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AYODHYA RAM MANDIR TEMPLE

Prime Minister on Monday 22nd January 2024 led the 'Pran Pratistha' rituals as the Ram Mandir was inaugurated in Ayodhya.

The Ayodhya Ram Mandir is a grand temple built in the Nagara style of temple architecture, characterized by its towering spires or shikharas.



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- + INDIA'S FIRST DARK SKY PARK
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- MAINS UPGRADATION
- ANSWER WRITING PRACTICE
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Eminent Personality



Parakram Diwas

The Prime Minister of India has extended greetings to the people of India on Parakram Diwas.

About Parakram Diwas

- It is celebrated on January 23 to commemorate the birth anniversary of freedom fighter Subhas Chandra Bose.
- This year marks the 127th birth anniversary of Bose, fondly known as 'Netaji'.
- Parakram Diwas aims to instil fearlessness and patriotism, especially among the youth, inspiring them to stand strong in the face of challenges.

Key points about Subhas Chandra Bose

- He was born on January 23, 1897, in Cuttack, Orissa.
- In 1920, he passed the civil service examination, but in April 1921, after hearing of the nationalist turmoil in India, he resigned from his position.
- He was an Indian nationalist leader who was a key figure in the Indian independence movement against British colonial rule.
- Bose then joined the Indian National Congress and actively participated in the Indian independence movement.
- President of Indian National Congress: Bose was elected president of the Indian National Congress for two consecutive terms but resigned from the post following ideological conflicts with Mahatma Gandhi.
- In 1939, he formed the Forward Bloc, an organization aimed at unifying all the anti-British forces in India.
- At the outset of the Second World War, he fled from India and traveled to the Soviet Union, Germany and Japan, seeking an alliance with the aim of attacking the British in India.
- With Japanese assistance, he reorganized and later led the Indian National Army, formed from Indian prisoners-of-war and plantation workers from Malaya, Singapore, and other parts of Southeast Asia, against British forces.
- Also with Japanese monetary, political, diplomatic, and military assistance, he formed the Azad Hind Government in exile, and regrouped, and led the Indian National Army in battle against the allies at Imphal and in Burma.

AYODHYA RAM MANDIR TEMPLE INAUGURATED BY PM

- Prime Minister on Monday 22nd Jan 2024 led the 'Pran Pratishtha' rituals as the Ram Mandir was inaugurated in Ayodhya.
- Ram Lalla's idol has been adorned in gold and emerald jewellery. The idol was placed at the temple with the eyes closed - was revealed later to the world after the scarf covering the eyes were removed

History of Ayodhya Ram Mandir

- The history of the Ayodhya Ram Mandir is centuries-old. The temple is built on the site believed to be the birthplace of Lord Ram, one of the most revered Hindu deities. The temple was demolished by the Mughal emperor Babur in the 16th century and a mosque was built in its place. The mosque, known as the Babri Masjid, stood on the site for centuries until it was demolished in 1992 by Hindu nationalists, triggering widespread violence and communal tensions in the country.
- The Ayodhya dispute has been a contentious issue in Indian politics for decades. The dispute revolved around the ownership of the site where the Babri Masjid stood and whether it was the birthplace of Lord Ram. The dispute was finally settled by the Indian Supreme Court in 2019, which ruled in favor of the construction of a Ram Janmabhoomi temple on the site. The construction of the temple was undertaken by the Shri Ram Janmabhoomi Teerth Kshetra, a trust formed by the Indian government to oversee the construction of the temple.

Architecture and Features of the Ayodhya Ram Mandir

- The Ayodhya Ram Mandir is a grand temple built in the Nagara style of temple architecture, characterized by its towering spires or shikharas. The temple is built using pink sandstone and is spread across an area of 2.77 acres. The temple is surrounded by a large courtyard and has several smaller shrines dedicated to other Hindu deities. The most striking feature of the temple is the giant Shaligram stone, a black stone believed to represent Lord Ram and brought from the Gandaki river in Nepal.
- The temple is 161 feet high and has three floors, each with a different purpose. The

first floor is dedicated to Lord Ram, while the second floor is dedicated to Lord Hanuman, and the third floor is a museum showcasing the history and culture of Ayodhya.

- The temple complex also includes a yajnasbala or a hall for conducting yajnas or Hindu fire rituals, a community kitchen, and a medical facility. The temple complex is spread over 67 acres and is expected to become a major cultural and religious center, attracting millions of devotees from around the world.



Significance of the Ayodhya Ram Mandir for Hindus

- The Ayodhya Ram Mandir is considered to be one of the most important pilgrimage sites for the Hindus. It is believed to be the birthplace of Lord Ram and is considered a sacred site. The construction of the temple is seen as a symbolic victory for the Hindu community, who had been fighting for the temple's construction for decades.
- The temple is expected to contribute to the development of Ayodhya as a major religious and cultural center. It is also expected to create jobs and generate economic growth in the region. The temple is expected to attract millions of devotees from across India and the world, contributing to the development of Ayodhya as a major religious and cultural center.

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BURNING ISSUES

CONCERNS OVER INSOLVENCY AND BANKRUPTCY CODE OF 2016.

- The Insolvency and Bankruptcy Code (IBC) came into effect in 2016 to achieve several objectives, including maximizing the value of debtor's assets, promoting entrepreneurship, ensuring timely resolution of cases, and balancing the interests of stakeholders. However, recent developments have raised concerns about the effectiveness of the code and the resolution process.

What are the Issues with the IBC?

Low Repayment Percentage:

- The resolution plan approval process typically involves only about 15% payment by the purchaser, and repayment can take years without any further interest collected by the banks according to the financial stability report (FSR) released by Reserve Bank of India (RBI) in 2023.
- This has raised questions about the effectiveness of the repayment process.

Settlement and Recovery:

- Recent settlements and resolutions, such as the Reliance Communications Infrastructure Ltd. (RCIL) case, have raised concerns due to the low settlement amounts and extended resolution periods.
- For example, the settlement for RCIL amounted to a mere 0.92% of the debt, and it took four years to complete the resolution plan, far beyond the stipulated maximum of 330 days.
- The Financial Creditors (FCs) should ideally get principal and interest.
- Time-consuming processes for identifying and acknowledging defaults contribute to reduced recovery rates. It hampers the timely initiation of resolution proceedings, contributing to reduced recovery rates.

Regulatory Concerns:

Regulatory Reports:

- The FSR has highlighted several concerns regarding the Corporate Insolvency Process (CIRP).
- The report indicates that the admitted claims are less than the dues, and banks or financial creditors are recovering only a fraction of the liquidation value and fair value.

Parliamentary Standing Committee Report:

- The 32nd report of the Parliamentary Standing Committee on Finance has raised concerns about low recovery rates, with haircuts as much as 95% and the delay in the resolution process with more than 71% of cases pending for more than 180 days clearly points towards a deviation from the original objective of the code intended by the Parliament, and issues with Resolution Professionals (RPs) and Insolvency Professionals (IPs).
- It also recommends the need for a professional code of conduct for the Committee of Creditors (COCs) and fixing a ceiling on haircuts.

Way Forward

- Implement measures to ensure a higher repayment percentage in the resolution plans. This may involve stricter evaluation criteria for approving plans, emphasizing the need for a substantial upfront payment by the purchaser, and incentivizing timely repayments.
- RBI's decision to implement a maximum ceiling of credit to a single corporate house at Rs 10,000 crore is crucial for reducing the burden of banks during write-offs.
- As the original objectives have not been fulfilled, a full review of IBC and NCLTs is urgently needed.
- Reevaluate the concept of "haircuts" and implement measures to prevent abuse by promoters. Introduce safeguards that ensure a fair distribution of losses between promoters and financial creditors.
- Enhance transparency in the resolution process by ensuring regular updates on the status of cases and reasons for delays.

POLITY AND GOVERNANCE

SUPREME COURT LEGAL SERVICES COMMITTEE

- Justice BR Gavai has been nominated as the Chairman of the Supreme Court Legal Services Committee (SCLSC), which offers free legal services to underprivileged individuals in cases under the jurisdiction of the Supreme Court.
- The Supreme Court Legal Services Committee (SCLSC) holds a crucial role in providing free and competent legal services to vulnerable sections of society.

Mandate of SCLSC

- Established under Section 3A of the Legal Services Authorities Act, 1987, the SCLSC's primary objective is to offer free and competent legal services, specifically in cases falling under the jurisdiction of the Supreme Court.
- The committee comprises a sitting Supreme Court judge as the chairman and members appointed by the Chief Justice of India (CJI) possessing prescribed experience and qualifications.
- The NALSA Rules, 1995, outline the specifics regarding the numbers, qualifications, and experiences required for SCLSC members.
- The CJI appoints the Secretary to the Committee, and the Committee, in consultation with the CJI, can appoint officers and other employees as per the prescribed norms.

Legal Services and Constitutional Obligations

- The Indian Constitution, particularly Article 39A, emphasizes the state's responsibility to ensure justice and provide free legal aid to citizens, ensuring justice isn't denied due to economic or other disabilities.
- Articles 14 and 22(1) also stress the need for equality before the law and provisions for informing individuals about the grounds for arrest.

Legal Services Authorities Act of 1987

- Enacted to establish a statutory foundation for legal aid programs, the Act aims to provide free and competent legal services to eligible groups, including women, children, SC/ST and EWS categories, industrial workers,

disabled persons, and others.

- NALSA, constituted in 1995, oversees and evaluates the implementation of legal aid programs and formulates policies to ensure the availability of legal services.

State and District Legal Services Authorities

- The Act also led to the establishment of State Legal Services Authorities (SLSA) and District Legal Services Authorities (DLSA), headed by High Court Chief Justices and District Judges, respectively.
- These bodies aim to provide legal aid, conduct Lok Adalats, organize legal awareness camps, and facilitate the dissemination of legal services and information at the district and taluk levels.

RULES FOR ALLOCATION OF SYMBOLS TO UNRECOGNISED POLITICAL PARTIES

- The Election Commission of India introduced new regulations for allocating symbols to Registered Unrecognised Political Parties (RUPPs).
- Now, these parties must provide:
- Audited accounts from the last three financial years.
- Expenditure statements from the last two elections.
- The signature of the authorized party official along with their symbol application.

Registered Unrecognised Political Parties (RUPPs)

Registration of political parties

- Article 324 of the Indian Constitution grants the ECI the authority to register political parties.
- The registration of all political parties is governed by the provisions of Section 29A of the Representation of the People Act, 1951.
- According to the ECI, any party seeking registration must file an application (to the Secretary to the ECI) within 30 days of its formation.

About RUPPs

- These parties include:
- Newly registered ones, those that haven't gained sufficient votes to be a state/national party, and those that have never participated in elections since their registration. Such

parties do not enjoy all the benefits extended to the recognised parties. A recognised political party shall either be a National party or a State party if it meets certain laid down conditions.

Allotment of election symbols to political parties in India

Responsibility of ECI

- The Election Commission of India (ECI) is responsible for the allotment of symbols.
- This is done under **The Election Symbols (Reservation and Allotment) Order, 1968**.
- This rule is meant to provide for specification, reservation, choice and allotment of symbols at elections in Parliamentary and Assembly Constituencies, for the recognition of political parties.
- Symbols can be either reserved, meaning they are exclusive to a recognised political party, or 'free'.
- A political party can be recognized as a national or state party if it meets the certain criteria.
- The EC publishes lists specifying the parties and their symbols through a notification in the Gazette of India.

Unrecognised registered parties and election symbol

- Unrecognised registered parties' candidates can choose from free, non-exclusive symbols.
- After being selected by parties, in subsequent elections, these symbols are declared free again for others to choose.

Recognised parties and election symbol

- Recognised national and state parties get exclusive symbols.

Unregistered parties and election symbol

- These are supposed to give the names of ten symbols, in order of preference, out of the list of free symbols notified by the commission.
- As per the 1968 order, party may also propose three new symbols of their choice, with the names and clear design and drawings of symbol, in the order of preference.
- The Commission, then, may consider these symbols for allotment as its common symbol if there is, in its opinion, no objection in allotting such symbol.

- Symbols proposed by the parties should have no resemblance to the existing reserved symbols or free symbols, or any religious or communal connotation, or **depict any bird or animal**.

Split of a recognised political party and the issue of election symbol

- Para 15 of the Symbols Order, 1968 empowers EC to decide on the claim of rival factions in case of split.
- EC decides on the issue after taking into account all the available facts and circumstances of the case and hearing their representatives.
- **The decision of the Commission is binding** on all such rival sections or groups.
- For splits in **registered but unrecognised parties**, the ECI usually advises the warring factions to resolve their differences internally or to approach the court.
- The Election Commission of India has brought in new rules for allocation of symbols to Registered Unrecognised Political Parties (RUPPs).

Existing practice

- Common symbols are provided to RUPPs based upon an undertaking that they would put up at least 5% of total candidates with regard to said Legislative Assembly election of a State.

SUB-CATEGORISATION AMONG SCHEDULED CASTES

- The ongoing legal debate on sub-categorization among Scheduled Castes in India, before a seven-judge Supreme Court bench, revolves around the question of whether states can sub-classify SC reservations or if this authority solely rests with the President.
- Summary of the evolution of the legal debate over sub-categorization among Scheduled Castes (SCs)

1975 - Punjab's Sub-Categorization Attempt

- The Punjab government issued a notification in 1975, dividing its 25% SC reservation into two categories. The first category reserved seats exclusively for the Balmiki and Mazhbi Sikh communities, giving them preferential treatment in education and public employment.

- This sub-categorization aimed to address the economic and educational backwardness of specific SC communities within the state.

2004 - Andhra Pradesh's Struck-down Law

- In 2004, a five-judge constitution bench in the case of 'E.V. Chinnaiah v State of Andhra Pradesh' struck down a similar law introduced by Andhra Pradesh in 2000.
- The Supreme Court held that sub-classifying SC communities violated the right to equality, treating communities differently within the same category. The court emphasized the homogeneity of the SC list defined by the Constitution and the President's exclusive power to create this list under Article 341.

Punjab & Haryana High Court's Decision

- In 2006, the Punjab & Haryana High Court struck down the 1975 notification, affirming the principles laid down by the Supreme Court in the Chinnaiah case.
- 2010 - Attempted Reintroduction by Punjab
- In 2010, the Punjab government attempted to reintroduce sub-categorization through the Punjab Scheduled Caste and Backward Classes (Reservation in Services) Act, 2006.
- The High Court once again struck down this provision, leading to an appeal to the Supreme Court.

2014 - Referral to Five-judge Constitution Bench

- In 2014, the Supreme Court in 'Davinder Singh v State of Punjab' referred the appeal to a five-judge constitution bench to reconsider the 2004 Chinnaiah decision.
- 2020 - Reconsideration of Chinnaiah Ruling
- In 2020, the constitution bench held that the 2004 Chinnaiah decision required reconsideration. The court rejected the notion of SCs as a homogeneous group, recognizing the presence of inequalities within the list.

Introduction of Creamy Layer Concept

- Since the Chinnaiah decision, the concept of a "creamy layer" has been applied to SC reservations. In the 2018 'Jarnail Singh v/s Lachhmi Narain Gupta' case, the Supreme Court upheld the creamy layer concept within SCs, putting an income ceiling on eligibility for reservations.

Current Scenario - Seven-judge Constitution Bench

- In the present, a seven-judge constitution bench, headed by Chief Justice of India D Y Chandrachud, is set to hear the case on sub-categorization among SCs.
- The key issue is whether states have the power to create sub-classifications or if this power is exclusively vested in the President.

WILD LIFE (PROTECTION) LICENCING (ADDITIONAL MATTERS FOR CONSIDERATION) RULES, 2024.



- The Union Environment Ministry issued a notification titled: Wild Life (Protection) Licensing (Additional Matters for Consideration) Rules, 2024

Introduction:

- The central government has introduced revised rules governing wildlife trade licensing.
- These rules specifically exclude certain species from the licensing process.
- The regulations are outlined in the Wild Life (Protection) Licensing (Additional Matters for Consideration) Rules, 2024.

Categories Affected:

- The revised guidelines have implications for stakeholders involved in the trade of snake venom, captive animals, trophy animals, and stuffed animals.
- This marks the first substantial revision since the rules in 1983.

Previous Rules (1983):

- Under the rules from 1983, licenses for trading in wildlife were prohibited for species listed in Schedule I or Part II of Schedule II under the Wildlife Protection Act 1972.
- Exceptions were allowed in exceptional cases, subject to the prior approval of the central government.

Background (2022 Amendments):

- In 2022, amendments to the Wildlife Protection Act led to the merging of four schedules of wild animals into two, reducing the total from six to four.
- Schedule I now includes animals requiring utmost protection, while Schedule II comprises species needing comparatively lower protection.
- The categories under Schedule II encompass birds, reptiles, mammals, and amphibians.
- Schedule IV is dedicated to species to be protected under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).

Global Context:

- The World Wildlife Report 2020 highlights a global issue, revealing that about 6,000 species of flora and fauna were seized globally from 1999-2018, underscoring the challenges in combating illegal wildlife trade.

Wild Life (Protection) Licencing (Additional Matters for Consideration) Rules, 2024

Revised Licensing Rules (2024):

- Earlier rules restricted licences for trading in Schedule I and Part II of Schedule II species.
- New notification lifts restrictions on Schedule II species but maintains them for Schedule I species.

Factors for consideration in the licensing process include:

- The capacity of the applicant, including facilities, equipment, and the feasibility of business premises.
- The source and manner in which supplies would be obtained.
- The number of existing licenses in the relevant area.
- The potential implications on hunting or trade of the concerned wild animals.

Modification Unexplained:

- The rationale behind the modification, especially the lifting of restrictions on Schedule II, remains unexplained.
- Lack of clarity on the government's decision to alter licensing rules.

Conclusion:

- The revised rules aim to bring transparency

and efficiency to the wildlife trade licensing process. However, the lack of clarity on the removal of restrictions on Schedule II species raises questions.

- The considerations for license issuance emphasize the government's commitment to evaluating the impact on wildlife and trade, showcasing a nuanced approach.

Way Ahead

Review of Schedule II Species:

- Conduct a transparent review to explain the rationale behind lifting restrictions on Schedule II species.
- Ensure alignment with conservation goals and international commitments.

ARTICLE 30 OF THE INDIAN CONSTITUTION

- The Supreme Court recently attempted to strike a balance by remarking that the intent of Article 30 of the Constitution was not to ghettoise minorities by insisting they had the upper hand in administration of the institution.

About Article 30

- It is one of the many provisions that ensure the preservation of minority rights.
- Article 30 of the Indian Constitution states the right of minorities to establish and administer educational institutions.
- It says: "All minorities, whether based on religion or language, shall have the right to establish and administer educational institutions of their choice."
- It was adopted on December 8, 1948.

Features:

- It consists of provisions that safeguard various rights of the minority community in the country, keeping in mind the principle of equality as well.
- Article 30(1) says that all minorities, whether based on religion or language, shall have the right to establish and administer educational institutions of their choice.
- The right is provided by this clause on two types of minorities, namely, religious and linguistic minorities.
- Article 30(1A) deals with the fixation of the amount for the acquisition of property of any educational institution established by

minority groups.

- Article 30(2) states that the government should not discriminate against any educational institution on the ground that it is under the management of a minority, whether based on religion or language, while giving aid.

Concept of Minorities:

- The Constitution of India uses the word minority but does not define it.
- Article 29 of the Indian Constitution uses the word 'minorities' in its marginal heading, but it speaks about "any section of the citizens inhabiting the territory of India or any part of the country should have the right to protect their language or script or culture, which is different and varied.
- It also says that citizens should be allowed to take admission in any educational institution which is maintained by the State or getting help from State funds whether they vary in religion, race, caste, language, or any of them.
- **Article 30 of the Constitution of India talks only about religious and linguistic minorities.**
- **Religious Minority:** The basic ground for a community to be nominated as a religious minority is the numerical strength of the community.

Section 2, clause (c) of the National Commission of Minorities Act, declares six communities as minority communities. They are:

- Muslims
- Christians
- Buddhists
- Sikhs
- Jains and
- Zoroastrians (Parsis)

Linguistic Minorities:

- Class or group of people whose mother language or mother tongue is different from that of the majority groups is known as the linguistic minorities.
- Article 350-A of the Indian Constitution imposes an obligation on the states to try to provide enough facilities for instruction in the mother language at the primary level of education to children belonging to the linguistic minority community.

GOVERNMENT SCHEMES AND BILLS

SCHEME FOR RESIDENTIAL EDUCATION FOR STUDENTS IN HIGH SCHOOLS IN TARGETED AREAS (SHRESHTA)

- Scheme for Residential Education for Students in High Schools in Targeted Areas (SHRESHTA) Blog Image
- The Central Board of Secondary Education (CBSE) recently issued instructions for Residential Private Schools interested in joining SHRESHTA Scheme.

About Scheme for Residential Education for Students in High Schools in Targeted Areas (SHRESHTA)

- The scheme aims to provide access to the best private residential schools for meritorious students from Scheduled Caste (SC) communities.
- It will provide scholarships to meritorious students from SC communities to study in private and NGO-run residential schools for Classes 9-12.
- The scheme is expected to provide admissions to around 3,000 students in Classes 9 and 11 each year.
- The core objectives of the scheme are to enhance the reach of the development initiatives of the government and fill in the gap in service-deprived SC dominant areas in the education sector.
- The scheme will collaborate with voluntary organisations to provide an environment that can help create conditions for socio-economic upliftment and the overall development of the SC communities.

Implementation agency: The Department of Social Justice and Empowerment, Ministry of Social Justice & Empowerment.

- The scheme is being implemented in two modes.
- First, there are SHRESHTA schools, which consist of the best CBSE/ state board-affiliated private residential schools.
- Under SHRESHTA, outstanding students from SC communities, across states and UTs, will be selected annually through the National Entrance Test for SHRESHTA (NETS) and will be admitted to these schools

for education in Classes 9 through 12.

- The schools that will be part of this scheme will be selected based on a performance score of above 75 percent pass rate in Class 10 and 12 board examinations over the past three years.
- The second mode is based on NGO and voluntary organisation-run schools and hostels. The institutions run by such organisations that run up to Class 12 will also be made part of the scheme.

Eligibility:

- Students whose annual parental income is less than Rs 2,50,000 and who belong to SC communities are eligible to participate in this scheme.
- Only those candidates who have passed or are appearing in Class VIII/X in the given academic session can apply for taking admission to Class IX/XI.
- The scheme will cover the tuition fee, the hostel fee, and the mess fees for qualifying students.
- Students will also be allowed to choose from a range of schools based on their merit.

KOCHI - LAKSHADWEEP ISLANDS SUBMARINE OPTICAL FIBER CONNECTION PROJECT

- Recently, the Prime Minister of India in Kavaratti, Lakshadweep, inaugurated Kochi-Lakshadweep islands submarine optical fiber connection (KLI-SOFC) project.

About Kochi-Lakshadweep islands submarine optical fiber connection project:

- It is the submarine cable connectivity project from Mainland (Kochi) to eleven Lakshadweep Islands namely, Kavaratti, Agatti, Amini, Kadmat, Chetlet, Kalpeni, Minicoy, Androth, Kiltan, Bangaram and Bitra has been extended.
- The project is funded by Universal Services Obligation Fund (USOF), Department of Telecommunication.
- Bharat Sanchar Nigam Limited (BSNL) was the Project Executing Agency and the work was awarded to M/s NEC Corporation India Pvt Ltd through Global Open Tendering process.
- The major activities related to the project include Marine Route Survey, Submarine

Cable laying, Civil Construction of CLS stations, Installation, Testing and Commissioning of End Terminals (SLTE).

Significance of the project

- The KLI-SOFC project will lead to an increase in internet speed unlocking new possibilities & opportunities.
- For the first time since independence, Lakshadweep will be connected through Submarine Optic Fibre Cable.
- The dedicated submarine OFC will ensure a paradigm shift in communication infrastructure in the Lakshadweep islands, enabling faster and more reliable internet services, telemedicine, e-governance, educational initiatives, digital banking, digital currency usage, digital literacy etc.

THE AMRIT DHAROHAR INITIATIVE: WETLAND 'NATURE TOURISM' GETS A FILLIP

- The Central government has embarked on a mission - the Amrit Dharohar initiative - to promote tourism at ecologically-sensitive wetlands better known as Ramsar sites like Odisha's Chilika lake and Haryana's Sultanpur bird sanctuary.
- A Ramsar site is a wetland designated to be of international importance under an environmental treaty signed in February 1971 at Ramsar, Iran under the auspices of UNESCO.
- Ramsar identifies wetlands of international importance, especially those providing waterfowl habitat.
- It provides for national action and international cooperation regarding the conservation of wetlands, and wise sustainable use of their resources.
- India has 75 Ramsar sites - Odisha's Chilika Lake and Bhitarkarnika Mangroves, West Bengal's Sundarbans, Chitrangudi Bird Sanctuary in Tamil Nadu are some of the well-known Ramsar sites in India.

Amrit Dharohar Initiative

- The initiative is a part of the 2023-24 budget announcement and was launched during June 2023 to promote unique conservation values of the Ramsar Sites in the country.
- The initiative to develop these sites has been taken by the Union Tourism Ministry and the

Ministry of Environment, Forest and Climate Change under the 'Amrit Dharohar Capacity Building Scheme' 2023.

Implementation of the Amrit Dharohar Capacity Building Scheme 2023:

- The scheme is being implemented in convergence with various Central govt ministries, State wetland authorities, and a network of formal and informal institutions, working together for a common cause.
- As of now, 16 Ramsar sites have been identified out of which 5 have been taken up as a pilot project for skill development of the facilitators, tourism service providers, stakeholders in and around these sites.
- **These five wetlands** are Sultanpur National Park (Haryana), Bhitarkanika Mangroves (Odisha), Chilika Lake (Odisha), Sirpur (Madhya Pradesh) and Yashwant Sagar (Madhya Pradesh).
- **A total of 30 participants have been trained** at each of the Ramsar sites for 15 days each under the Alternative Livelihood Programme (ALP) at Sultanpur (Haryana), Yashwant Sagar and Sirpur (Madhya Pradesh).
- **At Bhitarkanika and Chilika in Odisha,** two training programmes of 15 days each namely ALP and Paryatan Navik Certificate (boatman certification for tourism) will soon be completed.

Significance of the Amrit Dharohar Capacity Building Scheme 2023:

- **Wetlands are important for the conservation of** global biological diversity and for sustaining human life through the maintenance of their ecosystem components, processes and services.
- **Hence, it is important that we focus on nature tourism at these Ramsar sites.**
- The focus would be to **shift these fragile wetlands** from high-value tourism to high-value nature tourism by -
- Directly supporting conservation action and letting local communities and economies take the lead.
- **Generating employment opportunities and supporting local livelihoods** through harnessing the nature-tourism potential of the Ramsar Sites across the country.

What is Nature Tourism and Who are High-Value Travellers?

- **Nature tourism is tourism based on the natural attractions** of an area like birdwatching, photography, stargazing, camping, hiking, hunting, fishing, and visiting parks.
- These are **experiential tourists** who are interested in a diversity of natural and cultural resources.
- The tourism industry identifies high-value travellers as those who are likely to spend more, stay longer, and disperse beyond tourist hotspots.

PRADHAN MANTRI SURYODAYA YOJANA

- The Pradhan Mantri Suryodaya Yojana, launched by the Prime Minister, aims to install solar power systems on the rooftops of residential buildings, with a specific target of covering 1 crore (10 million) houses across India.

Key Highlights

- The primary goals of the scheme include reducing electricity bills for the poor and middle class while contributing to India's self-reliance in the energy sector.
- By encouraging widespread adoption of solar power at the household level, the **government aims to boost renewable energy usage and decrease reliance on traditional energy sources.**

India's Current Solar Capacity

- **As of December 2023, India's total solar capacity stands at approximately 73.31 gigawatts (GW), with rooftop solar contributing around 11.08 GW.** This solar capacity is distributed across states, with Rajasthan leading in total solar capacity (18.7 GW) and Gujarat topping the list in rooftop solar capacity (2.8 GW).
- Solar power plays a significant role in India's total renewable energy capacity, which stands at around 180 GW. The country's commitment to renewable energy is evident in its efforts to achieve ambitious targets, aiming for 500 GW of renewable energy capacity by 2030.

Importance of Solar Energy Expansion

- India is expected to experience the largest energy demand growth globally over the next 30 years, according to the International Energy Agency (IEA). To meet this increasing demand, a reliable and sustainable source of

energy is crucial, necessitating a shift away from traditional sources like coal.

- While India has increased its coal production, it is also committed to reaching 500 GW of renewable energy capacity by 2030. Solar energy, in particular, has seen significant growth, rising from less than 10 MW in 2010 to 70.10 GW in 2023.

Rooftop Solar Programme

- Launched in 2014, the Rooftop Solar Programme focuses on expanding rooftop solar installed capacity in the residential sector. It provides Central Financial Assistance and incentives to distribution companies (DISCOMs).
- The programme's goal is to achieve 40 GW of rooftop solar installed capacity by March 2026. Noteworthy progress has been made, with rooftop solar capacity increasing from 1.8 GW in March 2019 to 10.4 GW in November 2023.
- Consumers can benefit from the scheme through DISCOM tendered projects or the National Portal (www.solarrooftop.gov.in). The scheme empowers consumers to choose vendors and solar equipment based on their preferences. After installation and inspection, subsidies are directly transferred to consumers' bank accounts.
- Consumers have the opportunity to export surplus solar power to the grid, receiving monetary benefits in accordance with prevailing regulations set by State Electricity Regulatory Commissions (SERCs) or Joint Electricity Regulatory Commissions (JERCs).

Pradhan Mantri Suryodaya Yojana

- To promote the adoption of rooftop solar systems in India, the Prime Minister announced the Pradhan Mantri Suryodaya Yojana (PMSY). The PMSY is a government scheme that aims to install rooftop solar systems in 1 crore (10 million) households across the country.

Features

- The scheme will target low and middle-income households who can benefit from reduced electricity bills and additional income from surplus electricity generation.
- The scheme will provide financial assistance to eligible households in the form of subsidy, loan or incentive, depending on their category and location.

- The scheme will also provide technical assistance to the households in terms of installation, operation and maintenance of the rooftop solar systems.
- The scheme will be implemented by the Ministry of New and Renewable Energy (MNRE) in collaboration with state governments, distribution companies, banks and other stakeholders.

SMART 2.0 PROGRAM

- The Central Council for Research in Ayurvedic Sciences (CCRAS) along with National Commission for Indian System of Medicine (NCISM) has launched 'SMART 2.0' program.
- Scope for Mainstreaming Ayurveda Research among Teaching professionals (SMART) program promotes robust clinical studies in priority areas of Ayurveda with Ayurveda academic institutions/hospitals across the country through mutual collaboration.
- The objective of 'SMART 2.0' is to generate a tangible evidence to demonstrate efficacy and safety of Ayurveda interventions using interdisciplinary research methods and translating it into public health care.
- The study aims at safety, tolerability and adherence to Ayurveda formulations in the priority research areas of Bal Kasa, malnutrition, insufficient lactation, Abnormal Uterine Bleeding, Osteoporosis in post-menopausal women and Diabetes Mellitus (DM) II.
- It is an autonomous body of the Ministry of AYUSH (Ayurveda, Yoga & Naturopathy, Unani, Siddha and Homeopathy), Government of India. It is an apex body in India for the formulation, coordination, development and promotion of research on scientific lines in Ayurveda and Sowa-Rigpa system of medicine.

Key facts about National Commission for Indian System of Medicine

- It is the statutory body constituted under NCISM Act, 2020. An Act to provide for a medical education system that improves access to quality and affordable medical education, ensures availability of adequate and high quality medical professionals of Indian System of Medicine in all parts of the country.
- Composition: It consists of 29 members, appointed by the central government. A

Search Committee will recommend names to the central government for the post of Chairperson, part time members, and presidents of the four autonomous boards set up under the NCISM.

Functions

- Framing policies for regulating medical institutions and medical professionals of Indian System of Medicine
- Assessing the requirements of healthcare related human resources and infrastructure.
- Ensuring compliance by the State Medical Councils of Indian System of Medicine of the regulations made under the Bill. Ensuring coordination among the autonomous boards.

FAME INDIA PHASE II

- The Parliamentary Standing Committee's recommendations concerning the extension of the FAME-II Scheme and the broader encouragement of electric vehicle (EV) adoption seem quite comprehensive.

Key recommendations of the Parliamentary Standing Committee

FAME-II Scheme Extension

- Suggests extending the FAME-II Scheme for at least three more years beyond the current deadline of March 31, 2024.
- Recommends restoring subsidies on electric two-wheelers to maintain momentum in EV penetration.
- Proposes broadening the scheme's scope, including private electric four-wheelers, with considerations based on vehicle cost and battery capacity.

Charging Infrastructure Incentives

- Recommends incentivizing the installation of charging stations, including support for individual investors, women's self-help groups, and cooperative societies.
- Suggests involving public sector undertakings and government institutions in installing charging stations on their premises.

Industry Support and Stability

- Emphasizes the need for supportive government frameworks and dedicated manufacturing hubs for EV components to boost India's EV industry.
- Stresses the importance of consistent

and stable national policies to eliminate market uncertainties and create a conducive environment for the EV industry.

- The committee's focus is not just in incentivizing EV purchases but also expanding charging infrastructure and ensuring policy stability reflects a comprehensive approach toward fostering EV adoption in India.

SANITATION SOLUTIONS

- A dive into sanitation solutions: processing, managing and treating used water.

About the News

- Apart from the water we drink and consume through our food, we use water for cooking, cleaning ourselves and our homes, and washing clothes and utensils. Where does the used water from our homes go?
- Common answers to this question are into the ground, into the open space around the house, into pipes underground or into open drains. Some of these responses are not entirely wrong, but the key concern is where used water should go.
- It should go into sanitation systems designed to contain, convey, treat, and either dispose of or reuse the used water ensuring good public health and reducing environmental pollution.
- While rudimentary sanitation was introduced by ancient civilisations around 4000 BC, the modern sanitation system was built in London around the 1800s.

What are the types of sanitation systems?

- In rural areas or spacious urban residences, used water goes into twin pits or septic tanks, also known as on site sanitation systems (OSS), connected below ground to toilets.
- While twin pits and septic tanks are widely used, other OSS types include bio-digester toilets, bio-tanks, and urine diversion dry toilets.

Key Facts

- In 2022, 57% of the global population (4.6 billion people) used a safely managed sanitation service.
- Over 1.5 billion people still do not have basic sanitation services, such as private toilets or latrines.
- Of these, 419 million still defecate in the open, for example in street gutters, behind

bushes or into open bodies of water. In 2020, 44% of the household wastewater generated globally was discharged without safe treatment (1).

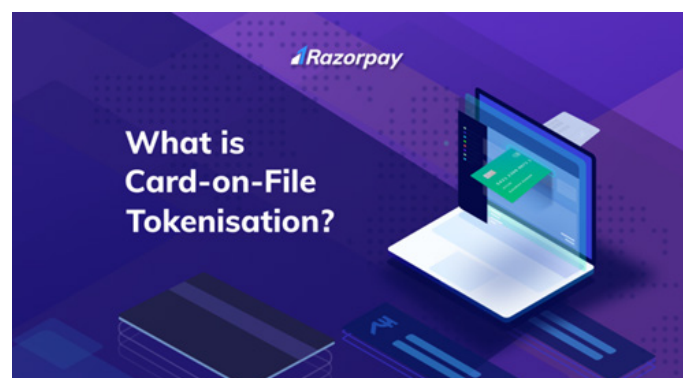
- At least 10% of the world's population is thought to consume food irrigated by wastewater.
- Poor sanitation reduces human well-being, social and economic development due to impacts such as anxiety, risk of sexual assault, and lost opportunities for education and work. Poor sanitation is linked to transmission of diarrhoeal diseases such as cholera and dysentery, as well as typhoid, intestinal worm infections and polio. It exacerbates stunting and contributes to the spread of antimicrobial resistance. Sanitation and health
- Some 827 000 people in low- and middle-income countries die as a result of inadequate water, sanitation, and hygiene each year, representing 60% of total diarrhoeal deaths.
- Poor sanitation is believed to be the main cause in some 432 000 of these deaths.
- Diarrhoea remains a major killer but is largely preventable.
- Better water, sanitation, and hygiene could prevent the deaths of 297 000 children aged under 5 years each year.
- Open defecation perpetuates a vicious cycle of disease and poverty. The countries where open defecation is most widespread have the highest number of deaths of children aged less than 5 years as well as the highest levels of malnutrition and poverty, and big disparities of wealth.

Benefits of improved sanitation

- Benefits of improved sanitation extend well beyond reducing the risk of diarrhoea. These include: Reducing the spread of intestinal worms, schistosomiasis and trachoma, which are neglected tropical diseases that cause suffering for millions;
- Reducing the severity and impact of malnutrition; Promoting dignity and boosting safety, particularly among women and girls;
- Promoting school attendance: girls' school attendance is particularly boosted by the provision of separate sanitary facilities; and
- Potential recovery of water, renewable energy and nutrients from faecal waste.

INDIAN ECONOMY

COFT



- The Reserve Bank of India (RBI) has expanded the scope of Card-on-File Tokenization (CoFT) to include debit card issuing banks. This move aims to enhance security and convenience for users opting for digital payments.
- CoFT, or Card-on-File Tokenization, is a security measure introduced by the RBI to protect users' financial data during digital transactions. Instead of storing actual card details, a unique token is created and used for transactions with merchants, safeguarding sensitive financial information.

Expansion of CoFT Scope

- **Service Expansion:** CoFT was previously facilitated through merchants. Now, RBI's notification allows CoFT to be enabled directly through card-issuing banks and institutions.
- **Token Generation:** Cardholders can generate CoFT tokens using mobile banking and Internet banking channels.
- **Customer Consent:** Tokens can only be generated with explicit customer consent and validation through Additional Factor Authentication (AFA).
- **Flexibility for Cardholders:** Cardholders can tokenize their cards at their convenience, either upon receiving a new card or at a later stage. They can also select the merchants they wish to maintain tokens with.
- **Token Issuance:** The issued card token maybe by the card network, the issuer, or both.

Purpose and Impact

- **Enhanced Security:** CoFT ensures the safety and security of card data by replacing actual

card details with unique tokens, minimizing vulnerabilities and potential breaches.

- **Transaction Volume:** Since its introduction in October 2022, over 56 crore tokens have been created, facilitating transactions valued at over ₹5 lakh crore. This indicates a substantial adoption and usage of CoFT within a relatively short period.

SECTION 194-O OF THE INCOME-TAX ACT 1961



- Section 194-O of the Income-tax Act, 1961, addresses the deduction of income tax by e-commerce operators.

Key Highlights

- **Applicability:** Section 194-O mandates e-commerce operators to deduct income tax at the rate of 1% from the gross amount of the sale of goods or provision of services facilitated through their digital or electronic platform.
- **Issuance and Purpose:** Circular No. 20/2023, dated 28.12.2023, was issued by the Central Board of Direct Taxes (CBDT). The purpose is to provide guidelines for removing difficulties and offering clarity on various issues related to the application of Section 194-O, especially in a multiple e-commerce operator model like the Open Network for Digital Commerce (ONDC).

Income-tax Act, 1961

- The Income-tax Act 1961 governs the taxation of income in India. It was enacted by the Parliament of India and came into force on 1 April 1962.
- It covers various aspects of income tax, such as the charge of tax, the computation of income, the deductions and exemptions, the assessment procedure, the penalties and

prosecution, and the appeals and revisions.

- It deals with different topics, such as definitions, scope of total income, heads of income, incomes which do not form part of total income, deductions from gross total income, rebates and reliefs, special provisions relating to certain incomes or persons, computation of tax liability, advance payment of tax, collection and recovery of tax, refunds, appeals and revisions, penalties and prosecution, miscellaneous provisions, etc.
- It applies to all persons who are resident or non-resident in India, subject to certain exceptions and modifications. The Act defines various categories of persons, such as individuals, Hindu undivided families (HUFs), companies, firms, associations of persons (AOPs), bodies of individuals (BOIs), local authorities, artificial juridical persons (AJPs), etc. The Act also defines various sources of income, such as salaries, house property, profits and gains from business or profession, capital gains, income from other sources, etc.
- It is amended every year by the Finance Act, which is passed by the Parliament along with the annual budget. The Finance Act incorporates changes in the rates of tax, surcharge, cess, and other provisions relating to income tax.

GREEN DEPOSITS



- The Reserve Bank of India (RBI) has clarified its stance on green funds, stating that banks and Non-Banking Financial Companies (NBFCs) do not need to raise green funds. However, if they choose to do so, they must adhere to the prescribed framework.
- Green deposits are a type of financial product that allows investors to support environmentally friendly projects and

initiatives. They are similar to regular deposits, except that the bank or financial institution guarantees that the funds will be used for green purposes, such as renewable energy, sustainable agriculture, or waste management.

- Green deposits are attractive for investors who want to align their money with their values and contribute to the fight against climate change. They also offer competitive interest rates and tax benefits in some countries.
- The RBI had previously issued detailed guidelines in April 2023 for the acceptance of "green deposits" by banks and NBFCs. These funds are intended to finance activities such as renewable energy, green transport, and green buildings.

Key points from the RBI's clarification

- **Green Deposit Framework:** The framework for the acceptance of green deposits came into effect from June 1, 2023.
- **Interest Payments:** RBI-regulated entities (REs) are required to pay interest on green deposits to customers as per agreed terms and conditions, irrespective of the allocation or utilization of proceeds.
- **Premature Withdrawal:** There is no restriction on the premature withdrawal of green deposits. However, REs must adhere to existing guidelines.
- **Impact of Withdrawals:** Premature withdrawals will not impact activities or projects undertaken using the proceeds of green deposits.
- **Temporary Parking of Proceeds:** REs can temporarily park proceeds of green deposits, pending allocation towards green activities or projects, in liquid instruments with a maximum maturity of up to one year.
- **Foreign Banks:** Foreign banks can have a common global policy on green deposits, but they must comply with the framework for green deposits raised in India after June 1, 2023.
- **Currency Denomination:** Green deposits can only be denominated in Indian rupees if they are raised in India after June 1, 2023.

ZED SCHEME



- The Zero Effect, Zero Defect scheme (ZED) by the MSME Ministry has achieved a significant milestone of certifying 1 lakh (100,000) Micro, Small, and Medium Enterprises (MSMEs) for environmentally conscious manufacturing practices.

Details

- The Zero Effect, Zero Defect scheme (ZED) was launched in October 2016 and revamped in April 2022, aims to encourage sustainable manufacturing and reduce environmental impact.

ZED Scheme Overview

Certification Levels

- The ZED scheme offers certification under three levels: Gold, Silver, and Bronze.
- Certification is based on 20 performance-based parameters, including quality management, timely delivery, process control, and waste management.

Financial Support

- MSMEs receive financial assistance for certification, with a subsidy of up to 75% of the total certification cost.
- The maximum subsidy ceiling is Rs 50,000, and additional support of up to Rs 2 lakh is provided for consultancy to achieve the next certification level.
- For technology upgradation, assistance of up to Rs 3 lakhs is offered for zero-effect solutions, pollution control measures, and cleaner technology.

Certification Fees

- MSMEs are charged a certification fee: Rs 10,000 for Bronze, Rs 40,000 for Silver, and Rs 90,000 for Gold.
- The scheme was made free for women-led MSMEs in December 2023, and the government guarantees 100% financial

support for certification costs.

Certification Validity

- ZED certification is valid for three years.
- MSMEs must reapply for the certificate after the expiration of the validity period.

Target and Achievement

- The scheme surpassed its internal target of 50,000 certifications before January 26, achieving over 1 lakh certifications in 19 months.
- As of the latest data, 1,01,962 units received Bronze certification, 339 units received Silver certification, and 341 units received Gold certification.

Environmental Sustainability and Government's Goals

- **Carbon Emission Reduction:** The ZED scheme aligns with the government's plan to reduce India's CO2 emissions by 1 billion tons by 2030. The goal is to reduce carbon intensity below 45% by 2030 and achieve a Net-Zero emission target by 2070.
- **Focus on Sustainable Practices:** The ZED scheme encourages MSMEs to adopt sustainable manufacturing practices, contributing to environmental conservation.

NATIONAL TRANSIT PASS SYSTEM



- The National Transit Pass System (NTPS), branded as 'One Nation-One Pass,' was recently launched by the Union Minister for Environment, Forest, and Climate Change, and Labour and Employment. This initiative aims to facilitate the seamless transit of timber, bamboo, and various forest produce across India.

About National Transit Pass System (NTPS)

- The National Transit Pass System (NTPS) is a digital platform aimed at simplifying the process of obtaining transit permits for timber, bamboo, and other minor forest produce.

Key Features

- **Role and Workflow-Based Application:** NTPS operates on roles and workflows, accessible as a desktop web portal and mobile application.
- **Online Registration and Application Submission:** Users can register and submit applications for Transit Permits (TP) or No Objection Certificates (NOC) via the web portal and mobile app.
- **Species Classification:** Online application for species grown on private lands that are either exempted or not exempted from the transit pass regime.
- **Online Generation of Permits:** Transit Permits or NOCs are generated online based on the species category.
- **E-Payment System:** Payment for permits can be made online through the mobile app or web portal before downloading the Transit Permit.

Key Benefits

- **Expedited Issuance of Permits:** Streamlines the process of obtaining permits for timber, bamboo, and other minor forest produce without physically visiting forest offices.
- **Digital Replacement of Manual System:** Replaces the traditional paper-based transit system with an efficient online process.
- **Nationwide Permit:** Offers a single permit valid across India for the transit of timber, bamboo, and other minor forest produce, contributing to ease of doing business.
- **Seamless Movement Across States:** Facilitates seamless movement across state borders from the origin to the destination through the use of the mobile app.
- **Ease for Producers and Transporters:** Reduces hardships for timber and bamboo producers, farmers, and transporters at forest check posts.
- **Promotion of Agro-forestry:** Encourages and promotes agro-forestry activities across the country.

- **Cost and Time Savings:** Saves transportation costs and time for farmers and traders, leading to increased income for farmers.

AADHAAR-BASED PAYMENT SYSTEM

- The Union Government has made the Aadhaar-based payment system (ABPS) mandatory for the payment of wages to NREGS (National Rural Employment Guarantee Scheme) workers. This system involves linking workers' 12-digit Aadhaar numbers with their job cards and bank accounts to ensure direct payment of wages.

Details

- The transition to the Aadhaar-based payment system (ABPS) for the payment of wages to NREGS (National Rural Employment Guarantee Scheme) workers has been a point of contention, with the government making it mandatory.
- The ABPS links workers' Aadhaar numbers with their job cards and bank accounts to ensure direct payments. Initially made mandatory from February 1, 2023, it saw extensions until December 31, 2023, allowing a mixed route with NACH (an interbank payment system). However, from January 1, 2024, ABPS became compulsory.
- The Rural Development Ministry announced that while ABPS is the preferred mode for wage payments, exemptions might be considered on a case-by-case basis if any gram panchayat faces technical or Aadhaar-related issues.

Aadhaar-Based Payment System (ABPS)

- Aadhaar-based payment system (ABPS) is a digital payment system that enables users to access various banking services using their Aadhaar number and biometric authentication. It was introduced by the National Payments Corporation of India (NPCI) to promote financial inclusion and digital payments in India.

ABPS has the following features

- **Aadhaar-linked transactions:** Users can make transactions through their Aadhaar-linked bank accounts, similar to debit/credit card transactions.
- **Biometric authentication:** Transactions are completed by submitting the Aadhaar number and biometric details (iris or fingerprint scan) at PoS or micro ATMs,

using Aadhaar authentication.

- **Bank account privacy:** Users do not have to share their bank account details during the transaction, enhancing privacy and security.
- **Fund transfers:** ABPS allows users to transfer funds between bank accounts, providing a convenient way to send and receive money.
- **Secure transactions:** ABPS transactions are considered safe and secure as they require biometric authentication, ensuring the identity of the user.

ABPS has the following significance

- **Financial inclusion:** ABPS enables financial inclusion by providing access to banking services to the unbanked and underbanked sections of society, especially in rural and remote areas.
- **Digital payments:** ABPS promotes digital payments by reducing the dependence on cash and encouraging cashless transactions.
- **Direct benefit transfer:** ABPS facilitates direct benefit transfer (DBT) of various government schemes and subsidies to the beneficiaries' bank accounts, eliminating intermediaries and leakages.
- **Financial literacy:** ABPS creates awareness and education about financial products and services among the users, improving their financial literacy and empowerment.

Steps taken to implement and promote ABPS

- **Linking Aadhaar with bank accounts:** The government has made it mandatory for all bank account holders to link their Aadhaar numbers with their bank accounts to enable ABPS transactions.
- **Making ABPS mandatory for NREGS workers:** The government has made ABPS mandatory for the payment of wages to NREGS workers, ensuring timely and transparent payment of wages.
- **Providing incentives for BCs and users:** The government has provided incentives for BCs and users to adopt ABPS, such as commission for BCs and zero transaction costs for users.
- **Creating awareness and capacity building:** The government has created awareness and capacity building among the stakeholders, such as banks, BCs, users, and government officials, about the benefits and usage of ABPS.

ABPS faces the following challenges

- **Technical issues:** ABPS faces technical issues such as network connectivity, device malfunctioning, biometric mismatch, etc., affecting the smooth functioning of the system.
- **Aadhaar-related issues:** ABPS faces Aadhaar-related issues such as incomplete or incorrect Aadhaar data, lack of Aadhaar enrolment or updation, etc., affecting the verification and authentication of the users.
- **Behavioural issues:** ABPS faces behavioural issues such as resistance or reluctance from some users or BCs to adopt ABPS, due to a lack of trust, awareness, or convenience.
- **Regulatory issues:** ABPS faces regulatory issues such as a lack of clarity or consistency in the policies or guidelines related to ABPS, affecting its implementation and compliance.

Way forward for improving ABPS

- **Strengthening the infrastructure:** The infrastructure for ABPS should be strengthened by improving the network connectivity, device quality, biometric accuracy, etc., ensuring reliable and efficient transactions.
- **Updating the Aadhaar data:** The Aadhaar data should be updated regularly by enrolling or updating the Aadhaar details of the users, ensuring accurate and complete verification and authentication.
- **Enhancing awareness and trust:** The awareness and trust among the users and BCs should be enhanced by conducting campaigns, workshops, demonstrations, etc., highlighting the benefits and usage of ABPS.
- **Harmonizing the regulations:** The regulations related to ABPS should be harmonized by streamlining and simplifying the policies or guidelines related to ABPS, ensuring its implementation and compliance.

ZERO COUPON ZERO PRINCIPAL INSTRUMENTS

- SEBI (Securities and Exchange Board of India) has introduced guidelines for not-for-profit organizations (NPOs) intending to issue 'zero coupon zero principle' instruments in the public domain and list these instruments on the Social Stock Exchange (SSE).

Key Highlights of the guidelines

Documentation Process

- The SSE must outline the specifics required in the fundraising document.
- NPOs need to file the draft fundraising document with the SSE and seek preliminary approval for listing these instruments.

Observation and Approval

- SSE is required to provide observations on the draft fundraising document within 30 days of filing or upon receiving any clarification requested from the NPO.
- The NPO must incorporate SSE's observations in the final fundraising document before the issue opens.

Disclosure Requirements

- Both the draft and final fundraising documents must contain comprehensive and accurate disclosures, enabling informed decisions by potential investors.

Conditions for 'Zero Coupon Zero Principle' Instruments

- These instruments will be issued only in dematerialized form and won't be transferable.
- The minimum issue size is set at Rs 50 lakh, with a minimum application size of Rs 10,000.
- The minimum subscription needed to proceed with the issuance is 75% of the proposed fundraising amount.
- In case of undersubscription, NPOs must detail how they plan to raise the remaining capital or its impact on achieving the social objective if they fail to address the shortfall.
- Refunds will be made if the subscription falls below 75% of the issue size.

Post-Issuance Procedures

- SSE will maintain records of allotments post the issuance of these instruments by NPOs.
- SSE will define additional norms related to the issuance process, including agreements with depositories, ASBA-related matters, duration of public issuance, allocation methodology, and other relevant procedures.

Social Impact Reporting

- NPOs must disclose past social impacts based on existing practices, highlighting trends in key metrics, beneficiaries, cost per

beneficiary, and administrative overheads related to the NPO's objectives.

Zero Coupon Zero Principal Instruments

- They are a **type of financial derivative that has no periodic interest payments and no repayment of principal at maturity**. They are also known as pure discount instruments or zero coupon bonds.
- These instruments are sold at a deep discount to their face value and pay the face value at maturity. The difference between the purchase price and the face value is the investor's return.

Advantages

- **Fixed Return:** Investors receive a predetermined return upon maturity, calculated as the difference between the purchase price and the face value.
- **Lower Credit Risk:** Since these instruments don't rely on regular interest payments, they carry lower credit risk compared to traditional bonds.
- **Useful for Liability Matching:** Ideal for investors, like pension funds or insurance companies, looking to align future liabilities with specific future cash flows.
- **Lock-in Return:** Attractive for those wanting a predetermined return without the need to reinvest interest payments.

Disadvantages

- **Interest Rate Sensitivity:** Highly sensitive to changes in interest rates. Their prices fluctuate based on the present value of the entire payment at maturity.
- **Reinvestment Risk:** Once the instrument matures, investors face the challenge of finding new investment opportunities for the lump sum received.
- **Taxation on Imputed Interest:** Even though no cash flow is received until maturity, investors might be subject to taxation on the imputed interest.

ENVIRONMENT AND ECOLOGY

NORTHEAST AFRICAN CHEETAH

- A group of experts have appealed to the International Union for Conservation of Nature (IUCN) to reclassify the status of the Northeast African Cheetah (*Acinonyx jubatus soemmeringii*) to 'endangered' from 'vulnerable'.



About Northeast African Cheetah:

- It is found in the Horn of Africa.
- It is also known as the Sudan cheetah. This subspecies is more closely related to the Southern African cheetah than to Saharan cheetah populations.
- The cheetah's long tail helps it keep its balance when changing direction mid-chase. Cheetahs can make even 90-degree turns with ease while sprinting.
- **Appearance:** Like it's relative to the south in East Africa, the Northeast African cheetah is fairly large. Physically, it most resembles the East African cheetah.
- **Distribution:** Contemporary records are known in South Sudan and Ethiopia. These animals live in wide open lands, grasslands, semi-arid areas, and other open habitats where prey is abundant such as in the East Sudanian Savanna.
- **Threat:** The subspecies' cubs are being heavily trafficked across the Red Sea to Arab countries like Saudi Arabia, the United Arab Emirates and Yemen.
- Conservation status
- IUCN: Vulnerable

INDIA'S FIRST DARK SKY PARK

- The Pench Tiger Reserve in Maharashtra has been designated as India's first Dark Sky Park and the fifth in Asia, protecting the night sky and preventing light pollution.

About India's First Dark Sky Park

- The Pench Tiger Reserve (PTR) in Maharashtra is India's first Dark Sky Park within a tiger reserve for earmarking areas around the park that restrict light pollution for stargazers to access pristine dark skies.
- Dark Sky Place certification focuses on lighting policy, dark sky-friendly retrofits, outreach and education, and monitoring the night sky.
- This designation positions PTR as a sanctuary where tourists can witness celestial spectacles, shielded from the intrusion of artificial light pollution.
- PTR became the fifth such park in Asia.
- The certification was given by the International Dark-Sky Association, a global dark-sky movement to promote astronomy.

Himalayan Wolf

- Himalayan Wolf has been assessed for the first time in the International Union for Conservation of Nature (IUCN)'s Red List and categorised as 'Vulnerable'.



About Himalayan Wolf

- The Himalayan Wolf (*Canis lupus chanco*), a prominent lupine predator found across the Himalayas.
- It is also called Tibetan wolves, which live at more than 4,000 metres altitudes and are genetically distinct from grey wolves.
- Living at such high altitudes, these wolves have genetically adapted themselves to live in low oxygen (hypoxic) conditions.

Distribution:

- In China, the Himalayan wolf lives on the Tibetan Plateau in the provinces of Gansu, Qinghai, Tibet, and western Sichuan.
- In northern India, it occurs in the Union Territory of Ladakh and in the Lahaul and Spiti region in northeastern Himachal Pradesh.

Conservation status

- IUCN: Vulnerable
- CITES: Appendix I

Wildlife Protection Act, 1972: Schedule I

- Threats: It is illegally hunted for trade in its fur and body parts including paws, tongues, heads, and other parts.
- Measures to be taken to enhance the protection of Himalayan wolves
- Securing and restoring healthy wild prey populations and landscapes and setting aside wildlife habitat refuges;
- Improving livestock guarding methods, such as predator-proof corral pens and using sustainable livestock herding practices, including reduced livestock loads, adapted herding, and developing novel but tradition-based holistic management practices

Management of feral dog populations

- Trans-boundary efforts in conservation of the species in range countries through research and monitoring.

INDIAN PANGOLIN



- The pangolin conservation project launched to protect pangolins has succeeded at Pench Tiger Reserve and Satpura Tiger Reserve, as the mammals have started to breed there.

- Pangolins, also known as scaly anteaters, are the only known mammals with large keratin scales covering their skin.
- Of the eight species found worldwide (four each in Asia and Africa), two are found in India: the Indian Pangolin (*Manis crassicaudata*) and the Chinese Pangolin (*Manis pentadactyla*).

About Indian Pangolin:

- The Indian pangolin, also called the thick-tailed pangolin, is native to the Indian subcontinent.
- They are one of the most trafficked mammals in the world, despite an international ban on their trade.
- Distribution: It lives in India (south of the Himalayas), Bangladesh, Southern Nepal, Sri Lanka, and small parts of Pakistan.

Habitat:

- They are well adapted to desert regions and prefer barren, hilly areas. Their habitat extends up to 2,500 feet above sea level.
- Overall, they prefer soil that is soft and semi-sandy, suitable for digging burrows.
- They have also been shown to survive in various types of tropical forests, open land, grasslands, and in close proximity to villages.

Features:

- Like other pangolins, it has large, overlapping scales on its body, which act as armor.
- The Indian pangolin's armor is among the most effective in the mammalian world. It has about 13 rows of moveable, sharp scales covering its body, which are shed periodically.
- The colour of its scales varies depending on the colour of the earth in its surroundings.
- It can also curl itself into a ball as self-defense against predators.
- It is an insectivore, feeding on ants and termites.
- It is nocturnal and it rests in deep burrows during the day.
- Conservation status:
- IUCN Red List: Endangered
- Wildlife (Protection) Act, 1972: Schedule I
- CITES: Appendix I

AGRICULTURE

LITCHI CULTIVATION



- The National Research Centre on Litchi (NRCL) in Muzaffarpur significantly contributed to the expansion of litchi cultivation across 19 Indian states by providing technical support, plants, and training to farmers.

Key Highlights

- **Expansion of Litchi Cultivation:** Litchi cultivation, initially concentrated in specific regions like Bihar, has now spread to 19 states across India. This expansion is attributed to the NRCL's initiatives in providing resources and knowledge to farmers.
- **NRCL's Role:** The NRCL plays a pivotal role by nurturing thousands of litchi saplings in its nursery annually and distributing them to farmers in different states. This includes popular varieties like Shahi litchi, China, Gandki Lalima, Gandki Sampada, and Gandki Yogita.
- **Scientific Basis:** The decision to expand litchi cultivation was grounded in scientific studies that identified suitable soil and climate conditions for successful cultivation in various states.
- **Challenges and Considerations:** Litchi is a sensitive fruit, highly responsive to temperature, rainfall, humidity, and soil conditions. Variations in these factors have affected litchi crops in recent years, impacting fruit quality.
- **Transition to Commercial Production:** While there's a substantial expansion in litchi cultivation, transitioning this growth into full-scale commercial production will take time. Saplings planted in orchards typically require several years before they begin bearing fruit.
- **Geographical Distribution:** Traditionally grown in the Himalayan foothills in states

like Uttarakhand, Bihar, West Bengal, and Jharkhand, litchi cultivation in Bihar alone accounts for nearly 40% of India's total production. Other states, like West Bengal and Jharkhand, also contribute significantly.

- **New Regions and Challenges:** While litchi was previously cultivated in limited areas for non-commercial purposes in states like Odisha, Chhattisgarh, Madhya Pradesh, and Assam, recent initiatives have introduced cultivation in Karnataka and Kerala. However, challenges such as seasonal differences in harvesting in regions like Karnataka compared to the traditional summer harvest in North India exist.
- This expansion signifies a positive trend toward diversifying crop cultivation across India, potentially impacting the overall agricultural landscape and contributing to the fruit's availability in various regions.

Pulses Production in India

- Various representatives of governments, as well as commercial and nonprofit organisations involved in the production and processing of pulses, will attend the Global Pulse Convention to be held in New Delhi in February.
- About Pulses (Details, Climate Requirements, Production in India, Govt. Schemes, etc.)
- Pulses are annual leguminous crops yielding between one and 12 grains or seeds of variable size, shape and color within a pod, used for both food and feed.
- The term "pulses" is limited to crops harvested solely for dry grain, thereby excluding crops harvested green for food, which are classified as vegetable crops.
- Besides serving as an important source of protein for a large portion of the global population, pulses contribute to healthy soils and climate change mitigation through their nitrogen-fixing properties.
- Bengal Gram (Desi Chick Pea / Desi Chana), Pigeon Peas (Arhar / Toor / Red Gram), Green Beans (Moong Beans), Chick Peas (Kabuli Chana), Black Matpe (Urad / Mah / Black Gram), Red Kidney Beans (Rajma), Black Eyed Peas (Lobiya), Lentils (Masoor), White Peas (Matar) are major pulses grown and consumed in India.

Climate Requirement:

- Pulse crops are cultivated in Kharif, Rabi and

Zaid seasons of the Agricultural year.

- Rabi crops require mild cold climate during sowing period, during vegetative to pod development cold climate and during maturity / harvesting warm climate.
- Similarly, Kharif pulse crops require warm climate throughout their life from sowing to harvesting. Summer pulses are habitants of warm climate.
- Seed is required to pass many stages to produce seed like germination, seedling, vegetative, flowering, fruit setting, pod development and grain maturity / harvesting.

Pulses Production in India

- India is the largest producer (25% of global production), consumer (27% of world consumption) and importer (14%) of pulses in the world.
- Pulses account for around 20 per cent of the area under foodgrains and contribute around 7-10 per cent of the total foodgrains production in the country.
- Though pulses are grown in both Kharif and Rabi seasons, Rabi pulses contribute more than 60 per cent of the total production.
- Gram is the most dominant pulse having a share of around 40 per cent in the total production followed by Tur/Arhar at 15 to 20 per cent and Urad/Black Matpe and Moong at around 8-10 per cent each.

Government Programme w.r.t. Pulses in India:

- Department of Agriculture & Farmers Welfare is implementing National Food Security Mission (NFSM)-Pulse.
- It has been launched with the objectives of increasing production through area expansion and productivity enhancement.
- Under NFSM-Pulses, assistance is given through States/UTs to the farmers for interventions like cluster demonstrations on improved package of practices, demonstrations on cropping system, seed production and distribution of HYVs/hybrids, etc.
- In order to increase the productivity potential of pulses crops in the country, the ICAR is undertaking basic and strategic research on these crops.
- The idea is to develop location-specific high yielding varieties and match production packages.

- During 2014-2023, 343 high yielding varieties/hybrids of Pulses have been notified for commercial cultivation in the country.
- Further to ensure remunerative prices to farmers, Government implements an umbrella scheme PM-AASHA comprising Price Support Scheme (PSS), Price Deficiency Payment Scheme (PDPS) and Private Procurement Stockist Scheme (PPSS) in order to ensure Minimum Support Price (MSP) to farmers for their produce of notified oilseeds, pulses and copra.
- During the year 2021-22, a total of 30.31 lakh tonnes of pulses were procured under PSS benefitting 13,90,737 farmers, while during 2022-23 (as on 31.07.2023) 28.33 lakh tonnes of pulses have been procured so far, benefitting 12,43,977 farmers.
- The Global Pulse Convention is scheduled to be held in New Delhi in February.
- The Global Pulse Convention is jointly organised by the National Agricultural Cooperative Marketing Federation of India Ltd. (NAFED) and the Global Pulse Confederation (GPC).
- The conference will see experts in the field sharing their views and experiences with various stakeholders and policymakers.

SISAL PLANT

- A research team at Stanford University has found the absorption capacity of a sisal-based material to be higher than those in commercial menstrual pads.

About Sisal Plant

- It is a xerophytic, monocarp, semi-perennial leaf fibre producing plant.
- The leaves are thick, fleshy and often covered with a waxy layer, typical characteristics of xerophytic plants.
- Its leaves grow up to 2 m long. The lifespan of a sisal plant is about 7-10 years, during which it produces 200-250 usable leaves.
- Each leaf has about a thousand fibres that can be used to make ropes, paper, and cloth.
- It could be used to make a highly absorbed material as well.

GEOGRAPHY

STRAIT OF GIBRALTAR



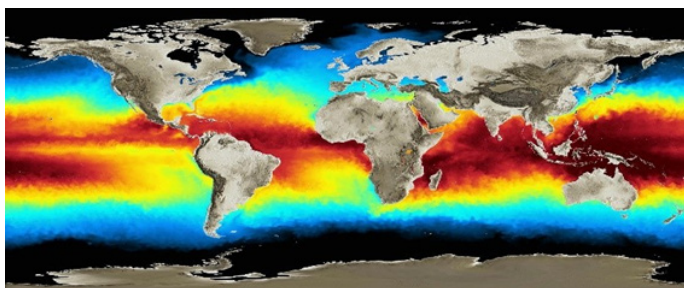
- Iran has threatened to close the Strait of Gibraltar and the Mediterranean Sea unless Israel stops bombing Gaza, as the US warned Tehran was “deeply involved” in attacks on shipping.

About Strait of Gibraltar

- It is a slender canal that links the **Mediterranean Sea to the Atlantic Ocean** and divides Europe from Africa.
- The Strait of Gibraltar was the only route to the Mediterranean Sea until the Suez Canal opened in 1869.
- Its borders are to the **north with Spain** and the British Overseas Territory of Gibraltar, and to the **south with Morocco**, an African nation, and the Spanish exclave of Ceuta.
- At its narrowest point, its length is around 58 km, while its breadth is approximately 13 km.
- It is a substantial chasm that separates the Atlas Mountains of Northern Africa from the high plateau of Spain, with a depth ranging from 300 to 900 metres.
- According to geological research, the African Plate moving northward towards the European Plate is what created the strait.
- It is among the world's **busiest waterways**.
- Every day, roughly 300 ships one every five minutes cross the Strait.
- The **Moroccan port of Tanger-Med**, close to Tangier, is a significant port situated on the strait.
- **Pillars of Heracles:** The easternmost point of the strait, which is roughly 23 km wide, is situated between Mount Hacho, also known as Jebel Moussa, in the south, and the Rock of Gibraltar in the north.
- The Pillars of Heracles are these two

geographical landmarks on the eastern end of the strait.

GLOBAL OCEAN HEAT CONTENT



- The amount of heat stored in the upper 2,000 metres of the global ocean or the ocean heat content reached 286 Zetajoules (ZJ) in 2023 relative to the 1981–2010 average, according to a new study published in *Advances in Atmospheric Sciences*.

Findings

- The 2023 ocean heat content value was 15 ZJ more than the preceding year.
- The 2023 estimate represents around 4.6 billion Hiroshima nuclear bombs.
- Warming in much of the Atlantic, North Pacific, Western Pacific and Southern oceans is occurring at a faster rate than the global average.
- The ocean covers 70 per cent of the planet and absorbs about 90 per cent of the heat from global warming. When the ocean warms, it releases extra heat and moisture into the atmosphere, making storms more severe with heavier rain, with stronger winds and more significant flooding.
- Ocean heat content also plays an essential role in Earth's energy, water, and carbon cycles, and significantly affects human society.
- The 2023 ocean heat content is ranked as **one of the five hottest years of the world's ocean since 1955**. The upper 2,000 m of the world's ocean has warmed on average by 6.6 ± 0.3 ZJ per year from 1958–2023.
- Both ocean heat content and sea level rise are robust indicators of climate change.
- Ocean heat content also plays an essential role in Earth's energy, water, and carbon cycles, and significantly affects human society.

Global Ocean Heat Content (OHC):

- Global Ocean Heat Content (OHC) refers to the total amount of heat stored in the world's oceans.
- It is a crucial indicator of climate change and plays a significant role in understanding the Earth's energy balance.
- The OHC is measured in terms of the amount of heat energy (in joules) absorbed by a unit mass of seawater.

Key Points:

Climate Indicator:

- OHC is a key metric for assessing climate change. Monitoring changes in ocean heat content helps scientists understand how the Earth's climate system is responding to increasing greenhouse gas concentrations.

Warming Trend:

- Over the past few decades, there has been a notable increase in global OHC, indicating a warming trend. The oceans absorb and store much of the excess heat trapped in the atmosphere due to human activities such as the burning of fossil fuels.

Impact on Sea Levels:

- The thermal expansion of seawater due to increased ocean heat content contributes significantly to rising sea levels. This poses a threat to coastal areas and low-lying regions.

Ocean Circulation and Climate Patterns:

- Changes in OHC influence ocean circulation patterns and, consequently, climate variability. Understanding these changes is essential for predicting and adapting to shifts in weather patterns.

Measurement Techniques:

- OHC is measured using a combination of satellite observations, autonomous floats, and ship-based measurements. These technologies provide comprehensive data on temperature variations at different depths and locations.

Deep Ocean Warming:

- Studies indicate that not only the surface waters but also deeper layers of the ocean are experiencing warming. This underscores the significance of OHC as a comprehensive metric for assessing overall oceanic warming.

Thermal Inertia:

- Oceans have a high thermal inertia, meaning they can store and release heat over long periods. This delayed response has implications for long-term climate projections.

Ecosystem Impact:

- Changes in OHC can impact marine ecosystems, affecting the distribution of marine species, coral reefs, and fisheries. Warmer oceans can lead to coral bleaching events and disrupt marine biodiversity.

Global Climate Models:

- OHC data are crucial for validating and improving global climate models. Incorporating accurate information about ocean heat content helps enhance the reliability of climate projections.

International Collaboration:

- Monitoring global OHC requires international collaboration. Organizations such as the Intergovernmental Panel on Climate Change (IPCC) and international research initiatives contribute to the collection and analysis of OHC data.

Mahanadi River Basin

- Overview:
- The state-owned Oil and Natural Gas Corporation (ONGC) recently discovered two significant natural gas reserves in the Mahanadi basin block in the Bay of Bengal.

About Mahanadi River Basin

- It is the 8th largest river basin in the country, with a total catchment area of 139681.51 sq. km, which is nearly 4.28% of the total geographical area of the country.
- The catchment area of the basin extends over major parts of Chhattisgarh and Odisha and comparatively smaller portions of Jharkhand, Maharashtra, and Madhya Pradesh.
- The basin has a maximum length and width of 587 km and 400 km, respectively.
- It is bounded by the Central India hills on the north, by the Eastern Ghats on the south and east, and by the Maikala range on the west.
- Physiographically, the basin can be divided into four regions, namely, the northern plateau, the Eastern Ghats, the coastal plain, and the erosional plains of central table land.

The first two are hilly regions.

The coastal plain is the delta area, which is highly fertile.

The central tableland is the central interior region of the basin, traversed by the river and its tributaries.

- The basin receives about 90% of its rainfall during the monsoon season.
- The major part of the basin is covered with agricultural land, accounting for 54.27% of the total area, and 4.45% of the basin is covered by water bodies.
- The main soil types found in the basin are red and yellow soils.

Key Facts about Mahanadi River

- It is one of the major east-flowing peninsular rivers in India.
- Origin: The river originates from the Sihawa range of hills in the Dhamtari district of Chhattisgarh state.
- It ranks second to the Godavari River among the peninsular rivers in respect of water potential.
- The total length of the river from origin to its outfall into Bay of Bengal is 851 km of which 357 km lies in Chhattisgarh and 494 km in Odisha.
- Tributaries: The Seonath, the Hasdeo, the Mand, and the Ib join Mahanadi from left, whereas the Ong, the Tel, and the Jonk join it from right.
- Hirakud Dam: The Hirakud Dam, the world's longest earthen dam (26km), is constructed across the Mahanadi River, about 15 km from Sambalpur in Odisha.
- Chilika Lake: Chilika, named wetland of international importance under the Ramsar Convention, gets 61% of its inland flow from the Mahanadi River system, mainly from its tributaries, Daya and Bhargabi.

INTERNATIONAL RELATIONS

EXERCISE DESERT CYCLONE

- The Joint Military Exercise 'Desert Cyclone 2024' between India and UAE will be held from January 2 to January 15 in Rajasthan.

About Exercise 'Desert Cyclone':

- It is the inaugural edition of joint military exercise "Desert Cyclone 2024" between India and the United Arab Emirates (UAE).
- The exercise aims to enhance interoperability by learning & sharing best practices in Urban Operations.
- This exercise is marking a significant milestone in the strategic partnership.

Key facts about India and UAE relations

- India and the UAE established diplomatic relations in 1972 and UAE opened its Embassy in Delhi in 1972 whereas, India opened its Embassy in Abu Dhabi in 1973.
- The first-ever India-UAE Joint Air Forces exercise took place in September 2008 at the Al-Dhafra base in Abu Dhabi.
- India has also been a regular participant at the biennial International Defence Exhibition (IDEX) in Abu Dhabi.
- Earlier this year, two ships of the Indian Navy, INS Visakhapatnam, and INS Trikanth participated in bilateral exercise 'Zayed Talwar' with the UAE to enhance interoperability and synergy between the two navies.

AGREEMENT ON THE PROHIBITION OF ATTACK AGAINST NUCLEAR INSTALLATIONS AND FACILITIES

- India and Pakistan exchanged the list of nuclear installations and facilities through diplomatic channels recently under the agreement on the Prohibition of Attack against Nuclear installations and facilities.
- About Agreement on the Prohibition of Attack against Nuclear Installations and Facilities:
- It was signed on December 31, 1988, by the then Pakistani Prime Minister Benazir Bhutto and Indian PM Rajiv Gandhi.
- The treaty came into force on January 27, 1991, and has two copies each in Urdu and Hindi.

Need for the Agreement:

- In 1986, the Indian army carried out a massive exercise 'Brasstacks', raising fears of an attack on nuclear facilities.
- Since then, both countries have been negotiating to reach an understanding towards the control of nuclear weapons, which culminated in the treaty.

Provisions:

- The agreement mandates both countries to inform each other about any nuclear installations and facilities to be covered under the agreement on the first of January of every calendar year, providing a confidence-building security measure environment.
- The term 'nuclear installation or facility' includes nuclear power and research reactors, fuel fabrication, uranium enrichment, isotopes separation, and reprocessing facilities, as well as any other installations with fresh or irradiated nuclear fuel and materials in any form and establishments storing significant quantities of radioactive materials.

Eurozone

- The eurozone economy is set for only modest growth next year, despite wages rising faster than inflation for the first time in three years, according to a recent poll of economists.



About Eurozone:

- The eurozone, officially known as the euro area, is a geographic and economic region that consists of all the European Union countries that have fully incorporated the euro as their national currency.
- As of January 2023, the eurozone consists of 20 countries in the European Union (EU):
- Austria, Belgium, Croatia, Cyprus, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Portugal, Slovakia, Slovenia, and Spain.
- Not all European Union nations participate

in the eurozone; some opt to use their own currency and maintain their financial independence.

- The European Central Bank (ECB) exercises the sole power to set the monetary policy for the Eurozone countries.
- The ECB exercises the sole authority to decide the printing and minting of euro notes and coins. It also decides the interest rate for the Eurozone.
- The ECBs is headed by a president and a board, comprising the heads of the central banks of the participating nations.

How do countries join Eurozone?

- In order to join the euro area, EU member states are required to fulfil so-called 'convergence criteria' which consists of price stability, sound public finances, the durability of convergence, and exchange rate stability.
- These binding economic and legal conditions were agreed upon in the Maastricht Treaty in 1992 and are also known as 'Maastricht criteria'.
- All EU Member States, except Denmark, are required to adopt the euro and join the euro area once they are ready to fulfill them.
- The Treaty does not specify a particular timetable for joining the euro area but leaves it to member states to develop their own strategies for meeting the condition for euro adoption.
- The European Commission and the ECB jointly decide whether the conditions are met for euro area candidate countries to adopt the euro.

What is European Union (EU)?

- The EU is a political and economic union of 27 member states located primarily in Europe.
- The EU was established by the Maastricht Treaty, which entered into force on November 1, 1993.
- The main goal of the EU is to promote cooperation and integration among its member states in order to enhance economic and political stability in Europe.
- It has a single market where goods, services, and capital can move freely.

SALTON SEA



- Under California's Salton Sea, the U.S. Department of Energy has recently found the greatest lithium resource in the world.

About Salton Sea

- It is a saltwater lake that is shallow and situated in southern California's lower Colorado Desert.
- It is a geological depression that is below sea level and nestled between mountain ranges.
- **Formation:** Until 1905–06, when diversion controls on the Colorado River broke a few miles below the California–Mexico border, the area that is now the lake was a salt-covered sink or depression (a remnant of prehistoric Lake Cahuilla) about 280 feet (85 metres) below sea level.
- Floodwaters rushed northward, filling the depression.
- A series of protective levees was constructed in 1907, which prevented the sink from becoming deeper in the future.
- As of right now, it is 228 feet below sea level.
- It has 130 miles of shoreline spread across an area of 970 square km.

Key information about lithium:

- It is a soft, silvery-white metal that is the head of group 1 (the alkali metals group) of the periodic table of elements.
- Its characteristics include having the lowest density of all metals, being the lightest of all solid elements, reacting violently with water, and having a body-centered cubic crystal structure.
- **Occurrence:** Although lithium is not found in nature as a metal, it is found in small amounts in igneous rocks, brine deposits, and as salts in mineral springs.
- Its concentration in seawater is 0.1 parts per million (ppm).
- **Uses:** Lithium is important in rechargeable batteries for cell phones, laptops, digital cameras, and electric vehicles.

NICARAGUA



- At least 20 passengers from Gujarat who were on the Nicaragua-bound flight, which was pulled back mid-route from France recently, were questioned by the authorities in an attempt to expose a potential illegal immigration network.

About Nicaragua

- It is the largest of the Central American republics and a country in the region.
- Borders: Honduras to the north and Costa Rica to the south encircle the nation.
- The country's eastern border is shared by the Caribbean Sea while its western border is provided by the Pacific Ocean.
- History: It was the only Latin American nation to have experienced simultaneous Spanish and British colonisation.
- After gaining independence from Spain in 1821, it spent a number of years as a part of the Mexican Empire.
- Then it joined the Provinces of Central America, a confederation of neighbouring nations centred on Guatemala City.
- In 1838, Nicaragua broke away from the group and attained complete independence.

Form of Government:

- It is a Republic. The president is elected by popular vote for a five-year term.
- Power is divided among four governmental branches: the executive, legislative, judicial, and Supreme Electoral Council.
- Capital: Managua
- Official Languages: Spanish, English, indigenous languages
- Currency: Nicaraguan córdoba (NIO)

Population:

- It is made up mostly of mestizos (people of mixed European and indigenous ancestry).
- Most people live in the western Pacific lowland region between the Pacific coast and Lake Managua.

CARBON BORDER ADJUSTMENT MECHANISM (CBAM)

- India recently flagged concerns relating to sensitive and confidential trade data of its exporters getting compromised while complying with the European Union's Carbon Border Adjustment Mechanism (CBAM).

About Carbon Border Adjustment Mechanism (CBAM)

- What is it? It is a proposed European Union (EU) tariff on carbon-intensive products.
- Purpose: To put a fair price on the carbon emitted during the production of carbon intensive goods that are entering the EU and to encourage cleaner industrial production in non-EU countries.
- It was adopted on May 17, 2023, and the CBAM transitional period started October 1, 2023.
- It is designed to counter the risk of carbon leakage and operates by imposing a charge on the embedded carbon content of certain imports that is equal to the carbon price of domestic production.

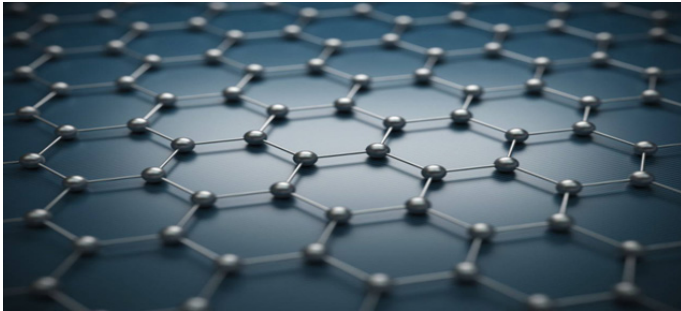
How does it Work?

- If implemented as planned, EU importers will have to buy carbon certificates corresponding to the carbon price that would have been paid in the EU if the goods had been produced locally.
- The price of the certificates would be calculated according to the auction prices in the EU carbon credit market.
- The amount of certificates required would be defined yearly by the quantity of goods and the embedded emissions in those goods imported into the EU.
- Companies in countries with a domestic carbon pricing regime equivalent to the EU's will be able to export to the EU without buying CBAM certificates.

SCIENCE AND TECHNOLOGY

GRAPHENE

- Researchers recently created the world's first functional semiconductor made from graphene.



- Graphene is a one-atom-thick layer of carbon atoms arranged in a hexagonal lattice.
- It is the building-block of Graphite (which is used, among other things, in pencil tips).
- It was first isolated in 2004.

Properties:

- Graphene is the world's thinnest material; it is only one atom thick, one million times thinner than human hair.
- However, it is very strong, stronger than steel and diamond.
- It is an excellent conductor of heat and electricity. It conducts electricity better than copper.
- It is almost perfectly transparent, as it absorbs only 2% of light.
- It is impermeable to gases, even those as light as hydrogen and helium.

Applications:

- Mechanical strength: It can be used to enhance the strength of other materials.

Thermal applications:

- It is a great material for making heat-spreading solutions, such as heat sinks or heat dissipation films.
- This could be useful in both microelectronics (for example, to make LED lighting more efficient and longer-lasting) and in larger applications, for example, thermal foils for mobile devices.

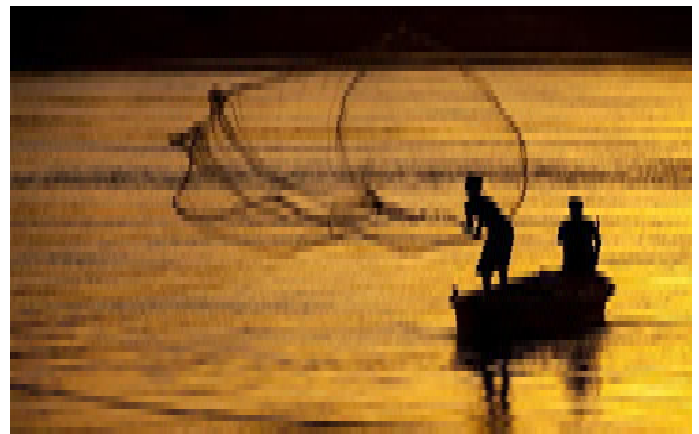
Energy storage:

- Since graphene is the world's thinnest material, it also has an extremely high

surface-area-to-volume ratio. This makes graphene a very promising material for use in batteries and supercapacitors.

- Graphene may enable batteries and supercapacitors (and even fuel cells) that can store more energy and charge faster, too.
- It has a lot of promise for additional applications: anti-corrosion coatings and paints, efficient and precise sensors, faster and more efficient electronics, flexible displays, efficient solar panels, faster DNA sequencing, drug delivery, and more.

DISTRESS ALERT TRANSMITTER



- Indian Space Research Organisation (ISRO) has developed an improvised Distress Alert Transmitter (DAT) with advanced capabilities and features for the fishermen at sea to send emergency messages from fishing boats.

Details

Evolution

- The first version of DAT has been operational since 2010. Using this information, the MRCC coordinates to undertake search and rescue operations to save the fishermen in distress. Till now, more than 20,000 DATs are being used.

How does it work

- It is an indigenous technological solution namely Distress Alert Transmitter (DAT) for the fishermen at sea to send emergency messages from fishing boats.
- The messages are sent through a communication satellite and received at a central control station (INMCC: Indian Mission Control Centre) where the alert signals are decoded for the identity and location of the fishing boat.
- The extracted information is forwarded to

Maritime Rescue Co-ordination Centres (MRCCs) under Indian Coast Guard (ICG).

The second generation

- Further, taking advantage of technological developments in satellite communication and satellite navigation ISRO has improvised DAT with advanced capabilities and features evolving to Second Generation DAT (DAT-SG).
- **Acknowledgement:** The DAT-SG has the facility to send back acknowledgement to the fishermen who activates the distress alert from sea. This gives an assurance to him of rescue coming to him.
- **Real Time Information:** Apart from transmitting distress signal from Sea, DAT-SG has the capability to receive messages from control centre. Using this, advance alert messages can be sent to the fishermen at sea whenever there are events of bad weather, cyclone tsunami or any other emergencies. Thus, the fishermen will be able to sail back home or go to safe places.
- Further, the information about Potential Fishing Zones (PFZs) are also transmitted to fishermen using DAT-SG on regular intervals. This helps fishermen to get good yield in the catch and savings in terms of time and fuel.
- DAT-SG can be connected to mobile phones using Bluetooth interface and the messages can be read in native language using an App in the mobile.
- The central control centre (INMCC) has a web based network management system called "SAGARMITRA" which maintain a database of registered DAT-SGs and helps MRCCs to access the information about boat, coordinate the boat at distress in real time.
- This helps Indian Coast Guard to undertake Search & Rescue operations at the time of distresses, without any time delay.
- The services of DAT-SG has been declared operational on a 24 x 7 basis.

Initiatives for Fisherman's safety

- 'Nabhmitra' stands as an innovative satellite-based communication system. It facilitates seamless two-way messaging services, connecting fishing vessels with onshore authorities and control centers.
- GEMINI is a portable receiver that is linked

to ISRO-satellites. With this device, the fishermen outside the signal range of their phone companies (i.e. 10-12 km) can also access warnings and alerts, as the device can send signals up to 300 nautical miles.

VIPER ROVER

- NASA is inviting people to send their names to the surface of the Moon aboard the agency's first robotic lunar rover, VIPER – short for Volatiles Investigating Polar Exploration Rover.
- The rover will embark on a mission to the lunar South Pole to unravel the mysteries of the Moon's water and better understand the environment where NASA plans to land the first woman and first person of color under its Artemis program.

Details

Mission Overview

- **Objective:** VIPER aims to prospect and map lunar resources, especially water ice, in the Moon's South Pole region.
- **Development:** Developed by NASA's Ames Research Center, VIPER is part of the Lunar Discovery and Exploration Program.

Mission Timeline

- **Launch Date:** VIPER is scheduled to be delivered to the Moon's surface in November 2024.
- **Launch Vehicle:** SpaceX's Falcon Heavy will carry Astrobotic's Griffin lander, delivering VIPER as part of NASA's Commercial Lunar Payload Services (CLPS) initiative.

Landing Site

- **Location:** VIPER will operate on the western edge of Nobile crater on Mons Mouton in the Moon's South Pole region.
- **Terrain Exploration:** The rover will traverse various soil environments affected by light and temperature variations, collecting crucial data.

Scientific Payload

- VIPER is equipped with a suite of scientific instruments to carry out its objectives:
- **Neutron Spectrometer System (NSS):** Detects sub-surface water from a distance, guiding drilling locations.
- **Regolith and Ice Drill for Exploring New**

Terrain (TRIDENT): A 1-meter drill for obtaining subsurface samples.

- **Near InfraRed Volatiles Spectrometer System (NIRVSS):** Analyzes mineral and volatile composition, distinguishing water molecules from hydroxyl.

Cost and Management

- **Cost Estimate:** The mission's estimated cost is \$433.5 million, emphasizing its scientific significance and technological complexity.
- **Project Management:** NASA's Ames Research Center manages the VIPER project, with contributions from Johnson Space Center, Kennedy, and Honeybee Robotics.

Scientific Background

- **Lunar Water:** Data from previous lunar missions indicates the presence of water in various forms, especially in permanently shadowed craters.
- **Resource Utilization:** VIPER's findings on water distribution and form are crucial for potential resource extraction for future space exploration endeavors.
- **Artemis Program Integration:** VIPER aligns with NASA's Artemis program, contributing vital data for planned crewed missions to the Moon.
- **Resource Utilization Potential:** Successful extraction of water molecules could open avenues for propellant production and other space-based applications.

New Generation Akash missile

- Defence Research and Development Organisation (DRDO) conducted a successful flight-test of the New Generation AKASH (AKASH-NG) missile from the Integrated Test Range (ITR), Chandipur off the coast of Odisha.
- It is surface-to-air new generation missile.
- The missile intercepted the high-speed unmanned aerial vehicle at a very low altitude.
- The test has validated the functioning of the complete weapon system consisting of a missile with an indigenously developed radio frequency seeker, launcher, multi-function radar and command, control and communication system.
- This was the first trial of the missile against a live target, which was successfully

intercepted and destroyed.

Features

- It is a new generation state-of-the-art surface-to-air missile (SAM) for the Indian Air Force (IAF) to destroy high manoeuvring low radar cross section agile aerial threats.
- This advanced variant comes with an active electronically scanned array (AESA) multi-function radar that features all three functions - search, track and fire control in one platform.
- It can defend an area 10 times better compared to any short-range SAM and is capable of engaging up to 10 targets simultaneously.
- It can strike targets up to 40 km as against the earlier variant's maximum range of 30 km.

CENTRE SET TO ROLL OUT VACCINE DRIVE TO FIGHT CERVICAL CANCER

- The government is set to roll out a human papillomavirus (HPV) vaccination campaign for girls in the 9-14 years age group.
- It is a significant step which has potential to reduce the incidence of cervical cancer in India.

Cervical cancer

- Almost all cervical cancer cases are linked to certain strains of HPV, a common virus that is transmitted through sexual contact.
- The body's immune system usually gets rid of the HPV infection naturally within two years.
- However, in a small percentage of people the virus can linger over time and turn some normal cells into abnormal cells and then cancer.
- It is preventable as long as it is detected early and managed effectively.

Prevalence

- Cervical cancer is the second most common cancer type and the second leading cause of cancer death in women of reproductive age (15-44) worldwide.
- According to the World Health Organization's International Agency for Research on Cancer (IARC-WHO), India accounts for approximately one-fifth of the global burden.

- India witnesses 1.25 lakh cases and approximately 75,000 deaths each year (one woman every eight minutes).
- About 83 per cent of invasive cervical cancer cases are attributed to HPV 16 or 18 in India.
- Prevention
- Cervical cancer screening and vaccination are two effective preventive measures.
- There is still little awareness among women about this cancer prevention, and less than 10% of Indian women are screened.
- All women aged 30-49, regardless of symptoms, should be screened for cervical cancer and their adolescent daughters vaccinated against HPV.
- Vaccination drive planned in three phases over three years
- The immunisation drive, planned in three phases over three years.
- Every year for three years, one-third of girls aged 9 to 14 will get vaccinated.
- Also, in states where this happens, each new group of 9-year-olds will receive the vaccine during these three years.
- Vaccines to be available for free
- Currently, the two-dose HPV vaccine is available commercially for about Rs 2,000 per dose.
- But once the government includes it in its immunisation programme, it will be available for free.
- Vaccine to be use in the immunisation drive
- Cervavac, an indigenously developed quadrivalent vaccine by the Serum Institute of India (SII) in Pune, will be used for this drive.

Cervavac offers protection against four HPV strains – 16, 18, 6 and 11.

- Besides CERAVAC, two vaccines licensed globally are available in India;
- A quadrivalent vaccine (Gardasil, marketed by Merck) and
- A bivalent vaccine (Cervarix, marketed by Glaxo Smith Kline).
- These vaccines are costly and hence are unaffordable for the vast majority of Indians.

Place of vaccination

- The immunisation drive will be conducted

through schools and existing vaccination points.

- Single dose vaccination drive
- While none of the HPV vaccines available globally recommend a single-dose schedule, the World Health Organisation says that a single-dose regimen can be followed for public health programmes.

Challenges

- Production for public vaccination
- At present, SII has a production capacity of about 2-3 million doses of Cervavac per year.
- However, it needs to increase this capacity, with a target of 60-70 million doses.

Allocation of resources

- The biggest task will be in allocating adequate resources and manpower for vaccinating the massive demographic of adolescent girls aged between 9 and 14.

Awareness

- There is a huge need for stepping up awareness about the disease and the vaccine in the community.
- Unlike Covid and the vaccination programme, there is very little awareness about cervical cancer.
- There is an urgent need to have a communication strategy in place and to ensure that any myths circulating online are promptly busted.

FOG PASS DEVICES

- Recently, to ensure smooth rail operations, Indian Railways have provisioned 19,742 Fog Pass Devices during the foggy weather.
- It is a GPS based navigation device that helps the loco pilot to navigate during dense fog conditions.
- It provides on-board real-time information (Display as well as voice guidance) to Loco Pilots regarding location of fixed landmarks such as Signal, Level Crossing gate (Manned & Unmanned), Permanent Speed Restrictions, Neutral Sections etc.
- It displays approach indications of next three approaching fixed landmarks in geographical order accompanied with voice message approximately 500m on approach.

General features of Fog Pass Device

- Suitable for all types of sections like single line, double line, electrified as well as non electrified sections.
- Suitable for all types of electric and diesel locomotives, EMUs/MEMUs/ DEMUs.
- Suitable for train speeds up to 160 KMPH.
- It has built-in re-chargeable battery back-up for 18 hrs.
- It is portable, compact in size, light in weight (not more than 1.5 Kg including battery) and of robust design.
- Loco Pilot can carry the device easily with him to the locomotive on resuming his duty.
- It can be easily placed on the cab desk of locomotive.
- It is a standalone system.
- It is unaffected by weather conditions like Fog, Rain or Sunshine.

PRITHV

- The Ministry of Earth Sciences (MoES) has launched a new scheme called "PRITHVi Vigyan (PRITHVI)" to advance the scientific understanding and prediction of various aspects of the Earth system.
- The scheme will integrate five existing sub-schemes of MoES, namely:

ACROSS: Atmosphere & Climate Research-Modelling Observing Systems & Services

O-SMART: Ocean Services, Modelling Application, Resources and Technology

PACER: Polar Science and Cryosphere Research

SAGE: Seismology and Geosciences

REACHOUT: Research, Education, Training and Outreach

ACROSS

- It is a comprehensive program that covers atmospheric science, climate change, weather forecasting, air quality and aerosol research.
- The main objectives of ACROSS are to improve the accuracy and reliability of weather and climate predictions, to understand the causes and consequences of climate variability and change, to monitor and assess air quality and its impact on health and the environment, and to develop

and deploy state-of-the-art observing systems for atmospheric research.

O-SMART

- It is a multidisciplinary program that covers ocean observation, modelling, services, resources, technology and capacity building.
- The main objectives of O-SMART are to provide timely and accurate ocean information and advisory services for various sectors such as fisheries, navigation, coastal management, disaster management and security, to explore and harness the ocean resources such as minerals, energy and biotechnology, to develop and deploy cutting-edge ocean technology for observation, exploration and exploitation, and to enhance the human resource development and international cooperation in ocean science and technology.

PACER

- It is a focused program that covers the scientific exploration and research in the Polar Regions (Arctic and Antarctic) and the cryosphere (glaciers and snow).
- The main objectives of PACER are to understand the role of polar regions and cryosphere in the global climate system, to assess the vulnerability and resilience of polar ecosystems and biodiversity, to study the geology, geophysics and geochemistry of the polar regions, to monitor and model the changes in the cryosphere and their impact on water resources and sea level rise, and to participate in the international scientific collaborations and governance of the polar regions.

SAGE

- It is a specialized program that covers seismological research and earthquake hazard mitigation.
- The main objectives of SAGE are to improve the seismic monitoring network and data analysis, to understand the seismicity and tectonics of the Indian subcontinent and its surroundings, to estimate the seismic hazard and risk for various regions of India, to develop earthquake early warning systems and preparedness measures, and to promote public awareness and education on earthquake safety.

REACHOUT

- It is a cross-cutting program that covers the

dissemination of scientific knowledge and applications of earth sciences to various stakeholders such as students, teachers, researchers, policymakers, media and the public.

- The main objectives of REACHOUT are to enhance the quality and quantity of human resources in earth sciences through various schemes such as fellowships, scholarships, internships, training programs etc., and to create a culture of innovation and entrepreneurship in earth sciences through various platforms such as incubation centres, hackathons, challenges etc., to communicate the scientific achievements and societal benefits of earth sciences through various media such as publications, documentaries, exhibitions etc., and to foster national an
- MoES is responsible for providing services for weather, climate, ocean and coastal state, hydrology, seismology, and natural hazards; exploring and harnessing marine living and non-living resources in a sustainable manner for the country; and exploring the three poles of the Earth (Arctic, Antarctic and Himalayas). These services include weather forecasts (both on land and in the Oceans) and warnings for various natural disasters like tropical cyclones, storm surges, floods, heat waves, thunderstorms and lightning; alerts for Tsunamis and monitoring of earthquakes.

PHOTOCATAYLST

- Researchers at the Indian Institute of Science Education and Research (IISER), Bhopal, have pioneered a groundbreaking advancement in photocatalysis by creating a potent and sustainable material named UC-POP-Au.
- This novel photocatalyst, combining upconversion nanoparticles and gold nanoparticles within a UV-absorbing porous organic polymer, exhibits exceptional capabilities in harnessing solar energy for chemical processes, specifically targeting the detoxification of hazardous substances like chemical warfare agents.

UC-POP-Au Photocatalyst

- Full Spectrum Light Absorption: UC-POP-Au demonstrates a remarkable ability to absorb the entire spectrum of light, unlike traditional

photocatalysts that only utilize UV or high-energy light segments. This property significantly enhances its catalytic efficiency in chemical reactions under sunlight.

- Detoxification of Mustard Gas Simulant: The material has displayed impressive efficiency in detoxifying mustard gas simulants, such as '2-chloroethyl ethyl sulfide' (CEES), a highly toxic chemical warfare agent. Under direct sunlight, UC-POP-Au exhibited superior performance in breaking down CEES, showcasing its potential in combating chemical threats.
- Composition and Application: The composition of UC-POP-Au, integrating near-infrared absorbing upconversion nanoparticles and visible light absorbing gold nanoparticles within a UV-absorbing porous organic polymer, contributes to its catalytic efficacy.
- Real-World Applications: in designing protective coatings against chemical warfare agents under natural sunlight conditions. Its successful utilization on cotton cloth to detoxify mustard gas simulants exemplifies its practicality.
- Reusability and Sustainability: UC-POP-Au demonstrates reusability, retaining its catalytic activity over multiple cycles. This sustainability aspect distinguishes it from other catalysts that lack the ability to be collected and reused.

E-SOIL



- The development of an "electronic soil" (Soil) by researchers has demonstrated significant potential in enhancing crop growth, particularly in the context of hydroponic cultivation methods.

Key points from the research

Enhanced Growth with eSoi

- The ESoil, developed by the Electronic Plants

group at Linköping University, stimulated root systems and led to a 50% increase in the growth of barley seedlings.

Nature of ESoil

- It's tailored for hydroponic cultivation, a method of growing plants without soil using a water-based nutrient solution.
- Unlike non-biodegradable mineral wools often used in hydroponics, eSoil is composed of cellulose mixed with a conductive polymer called PEDOT. This combination is novel for plant cultivation.

Impact on Growth

- The study showed that the electrical stimulation via eSoil promotes better growth rates in barley seedlings cultivated through hydroponics.
- It's observed that seedlings process nitrogen more effectively, but the precise biological mechanisms influenced by electrical stimulation are yet to be fully understood.

Potential Benefits

- The researchers suggest that while eSoil might not solely solve global food security issues, it could be beneficial in areas with limited arable land and challenging environmental conditions. The method's controlled settings might facilitate food growth in urban environments.
- The potential to grow seedlings faster and with fewer resources through eSoil indicates promising possibilities for addressing agricultural challenges in resource-scarce environments.

What is electronic soil?

- Electronic soil, or ESoil, is a novel cultivation substrate that can enhance the growth of plants by electrically stimulating their root systems.
- It is designed for soilless farming, also known as hydroponics, which uses water and nutrients instead of soil to grow crops.
- eSoil is made of cellulose and a conductive polymer called PEDOT, which are both biodegradable and environmentally friendly materials.

Features of electronic soil

- It uses low energy and minimises resource consumption. It only requires a small voltage to activate the electrical stimulation, which

can be powered by renewable sources such as solar panels or batteries.

- It is compatible with various crops, including grains, which are usually not grown hydroponically. It can also be used for vertical farming, which maximises the use of space and reduces land use.
- **It is safe and effective. It does not harm the plants or the environment** and it can boost the growth rate of plants by up to 50% in 15 days.

Significance of electronic soil

- eSoil has many potential benefits for the world, especially in the face of growing challenges such as population growth, climate change, food insecurity, and environmental degradation. Some of them are:
- It can increase food production and quality.
- It can produce more crops in less time and space, with less water and nutrients.
- It can improve the nutritional value and taste of the crops.
- It can reduce environmental impact and pollution.
- It can save water and prevent nutrient leaching, which can contaminate groundwater and cause eutrophication.
- It can reduce greenhouse gas emissions and soil erosion, which are associated with conventional farming.
- It can promote urban agriculture and food security.
- It can enable people to grow their food in urban areas, where land is scarce and expensive.
- It can provide fresh and local food to consumers, reducing transportation costs and carbon footprint.

Conclusion

- The development of eSoil represents a promising step towards improving crop cultivation methods, particularly in environments where traditional agriculture might be limited. It presents an opportunity to optimize growth and resource utilization, offering potential benefits for future agricultural practices.

ART AND CULTURE

NAGARA STYLE

- The Ram temple in Ayodhya will be inaugurated on January 22. The complex is in the Nagara style of temple architecture, designed by 81-year-old Chandrakant Sompura and his 51-year-old son Ashish.



About the Nagara style:

- Nagara architecture is a classical architecture of temple design in northern India, contrasted with Dravida architecture in southern India.
- Nagara temples have a shikhara (mountain peak) over the garbha griha (sanctum sanctorum), a circumambulatory passage around it, and one or more mandapas (halls).
- Shikhara is a symbolic representation of the cosmic order and the divine presence.

There are five modes of shikhara design: Valabhi, Phamsana, Latina, Shekhari, and Bhumija.

- Valabhi and Phamsana are Early Nagara modes, derived from barrel-roofed wooden structures.
- Latina is a single, slightly curved tower with four equal sides, dominant for three centuries.
- Shekhari and Bhumija are composite Latinas with attached sub-spires or miniature spires, creating a complex and ornate appearance.
- These modes are scholastic classifications, not rigid categories. There is much variation and innovation within and across these modes.

CLASSICAL LANGUAGES OF INDIA

- External Affairs Minister S Jaishankar declared that the Government of India has chosen to include Farsi (Persian) as one of the nine classical languages in India under the New Education Policy.

Details

- This decision aims to deepen cultural ties and recognizes the cultural, literary, and linguistic connections between Iran and India.
- The announcement took place during Jaishankar's two-day visit to Iran, and he made the statement at a joint press conference with his Iranian counterpart, H Amir-Abdollahian.
- According to India's National Education Policy-2020, in addition to the recognized classical languages, Pali, Persian, and Prakrit, along with their literary works, must be preserved for their richness and for the pleasure and enrichment of posterity.

Classical Languages of India

- The Indian classical languages, known as Shastriya Bhasha, collectively represent languages in India with ancient origins and a distinguished literary heritage.
- The official recognition of a language as "Classical" in India is a result of stringent criteria established by the Government of India in 2004.

About Bhils

- The Bhil community is an indigenous ethnic group primarily located in the western regions of India.

Ethnic Background and Geographical Distribution

- **Ethnicity:** Bhils belong to a tribal group outside the traditional Hindu caste system. They speak the Bhil languages, which is a subgroup of the Western Zone of the Indo-Aryan languages.
- **Geographical Distribution:** The Bhil community resides in several states, including Gujarat, Madhya Pradesh, Chhattisgarh, Maharashtra, Rajasthan, Bengal, and Tripura. They inhabit forested and hilly regions, showcasing a strong connection to their environment.

Etymology and Historical References

- **Etymology:** The term "Bhil" is suggested to originate from words such as "billa" or "billu," signifying "bow" in the Dravidian lexicon. It references the communities' association with forests and hills, where the bow and arrow were prevalent weapons.
- **Historical References:** Bhil Kings have been mentioned in ancient texts like the Mahabharata, indicating their historical presence in regions like Malwa and Central India from ancient times until 325 B.C. They controlled substantial territories before Rajput conquests.

Socio-Political Movements and Struggles

- **Against Colonial Rule:** The Bhil community resisted British colonial rule and faced several rebellions, notably in the mid-1800s. The British labeled them as a criminal tribe under the Criminal Tribes Act 1871, leading to persecution and marginalization.
- **Mutinies and Protests:** Over the years, Bhils protested against unjust taxation, forced labor, and cultural restrictions. Leaders like Govind Guru and Motilal Tejawat played pivotal roles in advocating for their rights.

Demographics and Social Status

- **Population and Classification:** Bhils are the largest tribal group in India and are officially classified as a Scheduled Tribe in various states under the Indian government's positive discrimination program.
- **Sub-divisions:** The Bhil community comprises various endogamous territorial divisions, each with its distinct clans and lineages, seen in Rajasthan as Bhil Garasia, Dholi Bhil, Dungri Bhil, among others.

Language, Culture, and Traditions

- Bhilis predominantly speak Bhili, encompassing around 36 identified dialects influenced by regional languages like Gujarati, Marathi, and Rajasthani.
- Their culture is diverse, featuring Pithora painting and Ghoomar dance as notable art forms.
- Their cuisine includes maize, onion, garlic, and chili, with traditional clothing, ornamentation, and religious beliefs enriching their heritage.

WORLD HERITAGE COMMITTEE

- In a historic milestone, India is set to take the reins as the chair of UNESCO's World Heritage Committee for the very first time.

About World Heritage Committee

- It is a committee of the United Nations Educational, Scientific, and Cultural Organization.
- The Committee is responsible for the implementation of the World Heritage Convention, defines the use of the World Heritage Fund, and allocates financial assistance upon requests from States Parties.
- It has the final say on whether a property is inscribed on the World Heritage List.
- It examines reports on the state of conservation of inscribed properties and asks States Parties to take action when properties are not being properly managed.
- It also decides on the inscription or deletion of properties on the List of World Heritage in Danger.

Structure:

- It consists of representatives from 21 of the States Parties to the Convention elected by their General Assembly.
- A Committee member's term of office is six years, but most state parties choose voluntarily to be members of the committee for only four years in order to give other states parties an opportunity to be on the committee.

Bureau of the World Heritage Committee:

- The Bureau consists of seven states parties elected annually by the Committee: a Chairperson, five Vice-Chairpersons, and a Rapporteur.
- The Bureau of the Committee coordinates the work of the Committee and fixes the dates, hours, and order of business of meetings.

PRACTICE QUESTIONS

1) With reference to the Legislative Assembly of a State in India, consider the following statements:

1. At the beginning of the first session of the year, the Governor addresses the members of the House.
2. When the State Legislature does not have any rule on a specific subject, then it follows the rule of the Lok Sabha on that subject.

Which of the above statements is/are correct?

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

Answer: C

Explanation:

According to Article 176 (1), the Governor shall, at the beginning of the first session after every general election to the Legislative Assembly and at the beginning of the first session of every year, address the Legislative Assembly or, in the case of a State having a Legislative Council, both Houses assembled together. Hence statement 1 is correct.

According to Article 208 (1), subject to the provisions of the Constitution, any House of the Legislature of a State (Assembly or Legislative Council) may make rules for regulating its procedure and the conduct of its business. Under Article 209, the Legislature of the State can by law regulate the procedure and conduct of business of the House/Houses related to any financial subject for the purpose of timely completion of financial business. Also, when the State Legislature does not have any rule on a specific subject, it follows the rule of the Lok Sabha on that subject. Hence statement 2 is correct.

2) Under which one of the following articles of the Indian Constitution can the Governor reserve a bill for the consideration of the President?

- A: Article 169
- B: Article 200
- C: Article 201
- D: Article 204

Answer: B

Explanation:

According to Article 200, when a bill passed by both the Houses of the State Legislature is presented before the Governor, the Governor can reserve the bill for the consideration of the President in addition to giving or withholding his assent to it. According to Article 201, when a Bill is reserved by the Governor for the consideration of the President, the President shall declare whether he assents to the Bill or withholds the assent.

3) Kalaram Temple, recently seen in news, is located in which of the following states?

- A: Madhya Pradesh
- B: Maharashtra
- C: Gujarat
- D: Rajasthan

Answer: B

Explanation:

Recently, the Prime Minister of India visited the Kalaram Mandir situated in Nasik district of Maharashtra.

The Kalaram temple derives its name from a black statue of the Lord - Kala Ram translates literally to "Black Ram". Kala Ram Temple is situated on the banks of the Godavari River in Panchvati area of Maharashtra. The name Panchavati comes from the existence of five banyan trees in the area. The temple is also the site of a land mark agitation led by Babasaheb Ambedkar, demanding temple entry rights for Dalits more than 90 years ago. The temple was built in 1792 with the efforts of one Sardar Rangarao Odhekar. Hence, option (b) is correct.

4) India's centre-state relations are affected by-

- 1. The provisions of the Constitution
- 2. The process of planning
- 3. Conflict of political interests

Select the correct answer using the code given below:

- A: Only 1
- B: Only 2
- C: Both 1 and 2
- D: 1, 2 and 3

Answer: D

Explanation:

To establish better relations between the Center and the States, legislative, administrative and financial relations between them have been described in Parts 11 and 12 of the Constitution. Central planning system has been adopted in India. In practice, it has been seen that there are ups and downs in the relations between the Center and the states due to the presence of one party governments or governments of opposite parties, although these are hindering the development of the nation. Therefore, India's Centre-State relations are affected by the conflict of provisions of the Constitution, planning process and political interests.

5) With reference to Finance Commission, consider the following statements:

- 1. Finance Commission is a constitutional body, which considers the revenue relations of the Union and the State.
- 2. It is constituted by the President every five years.

Which of the above statements is/are correct?

- A: Only 1

- B: Only 2
C: Both 1 and 2
D: Neither 1 nor 2

Answer: C

Explanation:

The Finance Commission is a constitutional body, which considers the revenue relations of the Union and the State. Under Article 280, it is constituted by the President every five years. Its Chairman is also appointed by the President, but the condition for this is that he should have experience in public works.

Apart from the Chairman, the Finance Commission consists of four members including an economist, a government finance and accounting expert, a person with financial and administrative experience and a High Court judge or a person holding such qualification. Hence both the statements are correct.

6) Havisure vaccine, recently seen in news is related to which of the following disease?

- A: Hepatitis A
B: Hepatitis B
C: Malaria
D: Covid-19

Answer: A

Explanation:

Recently, the Indian Immunologicals Ltd (IIL) a wholly owned subsidiary of National Dairy Development Board (NDDB) launched India's first indigenously developed Hepatitis A vaccine 'Havisure' in Hyderabad. It is a two-dose vaccine first dose administered at above 12 months of age and the second at least six months after the first dose.

The vaccine is recommended for children as part of the routine immunization as well as for individuals at risk of exposure or travel to the regions with high hepatitis A prevalence. In addition to this people with occupational risk of infection and suffering from chronic liver diseases also require Hepatitis A vaccination.

7) With reference to Willingdon Island, consider the following statements:

1. It is among the most beautiful locations in Andaman & Nicobar.
2. It is a natural island, named after Lord Willingdon who was a British Viceroy of India.

Which of the above statements is/are correct?

- A: 1 only
B: 2 only
C: Both 1 and 2
D: Neither 1 nor 2

Answer: D

Explanation:

Recently, the Cochin Port Joint Trade Union Forum has urged the Prime Minister of India to take effective steps to revive the lost glory of Willingdon Island. It is among the most beautiful locations

in the Kochi area. This is a man-made island, named after Lord Willingdon who was a British Viceroy of India. It is a major commercial centre and has some of the best hotels in the city. It is also home to the Kochi Naval Base of the Indian Navy, the Central Institute of Fisheries Technology and the Port of Kochi. Lord Willingdon was the 22nd Viceroy and Governor-General of India. Hence, both statements are not correct.

8) With reference to Parakram Diwas, consider the following statements:

1. Parakram Diwas, also known as Bravery Day, is a national day in India celebrated on January 23rd.
2. The Indian government introduced the day in 2021, just before Bose's 125th birthday.
3. The theme of Parakram Diwas 2024 is Commemorating the legacy of Netaji Subhash Chandra Bose and the Azad Hind Fauj.

How many of the above statements is/are correct?

- A: Only one
- B: Only two
- C: All three
- D: None

Answer: C

Explanation:

The Prime Minister of India will participate in Parakram Diwas celebrations at Red Fort which will commemorate the legacy of Netaji Subhas Chandra Bose and the Azad Hind Fauj. Parakram Diwas, also known as Bravery Day, is a national day in India celebrated on January 23rd. It marks the birth anniversary of Netaji Subhash Chandra Bose, a freedom fighter. The Indian government introduced the day in 2021, just before Bose's 125th birthday. The theme of Parakram Diwas 2024 is Commemorating the legacy of Netaji Subhash Chandra Bose and the Azad Hind Fauj. During the programme, Prime Minister will also launch Bharat Parv, which will be held from 23rd to 31st January. Hence, all statements are correct.

9) Consider the following statements regarding Arogya Maitri cube:

1. It is a revolutionary mobile hospital equipped with cutting-edge technology.
2. This cube is a part of the broader initiative named "Project BHISHM" – Bharat Health Initiative for Sahyog, Hita and Maitri.

Which of the above statements is/are correct?

- A: 1 only
- B: 2 only
- C: Both 1 and 2
- D: Neither 1 nor 2

Answer: C

Explanation:

Recently, Arogya Maitri Disaster Management Cube has been deployed in Ayodhya to bolster medical readiness and response capabilities during the upcoming 'Pran Pratishtha' ceremony. It is a revolutionary mobile hospital equipped with cutting-edge technology. This cube is a part of the

broader initiative named "Project BHISHM" – Bharat Health Initiative for Sahyog, Hita and Maitri. It is tailored to treat up to 200 casualties, emphasizing rapid response and comprehensive care. The Aid Cube is equipped with several innovative tools designed to enhance disaster response and medical support during emergencies. It integrates Artificial Intelligence (AI) and data analytics to facilitate effective coordination, real-time monitoring, and efficient management of medical services in the field. Hence, both statements are correct.

10) With reference to Khelo India Youth Games- 2023, consider the following statements:

1. Kerala is hosting the sixth edition of the Khelo India Youth Games. This is the first time that Khelo India Youth Games are being held in South India.
2. Silambam, a traditional sport of Tamil Nadu, is being introduced as a demo sport for the first time in the history of Khelo India Youth Games.
3. The Mascot for the Khelo India Youth Games- 2023 is 'Veera Mangai'.

How many of the above statements is/are correct?

- A: Only one
- B: Only two
- C: All three
- D: None

Answer: B

Explanation:

Recently the Prime Minister inaugurated the Khelo India Youth Games and expressed the government's commitment to hosting the 2029 Youth Olympics and the 2036 Olympic Games in the country. Tamil Nadu is hosting the sixth edition of the Khelo India Youth Games. This is the first time that Khelo India Youth Games are being held in South India. The Games will be played across four cities of Tamil Nadu, namely Chennai, Madurai, Trichy and Coimbatore from 19th to 31st January 2024. Hence, statement 1 is not correct.

MAINS PRACTICE QUESTIONS

1. What factors contribute to the persistent occurrence of earthquakes in the Himalayan and northeastern regions of India? (150 words)
2. What initiatives govt has taken to preserve and promote the ancient scientific and technological knowledge of the country? (250 words)
3. The anti-defection law is a watershed moment in the Indian polity because it aims to curb the issue of political defections. How does it ensure the stability and discipline of the political parties and the legislatures? (150 Words)
4. Analyze the ideological differences between Gandhi and Ambedkar concerning the methods for achieving societal change in the context of the Indian independence movement. (150 words)
5. Write an essay on "Simplicity is the ultimate sophistication".

Purpose of the magazine

The purpose of Varthaman is to focus solely on issues which are relevant to the actual as well as applied aspects of the General Studies syllabus. The unique way the "Varthaman" team puts forward the facts and analysis would help you understand, retain and reproduce the information during the journey towards toppers' list.

The sources relied for selection and application of issues

The Hindu
The Indian Express
Times of India
PIB
Live Mint
Hindustan Times
News on Air
Prasar Bharati website
IDSA Website
NASA website
PRS India Website
Down to Earth
Rajya Sabha TV website
Lok Sabha TV website
Economic and Political Weekly
Yojana
Kurukshetra
NITI Aayog reports
BBC
Wikipedia

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Features of the magazine

Current Affairs Analysis

- This month's edition covers the analysis of news from the immediately preceding month.
- The news are categorized subject wise viz. Polity, Economics, Environment and Ecology, Science and Technology, International Relations, etc. for easy and efficient study.
- Lead articles on burning issues are included.

Practice Questions

- Prelims Practice Questions

TEST SERIES TO ENHANCE PRELIMS 2024 PREPARATION

The Prelims exam is a decisive prerequisite in moving on to the next stage of Mains in UPSC. The Prelims exam is that stage in UPSC where the screening process is the most dynamic. One sure shot way of clearing the Prelims exam for an aspirant is through a vigorous Prelims Test Series. The RV Training Academy has put together a well-integrated Prelims Test Series to assist students in their Prelims Exam preparations.

TEST SERIES COMPRISES OF: TOTAL 35 TESTS (6 NCERT TESTS + 11 SECTIONAL TESTS + 4 CURRENT AFFAIRS TESTS 4 CSAT TESTS + 10 FULL LENGTH TESTS)

- NCERT TEST SERIES
- SECTIONAL TEST SERIES
- CSAT TEST SERIES
- CURRENT AFFAIRS TEST SERIES
- SIMULATION TEST SERIES/FULL LENGTH TESTS



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