for Environment. Our ancient scriptures place a strong emphasis on the necessity of protecting our finite natural resources and living in harmony with the environment. It is vital that we draw on this timeless knowledge and make it known to as many people as we can.

Mission LiFE aims to organise people and groups into a massive, worldwide movement for constructive behaviour change.

Mission LiFE is intended to encourage people and communities to take steps that contribute to the creation of a sustainable future. Our daily decisions have an impact. Our decisions must support the preservation and protection of the environment, starting with the food we eat, the products we buy, the dwellings we live in, and the water and energy we use.

-Credit: Mission LiFE

SCIENCE AND TECHNOLOGY

ARTSENS

CONTEXT: *Scientists at IIT Madras create a simple screening tool for the accurate assessment of blood vessel health.*

BACKGROUND: Researchers at the Indian Institute of Technology in Madras have created a cutting-edge, non-invasive tool to evaluate the condition and age of blood vessels and offer early screening for cardiovascular illnesses. Its name is ARTSENS, and it was created so that even non-experts may use it to evaluate and forecast vascular health during normal medical examinations. It was created by the Healthcare Technology Innovation Centre (HTIC) at IIT Madras and is powered by a unique non-imaging probe and intelligent computing platform.

CURRENT PROGRESS: Clinical trials for ARTSENS have been given the go-ahead in the US, Europe, and India. At AIIMS New Delhi, a comprehensive clinical investigation is in progress. Researchers at AIIMS New Delhi are using it to study and comprehend the physiological underpinnings of arterial ageing in various disease conditions, and researchers at Radboud University Medical Centre in the Netherlands are using it to investigate the relationship between arterial age, physical inactivity, and cardiovascular events.

SIGNIFICANCE:

- Overcomes resource limitations: ARTSENS enables early screening in remote areas lacking advanced medical infrastructure. Example: Rural communities with limited access to specialized hospitals can benefit from convenient and affordable cardiovascular assessments.

- Reduces healthcare disparities: Non-invasive and user-friendly design makes it accessible to people across different socio-economic backgrounds. Example: Individuals from low-income communities can now receive timely cardiovascular screenings without financial barriers.

- Addresses high cardiovascular disease burden: India has a significant prevalence of heart diseases, and ARTSENS aids in early detection. Example: Regular screenings using ARTSENS can identify individuals at risk and facilitate timely interventions to prevent heart-related complications.

- Minimizes invasiveness and risks: By eliminating the need for invasive procedures, ARTSENS reduces patient discomfort and associated complications. Example: Patients who are elderly or have underlying health conditions can undergo non-invasive assessments, minimizing their physical stress.

- Empowers non-experts: ARTSENS can be operated by non-experts, such as primary healthcare workers, expanding its reach and impact. Example: Community health workers can administer routine screenings in remote areas, contributing to early detection and prevention efforts.

- Enables personalized interventions: ARTSENS' data-driven insights allow healthcare professionals to tailor treatment plans based on individual vascular health. Example: Doctors can prescribe specific lifestyle modifications or medications based on the patient's vascular health assessment.

- Enhances preventive care: Early identification of vascular health issues enables proactive interventions and reduces disease progression. Example: Individuals with early signs of arterial stiffness can receive guidance on lifestyle changes to prevent the development of cardiovascular diseases.

The development of ARTSENS by researchers at the Indian Institute of Technology Madras holds immense significance for a country like India. This novel, non-invasive device for assessing the health and age of blood vessels brings several key advantages. It enables early detection and screening of cardiovascular diseases, particularly important in a country with a high burden of heart-related ailments. Its non-invasive nature ensures accessibility and affordability, making it suitable for resource-constrained healthcare settings.

LOCKBIT RANSOMWARE

CONTEXT: *There have been reports that, for the first time, Mac machines are being targeted by the LockBit ransomware.*

BACKGROUND: This is the first significant ransom ware operation to expressly target Apple computers as cybercriminals have created new ransom ware encryptors targeted targeting macOS machines. Both newer Macs and older Macs using Apple Silicon are targeted by the new encryptors.

What is ransomware LockBit?

The LockBit ransom ware, first discovered in September 2019 and known as the "abcd" virus because of the file extension it uses to encrypt victims' files, is intended to penetrate victims' systems and encrypt crucial information. The infection is referred to as a "crypto virus" because it demands payment in crypto currency to unlock the victim's device's files. Therefore, the ransomware is generally used against victims who can afford to pay large quantities of money in exchange for access but feel constrained by the disruption.

Ransomware Attack

Ransomware is a form of malicious software that infects a victim's computer or network, encrypting files and holding them hostage until a ransom is paid. It infiltrates systems through various means, including phishing emails, malicious downloads, or exploiting vulnerabilities. Once activated, the ransomware encrypts the victim's files using strong encryption algorithms, making them inaccessible. The attackers then demand a ransom payment, typically in cryptocurrencies, in exchange for the decryption key needed to unlock the files.

Ransomware attacks can have severe consequences, disrupting businesses, causing data loss, and financial harm. Victims often face the difficult decision of whether to pay the ransom, with no guarantee of recovering their files. Furthermore, paying the ransom encourages the growth of ransomware attacks and funds criminal activities.

Prevention and mitigation are crucial in combating ransomware. Regularly updating software, using strong passwords, implementing robust security measures, and educating users about potential threats and safe online practices are essential. Creating secure backups of important data and regularly testing their restoration can minimize the impact of a ransomware attack.

In the event of an attack, organizations should isolate affected systems, report the incident to authorities, and seek professional assistance to analyse the attack, evaluate recovery options, and potentially negotiate with the attackers. However, prevention remains the best defence against ransomware attacks.

RANSOMWARE ATTACK
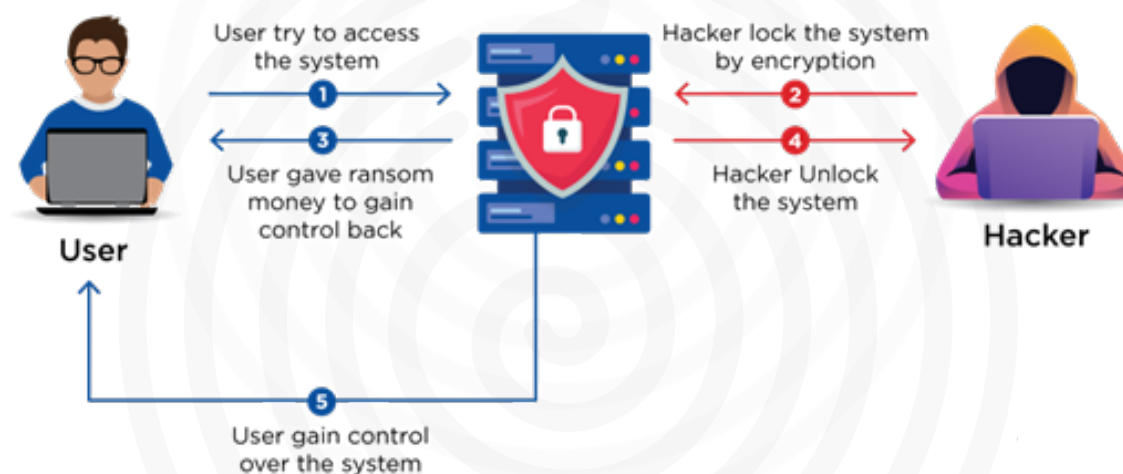
National Cyber Security Policy 2013

- Legal Framework: It emphasized the need for a robust legal framework to address cybercrimes and facilitate effective law enforcement and prosecution.

- Institutional Framework: The policy advocated for the establishment of institutional mechanisms and coordination among various stakeholders to enhance cyber security efforts.

- Critical Information Infrastructure Protection: It emphasized the protection of critical information infrastructure, such as power grids, telecommunications, and financial systems, from cyber threats.

- Incident Response: The policy highlighted the importance of establishing a national-level incident response mechanism to effectively respond to cyber security incidents and coordinate with relevant stakeholders.

- Research and Development: It stressed the need for research and development in the field of cyber security to develop innovative solutions, technologies, and practices.

- Public-Private Partnership: The policy emphasized the importance of collaboration between the government, private sector, and academia to address cyber security challenges collectively.

SARA, WORLD'S FIRST ROBOT CHECK-IN ASSISTANT

CONTEXT: *Emirates Introduces Sara, the First Robot Check-In Assistant in the World*

BACKGROUND: Sara, the first robot check-in agent in the world, was created by Emirates with the specific goal of making your trip convenient and easy.

Features: Sara can help you scan your documents, assist with check-in, and even print out your boarding pass. She is situated at ICD Brookfield Place. She can be found at the DIFC facility in Dubai or the recently opened Dubai International Financial Centre.

Additionally, it has a facility for luggage drop-offs where you can leave your bags as early as 24 hours before your departure. Luggage drop-offs are only accepted up to four hours before your flight. It has a large, touch-friendly LCD screen that is 2.5 metres wide.

Significance of Automation in Airports

Streamlined Check-in Process: Automated self-service check-in kiosks enable passengers to check-in, print boarding passes, and tag their luggage, reducing queues and wait times.

Efficient Baggage Handling: Automated baggage handling systems utilize barcode scanning, conveyor belts, and sorting mechanisms to ensure accurate and timely baggage routing, minimizing errors and delays.

Enhanced Security Screening: Automated security screening systems, such as advanced imaging technology and automated threat detection algorithms, improve the efficiency and effectiveness of security checks.

Faster Boarding Procedures: Automation facilitates self-boarding gates, where passengers can scan their boarding passes and proceed to the aircraft, reducing boarding times and improving the boarding process.

Real-time Flight Information: Automated display systems and digital signage provide passengers with up-to-date information regarding flight schedules, gate changes, and delays, enhancing communication and minimizing confusion.

STARBERRYSENSE

CONTEXT:*Astronomers have used commercially available parts to build a new, low-cost star sensor, which was just launched by ISRO on board PSLV C-55.*

BACKGROUND: The Indian Institute of Astrophysics (IIA), an independent division of the Department of Science and Technology (DST), created the StarBerrySense payload. For the first time, a unique, inexpensive sensor that can instantly determine where a satellite is pointing is being tested in orbit. StarBerrySense has not only endured the severe conditions in space and is operating as planned, the initial data indicates that it is possible to calculate the pointing direction, according to the astronomers from the Space Payloads Group at the institute.

IMPORTANCE: Knowing where the satellite is aimed at any given moment is essential for any space mission. There are various methods for doing this, but a star sensor offers the most precise data regarding a spacecraft's orientation. The Space Payloads Group at IIA created a start sensor that can determine its pointing direction in space by recognising the stars in its range of vision.

Significance of this development in Indian Space Technology

- Cost-effectiveness: The use of off-the-shelf components and the RaspberryPi minicomputer make StarBerrySense a cost-effective solution for accurately determining a spacecraft's orientation, making it accessible for a wide range of satellite missions.

- Enhanced Accuracy: Star sensors provide highly accurate information about a spacecraft's pointing direction by identifying stars in its field of view, enabling precise positioning and navigation.

- Survivability in Space: The sensor's ability to withstand the harsh conditions of space and perform as expected demonstrates its durability and reliability, ensuring its functionality even in challenging environments.

- Indigenous Development: The sensor was developed by the Indian Institute of Astrophysics, showcasing the country's capabilities in designing and manufacturing advanced space technology components.

- Integration with POEM: The sensor was successfully mounted on the PSLV Orbital Experimental Module (POEM), a unique initiative by ISRO that repurposes the spent 4th stage of the PSLV for scientific experiments. This integration provides a stable platform for StarBerrySense to operate from.

- Scientific Experimentation: StarBerrySense's deployment on POEM enables short-term scientific experiments in space, allowing researchers to gather valuable data and insights for future missions.

The successful launch and performance of the low-cost StarBerrySense star sensor by ISRO demonstrate its effectiveness in accurately determining spacecraft orientation. This indigenous development, with its cost-effectiveness and adaptability, showcases India's capabilities in space technology and paves the way for enhanced precision and efficiency in future space missions.

ANTI-SHINGLES VACCINE

CONTEXT: *GSK launches anti-shingles vaccine in India*

BACKGROUND: Shingrix (Zoster Vaccine Recombinant, Adjuvanted), according to GlaxoSmithKline Pharmaceuticals Ltd. (GSK), has been made available in India. In 2017, the US Food and Drug Administration (FDA) approved Shingrix for the treatment of persons 50 years of age or older who are at risk of developing shingles. Shingrix received approval from the European Commission in 2018 to be used in individuals 50 years of age or older as shingles prevention.

FEATURES: Shingrix is the first non-live, recombinant subunit vaccination to be administered intramuscularly in two doses. According to the manufacturer, the vaccine Shingrix can guard against shingles, which is brought on by the varicella zoster virus (VZV), which also causes chickenpox, for at least 10 years.

ABOUT SHINGLES (HERPES ZOSTER)

- Cause: Shingles occurs when the varicella-zoster virus, which remains dormant in nerve cells after a person has had chickenpox, becomes active again later in life.

- Symptoms: The primary symptom is a painful rash that typically appears as a band or strip of blisters on one side of the body. Other symptoms may include fever, headache, fatigue, and sensitivity to light.

- Risk Factors: Advanced age, weakened immune system, and a history of chickenpox increase the risk of developing shingles.

- Contagiousness: Shingles itself is not directly contagious, but a person with active shingles can transmit the varicella-zoster virus to others who have not had chickenpox or have not received the chickenpox vaccine, potentially leading to chickenpox.

- Postherpetic Neuralgia: One common complication of shingles is postherpetic neuralgia, which causes persistent pain in the area where the rash occurred. It can last for months or even years after the rash has healed.

- Prevention: Vaccination with the shingles vaccine is recommended for individuals aged 50 years and older to reduce the risk of developing shingles and its complications.

- Treatment: Antiviral medications can help shorten the duration and severity of a shingles episode, especially if started early. Pain medications, topical creams, and anticonvulsants may also be prescribed to manage symptoms.

- Management: Keeping the rash clean, avoiding scratching, and practicing good hygiene can help prevent secondary bacterial infections and aid in healing.

- Transmission: Direct contact with the fluid from shingles blisters can cause chickenpox in susceptible individuals. It is important to avoid contact with vulnerable populations, such as pregnant women and individuals with weakened immune systems.

- Seek Medical Advice: If symptoms suggestive of shingles appear, it is important to consult a healthcare professional for diagnosis, appropriate treatment, and to discuss vaccination options.

Significance of Vaccine in India

Prevention of Shingles: The vaccine plays a crucial role in preventing shingles, a painful and debilitating condition caused by the reactivation of the varicella-zoster virus.

Reduced Disease Burden: By preventing shingles, the vaccine helps in reducing the overall burden of the disease on individuals, families, and the healthcare system.

Protection against Postherpetic Neuralgia (PHN): The vaccine has been shown to reduce the risk of developing postherpetic neuralgia, a common and long-lasting complication of shingles that causes chronic pain.

Improved Quality of Life: By preventing shingles and its complications, the vaccine improves the quality of life for individuals, particularly the elderly who are at higher risk of developing severe symptoms and complications.

Cost Savings: Immunizing individuals against shingles can potentially lead to cost savings in terms of reduced healthcare expenditures associated with shingles treatment and management of complications.

Addressing the Aging Population: India has a significant aging population, and the vaccine can play a vital role in protecting older adults from the burden of shingles, reducing healthcare costs and improving the overall well-being of the elderly.

Public Health Initiatives: The inclusion of the shingles vaccine in public health initiatives and immunization programs can help raise awareness, increase vaccine coverage, and reduce the incidence of shingles and its associated complications.

The availability and administration of the shingles vaccine in India hold great significance. It offers protection against shingles and its complications, reduces disease burden and healthcare costs, improves the quality of life for individuals, and addresses the needs of an aging population, ultimately contributing to better public health outcomes.

PREPAREDNESS AND RESILIENCE FOR EMERGING THREATS (PRET) INITIATIVE

CONTEXT:*PRET: WHO establishes project to improve global pandemic preparedness*

BACKGROUND: In order to be better ready for future outbreaks with the same scope and devastation as the COVID-19 pandemic, the World Health Organisation (WHO) has started a new effort. The Preparedness and Resilience for Emerging Threats (PRET) Initiative seeks to offer recommendations on coordinated planning for dealing with any respiratory infection, such as influenza or coronaviruses. The programme was introduced at the Global Meeting for Future Respiratory Pathogen Pandemics, which took place in Geneva, Switzerland, from April 24 to 26, 2023.

HIGHLIGHTS: It is a cutting-edge strategy for enhancing disease pandemic preparedness. It acknowledges that groups of pathogens can share the same systems, capabilities, knowledge, and tools depending on how they spread (through respiratory, vector-borne, foodborne, etc.). The PRET programme integrates the most contemporary methods and instruments for group learning and action developed during the COVID-19 pandemic and other recent public health crises.

It prioritises the concepts of equity, inclusion, and coherence. National, regional, and international stakeholders can work together on PRET's platform to improve readiness. To assist stakeholders in updating their preparedness plans and exchanging experiences, technical resource packs, a peer learning network, and a community of practise are soon to be released.
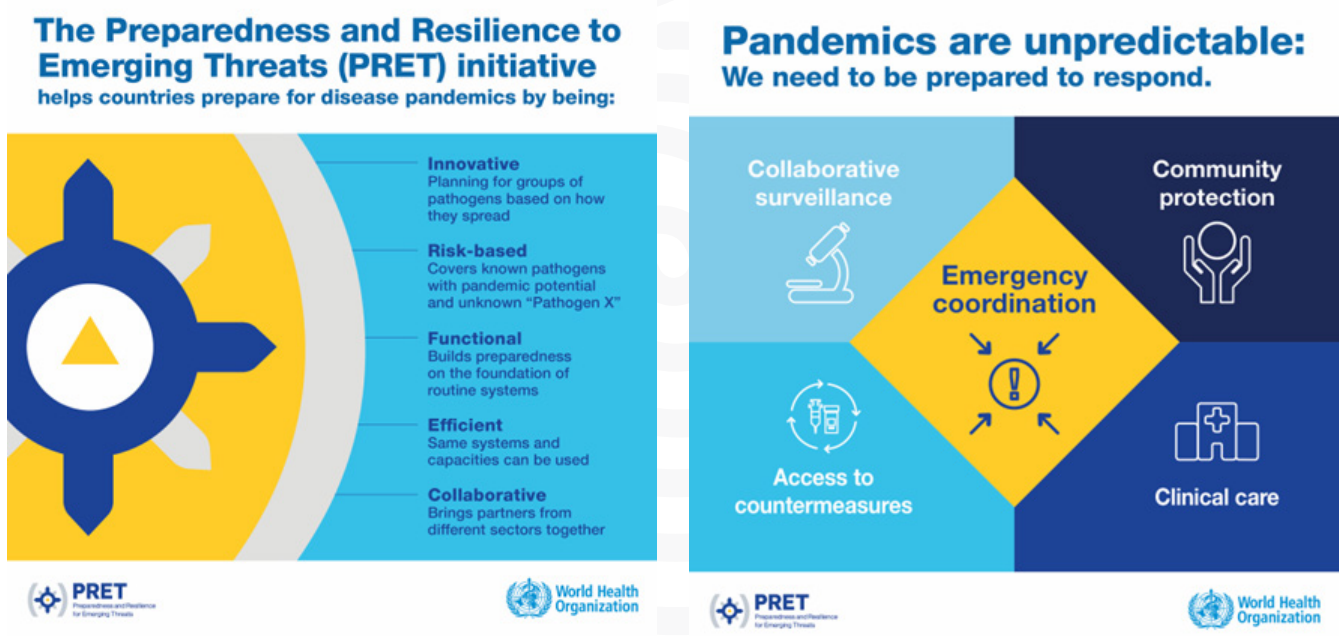
- Credit WHO

PINCER CATALYST

CONTEXT: *A unique "pincer catalyst" developed by IIT Guwahati may create green hydrogen from methyl alcohol.*

BACKGROUND: The Department of Chemistry at the Indian Institute of Technology, Guwahati has created a catalyst that can liberate hydrogen gas from wood alcohol without producing any carbon dioxide as a by-product. Formic acid, a useful industrial chemical, is produced by the technique, which is also simple and safe for the environment.

SIGNIFICANCE: Hydrogen gas continues to be the best way to generate clean energy as the globe looks for alternatives to fossil fuels. Currently, hydrogen is created by electrochemically splitting water or by using molecules obtained from living things, like alcohol. In the latter approach, methyl alcohol (also known as wood alcohol) is usually converted to hydrogen using a catalyst in a procedure known as methanol reforming. The catalytic generation of hydrogen from wood alcohol has two issues. The first is that the process takes place at high pressures (20 atmospheres) and temperatures in the range of 300 oC. Second, a greenhouse gas called carbon dioxide is a co-product of the reaction.The development of such a catalyst holds promise for the utilization of methanol as a "Liquid Organic Hydrogen Carrier" (LOHC) and contributes to the concept of a hydrogen-methanol economy. As the world seeks alternatives to fossil fuels, hydrogen gas is considered one of the most viable options for clean energy generation.
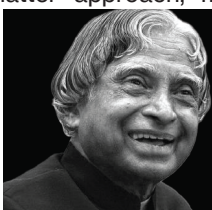
You have to dream before your dreams can come true..

- A. P. J. ABDUL KALAM

FM TRANSMITTERS

CONTEXT: *PM inaugurates 91 new 100W FM Transmitters to enhance FM connectivity in the country*

Background: Through video conferencing, the prime minister unveiled 91 brand-new 100W FM transmitters. The ceremony will increase radio connectivity throughout the nation. In order to improve FM coverage throughout the nation, the government has installed 91 new 100W FM transmitters in 85 districts spread throughout 18 States and 2 Union Territories. This expansion has placed a special emphasis on improving coverage in border regions and aspirational districts.

Is FM Transmitters still relevant in India?

FM transmitters are still relevant in India. Despite the growing popularity of digital platforms and streaming services, FM radio continues to play a significant role in the country's media landscape. FM radio has a wide reach and remains accessible to a large portion of the population, including those in rural areas with limited internet connectivity.

FM transmitters provide an important means of communication and entertainment, especially in areas where access to other media sources may be limited. They serve as a source of information, news, music, and entertainment for millions of listeners across the country.

FM radio serves as a platform for community engagement, promoting local culture, and supporting social initiatives. It plays a crucial role in disseminating important information during emergencies and natural disasters, reaching a wide audience quickly.

FM transmitters are cost-effective and require relatively simple technology, making them an affordable and practical choice for broadcasting, particularly in regions with limited resources.

FM transmitters continue to be relevant in India, catering to diverse audiences and providing valuable connectivity and entertainment services to a wide range of listeners.

1927 — The Indian Broadcasting Company (IBC) is established	**1993** — FM Rainbow, a channel targeting urban youth with a mix of music and interactive programming.
1930 — Indian Broadcasting Service starts regular broadcasting from Bombay (now Mumbai) and Calcutta (now Kolkata).	**1997** — AIR launches its website, providing online access to program schedules, news, and other information.
1936 — Indian Broadcasting Service is renamed as All India Radio	**2001** — AIR starts digital broadcasting, initially in select cities, offering improved audio quality and additional channels.
1957 — Vividh Bharati Service, a popular entertainment radio channel, is launched by AIR.	**2010** — AIR introduces mobile apps, allowing listeners to access AIR programs on their smartphones and tablets.
1967 — External Services Division of AIR begins international broadcasting	**2014** — AIR introduces mobile apps, allowing listeners to access AIR programs on their smartphones and tablets.
1984 — AIR starts broadcasting its news bulletins and programs in FM (frequency modulation).	**2020** — AIR launches a podcast platform, expanding its reach and offering on-demand audio content.

2023 — The Prime Minister inaugurates 91 new 100W FM transmitters, enhancing FM connectivity in the country and expanding the coverage of AIR's FM services.

G20 TECHSPRINT

CONTEXT: *The G20 TechSprint competition is launched by the RBI to enhance cross-border payments.*

BACKGROUND: G20 TechSprint, a global technology competition for creating cutting-edge solutions to enhance cross-border payments, was introduced by the Reserve Bank of India (RBI). The RBI and the BIS Innovation Hub (BISIH) of the Bank for International Settlements have joined forces to launch the fourth iteration of the G20 TechSprint during India's G20 Presidency.

HIGHLIGHTS: Three issues that cross-border payments must address will be the subject of the 2023 TechSprint. Technology solutions to combat money laundering and impose sanctions would be the primary area of concentration.

The second area would be solutions for foreign exchange and liquidity technology to allow settlement in currencies from emerging markets and developing economies (EMDE). Finally, develop technological solutions for platforms that support multilateral, international Central Bank Digital Currency (CBDC).

The launch of the G20 TechSprint by the Reserve Bank of India (RBI) and the BIS Innovation Hub holds significant importance for several reasons:

Global Collaboration: The TechSprint provides a platform for global collaboration among innovators, technologists, and financial institutions. It encourages participants from different countries to come together and jointly develop solutions for improving cross-border payments. This collaboration fosters knowledge-sharing, innovation, and the exchange of best practices.

Addressing Key Challenges: The competition focuses on three crucial challenges in cross-border payments: Anti Money Laundering (AML) and Sanctions, Foreign Exchange (FX) and liquidity, and Central Bank Digital Currency (CBDC) platforms. By addressing these challenges, the TechSprint aims to enhance the security, efficiency, and transparency of cross-border transactions, reducing risks and improving the overall payment ecosystem.

G20 Initiative: As part of India's G20 Presidency, the launch of the TechSprint reflects the commitment of the G20 nations to foster technological advancements in the financial sector. It demonstrates the collective effort of G20 members to promote innovation, inclusivity, and resilience in cross-border payments, which are vital for global economic stability and development.

Promoting Financial Inclusion: The TechSprint encourages the development of solutions that enable settlement in emerging market and developing economy (EMDE) currencies. By enhancing the accessibility and efficiency of cross-border transactions involving these currencies, the initiative aims to promote financial inclusion and support economic growth in these regions.

Central Bank Digital Currency (CBDC) Exploration: The TechSprint also focuses on technology solutions for multilateral cross-border CBDC platforms. This reflects the growing interest and exploration of CBDCs by central banks worldwide. By encouraging participants to develop innovative solutions in this domain, the competition contributes to the ongoing research and understanding of CBDCs and their potential role in cross-border transactions.

SCARY BARBIE

CONTEXT: *One of the longest, brightest, and most energetic cosmic objects ever seen has been discovered by astronomers. They have dubbed it "Scary Barbie," in part because of its scary power.*

BACKGROUND: A far-off star, which is now facing a fiery and spectacular demise, is being torn apart by a supermassive black hole. In honour of a cherished children's character, the black hole has been affectionately dubbed "Scary Barbie" by the researchers who first identified it. One of the most dynamic, brilliant, and fleeting celestial phenomena ever discovered, the supermassive black hole devouring the star is not exactly blazingly bright in the night sky. Instead, astronomers had to search through a vast amount of telescope data to find traces of the star's final moments after it had been hidden for years.

Black holes – Points to Remember

- Definition: A black hole is a region in space where gravity is so strong that nothing, not even light, can escape its gravitational pull.

- Formation: Black holes are formed from the remnants of massive stars that have undergone gravitational collapse, resulting in an extremely dense object.

- Event Horizon: The boundary of a black hole is called the event horizon. It is the point of no return, beyond which anything that enters the black hole is trapped forever.

- Singularity: At the center of a black hole lies a singularity, a point of infinite density where the laws of physics, as currently understood, break down.

- Size and Mass: Black holes come in different sizes, ranging from stellar black holes (a few times the mass of our Sun) to supermassive black holes found at the centers of galaxies (millions or billions of times the mass of our Sun).

- Time Dilation: The intense gravitational pull near a black hole causes time to slow down. This phenomenon, known as time dilation, means that time passes more slowly for an observer near a black hole compared to someone further away.

- No Hair Theorem: Black holes are described by the "no hair theorem," which states that they have only three properties: mass, electric charge, and angular momentum. All other information is believed to be lost within the black hole.

- Hawking Radiation: Black holes are not completely black. According to physicist Stephen Hawking, they emit a type of radiation called Hawking radiation, which is due to quantum effects near the event horizon. This radiation gradually reduces the black hole's mass over time.

- Gravitational Waves: Black holes can produce gravitational waves, which are ripples in the fabric of spacetime. The first detection of gravitational waves in 2015 provided direct evidence of the existence of black holes.

- Importance in Cosmology: Black holes play a crucial role in our understanding of the universe. They contribute to the formation and evolution of galaxies and are essential for explaining phenomena like quasars, active galactic nuclei, and the growth of cosmic structures.

PIEZOELECTRIC MEMS TECHNOLOGY

CONTEXT: *For underwater acoustic sensors, IIT Madras researchers create materials and micro device processing techniques.*

BACKGROUND: Researchers from the Defence Research and Development Organisation (DRDO) and the Indian Institute of Technology Madras (IIT Madras) have teamed together to create sensor technology for underwater communications that will be useful for defence applications, particularly in the Navy.

TECHNOLOGY: To create high-performance thin films and transform piezo-thin films into cutting-edge naval sensors and equipment for underwater applications, piezoelectric MEMS technology is needed. Piezo thin films, which are taken into consideration for acoustics and vibration-sensing applications, are an essential part of piezo MEMS devices. India is able to advance its defensive capabilities thanks to the development of cutting-edge piezo MEMS technology, which also enables the country to carry out essential applications' strategic activities. The Next-Generation SONAR programme of DRDO for the Indian Navy will be supported by the vast area piezo thin films and MEMS process technology.

Piezoelectric Materials

Piezoelectric materials are a unique class of materials that can generate an electric charge in response to applied mechanical stress or pressure, and conversely, they can deform or vibrate when subjected to an electric field. This property is known as the piezoelectric effect.

Applications

Sensor and Transducer Technology: Piezoelectric materials are widely used in sensor and transducer technologies. They can convert mechanical signals such as pressure, force, or acceleration into electrical signals, making them crucial in

various fields including industrial automation, automotive engineering, medical diagnostics, and aerospace.

Energy Harvesting: Piezoelectric materials can convert mechanical vibrations or motion into electrical energy. They are employed in energy harvesting devices to capture and convert ambient vibrations or mechanical movements into usable electricity, such as in self-powered sensors or wearable devices.

Acoustic Applications: Piezoelectric materials find applications in sound and vibration control. They are used in microphones, speakers, ultrasonic devices, and acoustic filters, where their ability to convert electrical energy into mechanical vibrations and vice versa is utilized.

Actuators and Motors: Piezoelectric materials can act as actuators, transforming electrical signals into precise mechanical motion. They are used in various devices such as precision positioning systems, Nano positioners, inkjet printers, and valves.

Medical Imaging: Piezoelectric materials are integral to ultrasound technology. They are used in ultrasound transducers to generate and receive sound waves, enabling medical imaging techniques for diagnostics and non-invasive examinations.

Industrial Applications: Piezoelectric materials are employed in various industrial applications. They can be found in precision machining and positioning systems, flow meters, non-destructive testing equipment, and vibration damping devices.

Sonar and Underwater Communication: Piezoelectric materials are utilized in sonar devices and underwater communication systems. They can generate and detect acoustic waves underwater, enabling applications in navigation, fish finding, submarine communication, and oceanographic research.

SEMI-CRYOGENIC ENGINE

CONTEXT: *The testing of the semi-cryogenic engines that will power future launch vehicles has successfully started, according to the Indian Space Research Organisation.*

BACKGROUND: At the recently opened Semicryogenic Integrated Engine & Stage Test facility at the ISRO Propulsion Complex(IPRC), Mahendragiri, ISRO conducted the first integrated test on a middle configuration of the 2000kN Semicryogenic Engine. All of the engine systems — with the exception of the thrust chamber — are included in the intermediate configuration, also known as the Power Head Test Article (PHTA). The test is the first of a series that will be conducted to verify the design of the propellant feed system, which includes the gas generator, control components, low-pressure and high-pressure turbo-pumps, and more.

HIGHLIGHTS: With the assistance of the Indian industry, the Liquid Propulsion Systems Centre (LPSC) of ISRO has taken on the design and development of a semicryogenic engine with a 2000 kN thrust that would power the booster stages of upcoming launch vehicles and utilises a liquid oxygen (LOX)-kerosene propellant mix.

This test showed that the intricate chill-down procedures, which took almost 15 hours to complete, were carried out properly and met all requirements for engine start. After the LOX circuit had been chilled, kerosene was added to the feed circuit, and the injection valve was opened to allow LOX to enter the gas generator. The order of procedures for additional tests can be determined using the test article's successful performance.
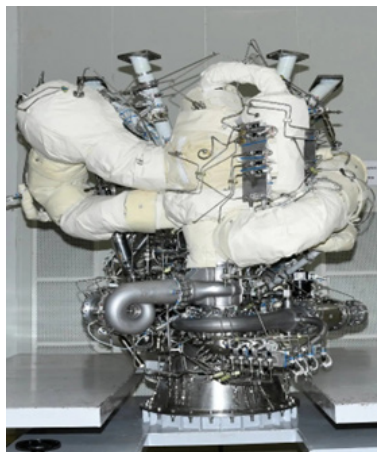
About Semi-Cryogenic Engines

A semi-cryogenic engine is a type of rocket engine that uses a combination of cryogenic and non-cryogenic propellants. Unlike fully cryogenic engines that use only cryogenic propellants (liquefied gases stored at extremely low temperatures), semi-cryogenic engines use a combination of a cryogenic fuel and a non-cryogenic oxidizer.

Some key aspects

- Propellants: Semi-cryogenic engines typically use liquid oxygen (LOX) as the oxidizer, which is stored at ambient temperature and pressure, and a cryogenic fuel such as liquid methane (LCH4) or liquid hydrogen (LH2). The use of cryogenic fuels helps achieve high specific impulse and efficient combustion.

- Performance: Semi-cryogenic engines offer better performance compared to non-cryogenic engines due to the higher specific impulse achieved by using cryogenic fuels. Specific impulse is a measure of the efficiency of a rocket engine and determines the amount of thrust produced per unit of propellant consumed.

- Reusability: Semi-cryogenic engines can be designed for reusability, allowing them to be used for multiple launches. This can help reduce the cost of space missions by eliminating the need for building new engines for each launch.

- Versatility: Semi-cryogenic engines are versatile and can be used in various types of launch vehicles, including both expendable and reusable launch systems. They are suitable for both medium and heavy-lift applications, offering a balance between performance and operational costs.

- Environmental Impact: The use of cryogenic fuels in semi-cryogenic engines can potentially reduce the environmental impact of space launches. Cryogenic propellants, such as liquid methane, have lower greenhouse gas emissions compared to traditional fuels like kerosene.

Semi-cryogenic engines offer improved performance, versatility, and potential environmental benefits compared to non-cryogenic engines. Their development plays a crucial role in advancing space exploration and reducing the cost and environmental impact of space missions.

iDRONE INITIATIVE

CONTEXT: *Under the iDrone effort, ICMR successfully completes a trial run of the delivery of blood bags.*

BACKGROUND: Under its iDrone programme, the Indian Council of Medical Research (ICMR) successfully tested the transportation of blood bags by drones. The trial run has been carried out for the first time in the nation by the ICMR, Lady Hardinge Medical College (LHMC), Government Institute of Medical Sciences (GIMS), Greater Noida, and the Jaypee Institute of Information Technology (JIIT), Noida. It is a part of a ground-breaking validation study. 10 units of whole blood samples from the GIMS and LHMC were transported on the first test flight within visual range. "JIIT is serving as the implementation centre for drone sorties, with LHMC and GIMS serving as the centres for supplying blood bags and examination of the samples.

About the Initiative

The iDrone Initiative is a program led by the Indian Council of Medical Research (ICMR) in collaboration with various medical institutions and technology partners. It aims to explore the use of drones in the healthcare sector, specifically for the transportation of medical supplies, including blood bags, vaccines, medicines, and diagnostic samples. The initiative focuses on leveraging drone technology to improve the accessibility, timeliness, and efficiency of healthcare services, particularly in remote and underserved areas.

The iDrone Initiative involves conducting research, pilot projects, and validation studies to assess the feasibility, safety, and effectiveness of using drones for medical logistics. It aims to establish guidelines, protocols, and standard operating procedures for drone operations in the healthcare sector, ensuring compliance with aviation regulations and maintaining patient safety and data security.

Key objectives of the iDrone Initiative include:

- Establishing a robust drone delivery network for medical supplies, including blood bags, in remote and inaccessible areas.

- Developing customized drone systems capable of safely transporting medical payloads.

- Conducting research and validation studies to assess the technical, operational, and regulatory aspects of drone-based medical logistics.

- Collaborating with medical institutions, technology partners, and government agencies to facilitate the implementation and scaling of drone delivery solutions.

- Creating awareness and building capacity among healthcare professionals, drone operators, and other stakeholders regarding the use of drones in healthcare.

- Developing a regulatory framework and guidelines for the safe and secure integration of drones into the healthcare delivery system.

The iDrone Initiative is an innovative approach that harnesses the potential of drone technology to overcome logistical challenges in healthcare delivery. By leveraging drones, it aims to bridge the gap in accessing medical services, particularly in remote and underserved areas, thereby enhancing patient outcomes and saving lives.

"75/25" INITIATIVE

CONTEXT: *The ambitious "75/25" plan, announced by the Union Health Ministry, aims to put 75 million people with diabetes and hypertension on standard care by 2025.*

BACKGROUND: To commemorate World Hypertension Day, the Union Health Ministry unveiled an ambitious programme to test and enrol 75 million individuals with hypertension and diabetes in standard care by 2025. The G20 co-branded event "Accelerating the Prevention and Management of Hypertension and Diabetes," hosted by the Union Health Ministry and WHO, made this announcement.

SIGNIFICANCE:

Addressing the Burden of Non-Communicable Diseases (NCDs): Hypertension and diabetes are major non-communicable diseases that contribute significantly to the overall disease burden in India. By focusing on screening and providing standardized care for these conditions, the initiative aims to tackle the growing prevalence of NCDs and their associated complications.

Early Detection and Prevention: The initiative emphasizes the importance of early detection through screening at the primary healthcare level. By identifying individuals with hypertension and diabetes at an early stage, it becomes possible to intervene and provide appropriate treatment, thereby preventing further progression and complications.

Improving Access to Care: The initiative highlights the commitment of the government to improve access to healthcare services for hypertension and diabetes. By expanding the coverage and ensuring standardized care, it aims to reach a larger population and reduce disparities in healthcare access.

Community-Based Approach: The initiative adopts a community-based approach by leveraging primary healthcare centers and creating more than 1.5 lakh Health and Wellness Centers (HWCs). This approach brings healthcare services closer to the community and promotes a holistic approach to disease management.

Multi-Sectoral Collaboration: The initiative recognizes the need for multi-sectoral collaboration to address hypertension and diabetes effectively. It involves engagement with various stakeholders, including the government, private sector, academic institutions, and research sectors. This collaboration enhances the pooling of resources, expertise, and innovation to achieve the ambitious targets set by the initiative.

Status of Hypertension and Diabetes in India

Hypertension:

- According to the National Family Health Survey-4 (NFHS-4) conducted in 2015-16, the prevalence of hypertension among adults (15-49 years) in India was estimated to be around 14.8%.

- A study published in The Lancet in 2019 reported that the prevalence of hypertension in India has increased from 32.5% in 2007 to 37.5% in 2017.

- Hypertension is more common in urban areas compared to rural areas.

Diabetes:

- According to the International Diabetes Federation (IDF), in 2019, India had an estimated 77 million adults aged 20-79 years with diabetes.

- The prevalence of diabetes in India is increasing rapidly. It is estimated that by 2030, India will have the highest number of people with diabetes in the world.

- Type 2 diabetes is the most common form of diabetes in India, accounting for over 90% of all cases.

- Diabetes is a major risk factor for various complications, including cardiovascular diseases, kidney problems, and neuropathy.

The initiative launched by the Union Health Ministry to screen and provide standardized care for 75 million people with hypertension and diabetes in India by 2025 is a significant step towards addressing the burden of non-communicable diseases and improving public health. By emphasizing early detection, the initiative aims to prevent complications and improve outcomes for individuals with these conditions. It highlights the government's commitment to expanding healthcare access and reducing disparities by leveraging community-based approaches and the integration of technology.

AIRAWAT

CONTEXT: *India joins the top supercomputing league thanks to the AI Supercomputer 'AIRAWAT'. In the top 500 Supercomputing List, "AIRAWAT" is ranked 75th*

BACKGROUND: The AI Supercomputer 'AIRAWAT', installed at C-DAC, Pune, has been ranked 75th in the world. Yesterday during the International Supercomputing Conference (ISC 2023) in Germany, the Top 500 Global Supercomputing List's 61st edition announced as such. India is now ranked first among all countries using AI supercomputers. The system was installed as part of the Indian government's national AI programme.

IMPORTANCE: Supercomputers like PARAM AIRAWAT play a crucial role in advancing scientific research, simulations, data analysis, and solving complex computational problems. They enable scientists, researchers, and engineers to perform large-scale computations, modelling, and simulations that are beyond the capabilities of traditional computing systems. Supercomputers like PARAM AIRAWAT contribute to various domains such as weather forecasting, climate modelling, drug discovery, molecular modelling, aerospace engineering, and more.

By providing immense computing power and advanced parallel processing capabilities, supercomputers like PARAM AIRAWAT accelerate research and development, leading to scientific breakthroughs, innovation, and technological advancements. These powerful computing systems are instrumental in solving complex real-world problems and pushing the boundaries of human knowledge and understanding.

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CSAT

COMPREHENSION

Q1. A male tiger was removed from Pench Tiger Reserve and was relocated in Panna Nation Park. Later, this tiger trekked toward his honie 250 miles away. The trek of this solitary tiger highlights a crisis. Many wildlife reserves exist as islands of fragile habitat in a vast sea of humanity, yet tigers can range over a hundred miles, seeking prey, mates and territory. Nearly a third of India's tigers live outside tiger reserves, a situation that is dangerous for both human and animal. 'Prey and tigers can only disperse if there are recognized corridors of land/ between protected areas to allow unmolested passage.

With reference to the above passage, the following assumptions have been made :

The strategy of conservation of wildlife by relocating them from one protected area to another is not often successful.

India does not have suitable legislation to save the tigers, and its conservation efforts have failed which forced the tigers to live outside protected areas.

Which of the above assumptions is/

are valid?"

A.1 only

B.2 only

C.Both 1 and 2

D.Neither 1 nor 2

Q2. The man who is perpetually hesitating which of the two things he will do first, will do neither. The man who resolves, but suffers his resolution to be changed by the first counter Suggestion of a friend – who fluctuates from opinion to opinion and veers from plan to plan-can never accomplish anything. He will at best be stationary and probably retrograde in all. It is only the man who first consults wisely, then resolves firmly and then executes his purpose with inflexible perseverance, undismayed by those petty difficulties which daunt a weaker spirit – that can advance to eminence in any line.

The keynote that seems to be emerging from the passage is that"

A.we should first consult wisely and then resolve firmly

B.we should reject suggestions of friends and remain unchanged

C.we should always remain broad-minded

D.we should be resolute and achievement-oriented

Q3. Why do people prefer open defecation and not want toilets or, if they have them, only use them sometimes? Recent research has shown two critical elements: ideas of purity and pollutions, and not wanting pits or septic tanks to fill they have to be emptied. These are the issue that nobody wants to talk about, but if we want to eradicate the practice of open defection, they have to be confronted and dealt properly.

Which among the following is the most crucial message conveyed by the above passage?"

A.The ideas of purity and pollutions are so deep-rooted that they cannot be removed from the minds of the people.

B.People have to perceive toilet use and pit-emptying as clean and not polluting.

C.People cannot change their old habits.

D.People have neither civic sense nor sense of privacy.

Q4. In the last two decades, the world's gross domestic product (GDP) has increased 50 percent, whereas inclusive wealth has increased by a mere 6 percent. In recent decades, GDP-driven economic performance, has only harmed inclusive wealth like human capital; and natural capital like forests, land and water. While the world's human capital which stands at 57 percent of total inclusive wealth grew by only 8 percent, the natural which is 23 percent of total inclusive wealth declined by 30 per cent worldwide in the last two decades.

Which of the following is the most crucial inference from the above passage?"

A.More emphasis should be laid on the development of natural capital.

B.The growth driven by GDP only is neither desirable nor sustainable.

C.The economic performance of the countries of the world is not satisfactory.

D.The world needs more human capital under the present circumstances.

Q5. By 2020, when the global economy is expected to run short of 56 million young people, India, with its youth surplus of 47 million, could fill the gap. It is in this context that labour reforms are often cited as the way to unlock double-digit growth in India. In 2014, India's labour force was estimated to be about 40 per cent of the population, but 93 per cent of this force was in unorganized sector. Over the last decade, the compound annual growth rate (CAGR) of employment has slowed to 0.5 per cent, with about 14 million jobs created during last year when the labour force increased by about 15 million.

Which of the following is the most rational inference from the above passage?"

A.India must control its population growth so as to reduce its unemployment rate.

B.Labour reforms are required in India to make optimum use of its vast labour force productively

C.India is poised to achieve the double-digit growth very soon

D.India is capable of supplying skilled young people to oil countries.

Q6. The very first lesson that should be taught to us when are old enough to understand it, is that complete freedom from the obligation to work is unnatural, and ought to be illegal, as we can escape our share of the burden of work only by throwing it on someone else's shoulders. Nature ordains that the human race shall perish of famine if it stops working. We cannot escape from this tyranny. The question we have to settle is how much leisure we can afford to allow ourselves.

The main idea of the passage is that"

A.it is essential for human beings to work

B.there should be a balance between work and leisure

C.working is a tyranny which we to face

D.human's understanding of the nature of work is essential

Q7. There is no harm in cultivating habits so long as they are not injurious. Indeed, most of us are little more than bundle of habits. Take away our habits and the residuum would hardly be worth bothering about. We could not get on without them. They simplify the mechanism of life. They enable us to do a multitude of things automatically, which, if we had to give fresh and original thought to them each time, would make existence an impossible confusion.

The author suggests that habits"

A.tend to make our lives difficult

B.add precision to our lives

C.make it easier for us to live

D.tend to mechanize our lives

Q8.We have hard work ahead. There is no resting for any of us till we redeem our pledge in full fill we make all the people of India what destiny intends them to be. We are citizens of a great country, on the verge of bold advance, and we have to live up to that high standard. All of us, to whatever religion we may belong, are equally the children of India with, equal rights, privileges and obligations. We cannot encourage communalism or narrow-mindedness, for no nation can be great whose people are narrow in thought or action.

The challenge the author of the above passage throws to the public is to achieve"

A.a high standard of living, progress and privileges

B.equal privileges, fulfilment of destiny and political tolerance

C.spirit of adventure and economic parity

D.hard work, brotherhood out national unity

Q9. "The individual, according to Rousseau, puts his person and all his power in common under the supreme direction of the General Will and in our corporate capacity we receive each member as an indivisible part of the whole."

In the light of the above passage, the nature of General Will is best described as"

A.the sum total of the private wills of the individuals

B.what is articulated by the elected representatives of the individuals

C.the collective good as distinct from private wills of the individuals

D.the material interests of the community

Q10. In a democratic State, where a high degree of Political maturity of the people obtains, the conflict between the will of the sovereign law-making body and the organized will of the people seldom occurs.

What does the above passage imply?"

A.In a democracy, force is the main phenomenon in the actual exercise of sovereignty.

B.In a mature democracy, force to a great extent is the main phenomenon in the actual exercise of sovereignty.

C.In a mature democracy, use of force is irrelevant in the actual exercise of sovereignty.

D.In a mature democracy, force is narrowed down to a marginal phenomenon in the actual exercise of sovereignty.

Q11. A successful democracy depends upon widespread interest and participation in politics, in which voting is an essential part. To deliberately refrain from taking such an interest, and from voting, is a kind of implied anarchy, it is to refuse one's political responsibility while enjoying the benefits of a free political society.

This passage relates to"

A.duty to vote

B.right to vote

C.freedom to vote

D.right to participate in politics

Q12. In a free country, the man who reaches the position of leader is usually one of outstanding, character and ability. Moreover, it is usually possible to foresee that he will reach such a position, since early in life one can see his qualities of character. But this is not always true in the case of a dictator; often he reaches his position of power through chance, very often through the unhappy state of his country.

The passage seems to suggest that"

A.a leader foresees his future position

B.a leader is chosen only by a free country

C.a leader must see that his country is free from despair

D.despair in a country sometimes leads to dictatorship

Q13. The greatest blessing that technological progress has in store for mankind is not, of course, an accumulation of material possessions. The amount of these that can be effectively enjoyed by one individual in one lifetime is not great. But there is not the same narrow limit to the possibilities of the enjoyment of leisure. The gift of leisure may be abused by people who have had no experience of making use of it. Yet the creative use of leisure by a minority in societies has been the mainspring of all human progress beyond the primitive level.

With reference to the above passage, the following assumptions have been made:

People always see the leisure time as a gift and use it for acquiring more material possessions.

Use of leisure by some people to produce new and original things has been the chief source of human progress.

Which of these assumptions is/are valid?"

A.1 only

B.2 only

C.Both 1 and 2

D.Neither 1 nor 2

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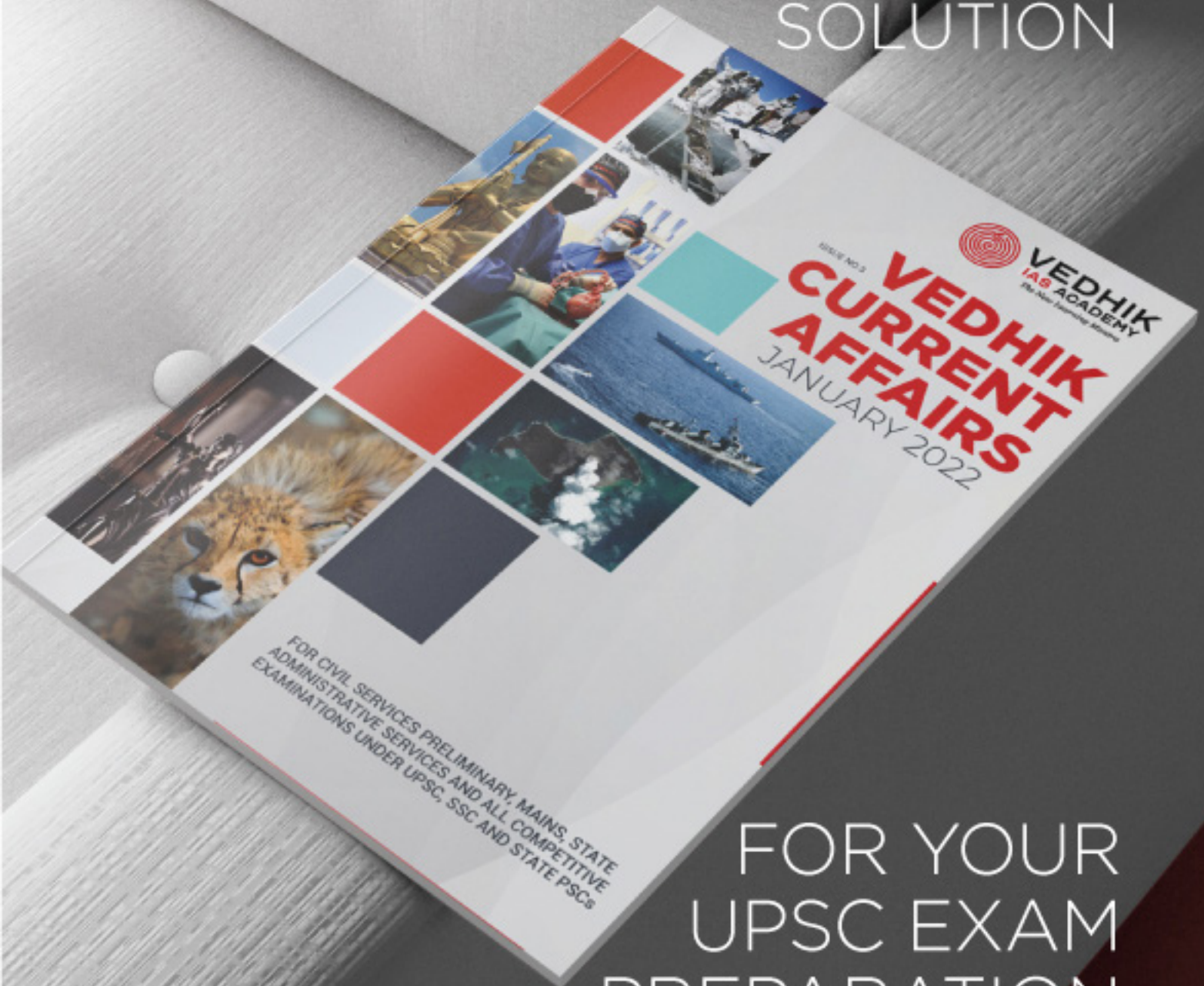
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ETHICS

LAW AND ETHICS

ETHICS IN ADVERTISING

INTRODUCTION

Ethics means a set of moral principles which govern a person's behaviour or how the activity is conducted. And advertising means a mode of communication between a seller and a buyer.

Thus ethics in advertising means a set of well-defined principles which govern the ways of communication taking place between the seller and the buyer. Ethics is the most important feature of the advertising industry. Though there are many benefits of advertising but then there are some points which don't match the ethical norms of advertising.

An ethical ad is the one which doesn't lie, doesn't make fake or false claims and is in the limit of decency.

Nowadays, ads are more exaggerated and a lot of puffing is used. It seems like the advertisers lack knowledge of ethical norms and principles. They just don't understand and are unable to decide what is correct and what is wrong.

The main area of interest for advertisers is to increase their sales, gain more and more customers, and increase the demand for the product by presenting a well decorated, puffed and colourful ad. They claim that their product is the best, having unique qualities than the competitors, more cost effective, and more beneficial. But most of these ads are found to be false, misleading customers and unethical.

The best example of these types of ads is the one which shows evening snacks for the kids, they use colouring and gluing to make the product look glossy and attractive to the consumers who are watching the ads on television and convince them to buy the product without giving a second thought.

Ethics in advertising is directly related to the purpose of advertising and the nature of advertising. Sometimes exaggerating the ad becomes necessary to prove the benefit of the product. For example, a sanitary napkin ad which shows that when the napkin was dropped in a river by some girls, the napkin soaked whole water of the river. Thus, the purpose of advertising was only to inform women about the product quality. Obviously, every woman knows that this cannot practically happen but the ad was accepted. This doesn't show that the ad was unethical.

Ethics also depends on what we believe. If the advertisers make the ads on the belief that the customers will understand, persuade them to think, and then act on their ads, then this will lead to positive results and the ad may not be called unethical. But at the same time, if advertisers believe that they can fool their customers by showing any impractical things like just clicking fingers will make your home or office fully furnished or just buying a lottery ticket will make you a millionaire, then this is not going to work out for them and will be called as unethical.

Recently, the Vatican issued an article which says ads should follow three moral principles - Truthfulness, Social Responsibility and Upholding Human Dignity.

Generally, big companies never lie as they have to prove their points to various ad regulating bodies. Truth is always said but not completely. Sometimes it is better not to reveal the whole truth in the ad but at times truth has to be shown for betterment.

Pharmaceutical Advertising - they help creating awareness, but one catchy point here is that the advertisers show what the medicine can cure but never talk about the side effects of that same thing or the risks involved in intake of it.

Children - children are the major sellers of the ads and the product. They have the power to convince the buyers. But when advertisers are using children in their ad, they should remember not to show them alone doing their work on their own like brushing teeth, playing with toys, or infants holding their own milk bottles as everyone knows that no one will leave their kids unattended while doing all these activities. So showing parents also involved in all activities or things being advertised will be more logical.

Alcohol - till today, there hasn't come any liquor ad which shows anyone drinking the original liquor. They use mineral water and sodas in their advertisements with their brand name. These types of ads are called surrogate ads. These type of ads are totally unethical when liquor ads are totally banned. Even if there are no advertisements for alcohol, people will continue drinking.

Cigarettes and Tobacco - these products should be never advertised as consumption of these things is directly and badly responsible for cancer and other severe health issues. These as are already banned in countries like India, Norway, Thailand, Finland and Singapore.

Ads for social causes - these types of ads are ethical and are accepted by the people. But ads like condoms and contraceptive pills should be limited, as these are sometimes unethical, and are more likely to loose morality and decency at places where there is no educational knowledge about all these products.

News Based Advertising: Ethical or Not!

Maybe you read the article that was shared on Facebook that said "10 best places to visit this summer" and maybe that article ended up influencing your choice for summer vacation destination. You may have thought that this article was written by a user or a travel enthusiast that wanted to share their experience.

In the worst case you may have thought that this article was written by a news reporter? What if I told you that this article is a part of a disturbing trend called "news based advertising" wherein corporations sponsor content that is shared with users and intended to influence their decisions. In this article we will understand more about news based advertising as well as the ethical implications that impact the issue.

The Rise of News Based Advertising

Online advertising has reached a saturation point. The situation is so severe that the pay per click model is almost irrelevant. Less than 0.2% of people that view an online advertisement actually click it. Therefore, there is a serious lack of trust between consumers that view online advertisements and companies that sponsor them. This is leading to big budgets earmarked for online advertisements going down the drain.

This sparked off a new trend. Companies like Buzzfeed have come into existence and have brought along the news based advertising model. Consumers tend to engage a lot more with such content. Not only do they read the content avidly, but they also share the content on social media giving it their stamp of approval. The method has become so effective that traditional media companies like Time Inc

have also created special teams to meet the demands of their clients. Corporate behemoths like General Electric and Chevron have also been known to extensively use news based advertisements.

What is News Based Advertising?

The simplest definition of news based advertising is that news articles actually do the work of advertisements. An advertisement is camouflaged as a news article. For instance if a company wanted to promote a brand of cereal as a healthy breakfast option, they would get an article written with the title " 5 healthy breakfast options" wherein they would list 4 other options which are already accepted by the public and then add their brand to the list as well.

Media houses like Buzzfeed and ScoopWhoop are required to disclose that these articles are sponsored by corporations. However, the disclosure happens in a form that is not obvious and difficult to find. Hence, the law is followed in letter but not is spirit.

The Principle of Separation of News and Advertisements

Media houses have always been required to ensure that the revenue that they generate from advertisements does not impact their news reporting. News is an important part of the social fabric and it is important that the news is not polluted via corporate interests. Media houses are therefore believed to have a basic responsibility that they clearly mark their advertisements as advertisements. This will enable the user to determine what content has been genuinely reported and what content has been sponsored and therefore might have ulterior motives.

Why Editorial Independence is Important for Society?

The trend of news based advertising is disturbing to say the least. This is because news based advertisements misuse the trust of the consumers. This is trickery to say the least. It is not long before consumers realize this and this trust gets shattered. Media houses may have to most to lose.

Consider for instance, if Volkswagen has an extremely cozy relationship with media houses. Then it can influence news reports on how its carbon emission negligence is reported! The society needs to know the full extent of negligence that has been committed by a profit mongering corporation but the same may be prevented or misdirected by news reporters because of their financial dependence on such firms.

This is one of those situations where the interests of business and the interests of society are clearly at conflict with one another. Society deserves to have an unbiased and uninfluenced reporting of the events around them. News based advertising is a deterrent to this independence. As mainstream companies are joining this trend, the future looks dangerously unstable and bleak!

Why Editorial Independence is Difficult to Protect?

Editorial independence is difficult to protect because consumers have started expecting free stuff. Well nothing in life is free. Media houses incur production and editorial expenses that consumers are unwilling to pay. On the other hand, corporations are more than happy to pay for such expenses if media houses mix advertisements with regular news articles.

This has put pressure on all media houses. The ones that are indulging in this seemingly unethical practice are reaping financial rewards. This has made them the darling

of investors on stock exchanged. The companies that still choose to be ethical are facing grim financial situations. They face the danger of hostile takeovers from other companies.

As a result, pretty much every media house is on board with news based advertising. Some are using their own brand to do so whereas others are more careful and have created subsidiaries to detach themselves from this questionable practice.

Measuring Advertising Effectiveness

"When a child writes the examination papers, he has to see the result come what it may be, so that he comes to know where he is wrong and where he should pay more attendance. This will help him work better in future."

This is exactly the case of the advertisement. The work is not complete if the effectiveness of advertise is not measured. This is the only way to know how the advertisement is performing, is it reaching the targets and is the goal achieved.

It is not at all possible to measure advertisement effectiveness accurately as there are many factors like making a brand image, increasing the sales, keeping people informed about the product, introducing new product, etc, which affect the effectiveness of an advertisement.

We all know that there are some companies who advertise at very low level but still their products are a hit and some companies indulge in very heavy advertisements but they don't get desirable results. But then, there are some traditional and modern tools to measure most of the effectiveness of an advertisement through which the advertiser can or may get more and more information about how their ads and product are performing in the market. According to Philip Kotler and Armstrong, the Gurus Of Marketing, there are two most popular areas which need to be measured for knowing the effectiveness of advertisement and they are Communication Effect and Sales Effect

Communication Effect Research consists of three types of researches:

Direct Rating Method - Here, customers are directly asked to rate the advertisement and then these rating are calculated.

Portfolio Tests - Here, the customers see the ads and listen carefully to the ads and all the contents of the ads and then they are asked to recall the ad and the contents. Then the calculations are done with help of this data.

Laboratory tests - Here, the apparatus to measure the heart rates, blood pressure, perspiration, etc are used on the customer after he watches the ad, to know the physiological reactions of the body.

Sales Effect Research totally depends on the sales of the company. The sales keep varying from time to time. There are some factors affecting sales like product availability, the price of the product, contents of the product, and sometimes the competitors.

So this method is a little difficult than the communication one. The company doing sales effect research generally bothers about the sales of the product, they try to know whether or not the money they are spending on the ads is enough or excess.

As earlier said, it is not possible to measure each and everything and the chances are at the lower end if the company has many ads running through various mediums at the same time. So suggestion is that the advertiser or the company should use appropriate and different methods which are most suitable for the media under use.

The company can hold surveys and product recognition tests

Questionnaire or feedback flyers can be distributed and customers could be asked to fill it up.

Toll free number can be highlighted on the ads so that customers can call up.

The response rates can be increased by telling customers what to do. For e.g. some ads have lines in flashy colour like "Hurry Up" or "No one can eat just one" or "be the first" etc.

These are the traditional ways. Now a days, internet is the modern tool for measuring the effectiveness of an advertisement. There are some types such as:

Integrated direct marketing - This is an internet based tool where they have a response corner designed on the websites. Whenever the customers visit the sites, they fill up their contact details and give feedbacks. Thus the company supplies more information and sends newsletters and also gets the idea for further action. But then its not that only online advertiser have this facility but then advertisers who don't work online can use coupons, discount vouchers, etc. to do this.

Analysis tool - there is an analysis tool available on internet by using which the advertiser will know how many customers are visiting the site, who are shopping online, how many pages are viewed, etc. which in turn will help advertiser to measure the effectiveness.

Internet is the most easy, cheaper and cost effective way to measure the effectiveness because here no money is wasted as the ad is only viewed when the customer want to view it where as in normal print method or using TV, the ad sometimes goes unwatched or unattended and viewed for the sake of viewing.

FUTURE OF ADVERTISING

Advertising is still all about the 'ifs and buts of a product', presented in a glowing rainbow like picture trying to attract consumers – but what is the future of advertising in coming years?

Lets go way back when the idea of advertising a product was regarded as some kind of a big deal. Then the advertisements were very limited, and it took lots and lots of efforts to make a single advertisement. And the customers then, had no option other than watching those advertisements.

Now, time has changed. Since last 20 years or lets just consider last 10 years, there has been a dramatic change in the world of advertisement. And this will not have a stopage in coming years.

The change doesn't mean that the advertising agencies will all be shut down and firms will take over. It just means that the existing advertising agencies will have to experience a change in the industry and within. They will be redefined and reinvented so that they can survive in the years ahead. The agencies which gave their number of years to this industry will also change for good, be capable to cope up with new challenges, new competition and new attitudes of the consumers.

Once a article was written on change in advertising in 1992 and the title then also suits now, it said - Advertising Age: Change or Die and very well said. To understand what is going to change and what will remain the same should be on the top of the list of the advertisers.

Now is the beginning of the digital era. The agencies had a system of having some few creative people who used to come with ideas for ads. That was the time when giving an ad in radio and television was very expensive. But now no one minds actually about the cost for such ads because consumers are responding well.

But now and onwards, internet and technology has taken a front seat. Lets talk about the mass media. Today every tv serial, all movies running in theatres and all breaks in the radio channels have fillers called ads. But in the coming years, the ads can be shown to the consumers only if they want to see and not because the advertiser want them to see it.

The cost of using internet and digital gadgets is everyday dropping down so the customers don't mind spending on these things other that fooling themselves with the colorful advertisements. The future will be in favour of the advertisers and advertisements but only at the cost of proper management and proper use of digital technologies and internet.

The Bond - Nowdays, no one trusts the ad industry because there is no transparency. The ethics are not being the part of ads anymore. In coming years, the bond of trust has to be again rebuilt between the consumers and the advertisers. The advertisers will have to work hard to gain the confidence of the customers.

More Creativity - The creative people of the agencies should not limit their creativity by only working with the old style menu. This is the time to explore with help of internet and digital tools.

Differentiated Products - The advertisers should launch a product which will be completely different but excellent to use. Then only the voice will be heard.

Attract Talent - More and more quality people should be hired today who will be leaders for tomorrow. They will be the people who lead the industry in the future will with the best quality being coping up will everything. Better HR practices should also be appointed.

These are some points which may help advertisers to survive and survive in a better way in the future. The people who will not change can just not stay in this new industry.

Looking at all these above mentioned points, advertisers should start taking responsibility of self-regulating their ads by:

Design self-regulatory codes in their companies including ethical norms, truth, decency, and legal points

Keep tracking the activities and remove ads which don't fulfill the codes.

Inform the consumers about the self-regulatory codes of the company

Pay attention on the complaints coming from consumers about the product ads.

Maintain transparency throughout the company and system.

When all the above points are implemented, they will result in:

Making the company answerable for all its activities

Will reduce the chances of getting pointed out by the critics or any regulatory body.

Will help gain confidence of the customers, make them trust the company and their products.

TOPICS OF THE MONTH

EDUCATIONAL IDEALS FOR INDIA
- DR. Alexander Jacob IPS

NATIONAL INTEGRATION
-DR. Babu Sebastian

GANDHIAN OUTLOOK AND PHILOSOPHY
-DR. G. Prasanna Kumar

NUCLEAR WEAPONS - DISASTER AHEAD
(History)
- Mr.solomon John

EDUCATIONAL IDEALS FOR INDIA

The educational ideals of a country are determined by the requirements of the age and by its social order, its culture and morality and the state of its economy. This fact accounts for much diversity in educational aims and the order of priority in them. The primary requirement of the modern age is that the people should learn to think in terms of making this planet a decent place to live in and should discard all parochial passions because in this age of thermonuclear weapons patriotism is clearly not enough. Patriotism is a laudable emotion when it takes the form of love of the native land and pride in its achievements, but in its aggressive form it is most dangerous. It breeds cultural and political chauvinism. Patriotism of the perverted kind does not spring from any particular social system. Capitalism, Fascism, Socialism and Communism can all be infected with this perversion. Education must be for world citizenship. Unfortunately, while in theory we all acknowledge the importance of pursuing knowledge and truth in a disinterested way and with scientific objectivity and promoting a world outlook, in actual practice we believe only in what promotes the national interest. Even very highly educated persons who have a critical intelligence of an exceptional order and who can form independent conclusions from given facts become emotionally involved when their nation is at war with another nation or when it adopts threatening postures to coerce another nation into submission.

Educational aims differ with different social systems. In Communist countries students are not encouraged to think independently, but are required to accept the orthodox Communist creed without any mental reservation as the ultimate truth. Of course, Communist orthodoxy is constantly undergoing revision. What Stalin called orthodoxy in the name of which he executed, exiled and imprisoned millions of persons was repudiated by his successors as a gross betrayal of Marxism-Leninism. Yugoslavia provides another version of the Communist creed. To the followers of Mao Tsetung, the Soviet version of Communism is heretical, deviationist, revisionist and consequently, a form of imperialism. The universities in Communist countries teach the truth as it is laid down by the men in power who are regarded as unquestioned authorities on all subjects, whether aesthetic, political, scientific or philosophic. In Fascist countries, schools and universities taught what the dictators willed or what the party theoreticians laid down. They glorified war and imperialism, stressed the purity of the Nordic race, urged the cruellest persecution of the Jews, made education frankly propagandist, ridiculed open societies and the free way of life and inculcated the habit of implicit obedience to the leader's commands. In all countries which are governed by a class or caste, education encourages complete subservience to the vested interests. When landlords dominated the political scene, the aim before the educationists was to produce gentlemen-men of leisure who lived on income from the land and had a noble bearing, refined manners and similar other accomplishments and could occupy any high offices. The classicists regarded acquisition of classical languages and the study of classical literature and philosophy as the principal concern of students. Education in countries which are predominantly religious or dominated by theologians and priests aims at producing strict conformity to the established dogma and a fanatical temper which is inimical to all forms of innovation, which rejects the questioning spirit and sees heresy even in the slightest deviation from the "truth".

It is, however, not enough to produce good citizens. Education must also produce good, cultured and wise men. Education should enable young men and women to develop all the latent powers and faculties of their nature and to enjoy a good life. It is not easy to measure the loss which the human race has suffered on account of want of education by men and women who had exceptional talent but could not make full use of it. An educational system which is flexible enough to take into account a person's native capacities is not easy to devise, but unless a student has an aptitude for certain type of education, nothing is to be gained by imposing it on him. University education in this country has not been much of a success because a very large majority of those who join colleges and universities are incapable of assimilating higher learning. Student indiscipline is largely the result of the activities of such students. There is not to suggest that the educational system has no blemishes. Classes are overcrowded, libraries are not well-stocked with book and laboratories are poorly equipped. There is very little contact between teachers and students outside the class room, and the teacher can never closely supervise their work or inspire them by his personal example. But, whatever the defects of our educational system, the poor quality of our graduates is due primarily to the fact that the majority of our university students are intellectually ill-equipped for higher learning. They do not want to be educated. They only want a university degree which will help them get a comfortable job. One reason why such young men join a university is that, in the absence of adequate opportunities for gainful employment, there is nothing else to do. A university degree is a status symbol. In this country greater importance is attached to intellectual attainments than to attainments in other fields or rather to passing examinations than to developing innate qualities and faculties. Examinations are no reliable tests of intelligence. Even in the case of the most brilliant students, examinations do much harm. Their strain on the best minds is so heavy that it leaves them exhausted and impairs their imagination and intellect. They discourage freshness of approach. Education should bring out the best in the student, not stifle his mind. Education which should be an exhilarating intellectual experience has been made a dull affair by teachers and examiners who insist that a student should fill his mind with facts which are either useless or which can always be looked up in books and which consequently need not be committed to memory.

One of the aims of education is to transmit national culture to the students. Of course, educational institutions are not the only agencies through which the culture of the nation can be passed on to the younger generations. The home exercises a powerful influence on the youthful mind. Religion and churches have a big role to play in making men truly cultured and moral. But schools and colleges have also a contribution to make to the transmission of national culture. The Indian educational system does not promote understanding of the country's composite culture. There are thousands of Indian students who leave the portals of the universities without knowing much about their own culture, social organisation and technical achievements. This country adopted the present educational system at a time when its own culture had stagnated and its social system had become static with the result that Western thought, science and culture became the ideal to be emulated by the younger generations. The impact of the West on Indian life has been revolutionary. We have adopted the parliamentary form of government, sought the development of the country on the Western model and

followed Western fashions, creating two nations in one, the Westernised elite and the illiterate and poor people in the countryside still steeped in the traditional ways. This development is most unfortunate. The educated classes know nothing of their own cultural heritage, at least, not much. Education has not transmitted Indian culture to the student community. At a time when the West is realising the need for spiritual values in life, at a time when it is being increasingly felt that affluence and social security are not enough to give man real happiness and that he needs a philosophy which transcends hedonism and invests his life with a large purpose, the educated classes of this country are blindly following Western ways and forgetting their own precious cultural heritage.

Education should aim at producing ideal men-men who are truly cultured, wise, tolerant and public-spirited. Different ages have different conceptions of ideal men. In this country, idealism is generally associated with renunciation and asceticism. Saints here are honoured more than scholars, wealthy men and soldiers. They are honoured not because they are good citizens or because they have in any way enriched social life but because they are mystics who have had visions of the ultimate reality and can show mankind the way to spiritual salvation. Educational institutions cannot produce saints. But they can certainly inculcate among students respect for spiritual and ethical values and make them understand that the promotion of human welfare, not self-aggrandizement, is the end of life. No man, however brilliant, however gifted, can be considered truly cultured unless he identifies himself with the well-being of others, unless he has the passion to make the Kingdom of God prevail on earth. A cultured man is always guided by the spirit of love and co-operation, never by the spirit of acquisition and domination. A cultured man is always wise. He has a comprehensive mind, a mind which sees this world as but an insignificant part of the cosmos, which sees man in relation to the history of the entire human race. "Genuine culture", says Bertrand Russell, " consists in being a citizen of the universe, not only of one or two arbitrary fragments of space-time ; it helps men to understand human society as a whole, to estimate wisely the ends that communities should pursue and to see the present in relation to past and future ". An educated man should have infinite curiosity, the passion to know and understand things in a scientific way, with complete objectivity. He is not a fanatic who has made up his mind no crucial issues and claims to be in possession of the final truth. Nor is he a cynic who thinks that there are no truths to be discovered. He cultivates intellectual discipline and intellectual humility.

One of the aims of education is to enable a boy or a girl to earn his or her living. Employment does not depend upon intellectual attainments alone. It is determined by the stage of economic development of a country. It is no fault of an educational system that its graduates cannot find employment. In India there is large -scale unemployment among the educated classes because its economy is yet largely undeveloped. Even engineers, the most highly trained among students, cannot always secure jobs. It is essential that education must be employment-oriented. Should education aim at utility or should it aim at the cultivation of the mind and the intellect? Before the advent of the Industrial Revolution, education was of a liberal character; the need for operating a highly sophisticated industrial system gave it a professional and technical bias. We now need doctors, engineers, scientists, overseers, supervisors, lawyers, skilled mechanics, journalists and teachers. The controversy over liberal and technical education is, however, puerile. We need both types of education. In aristocratic societies, the privileged few can

afford liberal education which aims only at widening the mind. In democratic countries, the employment aspect of the question cannot be ignored. It is meaningless to talk in terms of either achieving mental sophistication or satisfying material wants. Both are needed. Only through education in science and technology can we banish poverty, disease and ignorance from this earth and ensure to every man at least the minimum conditions of civilised existence. But those who emphasise only the utilitarian aspect of education forget that men need, not only material things, but also the things which delight their mind and intellect. We need freedom from want and disease and ample leisure which science and technology have secured for man, but we must also know how to utilise our leisure. The joy which we experience when we study the origin and nature of the universe, when we analyse problems posed by philosophy or literature or when we listen to classical music is no less exhilarating. This does not mean that we should not modify our liberal education to make it more valuable. The importance which our earlier educational system assigned to the acquisition of knowledge of ancient languages and grammar is clearly misplaced.

Character-formation is one of the principal aims of education. In earlier times when religious beliefs were unquestioningly accepted, the authority of the parents was acknowledged by children and more stress was laid on duties than on individual rights. Character-formation did not present any serious problem. Today, conditions are wholly different. Faith is on the decline. Parents and teachers are not revered simply because they are parents and teachers. Character-formation is also rendered difficult because leaders of society do not always live up to high ideals and consequently make the people cynical. Growing urbanisation, open glorification of fashions and sex in pictures, ostentatious living by the rich and the general craze for sensation and excitement make it difficult for teachers to promote good habits among students and form their character on sound lines. Despite all these handicaps, teachers have to make earnest attempts to give their students a moral outlook. It is because we have concentrated more on dissemination of knowledge than on character-formation and physical development that we are witnessing so much student indiscipline, so much rowdyism in classes, in examination halls and in public life on the part of the student community. When the educated youth begins to assault guardians of law and order, set fire to public property, loot shops and indulge in other acts of hooliganism as a mark of protest against a Government decision, when the revolutionary students commit murders or forcibly turn people out of their lawful possessions in pursuit of a perverted ideal or when candidates taking even very senior examinations resent measures to prevent cheating, we know that our educational system has failed because character-formation of students has been neglected. We need education for world citizenship. But our students are concerned with problems which bear no relation to those they have to face. Education has to produce integrated personalities-men and women whose various faculties, intellectual, mental, moral and physical, have been harmoniously developed and who are ideal persons as well as ideal citizens.

NATIONAL INTEGRATION

Political nationalism is a concept of western political science to which Indian intellectuals of the last century brought up on Western education and values were irresistibly drawn because it opened up infinite possibilities for their country. Before the advent of British power in India, political nationalism was unknown to the people who lived under a feudalistic economy in small independent States and who were sharply divided by caste, religion and race. The Great Revolt of 1857 was a war of liberation in the sense that it was directed against the foreign rulers, but it was not inspired by the ideal of a united nation with a Central Government, common administration and common laws. His ideal was cherished by the new Western-educated middle class-the class of lawyers, teachers, doctors, journalists and traders. Originally this ideal did not have any anti-British bias. The new middle class wanted British assistance to modernise the country and train the people in the art of self-government, but as the nationalist movement gained momentum and the British bureaucracy turned hostile to national aspirations, political nationalism became sharply critical of alien rule. The British unified the country and thus indirectly contributed to the strengthening of the national sentiment, but they always tried to stifle the nationalist movement by the policy of divide and rule, by bolstering up the feudal structure, by encouraging the notoriously corrupt Princely order to insist on an independent status for itself and by terrible repression.

When the country achieved independence, the leaders were immediately faced with a stupendous task, that of modernising the economy and developing the resources to ensure economic maturity and of welding the people into a nation. National integration seemed to have been accomplished when the people were struggling to overthrow alien despotism, but when the compulsions of liquidating imperialism had ended, the old fissures in the social order reappeared. A British statesman once said that England consisted of two nations--the rich and the poor. In India also the rich and the poor are divided by a wide gulf, but there is another gulf much wider-the gulf between the western-educated class brought up on liberalism of Western Europe and the U.S.A. and the illiterate masses steeped in the old ways of life-in fatalism, superstition and caste prejudices. Can the governing class transform the masses and make them rational, secular, politically conscious and nationalistic? History furnishes no example of transformation on such a big scale through democratic means. Modernisation of ancient societies has hitherto been achieved on a comparatively limited scale through despotism. In a sense, democracy is not helpful in ensuring this modernisation because politicians, instead of educating the masses on the need for a radical change in outlook, pander to their prejudices and appeal to their caste, communal and other parochial loyalties to gain votes. If national integration still awaits accomplishment, the responsibility lies with the middle class leaders who betray their convictions to satisfy their lust for power. This is not an argument for instituting any kind of despotic authority because force cannot remove deep-seated prejudices and inhibitions and the battle for nationalism has to be successfully waged in the minds of men. This is only a plea for recognition by the educated classes of their historic mission as agents of social change. It is manifestly an exaggeration to say that the British created communal consciousness in this country. They did not create it but only accentuated it. The Hindus and the Muslims lived in peaceful co-existence before British rule. Had the British not encouraged separatist tendencies among the Muslims and introduced communalism in politics and education, the history of this country might have been different. Communal consciousness rapidly developed when political power began to be progressively transferred to the people. It became so intense that partition became inevitable. The legacy of the British rule still persists. It was hoped that, with the establishment of Pakistan, the communal situation would improve and the national sentiment would be strengthened. This hope has unfortunately proved illusory. Communal riots are still taking place in different parts of the country. The persistence of communalism may be attributed to a number of factors. The most important among these factors is the feeling of veiled hostility between the two communities which the alien rulers had created as part of their divide and rule policy, and which politicians had exploited before the partition for their own ends. This feeling of veiled hostility not noticeable in normal times bursts into a riot sometimes on the most trivial provocation, and both sides commit most shameful atrocities.

In a vast country like India where the people speak different languages and have different social and economic problems, federalism provides an excellent means of reconciling national unity with regional diversity. National unity is not impaired if the people of a region have a genuine pride in their language and culture. But regionalism develops into a serious threat to national unity if politicians do not go beyond their regional loyalty and claim to stand only for their regional interests. The States are fighting among themselves over areas with the fierceness with which nations press their claims over disputed territories. Disputes between two States, whether on the distribution of river waters or over territory can be easily settled through an expert commission or by arbitration. Even international disputes can be resolved in this way. Why should there be so much bitterness over inter-state disputes? In many parts of the country, persons from other areas settled in a State are openly discriminated against in matters of education, trade and industry and are regarded as aliens. Private armies recruited from among fanatical young men indulge in hooliganism with impunity to terrorise the "outsiders". Yet no serious attempt is being made to meet this menace to national unity beyond occasional words of condemnation.

The sense of unity in a community depends upon a number of factors, one of which is common language. To be sure, there are countries where national unity prevails despite the existence of various languages, but in most countries the people speak one language. The British imposed English on the people both as the official language and as the medium of instruction at the university stage. In free India English can no longer retain its primacy for the simple reason that it is spoken only by a small minority of the people and is a foreign language. The Constitution explicitly recognises Hindi as the official language of the Union--a language which is understood by the majority of the people and has very close affinities with a large number of regional languages. Yet opposition to the adoption of Hindi as the official language of the Union is so strong and insistence in certain parts of the country on retaining English is so emphatic that it has been thought to be prudent not to take any hasty step in this matter. The three-language formula admirably serves all ends. English is the language for international communication, Hindi for the official use of the Union, and the regional language for the administration of the State and as the medium of instruction at the University level. English as the official language of the Union can only

be a passing phase.

In a country where there are huge inequalities in the distribution of national income and wealth and where, while the rich live a life of ostentation and indulge in conspicuous consumption, the poor are denied even the elementary conditions of civilised existence, we have two nations, each with a separate culture and way of life. There is nothing common between a multi-millionaire living in a palatial building attended by a host of servants and owning a fleet of cars and an unemployed young man or an agricultural labourer or a petty cultivator or artisan except perhaps the colour of their skins. How can they have a sense of unity or fellow-feeling? In times of war they may respond to the call of patriotism and for the time being forget their differences, but in normal times they will always remain class-conscious and think in terms of "we" and "they". Politicians may wax eloquent over the dangers of class antagonism and may plead passionately for a united front to promote the common good, but unless all sections of the people are assured of social justice and equality of opportunity, the sense of oneness which constitutes the essence of nationalism will not come. We often deplore the fact that our young men are attracted by foreign ideologies and look to other countries for inspiration and guidance. But the surest way to turn them away from foreign influences is to make our own ideology more attractive, to make nationalism richly meaningful for them. The best way to achieve national integration, to mobilise all our resources for rapid development and to achieve stability is to make democratic Socialism a reality. Left-wing extremism which is disrupting the peace in some parts of the country will practically disappear if our social order is reformed to give every citizen an opportunity to lead a useful and constructive life. We should make planned development an exhilarating experience for everyone and should make it possible for everybody to participate in the grand movement to make the nation strong.

How is national integration to be accomplished? One view is that the federal part of the Constitution should be scrapped and the unitary system of government should be established. Federalism, it is argued, encourages fissiparous tendencies and makes the people more loyal to their region than to the nation. This view is clearly mistaken. Our Constitution has a strong unitary bias. The Central Government will be strong, not by virtue of the legal powers invested in it, but by virtue of the support it enjoys in Parliament. No Government, whether under a unitary or federal system, can be strong unless

it is backed in Parliament by a majority party with a truly national outlook. More than a new Constitution, we need a new approach to problems. Political parties have a significant role to play in shaping the national outlook. They must train people to think in national terms. The lust for power which drives politicians to exploiting parochial passions and backing regional demands must be controlled. Fissiparous tendencies cannot be checked by force and the compulsions of the law. They have to be eradicated by persuasion and education. The battle for national unity is to be waged in the minds of men. All media of mass communication must be utilised for a drive for promoting national unity. Why old universities should be allowed to keep their communal appellations is hard to understand. Educational institutions should be compelled to renounce

their communal character. The Government should never yield to regional pressures, particularly when they take the form of violence and intimidation. Hitherto firmness has been generally lacking. We would have been spared the spectacle of mass violence over redistribution of State boundaries if from the very beginning the Government had dealt firmly with mischief-makers. The Central Government must not allow the law and order situation to deteriorate in a State to such an extent that it breeds a sense of insecurity everywhere. It is part of the strategy of the Left-wing revolutionaries determined to subvert the social order to discredit the democratic system. These revolutionaries are conscious or unconscious agents of foreign powers hostile to this country. Patriotism for them is a bourgeois virtue, nationalism an outworn dogma. They stand for international proletarian revolution. No democratic party ought to join with them to set up a coalition government in a State. Parties with extra-territorial loyalties have to be emphatically repudiated at the polls.

Our educational system must be reconstructed to emphasise the composite nature of our culture and to instil in the minds of the youth legitimate pride in our social heritage. The emphasis in our educational system is more on the study of Western thought and culture with the result that our students cannot claim extensive knowledge of their philosophy, their religion, their social organisation and their culture. Our intellectuals consequently suffer from an inferiority, complex. Comparisons are, of course, always invidious, but it is beyond dispute that ancient Indians revealed remarkable gifts in every direction and created a civilisation and culture which compares favourably with other civilisations and cultures. This point needs to be repeatedly stressed. Our history books, specially history books written by foreigners, give only a partial and distorted account of our past. They are stories of military conquests, foreign invasions, political quarrels and religious fanaticisms. They do not sufficiently bring out our cultural achievements, the interaction of various cultures upon one another to produce a remarkable synthesis and the contribution which the various people have made to the country's composite culture. One disastrous effect of foreign rule was the cultural denudation of the educated youth. India's educated classes have become completely westernised in their ways of life, in their dress and fashions, in their love of luxuries, in their love of excitement and sensation, in their loss of faith in spiritual values. They are a feeble copy of their western counterparts. They are like foreigners in their own land. They have not assimilated the wisdom of the West. They have become imitators of the superficial aspects of its life, of its fashions and manners, of its amusements and pleasures. India presents many glaring contrasts — between the rich and the poor, between the high-caste Hindus and the scheduled castes and tribes, between community and community, but no contrast is more glaring than that presented by the Western-oriented educated elite and the teeming millions in villages. National integration depends upon the progressive reduction of these contrasts and the Indianisation of the educated classes. As leaders of society they must lead the people but their leadership cannot be effective. if they do not identify themselves with the masses and do not share their social and cultural ways. National integration depends on

eliminating parochial loyalties, establishing social justice and re-constructing the educational system to give it a truly national bias.

GANDHIAN OUTLOOK AND PHILOSOPHY

If philosophy is wisdom, Mahatma Gandhi was among our foremost philosophers. He had the wisdom of Socrates, the humility of St. Francis of Assisi, the mass appeal of Lenin, the saintliness of the ancient Indian rishis and the profound love of humanity of the Buddha. He was a revolutionary who was committed to the overthrow of all forms of tyranny and social in- justice but who never bore ill-will towards anyone, who led a mighty movement against British imperialism but never allowed the movement to be accompanied by hatred, rancour or resentment against Englishmen. He was not an intellectual in the conventional sense of the term. He was not an academic philosopher propounding his philosophy in a precise, dry and formal manner. It would not be difficult to find inconsistencies and contradictions in some of his statements. He was supremely consistent in his devotion to truth. He was like the ancient sages, an earnest seeker after truth, a spiritual explorer or a scientist experimenting all his life to discover truth and apply it to the practical problems facing man. His sources of inspiration were not confined to his country or to his religion. His receptive mind was open to various influences. From his very childhood he was brought into contact with religious and moral ideas. He studied the Ramayana, the Bhagvata, the Vaishnava poets of Gujarat and the popular writings of the Jains. During his stay in England he studied Buddhism and the Gita, met quakers and missionaries, read the Upanishads in translation, Ruskin's Unto This Last, theosophist literature and books on Islam. He was also profoundly impressed by Thoreau and Tolstoy. Thoreau taught him that it was more honourable to be right than to be law-abiding-a revolutionary concept which inspired his philosophy of passive resistance. Tolstoy's the kingdom of God is Within You taught him how man could liberate himself and control evil through suffering.

Gandhiji was throughout his life a God-conscious, God-fearing man. He never passed through the valley of doubt and darkness. Nothing could shake his confidence and faith in God and His scheme of life. God with him was not an abstraction or a mere metaphysical concept, but an intensely felt reality. Belief in God was with him a question of faith and conviction. He needed no arguments to establish God's existence. His whole being was permeated with God-consciousness; his heart vibrated with it. Gandhiji was no mystic who communicates with God in his trances or in moments of ecstasy but a man of action not living in forests and meditating on eternal verities, but living amidst men, engaged in an epic struggle against alien rule. He had, however, the ability to withdraw himself from the life of excitement and meditate even amidst action. The Mahatma described God in various ways. God to him was kind, just and loving, who always responded to prayer and love. He was Truth and Love. A logical corollary to this belief is that the universe is organised on moral principles and that it presents a harmonious design, there being no contradiction or inconsistency in the laws of Nature and moral and spiritual principles. Gandhiji's faith in God was not shaken when he beheld Nature red in truth and claw, when he saw earthquakes, floods and other natural calamities overwhelming man and causing infinite suffering. Evil and destruction also had a meaning, a significance, a purpose despite appearances to the contrary. If God was truth, love, benevolence and justice, Gandhiji asserted, man too was fundamentally moral and spiritual- an image of God, not a naked ape, not one with a divided nature, not a being at the mercy of his subconscious being and dominated by his instincts, biological drives and passions. Society also was not a mechanical or biological organism but a fraternity of spiritual beings. Gandhiji was no fatalist. He believed in the doctrine of Karma and in punishment for the wrongs done, but he asserted that man was fundamentally a free agent gifted with a moral will and that he made or marred his own fortune.

Mahatma Gandhi's bold affirmation of faith in God, in the moral nature of the universe, in human society as an association of kindred souls and in free will may be criticised by the modern cynics on the ground that no valid intellectual grounds have been offered, but none can dispute the fact that his faith leads to a way of life which is in complete harmony with the needs of the times. If God is love or truth, there can be no bar to the realisation of God through diverse ways, Religion does not divide people, unless it is understood in the sense that it is a matter of dogma, a church, a holy book; it emphasises the fundamental unity of the human race. The Gandhian way is the way of universal love and tolerance, of profound reverence for all great religions which are so many ways of apprehending the reality and identifying ourselves with its purposes. Distinctions of race, nationality and sect have no room in Gandhian ethics. patriotism is not enough. A truly religious man does not restrict his allegiance to any country or nation. His loyalty is to the whole of humanity. He acknowledges all great religions as embodying the truth and, therefore, worthy of deep reverence. Mahatma Gandhi was an admirer of all religions-Hinduism, Buddhism, Jainism, Sikhism, Islam, Christianity and others. This does not mean that he accepted everything they preached. "He does not mouth the name of the Founder of Christianity'', writes Will Durant in his appreciation of the Mahatma, "but he acts as if the Sermon on the Mount were his perpetual guide". If God is truth and if truth is God, then there is nothing which stands in the way of persons of various religious affiliations coming together on the same platform as seekers after truth. Even an earnest atheist trying to explore the reality is a truly religious man. What is repugnant to the Gandhian way of life is dogmatism, fanaticism, intolerance, selfishness. Mahatma Gandhi was a secularist in the sense that he was against any discrimination between citizen and citizen on grounds of religion, sect or caste. But he firmly believed that a State or society would be stable only to the extent to which it was based on ethical and spiritual ideals.

A man so profoundly religious as Gandhiji will never subscribe to the cynical view that in promoting ends considered desirable, the nature of the means employed is of no importance and that means are justified by ends. Gandhiji attached the highest importance to both ends and means. In all spheres of life, the Mahatma pleaded, we must refuse to meet hatred with hatred, violence with violence, evil with evil, but must love even our enemies, for in reality they were no enemies. He always preached Satyagraha-truth-force, non-violence, universal love. Man, he argued, was a spiritual being. Love and non-violence were part of his nature. Force, hatred, vindictiveness was contrary to it. Non-violence was not the weapon of the weak and the timid but of a strong man, of a bold man who would not tolerate any manifestation of evil or injustice or tyranny but would resolutely fight it and willingly suffer the consequences of rebellion. What Gandhiji condemned most was cowardice, weakness of will, acquiescence in evil. He wanted man to create an ideal society by his soul-force, not

to remain satisfied with things as they were. He was a great revolutionary, a great rebel, a great social reformer, but his weapon always was man's defiant spirit permanently committed to non-violence and love. Gandhiji was an apostle of non-violence and love because, while violence and hatred brutalised men, love ennobled them and brought out the best in them. Christ and the Buddha liberated mankind from misery and tyranny. They achieved this liberation through their gospel of love, charity, gentleness and sympathy. Non-violence as a method of agitation, the Mahatma believed, was bound to succeed because there was no man, however tyrannical, domineering and acquisitive, who could indefinitely hold out against Satyagraha, against the appeal of the fighter for justice voluntarily submitting himself to suffering and sacrifice. Those who were not moved by appeals to reason or by display of physical force would not fail to respond to the appeal to their heart and to their soul. Underlying Gandhiji's faith in Satyagraha is his belief that man is fundamentally a spiritual being and cannot long deny the spirituality within himself. Satyagraha ennobles both the fighter for justice as well as the wrong-doer. Fasting, civil disobedience and non-co-operation with the tyrant are the means through which the conscience of the evil-doer is aroused. They are not a kind of blackmail or pressure tactics. They are not intended to coerce a man or to intimidate him. They are not a form of exploitation.

Mahatma Gandhi was a great idealist whose thinking was always on the highest level. But he also claimed to be a realist. He did not think that Satyagraha as he conceived it was beyond man's power. Nobody can say what man can or cannot do. Is man still at heart a naked ape or is he capable of being an angel? It was said about Gandhiji that he had the power of making heroes out of clay. All great leaders in history had this gift of making heroes out of ordinary mortals. Man has tremendous potentialities which can be

brought out by dynamic leadership, by training and education, by religious and spiritual discipline. The human race has become so used to the employment of force by rebels and men in authority, the appearance of great religious leaders with a spiritual message not-withstanding, that any other method seems utopian. All great ideas which are accepted as axiomatic today were once regarded as utopian and dismissed as unworthy of serious consideration. Force has come down to us from remote antiquity because our social order is oppressive and unjust. The philosophic anarchists believe that the need for force would be obviated if private property is abolished and society is organised on a voluntary co-operative basis. If society is organised on the Gandhian ideals and the people are educated on the right lines, force would disappear. It is now universally recognised that war is not a necessary evil which must periodically appear but something abhorrent, which can be ended if mankind is organised on an international basis and individuals are educated to respect the rule of law. There is nothing utopian about Mahatma Gandhi's ideals and techniques.

It cannot be denied that Satyagraha is a very lofty weapon and that even Gandhiji's own followers had not fully imbibed his ideals. Congress leaders were not absolute pacifists. They accepted the Satyagraha technique partly because they were convinced that it was a morally superior weapon -Indian tradition of non-violence associated with Upanishadic teachings and Buddhism and Jainism is very firmly rooted in the minds of men--and partly because it promised better results. Satyagraha is one way of eliminating injustice and oppression. The other way is to create a social order in which all forms of

exploitation may disappear and the need for Satyagraha or for the employment of force may be obviated. Such a social order implies a World Government democratically elected, a democratic national State, socialist economy and decentralisation of power. The World Government would establish the rule of law among nations and exploit world resources on a scientific basis for the benefit of the human race as a whole. It would have some force at its disposal to deal with any act of aggression or with a recalcitrant nation. Nobody can object to the use of this force because it will always be employed to uphold the rule of law. The democratic State will look after a people's internal affairs and maintain the police to crush anti-social forces. Obviously, there is nothing wrong with the use of force by a duly constituted, public-spirited authority in defence of the rule of law. This force would be very sparingly used because causes of social tension and social conflicts are very few where every citizen is guaranteed the basic conditions of good life and disparities in the standards of living are not very marked. Force is reduced to the minimum possible in a healthy social order in which it is a safeguard against unruly elements. Mahatma Gandhi would have preferred the technique of Satyagraha for undoing wrongs and bringing erring persons to the path of virtue, but he would not have objected to the use of force by the community in self-defence.

Mahatma Gandhi was a kind of philosophic anarchist in whose ideal society the coercive authority of the State would disappear, economic activity would be organised not on the basis of acquisitiveness and self-interest but on that of co-operation and service, and every individual would perform his duties and work for the common good. He distrusted the highly centralised modern State because, while apparently doing good by minimising exploitation and promoting welfare, it destroyed individuality and thereby impeded progress. The State in his view represented force in a most concentrated and organised form. With all his sympathy for the poor and the downtrodden, he was no socialist using the instrument of the State to relieve. distress, ensure an equitable distribution of wealth and provide employment through planned scientific exploitation of the national resources. He was a decentralist who wanted all political and economic power to be decentralised so that the people might really feel free and not slaves of a centralised authority in which their participation was only nominal. Gandhiji advocated village autonomy, each village, more or less, autonomous and self-governing through panchayats, and a loose federation of villages for the satisfaction of common needs. As a spiritualist, he urged social reform, not through legislation but through self-discipline, moral restraint and persuasion. Gandhiji had no love for capitalism. Its acquisitive nature, its stress on self-interest, its exploitation of the poor was all repugnant to him. He did not, however, want to abolish capitalism by law but to transform it by moral force, by appealing to the rich to act as trustees of the national wealth. In his ideal society, the rich classes would use their wealth for the benefit of the people, taking as their share only the minimum amount necessary for a simple and austere life.

Mahatma Gandhi was thoroughly dissatisfied with the present economic system and the growing trend towards materialism. He was against the modern craze for multiplicity of wants and ostentatious living and 'against ever-increasing mechanisation of production and huge industrial combines relentlessly expanding their operations and pushing out small producers. He favoured simple and

noble living, production through cottage and small-scale industries, village self-sufficiency, manual labour and self-help. He wanted everyone to be employed and assured of the basic conditions of good life, such as food, clothing and shelter. He was not opposed to the employment of machinery, but he wanted machines to serve man, not to enslave him. It would be wrong to call Gandhiji a conservative in his views. His views were conditioned by his knowledge of life in the country where the standards of living were deplorably low, unemployment had assumed staggering proportions and the privileged few were leading a most sophisticated life. Gandhiji did not have any soft corner in his heart for the rich. His conception of trusteeship has often been misunderstood. Trusteeship is a means of transforming the present capitalistic system into an egalitarian order. It does not recognise any right of private ownership of property except to the extent regarded by the community as essential for its welfare. The State may regulate trusteeship, lay down minimum and maximum incomes, the proportion between them to be reasonable and just and the difference between them to be progressively reduced till broad equality was reached. While Gandhiji was against expropriation, he favoured Satyagraha and non-co-operation with landlords and capitalists to persuade them to act merely as trustees of their wealth. Production, according to the Mahatma, should be regulated not by the whim or greed of the producer but to satisfy social needs. He would not hesitate to nationalise an industry if capitalists and workers did not function as trustees of an industry.

Mahatma Gandhi was a great champion of individual freedom, but while he conceded to the individual certain fundamental rights, he laid equal stress, if not more, on duties. Gandhiji was no individualist as the term is ordinarily understood-a man impelled by self-interest, working for self-aggrandizement and conceding to Society the minimum right to regulate his conduct. He was an advocate of individualism in the moral and spiritual sense of the term- in the sense of man whose nature made him an end in himself, who needed freedom to develop his moral nature and contribute to the enrichment of the corporate life of the community and who was always God-conscious, bound in his actions by Dharma. Gandhiji was against every custom that degraded man and made a mockery of his spiritual nature. He saw in the pernicious practice of untouchability man's deadliest sin. He never subscribed to the theory that women were in any way inferior to men or less intelligent or wise. Widows in his view had as much right to marry as widowers. He condemned child marriage. He denounced intoxicating drugs and drink as brutalising men and doing violence to their spiritual nature. Gandhiji's views on education were also inspired by the consideration for forming a sound character. Education should not only help in acquiring knowledge and arousing intellectual curiosity, but should inculcate right ideals through knowledge of the nation's social and cultural heritage. The Mahatma rejected the caste system based on birth as immoral. He wanted the organisation of the economy on the basis of hereditary occupations on the ground that they helped to transmit knowledge and skill to the succeeding generations. The Mahatma approached labour problems from a spiritual standpoint.

Mahatma Gandhi's philosophy of life has been criticised on the ground that independent India has completely repudiated it. Modern India is committed to the operation of highly centralised parliamentary government, the creation of a socialistic order, largescale industrialisation on the Western pattern and modern science and technology. But the Mahatma's views on autonomous villages, his advocacy of cottage industries, Charkha and Khaddar, his general opposition to mass production, big labour-saving machinery and imitation of Western production methods should be considered in the context of the conditions prevailing in the country. Besides, we must consider the spirit underlying his proposals. Mahatma Gandhi was not a philosopher or a metaphysical thinker, and a modern sceptic may legitimately claim that he has thrown no new light on the ultimate reality, the nature of the universe, the existence of evil and free will. But he has given the world a new way of life, a way which is a so as old as civilisation itself. His greatest contribution to modern thought lies in his insistence that man is fundamentally a spiritual and moral being and that society is an association of human spirits-an association which is not limited in any way by considerations of nationality, race, creed or sex. This is a simple doctrine, yet how profoundly revolutionary.

In this world, divided by nationality, race, religion, sex and caste and class, in the world where a large part of humanity lives under a totalitarian tyranny, in this world where man seeks only endless pleasure in the acquisition of the material things of life, in sex and drugs and drink, in new sensations and excitements, the message of the Mahatma has a significance which mankind cannot afford to ignore. The scheme of the Mahatma. about a federation of village republics has not found favour with the framers of our Constitution, but all eminent political and social thinkers are agreed that political and economic authority should be decentralised if man is to be truly free and is to participate in the democratic process of decision-making. One may dissent from the Mahatma's extreme views on pacifism and may regard the use of force by the State as justified in dealing with anti-social elements or by rebels protesting against an unjust social order, but if war among nations is to be eliminated, Gandhism provides the only way. Science and technology cannot be rejected and industrialisation on a big scale is unavoidable for a modern, viable and self-sustaining economy, but is it wrong to insist that the aim of the economy should be the promotion of human welfare and individual freedom rather than endless multiplication of wants, inhuman conditions of work, loss of craftsmanship, gigantic organisations dwarfing man and ever-increasing urbanisation which denies man any contact with Nature? Machines, to be sure, are needed, but must they make men their slaves? The ideal society of the Mahatma's dreams may appear to be too utopian. His distrust of the State seems unwarranted. The modern democratic State is the agent of the community and represents the collective wisdom of the masses. There is nothing wrong with democratic legislation to bring about a social change. No coercion is involved in it. It does not violate individual freedom but promotes it. Gandhiji relied too much on persuasion, too little on the conscience of the community embodied in Parliament. But with all his limitations as a thinker, he represented a great moral force and a new way of life which promises to relieve the anxiety of the modern age and put humanity on the road to sanity and health.

NUCLEAR WEAPONS - DISASTER AHEAD (HISTORY)

Man's ingenuity to control the atomic fission chain, manifested over 30 years ago, ushered in the nuclear age. To be precise, it began on the morning of July 16, 1945, on a stretch of semi-desert land in New Mexico, where an atomic device was first exploded and its immense destructive potential discovered by American scientists. At that historic moment-ranking in importance with the time, long ago, when man first put fire to work for him-the vast energy locked within the atom was released for the first time in a burst of flame the like of which had never been witnessed on this planet. The use of atomic bombs on Hiroshima and Nagasaki, two flourishing cities of Japan, in 1945 brought World War II to a conclusion, but it devastated whole populations and left indelible marks, in the shape of maimed men, women and children, apart from the ruins all round. Ironically enough, man had manufactured devices which are capable of destroying the entire human civilisation and turning this world, currently bubbling with life, into a massive graveyard.

The world's best brains contributed to the evolution of nuclear energy. The horrors of a nuclear war resulting from the misuse of this energy, are terrifying beyond imagination, and yet the prolonged negotiations for evolving plans for protection against the possible havoc and for arriving at some understanding to ban the use of these horrible weapons, have not been fruitful. It would, therefore, be correct to say that since the discovery of atomic disintegration and of the endless chain reaction implicit in the break-up of the atom, the entire humanity has been living under the threat of a cruel death. The development of thermo-nuclear weapons thus poses the biggest danger to the world today. According to the latest U.S. Defence Department assessment released in September 1975, 22 million people might die in a limited nuclear attack against strategic nuclear installations in America itself.

The sagacious and far-sighted leader that he was, Mr. Jawaharlal Nehru once remarked that all the technological and scientific progress made in the world, unless it is balanced by some kind of moral standards and ethical values, was likely to lead us to destruction. Mankind has failed to realise that even all the stockpiles of nuclear bombs put together cannot help to solve any of the problems which make for war. Both the United States of America and the Soviet Union have large stockpiles of nuclear weapons. Should they ever decide to wage a global war, the use of thermo-nuclear weapons would become inevitable, despite the many treaties and other precautions - with consequences the very thought of which huddlers the mind. Even though defensive missiles, once considered improbable, have now been developed and operationally deployed, the offensive weapons too are being further improved. With the development of MIRVs, offence is once more in a position of ascendancy in the game of hide and seek with the defensive strategy. This inexorable game will continue; so will perhaps the balance of terror, howsoever delicate.

The birth of nuclear energy can be traced to World War II. When Herr Hitler unleashed a war in 1939, the uncontrollable fury, which ultimately devoured him along with his coterie and laid waste large regions in Europe, new complexities were created and for some time there was confusion all round. It was in this welter of confusion and amidst the frantic search for an effective counter device, that nuclear strategy was born. During the first four years after World War II, the U.S.A. as the sole wielder of the nuclear power, dominated the international scene. The Soviet Union had no nuclear weapons, but its scientists were quietly working behind the scenes. The U.S. nuclear monopoly, according to war scientists, provided the origins of the "preventive war strategy" of a nuclear attack on a non-nuclear enemy to destroy him before he could acquire nuclear weapons. This held the ground for some months. At that time, besides the U.S.A., two other countries possessed technology of atomic bombs-Britain and Canada-but they had not actually manufactured atomic bombs. In September 1949, however, the Soviet Union broke the American monopoly and exploded its first fission bomb. This marked the beginning of an arms race of unprecedented proportions. In November 1952, the U.S.A. exploded its first Hydrogen-bomb, which was followed by the Russian explosion of the H-bomb in August 1953. The U.S. bomb was believed to be very heavy (65 tons in weight) while the Soviet version was considerably lighter and vastly cheaper. Its explosive power was reported to be much more-1000 time of the 1945 atom bomb. It was in March 1954 that the U.S. was able to explode a similar "Lithium-6" bomb. Of the two bombs it exploded during that month, one was believed to be a "Lithium-6" bomb and, like the Soviet specimen, it was light enough to be dropped from an aircraft. Thus by 1953, the Soviet Union had overtaken the U.S. in manufacturing nuclear bombs qualitatively and posed a challenge to the Americans. Since then, there has been no turning back, and both the giant Powers have been manufacturing more and more destructive weapons along with sophisticated delivery systems, each justifying its large arsenal by pointing to the growing stockpile of the other. The suicidal race thus goes on.

In August 1965, President Lyndon B. Johnson said: "President Eisenhower and President Kennedy sought, as I seek now, the pathway to a world in which serenity may one day endure. There is no sane description of a nuclear war. There is only the blinding light of man's failure to reason with his fellow man, and then silence." Addressing the United Nations General Assembly in June 1967, the Soviet Premier, Mr. Kosygin, said: "If a new world war starts, it would inevitably be a nuclear one. Its consequences would be fatal for many countries and people of the world........This cannot be called in question by any politician or any military man, unless he has lost the capacity for sensible thinking." Despite the nuclear "parity" negotiated by the two Big Powers, the dangers of a nuclear holocaust cannot be ruled out, for deterrence will work only if the parties to a conflict behave in a rational way and it is too much to expect that they would do so under all circumstances. The incalculable destructiveness of a nuclear war is realized by political and military leaders and yet the progress towards arms control has been painfully slow. Since 1946, nearly 60 Disarmament Conferences have been held. The U.N. General Assembly has passed some 80 separate resolutions on various aspects of disarmament. Before finally consenting to sign the Limited Test Ban Treaty in 1963, the participants had to go through some 353 protracted and sometimes acrimonious meetings.

In 1963, a year before China exploded its first nuclear device, the Chinese Foreign Minister, Marshal Chen Yi, voiced the unexpressed views of nuclear powers. He said: "Atomic bombs, missiles and supersonic aircraft are reflections of the technical level of a nation's industry. China will have to resolve this issue within the next several years, otherwise, it will degenerate into a second-class or third-class nation". Peace-loving statesmen had started cautioning the world much earlier. In 1954, when both the United States and the Soviet Union tested large-yield nuclear weapons in

the atmosphere with marked radio-active after-effects, Prime Minister Nehru called for a" stand-still agreement'" on nuclear testing. As concern spread on every side, Mr. Nehru appealed in November 1957 to "the great leaders, more especially of America and Russia......to stop all nuclear test explosions and thus to show to the world that they are determined to end this menace and to proceed also to bring about effective disarmament." He was the first world leader to call for an end to nuclear tests.

The Nuclear Test Ban Treaty was put on the table at Geneva on April 18, 1961, but agreement could not be reached till August 5, 1963, when the representatives of the three nuclear powers-the U.S.A., the U.S.S.R., and Britain - meeting in Moscow, finally decided to sink their major differences. On this day, U.S. Secretary of State Dean Rusk, Soviet Foreign Minister Andrei Gromyko, and British Foreign Secretary Lord Home put their signatures on the historic document which promised to end the fear of nuclear tests and radio-active fall-out through a pledge by all signatory nations not to test nuclear weapons. The pledge was to be made meaningful by international inspection through electronic means. The Treaty proposed to ban, under adequate safeguards, (a) all tests in the earth's atmosphere-the main source of radio-active fall-out; (b) all tests in outer space; and (c) all tests in the oceans.

According to the 17th annual survey of the International Institute for Strategic Studies titled "The Military Balance, 1975-76" published on September 5, 1975, despite the detente the United States and the Soviet Union continue to sharpen their nuclear strike forces while China's missile programme has slowed down. India had made notable progress in developing its arms industry, the Institute reported. At the same time, a new arms race is under way in the oil-producing countries. Iran and Saudi Arabia each tripled their military budget in the past year. Iran now spends more money on arms than Britain. The Institute has concluded that although the Vladivostok summit in November 1974 proposed a ceiling on the number of strategic nuclear weapons, it has not checked their development by the United States and the Soviet Union. In the year 1974-75, the United States completed its programme for deployment of 550 "Minuteman -3" Inter-Continental Ballistic Missiles each with multiple warheads, and equipped Poseidon missiles with multiple warheads in 25 submarines, besides many other improvements in its nuclear arsenal. The Soviets, among other things, added 40 ICBMs to their stockpile during the same period and deployed a family of more accurate large payload ICBMs identified by the Institute as the SS-17, SS-18, and SS-19. Their accuracy was reported to be within a quarter of a mile, comparable to U.S. missiles. All these developments are stated to be in conformity with the guidelines agreed at Vladivostok for limiting offensive nuclear weapons until 1985. But the Institute stressed that both sides are increasing their nuclear arsenals.

The Soviets have an advantage in ICBMs over the United States-Russia's 1,618 to America's 1,054 on the 1975 count. But the United States is well ahead in more sophisticated weaponry such as the multiple, independently targeted MIRV warhead. No Soviet submarine yet has this operational equipment. China has continued her nuclear programme. An unspecified number of intermediate-range ballistic missiles in the 2,800-km. category have been added by Peking. But the multi-stage ICBM with a range of 5,600-km. sufficient to reach Moscow is still not deployed and there has been no full-range test of China's planned 9,600 km.

On September 11,1975, the Soviet Union proposed that the U.N. consider the banning of all nuclear tests. The proposal came from Soviet Foreign Minister Andrei Gromyko in a letter to U.N. Secretary-General Kurt Waldheim and said from Moscow that a draft Soviet treaty accompanying the request proposed that all tests under sea, underground, in the air and in space, be banned. Signatory nations would carry out their own supervision, in keeping with the "norms of universally-recognised international laws, to ensure the ban is respected". Mr. Gromyko's letter said the agreement would be a major contribution to limiting the arms race and would promote peace and international detente and security. A partial ban on nuclear tests already exists, but it does not cover underground blasts. Since this was signed in 1964, the Soviet Union has regularly called for a ban on underground tests, but the question of supervision has always been a major obstacle to agreement.

But the United States took a dim view of the new Soviet proposal for a total ban on nuclear weapons testing, including underground explosions.

The Soviet Union desired that the U.N. General Assembly should discuss a universal weapons test ban treaty that would go into effect only after approval by all nuclear powers. But its proposed treaty lacks international on-site enforcement demanded by the United States. The U.S. has stated many times that it favours a comprehensive test ban adequately verified. For this it considers some on-site inspectors to be necessary to supplement national technical means. The U.S. also differs with the Soviet proposal to exempt underground nuclear explosions for peaceful purposes from its treaty and has pointed out the difficulties in knowing whether such blasts have military implications.

"The world is dangerously heading for a nuclear holocaust"- this is the grim foreboding made by the Stockholm International Peace Research Institute in a report released in 1975. The basis for it is the fast escalating world wide military expenditure which is not being curbed despite the frequent calls for global disarmament and for a sharp curtailment of the massive sums being spent on the most destructive weapons man ever devised. It has been calculated that by 1980 there might be more than 30 countries possessing the requisite technology for nuclear and thermo-nuclear explosions. At present the number of countries which can readily and cheaply manufacture nuclear explosives is at least 20.

The Peace Research Institute has estimated that in 1974 the world's total military expenditure nearly touched 100 billion dollars. The fact that NATO allies and the Warsaw Pact countries accounted for less than 80 per cent of this amount indicates the global spread of the suicidal arms race. That the value of the arms supplied to Third World countries has increased by 40 per cent in a single year also proves the point. Besides, it has been found that 400,000 research workers and technicians all over the world are engaged in developing new weapons and effecting improvements in old ones. This means that about 50 per cent of the world's researchers are devoting their energies entirely to the development of destructive weapons! The U.S. already has 8,500 strategic nuclear weapons and 500 bombers, Compared to Russia's 2,800 nuclear weapons and 160 bombers. In August 1975, the U.S. President sought Congress approval for 108 billion dollars for military purposes-the highest military expenditure level in history. The U.S. is acquiring 10 "Trident" submarines each of which will carry enough nuclear weapons to destroy any country in the world.

MODEL QUESTION PAPER-MCQ
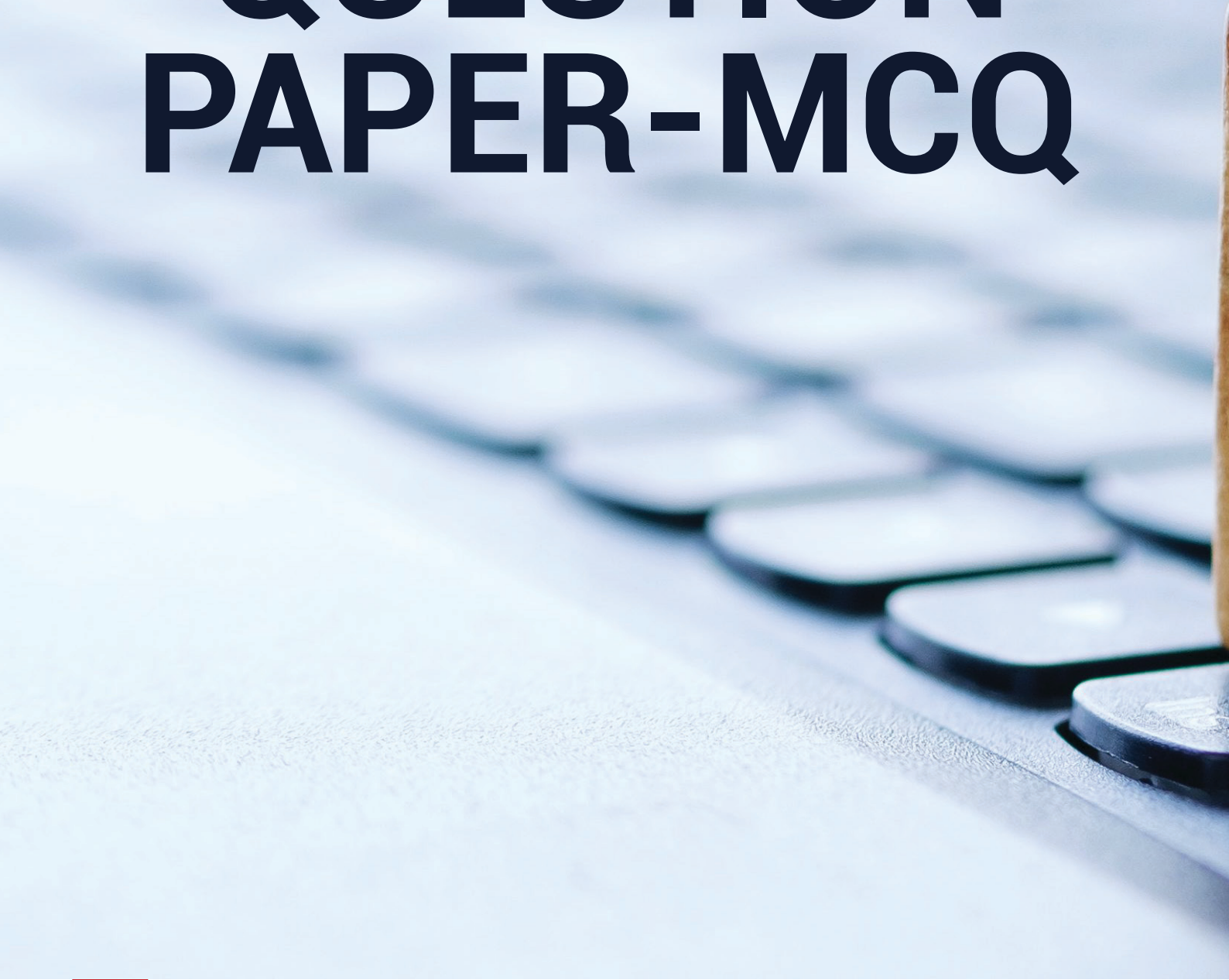
Q1. Consider the following statements:

Statement-I: India's first water bodies' census includes natural and man-made units used for storing water.

Statement-II: The census aims to establish a thorough database of ponds, tanks, lakes, and reservoirs in the country to aid water conservation and management efforts.

Which one of the following is correct in respect of the above statements?

A.Both Statement-I and Statement-II are correct and Statement-II is the correct explanation for Statement-I.

B.Both Statement-I and Statement-II are correct and Statement-II is not the correct explanation for Statement-I.

C.Statement-I is correct but Statement-II is incorrect.

D.Statement-I is incorrect but Statement-II is correct.

Q2. Consider the following statements.

1.Sanchi in Madhya Pradesh is slated to become India's first solar city.

2.The adoption of solar energy in Sanchi aligns with principles of sustainable development and environmental conservation.

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

Q3. Consider the following statements:

Statement-I: India has set a target to achieve a significant share of renewable energy in its total energy mix.

Statement-II: The reason behind this target is to reduce dependence on fossil fuels, promote sustainability, and combat climate change.

Which one of the following is correct in respect of the above statements?

A.Both Statement-I and Statement-II are correct and Statement-II is the correct explanation for Statement-I.

B.Both Statement-I and Statement-II are correct and Statement-II is not the correct explanation for Statement-I.

C.Statement-I is correct but Statement-II is incorrect.

D.Statement-I is incorrect but Statement-II is correct.

Q4. Consider the following statements.

1.Gandhi Sagar Wildlife Sanctuary is located on the northern boundary of Mandsaur and Nimach districts in Madhya Pradesh, India.

2.Gandhi Sagar Wildlife Sanctuary is predominantly covered with dense evergreen forests and rainforests.

3.The sanctuary is home to several endangered species, such as the Bengal tiger and Indian rhinoceros.

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

A.One statement only

B.Two statements only

C.All the three statements

D.None of the given statements.

Q5. With reference to water budget often seen in news, consider the following statements.

A.It is a quantitative analysis that assesses the balance of water inputs and outputs.

B.It accounts for factors like precipitation, evaporation, runoff, infiltration, and water withdrawals.

C.The water budget is created at the national level and not at the local body level.

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

A.One statement only

B.Two statements only

C.All the three statements

D.None of the given statements.

Q6. Which among the following Indian state announced the first water budget in India?

A.Karnataka

B.Kerala

C.Madhya Pradesh

D.None of the above

Q7. Consider the following statements:

Statement-I: The Petersburg Climate Dialogue serves as a platform for high-level political discussions and international cooperation on climate change issues.

Statement-II: The objective of this dialogue is to strengthen international climate action, implement the Paris Agreement, and foster collaboration among participating countries.

Which one of the following is correct in respect of the above statements?

A.Both Statement-I and Statement-II are correct and Statement-II is the correct explanation for Statement-I.

B.Both Statement-I and Statement-II are correct and Statement-II is not the correct explanation for Statement-I.

C.Statement-I is correct but Statement-II is incorrect.

D.Statement-I is incorrect but Statement-II is correct.

Q8. Consider the following statements:

Statement-I: The Ministry of Ports, Shipping & Waterways has launched the "Harit Sagar" Green Port Guidelines to achieve zero carbon emissions and promote sustainable port development.

Statement-II: These guidelines focus on the use of clean energy, storage of greener fuels, reduction of waste, and monitoring of environmental performance to achieve Sustainable Development Goals.

Which one of the following is correct in respect of the

above statements?

A.Both Statement-I and Statement-II are correct and Statement-II is the correct explanation for Statement-I.

B.Both Statement-I and Statement-II are correct and Statement-II is not the correct explanation for Statement-I.

C.Statement-I is correct but Statement-II is incorrect.

D.Statement-I is incorrect but Statement-II is correct.

Q9. With reference to ARTSENS often seen in news, consider the following statements.

1.It is a screening tool created by scientists at IIT Madras to assess blood vessel health.

2.It was developed by experts exclusively for use by medical professionals and experts.

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

A.1 only

B.2 only

C.Both 1 and 2

D.Neither 1 nor 2

Q10. Which of the following statements accurately describes ransomware attacks?

A.Ransomware attacks are a type of cybersecurity threat that involves gaining unauthorized access to a computer system and stealing sensitive data.

B.Ransomware attacks are a form of social engineering attack in which the attacker poses as a legitimate entity to deceive the victim into revealing confidential information.

C.Ransomware attacks involve encrypting a victim's data and demanding a ransom payment in exchange for decrypting the data.

D.Ransomware attacks target physical infrastructure such as power grids and transportation systems to disrupt essential services.

Q11. Consider the following statements.

1.Shingles is caused by the reactivation of the varicella-zoster virus, which remains dormant after chickenpox.

2.Shingles is directly contagious and can spread from person to person through physical contact.

3.Symptoms of shingles include a painful rash, fever, headache, fatigue, and sensitivity to light.

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

Q12. With reference to Preparedness and Resilience for Emerging Threats (PRET) often seen in news, consider the following statements.

1.It is an initiative under Coalition for Disaster Resilient

Infrastructure.

2.The Initiative aims to offer recommendations on coordinated planning for dealing with respiratory infections like influenza or coronaviruses.

3.The Initiative focuses solely on respiratory infections and does not consider other modes of transmission.

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

A.One statement only

B.Two statements only

CAll the three statements

D.None of the given statements.

Q13. What is the objective of the G20 TechSprint competition launched by the Reserve Bank of India (RBI)?

A.To foster international cooperation in the field of technology innovation among G20 member countries.

B.To promote cross-border payments and enhance financial inclusion in emerging markets.

C.To encourage the development of cutting-edge solutions for combating cyber threats in the banking sector.

D.To facilitate the creation of technological solutions for addressing challenges in cross-border remittances.

Q14. Consider the following statements.

1.Black holes are extremely dense regions of space-time with gravitational forces so strong that nothing can escape.

2.Black holes are formed from the remnants of massive stars that have undergone gravitational collapse.

3.The event horizon of a black hole is the boundary beyondwhich no information or light can escape.

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

A.One statement only

B.Two statements only

C.All the three statements

D.None of the given statements.

Q15. Which of the following statements accurately describes semi-cryogenic engines?

A.Semi-cryogenic engines use a combination of liquid oxygen and liquid hydrogen as propellants.

B.Semi-cryogenic engines are primarily used in the aerospace industry for launching satellites into orbit.

C.Semi-cryogenic engines operate at extremely low temperatures, typically below -150 degrees Celsius.

D.Semi-cryogenic engines are known for their high thrust-to-weight ratio and fuel efficiency.

Q16.Consider the following statements regarding the United Nations.

1)	Despite disparities in areas such as military power, geographic and population size, and economic development, the principle of sovereign equality asserts

that all states are considered equal under international law.

2) The UN Charter does not recognise the principle of Sovereign equality, but recognises the doctrine of collective security.

Which of the following is / are true

   a)   1 only
   b)   2 only
   c)   Both 1 & 2
   d)   Neither 1 nor 2

Q16. Consider the following statements regarding World Trade Organization (WTO).

1) World Trade Organization (WTO) officially commenced operations on 1 January 1995, under the Marrakesh Agreement.

2) India has been a member of GATT since 1948; hence it was party to Uruguay Round and a founding member of WTO.

3) After WTO came in to existence, General Agreement on Trade and Tariffs (GATT) ceased to exist.

Which of the above statements is/are correct?

   a) 2, 3
   b) 1, 3
   c) 1, 2
   d) 1, 2, 3

Q17. Which of the following statements best defines the concept of fraternity as enshrined in the Indian Constitution?

   A) Fraternity refers to the principles of justice, liberty, and equality that form the foundation of constitutional morality.

   B) Fraternity represents the unity and solidarity among all citizens of India, assuring dignity and promoting social harmony.

   C) Fraternity denotes the relationship between the Security Council and the General Assembly in the United Nations.

   D) Fraternity is a term used to describe the regional representation in the Indian political system.

Q18. Which of the following statements regarding the National Medical Devices Policy, 2023 is correct?

   a) The policy aims to reduce the import of high-end medical devices by 80%.

   b) India currently has the highest per capita spending on medical devices globally.

   c) The policy seeks to achieve a 10-12% share in the global medical device market over the next 10 years.

   d) The National Medical Devices Policy, 2023 does not include any strategies for promoting research and development in the medical device sector.

Q19. Which of the following statements best describes the basic structure doctrine in the context of the Indian Constitution?

A) The basic structure doctrine asserts that certain fundamental rights are essential and cannot be altered or abridged by any constitutional amendment.

B) The basic structure doctrine holds that the principles of federalism and separation of powers are fundamental to the Indian constitutional framework.

C) The basic structure doctrine states that the fundamental rights of individuals can be limited by the state in the interest of national security.

D) The basic structure doctrine gives the judiciary the power to interpret the Constitution and declare laws unconstitutional if they violate certain core constitutional principles.

Q20. Which of the following statements best differentiates between the concepts of Rule of Law and Rule by Law?

   a) Rule of Law ensures equal application of laws to all individuals, while Rule by Law allows for selective enforcement based on the discretion of those in power.

   b) Rule of Law guarantees individual rights and protections, while Rule by Law prioritizes the interests of the ruling elite.

   c) Rule of Law emphasizes fairness, justice, and accountability, while Rule by Law focuses on maintaining social order and stability.

   d) Rule of Law is a concept associated with democracies, while Rule by Law is more commonly found in authoritarian regimes.

Q21. The State of the World's Children report is released by

   (a) UNDP
   (b) UNESCO
   (c) UNICEF
   (d) UNHCR

Q22. Local self-government can be best explained as an exercise in

   (a) Cooperative Federalism
   (b) Democratic decentralization
   (c) Administrative delegation
   (d) Direct democracy

Q23. Consider the following statements with respect is to the implementation of POSHAN Abhiyaan?

1) NITI Aayog was mandated to conduct monitoring and evaluation periodically to assess the progress and impact of the programme

2) Use of technology for real time growth monitoring of women and children

3) Poshan Abhiyaan has enabled a nation-wide jan-andolan catalysing nutrition related behaviour change at scale for positive impact on feeding and health care practices.

Select the correct answer code:

   a) 1, 2
   b) 1, 3

c) 2, 3

d) 1, 2, 3

Q24. The computation of poverty in terms of monthly per capita consumption expenditure based on mixed reference period (MRP) was recommended by:

A) National Sample Survey Organization (NSSO)

B) Planning Commission of India

C) Rangarajan Committee

D) Tendulkar Committee

Q25. Consider the following statements about National Centre for Good Governance (NCGG):

1) NCGG is an autonomous institution under the Ministry of Personnel, Public Grievances and Pensions, previously known as the National Institute of Administrative Research (NIAR).

2) It is governed by a Governing Body, under the Chairmanship of the Cabinet Secretary.

Which of the statements given above is/are correct?

(a) 1 only

(b) 2 only

(c) Both 1 and 2

(c) Both 1 and 2

Q26. Consider the following statements about the Enforcement Directorate:

1) It is a statutory body.

2) It works under the aegis of the Ministry of Personnel

Which of the statements given above is/are correct?

(a) 1 only

(b) 2 only

(c) Both 1 and 2

(d) Neither 1 nor 2

Q27. Cantonment Board is an authority under the

(a) Ministry of Housing and Urban Affairs

(b) Ministry of Home Affairs

(c) Ministry of External Affairs

(d) Ministry of Defence

Q28. Article 355 of the constitution of India imposes which of the following duties on the Central Government?

1) To ensure that the government of every state is carried on in accordance with the provisions of the Constitution.

2) It is this duty in the performance of which the Centre takes over the government of a state under Article 356 in case of failure of constitutional machinery in state.

Which of the above statements is/are incorrect?

(a) 1 only

(b) 2 only

(c) Both 1 and 2

(d) Neither 1 nor 2

Q29. Which of the following statements about International Labour Day is correct?

(a) International Labour Day is celebrated on May 1st every year to commemorate the achievements of workers and to promote their rights and well-being.

(b) International Labour Day is celebrated on May 1st every year to honour the contributions of employers in various industries.

(c) International Labour Day is celebrated on May 1st every year to recognize the advancements in technology and automation in the labour market.

(d) International Labour Day is celebrated on May 1st every year to commemorate the establishment of the International Labour Organization (ILO).

Q30. .With reference to the PM Citizen Assistance & Relief In Emergency Situations (PM CARES) Fund, consider the following statements:

1.The Finance Act, 2020 constituted PM CARES Fund as a public charitable trust with the primary objective of dealing with any kind of emergency or distress situation and to provide relief to the affected.

2.The PM CARES Fund is entirely financed by voluntary contributions from domestic and foreign individuals/ organizations and does not get any budgetary support.

3.The PM CARES Fund is audited by a private party appointed directly by the Government of India

Which among the above statement(s) regarding the PM CARES Fund is / are true?

a.1 and 2 only

b.1 and 3 only

c.2 and 3 only

d.1, 2 and 3

Q31. With reference to the trade of agricultural commodities, consider the following statements:

1.Marine products constitute the largest share of agricultural commodities exports from India after rice.

2.Vegetable oils constitute the largest share of agricultural commodities imports to India.

Which among the above statement(s) is / are true?

a.1 only

b.2 only

c.Both 1 and 2

d.Neither 1 nor 2

Q32.With reference to Bharat Tap initiative, consider the following statements:

1.Bharat Tap initiative is a collaborative effort of Indian Plumbing Association (IPA) and manufacturers for water fixtures.

2.The water fixtures would be star-rated under the Bharat Tap initiative based on water efficiency.

3.It is estimated that provision of low-flow, sanitary ware at scale under Bharat Tap initiative can save 75 % in water consumption at the source.

Which among the above statement(s) is / are true?

   a.1 and 2 only

   b.1 and 3 only

   c.2 and 3 only

   d.1, 2 and 3

Q33. With reference to the Debt-for-climate swap, consider the following statements:

1.Allows a country to reduce its debt burden by committing to undertake climate-related investments.

2.The United States made a US $ 300 million debt waiver for Bolivia in 1991 under the world's first ever debt-for-climate swap.

3.Free up fiscal resources of the debtor Governments and improving their resilience without triggering a fiscal crisis or sacrificing spending on other development priorities.

Which among the above statement(s) is / are true?

   a.1 and 2 only

   b.1 and 3 only

   c.2 and 3 only

   d.1, 2 and 3

Q34. With reference to the Eat Right Food Street project, consider the following statements:

1.The Union Ministry of Health & Family Welfare in collaboration with the Union Ministry of Housing & Urban Affairs with technical support from Food Safety and Standards Authority of India (FSSAI) launched 'EAT RIGHT FOOD STREET PROJECT' under the National Health Mission (NHM).

2.The project focus upon setting up of 100 food streets in 100 districts across the country to promote safe and healthy food practices, reduce food-borne illnesses, and improve overall health outcomes.

Which among the above statement(s) is / are true?

   a.1 only

   b.2 only

   c.Both 1 and 2

   d.Neither 1 nor 2

Q35 .With reference to the neem-coated Urea, consider the following:

1.Cost effective.

2.Better nutrient absorption efficiency.

3.Reduce fertiliser subsidy bills.

4.Lower shelf-life.

Which among the above is / are benefits of neem-coated urea over conventional urea?

   a.1, 2 and 3 only

   b.1, 3 and 4 only

   c.2, 3 and 4 only

   d.1, 2, 3 and 4

Q36. India has climbed six places to rank 38th in the 7th edition of the World Bank's (WBs) Logistics Performance Index (LPI) 2023. With reference to the Logistics Performance Index (LPI), consider the following statements:

1.The LPI is a global ranking of 139 countries based on their logistics performance on a scale of 0 to 10, with 10 being the highest score.

2.The index measures the efficiency of domestic logistics system, which includes factors such as customs clearance, infrastructure, and timeliness of delivery.

3.Such benchmarking tool help countries identify challenges and opportunities in their performance on trade logistics.

Which among the above statement(s) regarding the Logistics Performance Index (LPI) is / are true?

   a.1 only

   b.1 and 3 only

   c.2 and 3 only

   d.1, 2 and 3

Q37. The G20 Meeting of Agricultural Chief Scientists (MACS) involves the meeting of ministries or governmental bodies responsible for agricultural research in the respective G20 states as well as leading research institutions which strategically advise these decision-makers. The first meet of MACS was held in Mexico in 2012. With reference to the Millets And OtHer Ancient Grains International ReSearcH Initiative (MAHARISHI), consider the following statements:

1.The MAHARISHI focus upon research and awareness about agro-biodiversity, food security, and nutrition aligning with the International Year of Millets 2023.

2.The International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), Hyderabad serves as the secretariat of MAHARISHI. The

Which among the above statement(s) is / are true?

   a.1 only

   b. 2 only

   c.Both 1 and 2

   d.Neither 1 nor 2

Q38. With reference to the National Ropeways Development Programme – PARVATMALA, consider the following statements:

1.Economical mode of transportation

2.Faster mode of transportation

3.Environmentally friendly

4.Last mile connectivity

5.Ideal for mountainous terrain

Which among the above statement(s) is / are true?

   a.1, 2, 3 and 4 only

   b.2, 3 and 4 only

   c.3, 4 and 5 only

   d.All of the above

Q39.With reference to PM's Citizen Assistance and Relief in Emergency Situations Fund (PM CARES Fund), consider the following statements:

1.Undertake and support relief or assistance of any kind relating to a public health emergency or any other kind

of emergency, calamity or distress, either man-made or natural

2.Create or upgrade healthcare or pharmaceutical facilities, other necessary infrastructure, funding relevant research or any other type of support.

3.Render financial assistance, provide grants of payments of money or take such other steps as may be deemed necessary by the Board of Trustees to the affected population.

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

a.1 and 2 only

b.1 and 3 only

c.2 and 3 only

d.1, 2 and 3

Q40. With reference to Misinformation Combat Alliance (MCA) seen in news, consider the following statements.

1.Misinformation Combat Alliance (MCA) is a non-profit organization founded in Delhi, India in 2020 to combat the spread of misinformation and disinformation through education, advocacy, and research.

2.MCA is a member of the Global Disinformation Index, a project that aims to create a global database of websites and social media accounts that spread misinformation and disinformation.

3.MCA is funded by a combination of grants, individual donations, and corporate sponsorships.

Select the correct statement/s from the code given below.

a.1 and 2 only

b.1 and 3 only

c.2 and 3 only

d.1, 2 and 3

Q41. With reference to the Startup India Seed Fund Scheme, consider the following statements:

1.The Department for Promotion of Industry and Internal Trade (DPIIT), Union Ministry of Commerce and Industry created Startup India Seed Fund Scheme in 2021 to provide financial assistance to start-ups for proof of concept, prototype development, product trials, market entry, and commercialization.

2.Start-ups that create innovative solutions in sectors such as social impact, waste management, water management, etc. are given priority under the Startup India Seed Fund Scheme.

Which among the above statement(s) is / are true?

a.1 only

b.2 only

c.Both 1 and 2

d.Neither 1 nor 2

Q42. With reference to the India –UAE Comprehensive Economic Partnership Agreement (CEPA) , consider the following statements:

1.The United Arab Emirates (UAE) is India's 3rd largest trading partner of India.

2.The UAE is also the 7th largest investor in India.

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

a.1 only

b.2 only

c.Both 1 and 2

d.Neither 1 nor 2

Q43. With reference to the United Nations Industrial Development Organisation (UNIDO), consider the following statements:

1.The Department of Science and Technology in India has released the "National Manufacturing Innovation Survey (NMIS) 2021-22.

2.The UNIDO is a specialized agency of the UN to promote and accelerate industrial development.

3.India is one of the founding Members of United Nations Industrial Development Organisation (UNIDO)

Which among the above statement(s) is / are true?

a.1 and 2 only

b.1 and 3 only

c.2 and 3 only

d.1, 2 and 3

Q44.Consider the following statements regarding Ahilyabai Holkar:

1.Ahilyabai Holkar ruled over the Mewar kingdom.

2.Ahilyabai repaired and renovated the famous Konark Sun Temple in

1780.

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

(a) Only statement 1 is correct.

(b) Only statement 2 is correct.

(c) Both statement 1 and 2 are correct.

(d) Neither statement 1 nor 2 is correct.

Q45.Which of the following best describes the significance of Sengol in ancient South Indian tradition?

(a) It represents the transfer of power from the British to the Indians.

(b) It signifies the integration of the idea of India with the idea of the

cosmos.

(c) It symbolizes righteousness, justice, and authority associated with the

correct exercise of power by a king.

(d) It serves as a legitimizing instrument for dynasties attaining kingly status.

Q46.Consider the following statements about the Dancing Girl; sculpture:

1.The Dancing Girl is made of copper.

2.The sculpture is approximately 10.5 cm tall, 5 cm wide, and 2.5 cm

deep.

3.The sculpture is believed to be from the Indus Valley Civilization and dates back to around 4500 BCE.

Which of the statements given above is/are correct?

(a) Statement 1 only.

(b) Statement 2 only.

(c) Statements 1 and 2 only.

(d) Statements 1, 2, and 3.

Q47. The above-mentioned lines refer to which of the following Harappan Sites?

(a) Surkotada

(b) Lothal

(c) Dholavira

(d) Banawali

Q48. Which one of the following is not a Harappan site? (GS Paper 1,2019)

(a) Chanhudaro

(b) Kot Diji

(c) Sohgaura

(d) Desalpur

Q49. Which one of the following ancient towns is well known for its elaborate system of water harvesting and management by building aseries of dams and channelising water into connected reservoirs? (GSPaper 1, 2021)

(a) Dholavira

(b) Kalibangan

(c) Rakhigarhi

(d) Ropar

Q50. With reference to the difference between the culture of Rigvedic

Aryans and Indus Valley people, which of the following statements is/are

correct? (GS Paper 1, 2017)

(1) Rigvedic Aryans used the coat of mail and helmet in warfare whereas

the people of Indus Valley Civilization did not leave any evidence of using them.

(2) Rigvedic Aryans knew gold, silver and copper whereas Indus Valley people knew only copper and iron.

(3) Rigvedic Aryans had domesticated the horse whereas there is no evidence of Indus Valley people having been aware of this animal.

Select the correct answer using the code given below:

(a) 1 only

(b) 2 and 3 only

(c) 1 and 3 only

(d) 1, 2 and 3

VEDHIK
IAS ACADEMY
The New Learning Mantra

ROLL NO.

TEST ID

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Name ....

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Mobile No.. Test Date ..../......../.............

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

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